

ILLINOIS DEPARTMENT OF TRANSPORTATION'S STORM WATER MANAGEMENT PLAN

The Illinois Department of Transportation's Phase II Storm Water Requirements and Strategy Options to Meet the Illinois National Pollutant Discharge Elimination System Permits ILR10 and ILR40.

I. Regulatory Requirements

The Illinois Department of Transportation was required to submit a Notice of Intent (NOI) to the Illinois Environmental Protection Agency (IEPA) to satisfy the Phase II National Pollutant Discharge Elimination System Storm Water Permit for small municipal operators. The permitting of the Illinois Department of Transportation's (IDOT) Small Municipal Separate Storm Sewer Systems (MS4s) at state and interstate highways, their rights-of-ways and thoroughfares including streets, roads, bridges, maintenance facilities, service areas, and rest areas within the jurisdictional boundary of the IDOT in the State of Illinois is required as a result of the United States Environmental Protection Agency's Phase II Storm Water Rule. The National Pollutant Discharge Elimination System's (NPDES) final regulation was promulgated on December 8, 1999. Illinois is a delegated State to implement the NPDES program and the IEPA is the state permitting authority. The IEPA issued the Illinois R40 Permit on March 1, 2003,

The term, MS4, is sometimes misinterpreted and does not only refer to municipally-owned storm sewer systems. The definition of an MS4 has a much broader application that includes in addition to local jurisdictions, the State Departments of Transportation, universities, local sewer districts, hospitals, military bases, parks and prisons. More importantly, an MS4 is not simply a system of underground pipes. An MS4 can include roads with drainage systems, gutters, and ditches. The regulatory definition of an MS4 is as follows:

Code of Federal Regulations 40 CFR 122.26(b)(8) defines the MS4 as "municipal separate storm sewer means a conveyance or a 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, 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 Clean Water Act (Act) that discharges into waters of the United States. (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."

The Phase II Final Rule requires nationwide coverage of all operators of small MS4s that are located within the boundaries of a Bureau of Census defined urbanized area (UA) based on the 2000 census. An UA is a land area comprising one or more places (core and fringe) with urban limits defined by a population density of 1000 people per square mile, and its contiguous census tracts of 500 people per square mile. The Bureau of Census uses this calculation to determine the geographic boundaries of the urban areas. The IEPA developed a list of MS4s utilizing the federal regulations.

IDOT Designation:

The Phase II municipal regulation requires those portions of the MS4 within the urbanized areas to have MS4 permit coverage. For the IDOT however, permit coverage includes all highway storm water discharge facilities. According to the regulations, an applicant must implement each program area for the entire MS4. Therefore, the highway storm sewer system falls under the NPDES ILR 40 permit. All of the highway drainage system under the jurisdiction of the Department must be addressed in the storm water program.

Based upon the language in the ILR40 Permit, the IDOT was required to prepare and implement a Storm Water Management Program (SWMP) that includes basic requirements for Best Management Practices (BMPs) that address six minimum control measures for storm water runoff from new and existing highways, their rights-of-ways, bridges, maintenance facilities, service areas, and rest areas.

The following sections of this document will identify the Six Minimum Control Measures, suggested BMPs, strategies and goals to meet the permit requirements.

II. Six Minimum Control Measures Overview

1. Public Education and Outreach on storm water impacts.
2. Public Involvement and Participation.
3. Illicit Discharge Detection and Elimination.
4. Construction Site Storm Water Runoff Control.
5. Post-Construction Storm Water Management in Development and Redevelopment.
6. Pollution Prevention/Good Housekeeping of Municipal Operations.

There are required BMPs in the ILR40 permit that must be addressed by the IDOT. The Department needs to determine appropriate BMPs for their MS4 that satisfy the above six minimum control measures. The list of BMPs the IDOT selects and is required to implement (i.e. storm sewer map) need to be developed and included in the Storm Water Management Plan (SWMP) submitted to the IEPA for compliance under the permit. The IEPA can require additional measures when a Total Maximum Daily Load (TMDL) has been

specified for a receiving water body, when a Watershed Management Plan has been adopted for a particular area, or if the IEPA determines that the IDOT's SWMP is not adequately reducing pollutants in storm water.

Some of the permit requirements may be satisfied by the IDOT coordinating its efforts with other regulated entities, municipalities, counties, etc. For example, the Department may become a partner in a program for a statewide public education campaign. In other cases, the Department already has programs in place that satisfy mandatory requirements of the permit (i.e. Adopt-a-highway for litter). An explanation of each of the existing programs, policies, practices and standards will be described in the submittal and will be a commitment to continue them.

The regulations do allow for the Department to rely on another entity to implement all or part of a minimum control measure to comply with the permit. However, the IDOT must still ensure that the requirements of the minimum control measure are met and is liable if they are not. The regulations require that if the permitted MS4 operator (IDOT) relies on another entity that fails to carry out the requirements of the minimum control measure it is the permittee's (IDOT) responsibility to find alternative means to assure compliance.

It is important to realize that the IDOT has a good degree of flexibility in determining the best approach to satisfy the six minimum control measure requirements. More importantly, the permit allows for implementation of the SWMP over the course of five years. The challenge ahead for the Department will be deciding which strategies, BMPs, and goals will be appropriate in the context of current program initiatives, constraints and practices while still meeting the permit requirements.

A. Organizing the IDOT Storm Water Management Plan (SWMP)

Universal to the permit requirements is the need to develop a plan of action with goals, timeframe for implementation and BMPs. The first phase in implementing the SWMP is to conduct a comprehensive analysis of the Department's situation with respect to complying with the Storm Water Phase II Rule. The following components need to be addressed:

1. Does IDOT staff understand the storm water regulations and their responsibilities under the regulations?
 - How is the IDOT designated by the IEPA?
 - What are the limits of that designation?
 - What practices and facilities are covered under the ILR40 permit?
 - i) Maintenance facilities, fueling areas, deicing chemical storage, pesticide application/storage, storm sewers/conveyances, etc.

- How many projects does the IDOT have that disturb greater than one acre?
 - What policies and practices are already in place to assist in the implementation of the SWMP?
 - a. Litter Programs (Adopt-a highway and Inmate Pickup)
 - b. Public Involvement Processes (NEPA, public hearings, posters)
 - c. Distribution of Public Information (pamphlets)
 - d. Roadside Development Programs (wildflowers, trees, rest areas, mowing, pesticide training, chemical storage, wetland mitigation, wet detention design practices, recycling program, etc.).
 - e. Street sweeping contracts (miles swept, frequency, location)
 - f. Special waste removal including hazardous materials response and LUST practices.
 - g. Deicing chemicals (usage, type, storage).
 - h. Environmental Coordination and Commitment Policies for HPA, ESA and CWA.
 - i. Storm sewer location (storm sewer map), maintenance practices, inlet design, program dollars spent or committed to this activity.
 - j. Erosion Control policies, specifications, standards.
 - k. Erosion Control and Storm Water Training Programs.
 - l. Utility Accommodation Policy.
2. Does the Department have an inventory of storm water inlets, pipes, ditches, open channels and, important to the permit, where do they outfall to?
 3. Do the Municipalities that the IDOT has agreements with know the above locations?
 4. What are the names and locations of the waters that receive the discharges? How many are listed by the IEPA as impaired (303(d) list)? How is the IDOT informed of these impaired waters by the IEPA?
 5. Which programs/practices will need to be amended for permit coverage (erosion control programs, procedures for illegal dumping and spills, training of staff, etc.)?
 6. What is the objective of the IDOT's SWMP (improve water quality, increase staff awareness, obtain additional funding, etc.)?
 7. What approach would work best for the IDOT (phased in program that includes meeting the minimum legal requirement)?
 8. Probably the most important aspect is what is realistically achievable given current program funding and constraints?

The next section of the document details the IDOT SWMP strategy, goals and BMPs in an attempt to answer the above questions utilized in developing the draft SWMP. It is important to point out that the SWMP is an evolving process.

B. Storm Water Management Plan Eligibility Requirements for Endangered Species and Plan of Action

The ILR40 NPDES Permit requires that the IDOT Storm Water Management Plan containing the Six Minimum Control Measures meet eligibility requirements for protection of threatened and endangered species. Permit coverage is available only if the IDOT storm water discharges, allowable non-storm water discharges and discharge related activities avoid unacceptable effects on Federal and State listed species. Upon submission by the Department of a signed NOI, the NOI constituted IDOT certification of Eligibility under the Federal and State ESA. The storm water discharge activities of the Department are not anticipated to result in an unacceptable effect on listed species for the following reasons:

1. The IDOT has in place erosion and sediment control standards and specifications to minimize potential storm water pollution into Aquatic Resources of concern. (see Construction Control Measures)
2. Prior to the letting of any highway construction project the Department performs extensive environmental coordination with the IDNR and the US Fish and Wildlife Service. During this coordination, potential effects on listed species are identified and commitments developed to avoid unacceptable effects. These commitments are placed in contract plans, discussed with contractors at preconstruction meetings, and monitored by IDOT Engineers over the construction period. Locations of listed species are also indicated on the plans to ensure species protection.
3. Highways, by there very linear nature, pass through numerous watersheds. Some sections of IDOT highways pass through watersheds containing Aquatic Resources of Concern. The BMP for the Six Minimum Control measures discussed in the following sections are designed to minimize potential effects on these resources to the Maximum Extent Practicable (MEP) as required by the permit.

C. IDOT Storm Water Management Program Overall Strategy

The NPDES Permit required the IDOT to submit an approvable SWMP to the IEPA Water Quality Division in March 2003. The permit requires the SWMP to include a description of programs to accomplish storm water pollution prevention, public education, and illicit discharge elimination.

The purpose of the Storm Water Management Plan prepared by the IDOT is to describe the procedures and practices IDOT uses to reduce the discharge of pollutants from storm drainage systems owned or operated by IDOT. The SWMP addresses storm water pollution control related to highway planning, design, construction and maintenance activities.

The Federal Act, which is the basis for the NPDES Permit, requires the control of pollutants from MS4s, construction sites, and industrial activities. Discharges from these sources are regulated under the NPDES Permit process. The US EPA has delegated administration of the NPDES program to the Illinois Environmental Protection Agency. The IEPA has issued general NPDES ILR10 # 10 storm water permit for designated construction and industrial activities. The IEPA has subsequently issued ILR40 Storm Water Permit for MS4s.

Under the federal storm water regulations, IDOT's properties, facilities, and activities come under the jurisdiction of NPDES storm water regulations for three primary reasons:

1. IDOT highways and highway related properties, facilities, and activities are served by extensive storm drain systems that in urban areas are often connected to and are considered to be comparable to municipal separate storm sewer systems which are covered explicitly in the Federal storm water regulations.
2. Construction of IDOT highways and related facilities often result in soil disturbance greater than 1 acre and are subject to NPDES permit requirements. The federal regulations require discharges of storm water associated with construction activity including clearing, grading, and excavation to obtain coverage under the ILR10 Permit. IDOT is required to implement and enforce a program for construction projects that disturb greater than one acre of total land area.
3. As previously stated, the Code of Federal Regulations (CFR) requires that NPDES storm water permits be issued for discharges from Small Municipal Operators known as MS4s. IEPA designated IDOT as the owner and operator of an MS4 in September 23, 2004. IDOT's mission is to "Provide Safe, Cost Effective Transportation for Illinois in Ways that enhance Quality of Life, Promote Economic Prosperity and Demonstrate Respect for Our Environment." This mission involves planning, designing, constructing, and maintaining transportation facilities such as freeways, highways, and bridges. IDOT has the responsibility of accomplishing its mission in ways that comply with public policy and applicable regulations, including complying with the Act via developing an SWMP under the Phase II MS4 program.

D. IDOT Facilities

IDOT operates its storm water drainage systems to minimize flooding and prevent the presence of standing water on traveled areas within the Right-Of-Way (ROW) via drainage systems within or adjacent to IDOT ROW. In some locations, run-off drains from off site areas onto IDOT ROWs due to topography or drainage patterns. In this situation, IDOT's drainage systems are designed to convey the storm water contributed from IDOT's property and storm water from off-site areas.

In urban areas, some drainage systems connect directly to receiving waters, others discharge to municipal storm drain systems. Highways in urban settings typically have curb and gutters. Freeways and rural highways typically have off-shoulder or median drainage. In developing this plan, IDOT identified direct connections to receiving waters as regulated outfalls. Connections to municipal storm drain systems are discharge points, not regulated outfalls.

IDOT facilities are located in diverse topography ranging from highly urbanized to highly rural including tall grass prairie, forests and farmland. Drainage systems that serve IDOT properties and facilities ultimately discharge storm water to receiving waters such as permanent and intermittent streams, lakes, wetlands, rivers and floodplain drainage ditches. The sensitivity of receiving waters to potential storm water discharge impacts will vary widely due to such factors as location, hydrology, the nature of the IDOT facility and drainage system, discharges and pollutants from other sources, and the beneficial uses of the receiving waters.

The purpose of the IDOT SWMP is to describe the procedures, policies, and practices to be implemented in order to reduce the discharge of pollutants from storm water drainage systems owned or operated by IDOT. IDOT property and activities that may be a source of pollutants are:

- Road surfaces and shoulders
- Construction and maintenance activities
- Highway related facilities such as maintenance yards and rest area parking lots.

Waters of the United States may pass through, over, or under IDOT properties or facilities. In these circumstances, IDOT will only be responsible for those pollutants contributed to such waters that are discharged from IDOT's point source and not for the pollutants present when they entered IDOT properties.

E. Highway Emergencies

Conditions may arise that require the IDOT to conduct emergency activities to protect public health, safety, or property. Situations may arise during an emergency that will not allow IDOT to implement elements of the SWMP. Such incidents are not considered non-compliance in accordance with ILR40. This includes incidents in which there is an unintentional and temporary non-compliance with technology based permit effluent limitations due to factors beyond the control of the IDOT. This situation would not cover or include noncompliance caused by operational error, lack of preventative maintenance, or improper operation.

F. IDOT's SWMP and Relationship with Municipalities

An important purpose of the IDOT SWMP is to ensure that those who direct and perform activities that may affect the quality of storm water system discharges are aware of their respective roles and responsibilities. IDOT currently relies on the Illinois Road and Bridge Laws to administer maintenance responsibilities for highway drainage systems within municipalities. The federal regulations encourage partnerships among MS4s in meeting the intent of the Act Phase II regulations. Numerous IDOT and municipal personnel are involved in daily activities that may impact storm water quality. It is the intention of the IDOT to coordinate activities within municipalities. Current municipal agreements may need to be updated to reflect any shared responsibilities under the permit requirements.

IDOT is taking this approach as discharges from IDOT's MS4s flow to MS4s owned or operated by municipalities (cities or counties) and vice versa. The IDOT and/or municipalities are ultimately responsible for the quality of the discharges from their MS4s. IDOT will make the commitment to ensure pollutants are reduced or controlled in discharges from the IDOT MS4 into municipal systems to the maximum extent practicable. Coordination will be accomplished through formal and informal discussions, meetings, agreements and procedures for any joint municipal program.

IDOT's objective is to incorporate BMPs identified in this SWMP and any up dated SWMPs into IDOT's general manuals, policies and procedures. This allows IDOT the flexibility to make necessary modifications to expand or improve upon detailed procedures within the frame work of the SWMP.

G. Best Management Practices Overall Strategy

Best Management Practices or BMPs were developed and selected based upon the requirements of the ILR40 permit, review and approval by IDOT officials, cost effectiveness, operation and maintenance, and applicability to IDOT activities and facilities. Found within each section of the SWMP's Six Minimum Control Measures Discussion are the BMPs the IDOT intends to implement. BMPs for the purpose of compliance under the federal storm water regulations can be placed into two categories; structural and non-structural.

Examples of structural BMPs would include:

- First flush basins
- Wet detention basins
- Vegetated swales or ditches
- Catch Basin Inlet Devices
- Temporary Seeding /Mulching
- Ditch checks
- Perimeter Barriers
- Detention Basins

Examples of non-structural BMPs would include:

- Employee Training
- Litter Control Programs
- Street Sweeping
- Storm Drain Cleaning Schedules
- Snow and Ice Control operations
- Detection/Monitoring of Illicit Discharge to Storm drains
- Brochures
- Employee Check Sheets/lists
- Policies and Procedures

The following sections detail the Six Minimum Control Measures, their goals and BMPs. As IDOT's SWMP develops, BMPs may be modified or eliminated. Any changes to the IDOT SWMP will be reflected in the Annual Report submittal as required under the MS4 Permit.

III. Public Education and Outreach Program

Community involvement is a key component for the success of any type of storm water management plan. This is evidenced by the fact that two of the six minimum control measures required by the permit focus upon public involvement. The public will in all probability need to be educated about water quality issues caused by storm water runoff. The support of municipal officials and their public constituents will be important for the success of the plan.

The support will range from individuals changing their daily actions to community backing for all six minimum control measures. The goal of this measure, as well as the others, is to reduce the degradation and improve water quality in Illinois waters. In order to achieve a water quality benefit, public education programs will be targeted to improve understanding of the reasons why storm water programs exist. An important benefit of grooming public support via education is to obtain approval for future IDOT funding initiatives to implement the plan. Public education should also assist in encouraging volunteers to implement aspects of the program.

The IDOT strategy is that as the public becomes more informed of storm water issues in their community, including individual actions they can implement, water quality within that area can improve.

A. Rationale Statement

The IDOT's strategy for the Public Education and Outreach Minimum Control Measure is to take a two-fold approach, namely; in the areas of employee and contractor education and training; and programs targeted toward public outreach. IDOT's objective in developing policies and practices is to provide education and

training to ensure that all employees have the knowledge and skills necessary to perform their functions effectively and efficiently. The IDOT develops and presents employee training programs with curricula and materials tailored to specific topics and personnel levels. These programs are updated and evaluated periodically to ensure that the educational materials are both timely and effective. The IDOT has offered training seminars in the past to employees in the area of storm water as it relates to erosion control. In light of the NPDES Phase II Regulations becoming effective, the IDOT has re-evaluated previous material and will be updating it to reflect the requirements of the ILR40 Permit.

Storm water training courses, including those for construction and maintenance personnel have been developed or, in the case of IDOT maintenance facilities, are currently being developed. These training sessions will provide a comprehensive review of storm water pollution prevention practices and procedures. The curriculum of these courses focuses on storm water pollution prevention topics such as erosion and sediment control and maintenance training. This training will be reinforced through educational reminders such as an employee check sheet and the creation of an IDOT storm water website.

The IDOT will also develop a formal outreach/training program to highway construction contractors to raise their awareness about storm water regulations, understand problems, causes of storm water pollution and to explain their responsibilities under the permit.

The SWMP developed by IDOT will also address public education and outreach. IDOT currently uses a variety of methods to educate the public about the importance of certain pollution prevention programs which in turn relate directly to improving water quality. Public education activities which focus specifically on the impacts of transportation runoff have been formally developed by IDOT in the form of a Storm Water Runoff Brochure. Recognizing this fact, IDOT will work toward enhancing its current programs the goals of which are:

1. Inform the public regarding storm water quality issues that pertain to IDOT ROWs and facilities.
2. Change public behavior regarding the release of potential pollutants such as litter, used oil, septic system discharges onto highway ROW.

The public education and outreach program is designed to consist of a variety of written materials, a website, and various anti-litter campaigns such as the IDOT Adopt-a-Highway program. The written materials will be designed to appeal to the general public and municipal officials in an easy to read format, while providing technical information on selected IDOT programs, projects, and activities. IDOT will also study participating with municipalities in developing a program like inlet stenciling, to prohibit pollution into storm drain inlets at rest areas and within the designated UAs during the term of this permit.

In addition to the above BMPs, IDOT will continue to install “No Dumping” and “Litter Fine” signs at selected locations on highways.

B. BMP Defined and Measurable Goals

B1. Employee Training

The goal of this BMP is to train IDOT planning, design, construction and maintenance work force on an annual basis. This includes personnel involved in programs that affect storm water quality. The actual training will consist of two primary courses:

- Storm Water Management for Planning, Design and Construction staff. This course identifies the roles of each group involved in project development and how storm water considerations apply to planning, design and construction projects. The course will emphasize and explain storm water requirements, related requirements, plan design, sources of pollutants, construction site impacts to storm water, discussion of appropriate erosion and sediment control BMPs, and identify area of responsibilities among each project phase.
- Storm Water Management for Maintenance Activities will be a course that provides an explanation of the specific sources of pollutants associated with road surfaces maintenance activities and facilities that require BMPs to protect storm water. The course includes a description of the BMPs to address those sources and ensures that Maintenance Supervisors are aware of their responsibilities to implement the maintenance side of the IDOT Storm Water Plan. The courses are targeted for both new and current employees that have never received training and repeated by all other staff every three years upon completion of the initial training

IDOT anticipates incorporating training materials, such as maintenance yard inspection check sheets, into every day activities so employees incorporate storm water quality thinking into various aspects of their responsibilities.

The IDOT Storm Water Coordinator will be responsible for implementing and coordinating the training programs.

B2. Contractor Training

The goal of this BMP is to educate the contractors on the permit conditions that apply to their projects, availability of guidance material, and requirements of implementing the SWPPP and erosion control plan. The IDOT works on a regular basis with the Illinois Transportation and Road Builders Association (IRTHBA), the Association of General Contractors (AGC) and other contractor groups. The outreach and training program will educate the contractors on issues related to storm water and implementation of good storm water practices. At a minimum, the course will emphasize the correct installation and maintenance of erosion and sediment control practices. The goal of this

BMP is to train all contractor staff on an annual basis. The goal will be measured by the number of attendees at the training and how the training translates into actual practice in the field. In other words, the correct installation and maintenance of practices as observed during the required weekly inspections by IDOT storm water inspectors.

The IDOT Storm Water Coordinator will be responsible for implementing and coordinating the training.

B3. Public Outreach

B3.1 Anti-Litter Programs

The IDOT currently utilizes litter programs targeted to educate the public about pollution from litter. Litter programs are designed to educate and involve the public in reducing this major cause of storm water pollution. Although not originally developed as a storm water BMP, anti-litter programs certainly have the benefit of reducing this pollutant. The IDOT recognizes what an important role litter campaigns can play in improving water quality in Illinois.

Highway litter programs as a Public Education BMP was selected as it is a major pollutant resulting from highways that has a great potential for pollution reduction via the implementation of a public education program directed at users of the highway system. For example, IDOT intends to continue the state wide anti-litter Adopt-a-Highway Program.

This BMP will be measured in a number of ways. The measures will consist of actual observations in roadside trash, documenting the amount of litter picked up to ascertain if there has been a reduction in amount, and number of new participants in the programs.

The litter programs will be coordinated by the IDOT Bureau of Operations.

B3.2 Storm Water Brochure

The IDOT developed a storm water brochure targeted at highway users and municipalities that identifies not only litter programs but other pollution prevention practices to minimize pollutants entering storm water. The specific audience for the brochure is the general public. The brochure will focus on sources of pollutants like used oil and pesticides and steps individuals can take to reduce these pollutants in urban runoff. The brochures will be distributed at public meetings, provided to members of the legislature, the press, IDOT staff, municipalities, and highway rest areas and tourist information centers. The IDOT will post the brochure on its website under the Environmental Link once the website is developed. The brochure will be developed in the second year of the program. The

BMP will be measured based on the distribution, requests for the brochure and number of visits to the website.

The IDOT Storm Water Coordinator Office will be responsible for coordinating this BMP.

B3.3 IDOT Storm Water Web Site

IDOT's website will be updated to include a storm water web page accessible through the IDOT home page website. The website will provide information on all IDOT storm water activities. These will include outreach programs, brochures, guidelines for erosion and sediment control, maintenance activities and how to obtain information. The website will be linked to other pertinent sites dealing with storm water pollution. The public and contractors will be able to go the website and access information on pollutants, practices, permit requirements, etc.

The BMP will be measured by the number of hits to the sites and comments received.

The IDOT Storm Water Coordinator will be responsible for coordinating information on the website.

B3.4 Storm Watering Stenciling

Some states like California, Mississippi and Washington use a stenciling program on storm drain inlets. For IDOT, this could be limited to just highway facilities like rest areas, park & ride lots or used in conjunction with municipalities on those highways passing through the UA. The stenciling usually has verbiage or symbols indicating "No Dumping of Waste", "Drains Directly toWater body", etc. The question then becomes does IDOT do one generic stencil or relate it to specific water bodies in a given Urban Area. The literature indicates that to be the most effective, stenciling should be related to the closest water body that people recognize in their community. This BMP would be implemented no earlier than the fifth year of the permit.

IV. Public Participation and Involvement

The IDOT has an established Planning Process that provides the public opportunity to learn and comment on transportation priorities and environmental affects. The issuance of the Phase II Storm Water rules and the subsequent ILR40 permit requires the IDOT to comply with State and local public notice requirements when implementing the Public Involvement Minimum Control Measure.

The IDOT recognizes that the public can provide valuable assistance to IDOT's SWMP. This is especially true in the Urbanized Areas (UA) as it is the activities of the public that often produce diffuse pollution and the public that funds the highway department. Therefore, it is important that the public be given the opportunity to be notified about IDOT programs and to actively participate. Community involvement and participation allows for broad public support since citizens who participate in the transportation development and decision making process are partially responsible for the program and may be more likely to take an active role in implementing any program.

The ILR40 Permit requires a public involvement and participation component of the storm water program. Public involvement can manifest itself in a number of forms. The involvement may include public hearings (through NEPA or separately), informational meetings, encouragement of volunteers to educate others within the UA about the SWMP, assisting in program coordination with other existing programs (planning commissions), or participating in volunteer monitoring efforts (anti-litter).

IDOT's strategy is to incorporate and/or enhance storm water discussions into their existing planning process and other program procedures.

A. Rationale Statement

The IDOT's current public involvement processes are designed to maximize public input. The public participation occurs at various stages of highway program development or through special programs. IDOT is required to involve and encourage public involvement not only under the NPDES Permit Storm Water Rules but also as a function of developing the multi-year transportation program. The public involvement requirements were mandated by various Federal legislation; namely, the Surface Transportation and Assistance Acts and the National Environmental Policy Act (NEPA).

IDOT's planning process provides two broad opportunities for the public to participate in the transportation plan. These opportunities are as follows:

1. Development of a comprehensive long range transportation plan is required to include public input.
2. IDOT performs public involvement as part of transportation improvements. The involvement occurs during the planning and design phase of projects. Information concerning the engineering and environmental aspects of a given project are disclosed as part of the National Environmental Policy Act (NEPA). Any project involving a Federal Action is required to follow the NEPA process. Depending upon the scope, type, and potential resource impacts of a project, IDOT prepares the appropriate NEPA document. The type of

documents are the Categorical Exclusion (CE), Environmental Assessment (EA), and the Environmental Impact Statement (EIS).

The potential effect on water quality is one aspect that is to be evaluated in preparing these documents. The documents are to address the type of water resources which exist within the project limits and the potential for water quality impacts. The public is notified of the availability of these documents for comments. This is accomplished by having them available at district offices, local libraries, the IDOT website, notices in newspapers and at public hearings and informational meetings. During the various stages of project development, one avenue that is used to afford the public the opportunity to provide input on a project's environmental affects is via informational meetings and formal public hearings. These forums are one method for the public to voice their concerns about a projects potential for water quality impacts to water resources within their community. The IDOT intends to enhance their water quality section of environmental documents and address the NPDES permit requirements at public meetings.

B. Best Management Practices Defined and Measurable Goals

B1. Identifying and Enhancing Water Quality Issues in the NEPA Process

The purpose of this BMP is to address water quality concerns during the development of a specific transportation improvement that is included in the Comprehensive Transportation Plan that could potentially impact a water resource in a community. The information would be presented in a format that would be used by the public and the IDOT to make informed decisions regarding a projects potential impact on storm water. IDOT proposes the following information will be added to NEPA documents in order to implement this BMP:

- a. Water Resources will be identified by name (including streams, ponds, lakes, rivers, etc) in the project area. The flow regime will be identified (permanent or intermittent) and upstream watershed area (in acres or hectares). The aquatic ecosystem of each water resource in terms of its physical, chemical and biological (e.g. fish, mussels, macro invertebrates, etc.) attributes will be described.

The resource will be investigated to determine if it is a wild and scenic river, candidate for wild and scenic river status, navigable river, Aquatic Resource of Concern, or threatened or endangered species habitat, public water supply, or ground water recharge area This information is obtained through the IDOT Environmental Survey Review Process.

- b. The NEPA documents will describe the existing surface water conditions and establish the sensitivity of the resource. This information is especially important to meet the compliance requirements under Part III, A, Special Conditions of the ILR40 NPDES permit. Existing water quality information from the IEPA 303(d) list and USGS water resource data will be utilized for this evaluation.
- c. The NEPA documents will contain a water resource/water quality impacts discussion. The purpose of this topic is to identify the type and degree of impact which could potentially occur and to identify the impact mitigation measures. The proposed work such as cofferdams, channel changes, channel excavation, construction haul roads, work pads, causeways, wing dams, dams, rip-rap placement, bank excavation, abutment construction, low-water crossings, etc.) in, over, and adjacent to the stream. Impacts to the physical, chemical and biological characteristics of the aquatic ecosystem will be described. In addition, impacts to the human use characteristics of such systems (e.g. municipal and private water supplies, recreational and commercial fisheries, water related recreation, navigation). The mitigation measures, including erosion and sediment control, to be implemented to lessen the impact will be discussed.
- d. A discussion of the potential for surface water quality impacts from the operation of the roadway will be included. Roadway operation includes vehicular use and maintenance practices. Highway runoff pollution may affect water quality of receiving waters through shock or acute loadings and through chronic effects from long term accumulation within the receiving water (TMDL for example). The significance of these impacts is very site specific and will depend heavily on the characteristics of the highway and receiving waters.

Research indicates few significant impacts occur for highways with less than 30,000 ADT. Potential impacts are generally short term, localized, acute loadings from temporary water quality degradation with few, if any, chronic effects. Where effects may occur, the documents will identify any location where roadway runoff may have an adverse impact on receiving waters and the potential mitigation to moderate any adverse impact. This is also a compliance requirement in Part IV B Minimum Control Measure # 5, Post-Construction Management. The IDOT will consult the 1996 FHWA research report "Evaluation and Management of Highway Runoff Water Quality" for estimating pollutant loading from highway runoff and will be used to assist in determining level of potential impacts and appropriate mitigation measures.

- e. The NEPA documents will contain a discussion of any water related permits that will be required (404, 401, NPDES) and why they are required. For example, a NPDES permit is required if 1 acre or more of

surface area is disturbed. If an NPDES construction activity permit is required, the following language will be incorporated into the documents:

“It is anticipated that this project will result in the disturbance of one or more acres of total land area. Accordingly, it is subject to the requirements for a NPDES permit for storm water discharges from the construction sites. Permit coverage for the project will be obtained either under the NPDES General Permit ILR 10 for Storm Water Discharges from Construction Site Activities or under the ILR40 MS4 Permit. Requirements applicable to such a permit will be followed including the preparation of a Storm Water Pollution Prevention Plan (SWPPP). Such a plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site and shall describe and ensure the implementation of practices which will be used to reduce the pollutants in discharges associated with construction site activity and to assure compliance with the terms of the permit”.

V. Illicit Discharge Detection and Elimination

The ILR40 Permit defines an illicit discharge as any discharge to a municipal separate storm sewer (MS4) that is not entirely composed of storm water and has not been authorized under an NPDES Permit. The definition is based upon 40 CFR 122.26 (b) (2) of the Federal Storm Water Rules.

Illicit discharges enter the storm sewer system through either direct connections (i.e., waste water piping either mistakenly or intentionally connected to storm drains) or indirect connections (i.e., infiltration into the MS4 from cracked sanitary systems, spills collected by drain outlets, or used paint and oil dumped directly into a drain). The result is untreated discharge containing pollutants of concern. Illicit discharges may also be continuous or intermittent. Intermittent discharges usually occur when carried by a storm event, while continuous illicit discharges often flow during dry weather. The concern with illicit discharges is that untreated pollutants of concern such as heavy metals, oils, grease, solvents, fertilizers, pesticides, bacteria, and sediment contribute to the degradation of a water resource. The pollutants contain the potential to threaten human health, wildlife and aquatic resources. The ILR40 Permit requires an MS4 to develop a minimum control measure to reduce or eliminate illicit discharges. IDOT recognizes their responsibility under this permit requirement and will develop such a program.

A. Rationale Statement

Discharges from storm drains pass through, over and out of IDOT properties and facilities. Flows into IDOT’s drainage system include flows allowed by ROW permit, flows from adjacent properties, flows that are accepted due to Illinois

drainage laws, and flows from illicit discharges. If a flow from an IDOT source is determined to be a significant source of pollution, IDOT is required to control the pollution through its legal authority or other measures. IDOT possess the legal authority to prohibit any illicit discharge or connections to its drainage system through 605 ILCS 5/9-113 and 9-117.

The primary employees that evaluate the functioning and maintenance of the MS4 drainage systems are the IDOT Maintenance Personnel. These employees through the course of their work activities are the ones most likely to identify unusual flows and polluted discharges. The IDOT will utilize information obtained by highway maintenance staff and/or through inventories conducted by municipal personnel through agreement to identify illicit discharge.

IDOT intends to implement staff training, and develop a storm water control policy/ordinance BMP respectively to prevent illicit discharges and connections to the IDOT MS4 system during the term of the permit.

B. BMP Defined and Measurable Goals

B1. Illicit Discharge Elimination Education Program BMP

IDOT feels that educational activities and internal training are the two elements of the plan from a highway perspective that will have the most impact on this BMPs success. This BMP will concentrate on educating the public, IDOT staff, municipal personnel and contractor staff on what constitutes an illicit discharge and how to eliminate those discharges. Toward this goal, IDOT will implement an education program to train employees, contracting agencies, consultants on the elements of the illicit discharge measure.

IDOT will work with Municipalities and local units of government on developing a brochure and webpage, to assist in educating the public and others on issues related to illicit discharges. IDOT will add training to its internal training sessions for employees and out reach program to consultants/contractors. The issue of illicit discharge will also be addressed through public meetings and correspondence with local units of government.

One other important aspect of this BMP is to direct education toward users of IDOT ROWs. IDOT will target utility companies, developers, etc. through its right-of-way use permit program by providing them material about illicit discharges.

IDOT Permit Engineers/Utility Engineers will be responsible for implementing this BMP. The BMP will be measured by the number of people trained annually, number of brochures distributed and hits to the IDOT website.

Utilizing the aforementioned tools, this BMP coordinates well with the Public Education and the Good Housekeeping/Pollution Prevention BMPs as identified in other sections of this document.

B2. IDOT Storm Water Control Policy/Ordinance BMP

The ILR 40 permit Part IV b(2) requires that IDOT develop ordinances or other regulatory mechanisms that provide IDOT with appropriate authority to ensure illicit discharges are prohibited or identified for notification to proper authorities. The IDOT already has this authority as mentioned above.

IDOT will review their programs, policies, practices for issuing utility and access permits and make any modifications necessary to ensure that non-storm water discharges are not connected into the IDOT storm sewer system. IDOT will notify individuals or entities applying for utility or access permits of the prohibition of discharging any non-storm water discharges. IDOT will amend existing ROW accommodation policies to include as a permit condition, documented proof of compliance with the NPDES Permits.

The IDOT Utility Engineers will be responsible for implementing this BMP. The BMP will be measured by the number of accommodation permits issued containing the illicit discharge information requirements.

VI. Storm Water Erosion Control

The ILR40 Permit requires that an MS4 develop, implement and enforce a program to reduce pollutants in any storm water runoff to their small MS4 from construction activities that result in land disturbance of greater than or equal to one acre. The IDOT has had an erosion control program in place since the Phase I NPDES Permit for General Construction activities was issued in 1992. The program includes an erosion control plan, standards for permanent and temporary controls, inspections, pre-construction reviews and contractor certification requirements.

Rationale Statement

IDOT projects result in land disturbing activities which often meet the 1 acre threshold. IDOT believes that having standards comparable to the Illinois Urban Manual, making a good plan first, inspectors checklists, and a training effort is the most productive strategy to ensure IDOT projects are compliant with the ILR40 and ILR10 NPDES Permits. The BMPs selected are intended to be cost effective, maintainable, and suited to manage storm water from a construction project. The following chart depicts the BMPs IDOT utilizes. During the term of the permit, BMPs in this measure will be revised, eliminated or added into the IDOT erosion control program. The IDOT Bureau of Construction will be responsible to manage the erosion control program with implementation by the

nine highway district offices. The IDOT Storm Water Coordinator will be responsible for the overall program.

VII. Post-Construction Management in New Development and Redevelopment

The purpose of this Minimum Control Measure is to reduce the quantity and/or the quality of, storm water in areas undergoing new development or redevelopment. Runoff from areas undergoing development or redevelopment has been shown to carry pollutants that affect receiving water bodies. There are two primary categories of impacts that affect water resources from post construction runoff. The first impact is caused by an increase in the type and quantity of pollutants in storm water runoff. This type of runoff can contain sediments, chemicals such as deicing materials, oil, grease, heavy metals, fertilizers, etc. which eventually find their way to streams, rivers, lakes, etc. It is the potential for the occurrence of these types of pollutants to occur in storm water that was one reason for the promulgation by the EPA of the Total Maximum Daily Loadings (TMDLs) in the Phase II Storm Water Rules.

The second type of impact of post construction runoff can occur by increasing the quantity of water delivered to a water body during a storm event. For example, water is collected from impervious surfaces such as asphalt and concrete where large volumes of runoff are routed quickly to drainage systems that flow into a receiving water. This often results in stream bank scouring and down stream flooding leading to impacts on aquatic life and property damage.

Rationale Statement

The challenge for the IDOT is to examine planning activities, design practices and standards, and operation activities to determine which ones could be modified to reduce pollutants of concern in order to meet the intent of this control measure. In examining IDOT practices it must be kept in mind that IDOT is often limited by what can be accomplished due to budget and right-of-way constraints. The following BMP chart includes the BMPs that were selected in light of IDOT activities and the constraints mentioned above. The IDOT Bureau of Design and Environment and the Bureau of Operations will be responsible for coordinating the Post-Construction Measure. The IDOT Storm Water Coordinator will be responsible for the overall program.

VIII. Pollution Prevention / Good Housekeeping for Municipal Operations

The purpose of this Minimum Control measure is to have the MS4, in this case IDOT, work toward reducing the amount of pollution that comes from operational activities or collects on IDOT facilities. This measure requires that the IDOT review, and if necessary, modify their activities to ensure a reduction in the amount and type of pollution that collects on highways and interstates, right-of-way, streets, bridges, maintenance yards, and rest areas where this pollution may be discharged to receiving waters. This measure is also intended to reduce

pollutants from maintenance activities and poor maintenance of storm sewer systems

IDOT will review their programs and activities in the areas of spill prevention, deicing storage and use, storm sewer maintenance, recycling of materials, and discharges from maintenance facilities and interstate rest areas to ascertain where improvements need to be made.

Rationale Statement

IDOT has numerous (102) facilities which are used for storage of materials and by maintenance forces. IDOT's approach is to conduct environmental compliance audits for all IDOT facilities and then develop an overall plan to minimize the discharge of pollutants of concern. This will include developing BMPs with good housekeeping objectives. The IDOT Bureau of Design and Environment and the Bureau of Operations will be responsible in implementing this program. The IDOT Storm Water Coordinator will be responsible for management of the overall program.