GSWMD MCM-6: Municipal Operations Pollution Prevention and Good Housekeeping

1. DESCRIPTION OF PROGRAM

The Pollution Prevention/Good Housekeeping for municipal operations minimum control measure is a key element of the GSWMD storm water management program. The GSWMD will examine and alter their own actions as well as work with other governmental agencies to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

While this measure is meant primarily to improve or protect receiving water quality by altering municipal or facility operations, it also can result in a cost savings for the GSWMD, since proper and timely maintenance of storm sewer systems can help avoid repair costs from damage caused by age and neglect.

The GSWMD, recognizes the adverse effects improper municipal operations pollution prevention and good housekeeping can have on the receiving waters in Gary and plans to develop, implement, and enforce a municipal operations pollution prevention and good housekeeping program which includes the following:

- 1. The GSWMD will develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system.
- 2. The GSWMD, in the municipal operations pollution prevention and good housekeeping plan, will require employee training on incorporating pollution prevention/good housekeeping techniques into municipal operations such as park and open space maintenance, fleet and building maintenance, new construction and other land disturbances, and storm water system maintenance. To minimize duplication of effort and conserve resources, the GSWMD will use training materials that are available from NIRPC, EPA, IDEM, IDNR, NRCS, or other relevant organizations.

1.1 Operation and Maintenance (O&M) Program

Several governmental organizations have O&M programs that address storm water quality. These O&M programs are being reviewed in order to determine if they properly deal with storm water impacts. If the O&M programs fail to comply with the storm water quality measures then the organization will be told of corrective measures to be taken.

The GSWMD recognizes there must be maintenance of the storm water system including water quality BMPs. Existing O&M programs will be reviewed in order to determine if they properly deal with storm water impacts. If the O&M programs fail to comply with the storm water quality measures then changes will be made to the program. O&M guidelines are included in Appendix C and D of the Gary, Indiana Stormwater Technical Standards Manual.

1.2 Pollution Prevention and Good Housekeeping

Pollution prevention and good housekeeping is similar to the O&M Program. Standard operating procedures will be reviewed in order to determine if they properly deal with storm water impacts. If the procedures fail to comply with the storm water quality measures then corrective measures will be taken.

2. BMPS

2.1 Website

- 2.1.1 BMP Description The GSWMD will work with NIRPC to create and maintain a website with relevant storm water information.
- 2.1.2 Measurable Goals Create website and post information.
- 2.1.3 Possible Partners NIRPC.
- 2.1.4 Timetable / Schedule Beginning in 2005, the GSWMD will work with NIRPC to create and maintain a website with storm water information. This will be ongoing.
- 2.1.5 Specific Target Outreach / Target Constituents Residents, Construction Site Personnel.
- 2.1.6 Reduction Goal Percentage 100% Reduction of lack of GSWMD website.
- 2.1.7 Record Keeping Requirements Track the number of visitors to the website.
- 2.1.8 Environmental Benefits By having informed citizens, it increases the likelihood of their participation in the program.
- 2.1.9 Applicable MCMs This applies to MCMs 1, 2, 3, 4, 5, and 6.

2.2 <u>Citizen Watch Groups</u>

- 2.2.1 BMP Description The GSWMD will identify residents and ask that they join the Citizen Watch Groups, similar to a "Crime Stoppers Block Watch".
- 2.2.2 Measurable Goals Establish a Citizens Watch Group that meets on a regular basis.
- 2.2.3 Possible Partners Existing local community organizations.
- 2.2.4 Timetable / Schedule Beginning in 2005, the GSWMD will initiate this activity. This will be ongoing.
- 2.2.5 Specific Target Outreach / Target Constituents Residents.
- 2.2.6 Reduction Goal Percentage 100% reduction in the lack of a Citizen Watch Group.

- 2.2.7 Record Keeping Requirements The GSWMD will document the number of watch groups formed, frequency of meetings, and activities in which the watch groups have participated.
- 2.2.8 Environmental Benefits By having informed citizens, it increases the likelihood of active participation in the program.
- 2.2.9 Applicable MCMs This applies to MCMs 1, 2, 3, and 6.

2.3 Stormwater Management Ordinance of Gary, Indiana

- 2.3.1 BMP Description The GSWMD has created the City of Gary Stormwater Management Ordinance. This ordinance establishes the regulatory authority and complies with the updated Rule 13 and Rule 5 requirements.
- 2.3.2 Measurable Goals Adoption of The City of Gary Stormwater Management Ordinance.
- 2.3.3 Possible Partners None.
- 2.3.4 Timetable / Schedule The City of Gary Stormwater Management Ordinance will be adopted in 2005.
- 2.3.5 Specific Target Outreach / Target Constituents Residents, Visitors, Public Service Employees, Commercial Facilities, Industrial Facilities, Construction Site Personnel.
- 2.3.6 Reduction Goal Percentage 100% reduction of the lack of an illicit discharge and detection ordinance, construction site runoff control ordinance, and a post-construction runoff control ordinance.
- 2.3.7 Record Keeping Requirements The MS4 operator will retain a copy of the ordinance and the adoption date.
- 2.3.8 Environmental Benefits By establishing an ordinance, it allows the GSWMD to comply with the state regulations.
- 2.3.9 Applicable MCMs This applies to MCMs 3, 4, 5, and 6.

2.4 <u>Pollution Prevention Brochure</u>

- 2.4.1 BMP Description The GSWMD will partner with NIRPC and other agencies to distribute a residential pollution prevention brochure and a commercial pollution prevention brochure.
- 2.4.2 Measurable Goals The GSWMD will distribute a residential and commercial pollution prevention brochure.

- 2.4.3 Possible Partners NIRPC, IDEM, DNR, EPA, Lake County.
- 2.4.4 Timetable / Schedule Beginning in 2006, the GSWMD will partner with NIRPC and other agencies to distribute a residential and commercial pollution prevention brochure. This will be ongoing.
- 2.4.5 Specific Target Outreach / Target Constituents Residents, Commercial Facilities, Industrial Facilities.
- 2.4.6 Reduction Goal Percentage Not Applicable
- 2.4.7 Record Keeping Requirements The GSWMD will retain a copy of the brochure for their records. The GSWMD will record the number of brochures distributed.
- 2.4.8 Environmental Benefits By informing residents and commercial entities about pollution prevention and illicit discharges, the likelihood of pollution in the receiving streams will be reduced.
- 2.4.9 Applicable MCMs This applies to MCMs 1, 2, 3, and 6.

2.5 Stormwater Technical Standards Manual

- 2.5.1 BMP Description The GSWMD has created the City of Gary Stormwater Technical Standards Manual. This Manual includes principals and practices that comply with the updated Rule 13 and Rule 5 regulations.
- 2.5.2 Measurable Goals The City of Gary Stormwater Technical Standards Manual will be implemented for all development or redevelopment within the MS4 area that meets the land disturbance criteria.
- 2.5.3 Possible Partners GSWMD has worked with Lake County to establish these standards.
- 2.5.4 Timetable / Schedule Implementation of the standard will be ongoing. The standards will be adopted in 2005.
- 2.5.5 Specific Target Outreach / Target Constituents Residents, Public Service Employees, Commercial Facilities, Industrial Facilities, and Construction Site Personnel.
- 2.5.6 Reduction Goal Percentage Varies based on structural BMP installed.
- 2.5.7 Record Keeping Requirements The GSWMD operator will retain a copy of the current City of Gary Stormwater Technical Standards Manual.

- 2.5.8 Environmental Benefits Establishment of the Technical Standards will provide for compliance with the state regulations, and consistency among new stormwater facilities.
- 2.5.9 Applicable MCMs This BMP applies to 3, 4, 5 and 6.

2.6 Plan Review for SWPPP and Erosion and Sediment Control

- 2.6.1 BMP Description Plan Review for Storm Water Pollution Prevention (SWPP) and Erosion and Sediment Control will be incorporated into the current process. The plan reviewer will evaluate the plans per the City of Gary Stormwater Technical Standards Manual. A plan review checklist will be developed for the project site developer to use in the development of the SWPP and Erosion and Sediment Control Plans. The reviewer will use a Technical Review and Comment Form during SWPP and Erosion and Sediment Control Plan review. Comments on the SWPP and Erosion and Sediment Control Plans will be forwarded to the developer. Developer will make revisions based on the comments and submit revised SWPP and Erosion and Sediment Control Plans to the reviewer. This process will continue until an acceptable SWPP and Erosion and Sediment Control Plan is produced.
- 2.6.2 Measurable Goals All construction projects meeting the requirements of 327 IAC 15-5 (Rule 5) will be reviewed for SWPP and Erosion and Sediment Control measures. A plan review checklist for SWPP and Erosion and Sediment Control Plans will be made available to all developers.
- 2.6.3 Possible Partners Lake County Soil and Water Conservation District.
- 2.6.4 Timetable / Schedule The plan review process will be developed during 2005 and will be reviewed annually.
- 2.6.5 Specific Target Outreach / Target Constituents Public Service Employees, Construction Site Personnel.
- 2.6.6 Reduction Goal Percentage 100% reduction of applicable construction sites that do not have SWPP and Erosion and Sediment Control Plans.
- 2.6.7 Record Keeping Requirements GSWMD will record the number of permits issued by the MS4 each year and the number of hours dedicated to reviewing SWPP and Erosion and Sediment Control Plans.
- 2.6.8 Environmental Benefits By ensuring that construction sites have adequate plans in place prior to disturbing soil, it reduces the amount of sediment in the receiving streams.

2.6.9 Applicable MCMs - This applies to MCMs 4, 5, and 6.

2.7 <u>Erosion and Sediment Control Inspections</u>

- 2.7.1 BMP Description The MS4 will develop policies and procedures for erosion and sediment control inspections and assign responsibilities for inspections. Inspections will be coordinated through the GSWMD.
- 2.7.2 Measurable Goals All construction sites issued Rule 5 permits will be inspected by the MS4.
- 2.7.3 Possible Partners Inspections to be conducted by construction site inspectors and MS4 personnel or their representatives.
- 2.7.4 Timetable / Schedule Erosion and sediment control inspections of construction sites will begin once the City of Gary Stormwater Management Ordinance has been approved.
- 2.7.5 Specific Target Outreach / Target Constituents Public Service Employees, Construction Site Personnel.
- 2.7.6 Reduction Goal Percentage 100% reduction of applicable construction sites not being inspected.
- 2.7.7 Record Keeping Requirements The results of inspections and enforcement actions will be recorded on inspection sheets and included in the monthly reports and the annual report. Record the total number of construction sites inspected. Record the number of incidents of non-compliance or deficiencies identified through inspections. Document corrective actions taken by project site owners/contractors based upon site inspections. Maintain copies of inspection forms.
- 2.7.8 Environmental Benefits By inspecting construction sites, it ensures that sediment remains on site and not in the receiving streams.
- 2.7.9 Applicable MCMs This applies to MCM 4, 5, and 6.

2.8 <u>Enforcement of Erosion and Sediment Control Requirements</u>

- 2.8.1 BMP Description As required, the MS4 will take enforcement actions for noncompliance with the construction site runoff and erosion control program requirements. Enforcement actions will be as stated in the City of Gary Stormwater Management Ordinance.
- 2.8.2 Measurable Goals All enforcement actions will be recorded on inspection sheets, included in monthly reports to IDEM, and included in annual reports.

- 2.8.3 Possible Partners None.
- 2.8.4 Timetable / Schedule Policies and procedures for enforcement of erosion and sediment control requirements will be put into place once the City of Gary Stormwater Management Ordinance has been accepted and adopted.
- 2.8.5 Specific Target Outreach / Target Constituents Public Service Employees, Construction Site Personnel.
- 2.8.6 Reduction Goal Percentage 80% reduction of construction site non-compliance.
- 2.8.7 Record Keeping Requirements Record the number and type of enforcement actions taken. Record the results of the enforcement actions (project termination, correction of deficiencies, etc.).
- 2.8.8 Environmental Benefits By enforcing the City of Gary Stormwater Management Ordinance and the City of Gary Stormwater Technical Standards Manual, a reduction of the pollution in the receiving streams will be realized.
- 2.8.9 Applicable MCMs This applies to MCMs 4, 5, and 6.

2.9 <u>Erosion and Sediment Control Construction Plan Review for MS4 Projects</u>

- 2.9.1 BMP Description All applicable construction activities operated by the MS4, will be submitted to the Lake County Soil and Water Conservation District (SWCD) for review and approval. The post-construction plans will be reviewed for conformance with the City of Gary Stormwater Ordinance and the City of Gary Stormwater Technical Standards Manual.
- 2.9.2 Measurable Goals All construction plans for applicable MS4 projects will be reviewed by the Lake County Soil and Water Conservation District for post-construction erosion and sediment control.
- 2.9.3 Possible Partners Lake County Soil and Water Conservation District.
- 2.9.4 Timetable / Schedule All GWSMD plans are currently reviewed by the SWCD. This process will continue until one year following the acceptance of the City of Gary Stormwater Management Ordinance in 2005, if the DNR and MS4 agree that the MS4 is in compliance and able to review its own plans.
- 2.9.5 Specific Target Outreach / Target Constituents Public Service Employees, Construction Site Personnel.

- 2.9.6 Reduction Goal Percentage Not Applicable.
- 2.9.7 Record Keeping Requirements Notices of Intent will be sent to IDEM after plans are approved. Correspondence between the SWCD/DNR and the MS4 regarding plan review will be kept on file for evaluation.
- 2.9.8 Environmental Benefits By having Lake County Soil and Water Conservation District review MS4 operator's construction plans, it ensures that erosion controls are being applied appropriately.
- 2.9.9 Applicable MCMs This applies to MCMs 4, 5, and 6.

2.10 <u>Training of Plan Reviewer and Post-Construction Inspector</u>

- 2.10.1 BMP Description MS4 area personnel responsible for plan review; inspection, and enforcement of post construction BMPs will receive annual training addressing appropriate control measures, inspection protocol, and enforcement procedures.
- 2.10.2 Measurable Goals All MS4 reviewers and inspectors will receive training on an annual basis.
- 2.10.3 Possible Partners The GSWMD may work with the following organizations in order to provide training: NIRPC, IDEM, IDNR, IACT, and Lake County SWCD.
- 2.10.4 Timetable / Schedule Training will begin in 2005 and will be conducted at least annually.
- 2.10.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.10.6 Reduction Goal Percentage 100% of untrained plan reviewers and inspection staff will be trained.
- 2.10.7 Record Keeping Requirements Documentation includes sign-in sheets, meeting agendas, and training handouts for post-construction training sessions.
- 2.10.8 Environmental Benefits By ensuring that the plan reviewer and construction site inspector are trained, it reduces the likelihood of improper erosion controls.
- 2.10.9 Applicable MCMs This applies to MCMs 5 and 6.

2.11 Coordinate Training Efforts

- 2.11.1 BMP Description The GSWMD will work with NIRPC and other governmental and professional organizations to ensure that public service employees receive at least annual training in pollution prevention and good housekeeping techniques.
- 2.11.2 Measurable Goals All municipal employees will receive annual storm water pollution prevention and good housekeeping training.
- 2.11.3 Possible Partners The GSWMD may work with the following organizations in order to provide training: NIRPC, IDEM, IDNR, IACT, and Lake County SWCD.
- 2.11.4 Timetable / Schedule Training will begin in 2005 and will continue annually.
- 2.11.5 Specific Target Outreach / Target Constituents Public Service Employees, Commercial Facilities, Industrial Facilities.
- 2.11.6 Reduction Goal Percentage 100% of untrained personnel staff will be trained.
- 2.11.7 Record Keeping Requirements Retain copies of sign-in sheets, meeting agendas and training handouts.
- 2.11.8 Environmental Benefits By ensuring that the plan reviewer and construction site inspector are trained, it reduces the likelihood of improper erosion controls.
- 2.11.9 Applicable MCMs This applies to MCMs 4, 5, and 6.

2.12 Street Sweeping

- 2.12.1 BMP Description The GSWMD will create a street sweeping plan to ensure that the streets located in the GSWMD are swept 3 to 4 times per year. Material removed through sweeping operations will be disposed of at a landfill or other approved disposal site for potential reuse.
- 2.12.2 Measurable Goals Create the street sweeping plan. Sweep all streets 3 to 4 times per year.
- 2.12.3 Possible Partners None.
- 2.12.4 Timetable / Schedule The street sweeping plan will be initiated in 2005. The street sweeping program will be ongoing.

- 2.12.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.12.6 Reduction Goal Percentage 100 % reduction of unswept streets.
- 2.12.7 Record Keeping Requirements The GSWMD will retain a copy of the street sweeping plan. The GSWMD will also report the streets swept, time swept and amount of material collected and properly disposed. These items will be included in the annual report.
- 2.12.8 Environmental Benefits Sweeping streets reduces runoff debris, which would otherwise be deposited into the receiving streams.
- 2.12.9 Applicable MCMs This applies to MCM 6.

2.13 Roadside / Municipal Litter Management

- 2.13.1 BMP Description The GSWMD will remove litter from roadways, parks, and other municipal properties.
- 2.13.2 Measurable Goals Remove litter from roadways, parks and other municipal properties.
- 2.13.3 Possible Partners The GSWMD may work with environmental organizations, local scout troops, neighborhood organizations, etc. to create a public involvement opportunity such as an "Adopt a Street" program.
- 2.13.4 Timetable / Schedule The GSWMD will map litter pick-up areas and decide upon frequency in 2005. Litter pick-up will be ongoing.
- 2.13.5 Specific Target Outreach / Target Constituents Residents, Public Service Employees.
- 2.13.6 Reduction Goal Percentage This BMP will reduce the amount of litter on roadways, parks, and other municipal properties.
- 2.13.7 Record Keeping Requirements The GSWMD will maintain records for the dates of debris pick-up, the location of the debris pick-up and the estimated amount of debris picked up.
- 2.13.8 Environmental Benefits By properly disposing of debris from roadways, parks, and other municipal properties, it reduces the quantity of debris ending up in receiving streams.
- 2.13.9 Applicable MCMs This applies to MCMs 1, 2, and 6.

2.14 Pet Waste Clean Up

- 2.14.1 BMP Description The GWSMD will require that pet owners clean up after their pets.
- 2.14.2 Measurable Goals Enactment of an Ordinance requiring disposal of pet waste.
- 2.14.3 Possible Partners None.
- 2.14.4 Timetable / Schedule The GSWMD will enact an ordinance requiring owners to pick up after their pets in 2005.
- 2.14.5 Specific Target Outreach / Target Constituents Residents.
- 2.14.6 Reduction Goal Percentage 100% reduction of pet waste.
- 2.14.7 Record Keeping Requirements Keep a copy of the ordinance on file. Maintain copies of citations.
- 2.14.8 Environmental Benefits By removing the pet waste and properly disposing of it, it reduces the likelihood of pet waste ending up in the receiving streams.
- 2.14.9 Applicable MCMs This applies to MCMs 1, 2, and 6.

2.15 MS4 Entity Fleet Maintenance

- 2.15.1 BMP Description The GSWMD will ensure that fleet maintenance will occur at a location that has measures to protect against stormwater pollution.
- 2.15.2 Measurable Goals The GSWMD will verify that fleet maintenance locations have measures to protect against stormwater pollution.
- 2.15.3 Possible Partners None.
- 2.15.4 Timetable / Schedule Beginning in 2005, the GSWMD will ensure that fleet maintenance is performed at locations with measures to protect against stormwater pollution. This will be ongoing.
- 2.15.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.15.6 Reduction Goal Percentage 100% reduction of fleet maintenance performed without measures to protect against stormwater pollution.

- 2.15.7 Record Keeping Requirements The GSWMD will document the measures that have been taken at the fleet maintenance area or will require a certification form from private fleet maintenance areas. Documentation will be kept on file.
- 2.15.8 Environmental Benefits By making sure that the municipal fleet is maintained in an environmentally conscious way, it sets a good example and reduces the chances of automotive waste ending up in receiving streams.
- 2.15.9 Applicable MCMs This applies to MCM 6.

2.16 MS4 Entity Fleet and Equipment Washing

- 2.16.1 BMP Description The GSWMD will ensure that municipal fleet and equipment washing is performed in a facility that does not allow untreated wash water to reach the storm sewer. The GSWMD will distribute a short memo statement to staff educating them on the purpose of the facility and stating that the facility must be used for all municipal fleet and equipment washing.
- 2.16.2 Measurable Goals The GSWMD will verify that fleet and equipment washing areas have measures to protect against stormwater pollution.
- 2.16.3 Possible Partners None.
- 2.16.4 Timetable / Schedule Beginning in 2005, the GSWMD will ensure that fleet and equipment washing is performed at locations with measures to protect against stormwater pollution. The GSWMD will distribute a memo to all City employees describing the requirement. This will be ongoing.
- 2.16.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.16.6 Reduction Goal Percentage 100% reduction of fleet and equipment washing performed without measures to protect against stormwater pollution.
- 2.16.7 Record Keeping Requirements The GSWMD will record a copy of the memo distributed.
- 2.16.8 Environmental Benefits By ensuring that the debris from municipal fleet and equipment is properly disposed of it reduces the possibility of the debris ending up in the receiving streams.
- 2.16.9 Applicable MCMs This applies to MCM 6.

2.17 <u>Landscaping and Lawn Care</u>

- 2.17.1 BMP Description The majority of lawn owners are not aware of the phosphorus or nitrogen content of the fertilizer that they apply. The GSWMD will provide information about proper landscaping and lawn care.
- 2.17.2 Measurable Goals Educational web site links will be posted on the GSWMD website.
- 2.17.3 Possible Partners Lake County Extension Services, IDNR, IDEM.
- 2.17.4 Timetable / Schedule Beginning in 2006 the GSWMD will provide information about proper landscaping and lawn care. This will be ongoing.
- 2.17.5 Specific Target Outreach / Target Constituents Residents, Public Service Employees, Commercial Facilities, and Industrial Facilities.
- 2.17.6 Reduction Goal Percentage 100% reduction in the amount of lawn owners unaware of the problems with the improper application of lawn care chemicals.
- 2.17.7 Record Keeping Requirements The GSWMD will keep a copy of the information that was provided.
- 2.17.8 Environmental Benefits By reducing the amount of excess lawn care chemicals applied; it reduces the likelihood of those chemicals ending up in receiving streams.
- 2.17.9 Applicable MCMs This applies to MCMs 1, 2, and 6.

2.18 Storm Sewer Cleaning

- 2.18.1 BMP Description Storm Sewer Cleaning involves the removal of debris from sewers that can reduce sewer capacity and can be discharged to receiving streams. Storm sewers need to be cleaned regularly. The GSWMD will map the storm sewer system in conjunction with other MCMs. As the mapping progresses the GSWMD will institute a storm sewer-cleaning program.
- 2.18.2 Measurable Goals The GSWMD will create a storm sewer map and clean the storm sewers.
- 2.18.3 Possible Partners None.

- 2.18.4 Timetable / Schedule Beginning in 2005 as storm sewer mapping progresses, the GSWMD will institute a storm sewer cleaning program. This will be ongoing.
- 2.18.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.18.6 Reduction Goal Percentage 100% reduction of storm sewers that are not cleaned.
- 2.18.7 Record Keeping Requirements The GSWMD will record the storm sewers cleaned and the amount of debris collected.
- 2.18.8 Environmental Benefits By cleaning the storm sewers it reduces the amount of debris that ends up in the receiving streams.
- 2.18.9 Applicable MCMs This applies to MCM 6.

2.19 <u>Municipal Hazardous Material Storage</u>

- 2.19.1 BMP Description The GSWMD will ensure that any hazardous materials are stored and managed in a way to reduce possible pollution.
- 2.19.2 Measurable Goals Ensure that above ground storage tanks are equipped with secondary containment and that chemicals are stored and managed with appropriate containments. Conduct regular inspections and perform appropriate maintenance.
- 2.19.3 Possible Partners None.
- 2.19.4 Timetable / Schedule Beginning in 2005, inspect and maintain municipal hazardous material storage locations. This will be ongoing.
- 2.19.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.19.6 Reduction Goal Percentage 100% reduction of improperly stored hazardous materials.
- 2.19.7 Record Keeping Requirements The GSWMD will record the number and locations of sites inspected and actions taken.
- 2.19.8 Environmental Benefits By reducing the amount of municipal hazardous material improperly stored, it decreases the likelihood of these hazardous materials ending up in the receiving streams.
- 2.19.9 Applicable MCMs This applies to MCM 6.

2.20 Road Salt Storage

- 2.20.1 BMP Description The GSWMD has two designated road salt storage locations. One location utilizes a freestanding storage building. The other is an outdoor tarp covered location. This BMP also considers alternative types of deicing measures.
- 2.20.2 Measurable Goals Investigate alternate road deicing measures. Reduce the potential for road salt entering storm water through the use of grass covered snow disposal areas located away from the receiving waters.
- 2.20.3 Possible Partners Lake County Highway Department, INDOT.
- 2.20.4 Timetable / Schedule Beginning in 2005, the City of Gary will evaluate the need for road salt storage. This will be ongoing.
- 2.20.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.20.6 Reduction Goal Percentage Not Applicable.
- 2.20.7 Record Keeping Requirements The GSWMD will record the amount of road deicing material applied each season.
- 2.20.8 Environmental Benefits By reducing the improper application and wasted deicing material, it reduces the likelihood of the material running off into the receiving streams.
- 2.20.9 Applicable MCMs This applies to MCM 6.

2.21 Spill Prevention for Municipal Operations

- 2.21.1 BMP Description The GSWMD will ensure that there is a spill prevention plan in place for municipal operations.
- 2.21.2 Measurable Goals Ensure that spill kits are maintained in close proximity to municipal operations.
- 2.21.3 Possible Partners None.
- 2.21.4 Timetable / Schedule Beginning in 2005, spill prevention plans will be reviewed. This will be ongoing.
- 2.21.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.21.6 Reduction Goal Percentage 100% reduction in the number of locations without spill prevention kits.

- 2.21.7 Record Keeping Requirements Conduct regular inspection of municipal operations and document any deficiencies. Keep record of number and location of spill kits. Summarize information in annual reports.
- 2.21.8 Environmental Benefits By increasing the ability to properly clean up spills, it reduces the likelihood that the material will end up in the receiving streams.
- 2.21.9 Applicable MCMs This applies to MCM 6.

2.22 <u>Automotive Fluids Recycling</u>

- 2.22.1 BMP Description The GSWMD will recycle or properly dispose of automotive fluids. The GSWMD will also coordinate recycling opportunities for residents by providing locations that accept automotive fluids and other recyclable material.
- 2.22.2 Measurable Goals The MS4 will attempt to reduce the amount of automotive fluid from municipal areas and increase the amount of material to be recycled.
- 2.22.3 Possible Partners Local automotive centers, Lake County Solid Waste District.
- 2.22.4 Timetable / Schedule Recycling and waste disposal are ongoing programs.
- 2.22.5 Specific Target Outreach / Target Constituents Residents, Public Service Employees.
- 2.22.6 Reduction Goal Percentage 100% reduction in the amount of automotive fluids and waste materials being disposed of improperly.
- 2.22.7 Record Keeping Requirements Record the locations that accept recycling material and the type of material they accept.
- 2.22.8 Environmental Benefits By recycling and properly disposing of automotive fluid and waste material, it reduces the likelihood that it will end up in the receiving stream.
- 2.22.9 Applicable MCMs This applies to MCMs 1, 2, and 6.

2.23 Water Quality for Flood Control Projects

- 2.23.1 BMP Description New flood management projects within the GSWMD will address storm water quantity and evaluate the potential for addressing storm water quality. During the pre-construction phase for new projects, a determination will be made to see if a practice can be modified to address the reduction of pollutants associated with stormwater runoff or if additional BMPs can be designed into the watershed of the project to improve the water quality.
- 2.23.2 Measurable Goals Document that all new MS4 controlled flood management projects are evaluated for water quality impacts.
- 2.23.3 Possible Partners Consultants, IDNR, IDEM.
- 2.23.4 Timetable / Schedule The GSWMD is already implementing this BMP. This practice will continue indefinitely.
- 2.23.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.23.6 Reduction Goal Percentage This BMP will reduce the amount of flood management projects without water quality measures.
- 2.23.7 Record Keeping Requirements Include a description of flood management projects that have been evaluated for water quality in annual reports.
- 2.23.8 Environmental Benefits By ensuring that flood management projects are evaluated for water quality impacts it will reduce the likelihood that pollution will enter receiving streams.
- 2.23.9 Applicable MCMs This applies to MCMs 5 and 6.

2.24 Maintenance of Roadside Shoulders and Ditches

2.24.1 BMP Description - The GSWMD will perform roadside shoulder and ditch stabilization as required for areas that have become eroded or unvegetated. Stabilization BMPs include the placement of riprap in ditches that are eroded from high flows, re-establishing grass cover along roadside shoulders, the use of erosion control blanketing along eroded slopes, or other similar activities. Training shall be conducted for municipal employees to identify problem areas and learn appropriate stabilization techniques. Problem areas may be identified during mowing operations. For areas maintained by GSWMD, grass covered areas will be reseeded as needed to re-establish appropriate vegetation.

- 2.24.2 Measurable Goals Demonstrate an increase in linear feet of stabilized roadside shoulders or ditches. Demonstrate an increase in the total area re-vegetated.
- 2.24.3 Possible Partners None.
- 2.24.4 Timetable / Schedule Beginning in 2005, annual training will be conducted. Roadside shoulder and ditch maintenance are ongoing activities.
- 2.24.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.24.6 Reduction Goal Percentage 100% reduction of roadside shoulders and ditches that are not maintained.
- 2.24.7 Record Keeping Requirements Document the total shoulder area or length of ditch stabilized. Information to be included in the annual report.
- 2.24.8 Environmental Benefits By reducing roadside shoulders and ditch erosion, it reduces the amount of sediment in the receiving streams.
- 2.24.9 Applicable MCMs This applies to MCM 6.

2.25 Outfall Scouring Repair

- 2.25.1 BMP Description The MS4 will conduct dry weather inspections at all storm sewer outfalls. Outfalls will be evaluated for erosion scouring conditions during outfall inspections. Erosion and scouring around the outfalls will be repaired as determined by the MS4 entity.
- 2.25.2 Measurable Goals Demonstrate maintenance on or an increase in number of storm water outfall areas remediated due to erosion and scouring conditions. All outfalls will be inspected annually for erosion and scouring conditions. Outfalls with scouring will be repaired with riprap or other measures as required.
- 2.25.3 Possible Partners Lake County, IDEM, U.S. Army Corps of Engineers.
- 2.25.4 Timetable / Schedule Beginning in 2005, inspect outfalls annually and repair as needed.
- 2.25.5 Specific Target Outreach / Target Constituents Public Service Employees

- 2.25.6 Reduction Goal Percentage 100% reduction in the amount of scoured soils that may be transported in a watercourse.
- 2.25.7 Record Keeping Requirements Outfall inspection reports and repairs will be recorded and kept on file.
- 2.25.8 Environmental Benefits By repairing outfall scouring, it reduces the likelihood of sediment ending up in receiving streams.
- 2.25.9 Applicable MCMs This applies to MCM 6.

2.26 <u>Snow Disposal Areas</u>

- 2.26.1 BMP Description The GSWMD designates snow disposal areas on public properties on an as needed basis. The GSWMD is considering designating specific areas to be utilized when snowfall accumulation is excessive.
- 2.26.2 Measurable Goals Ensure that snow is deposited in the designated locations and not placed on an impervious surface. Incorporate into annual training sessions.
- 2.26.3 Possible Partners None.
- 2.26.4 Timetable / Schedule Identify all potential snow disposal site areas in 2005. Use the snow disposal area as needed during heavy snowfall.
- 2.26.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.26.6 Reduction Goal Percentage 100% reduction of the lack of designated snow disposal areas.
- 2.26.7 Record Keeping Requirements The GSWMD will maintain a map showing the location of the snow disposal areas.
- 2.26.8 Environmental Benefits By placing excess snow in a designated snow disposal area it reduces the likelihood of road debris ending up in receiving streams.
- 2.26.9 Applicable MCMs This applies to MCM 6.

2.27 Catch Basin Cleaning

2.27.1 BMP Description - Catch basins within the MS4 area will be cleaned with a Vac-Truck. Material removed from catch basins will be disposed of properly.

- 2.27.2 Measurable Goals Demonstrate an increase in the amount of debris collected from catch basin cleaning. All catch basins will be cleaned as needed and at least once during the permit term.
- 2.27.3 Possible Partners None.
- 2.27.4 Timetable / Schedule Beginning in 2005, cleaning will be performed on a periodic basis.
- 2.27.5 Specific Target Outreach / Target Constituents Public Service Employees.
- 2.27.6 Reduction Goal Percentage 100% reduction of catch basins that are not cleaned.
- 2.27.7 Record Keeping Requirements Vac-Truck operators will record the total amount of material removed from catch basins. Yearly totals will be recorded in the annual reports.
- 2.27.8 Environmental Benefits By cleaning the storm sewers it reduces the amount of debris that ends up in the receiving streams.
- 2.27.9 Applicable MCMs This applies to MCM 6.

2.28 Canine Parks

- 2.28.1 BMP Description There are no known canine parks located within the MS4. Additionally, the MS4 has no plans to develop canine parks.
- 2.28.2 Measurable Goals No canine parks will be located within 150 feet of a receiving stream.
- 2.28.3 Possible Partners None.
- 2.28.4 Timetable / Schedule Canine Parks will be regulated by the City of Gary Stormwater Management Ordinance to be enacted in 2005.
- 2.28.5 Specific Target Outreach / Target Constituents None.
- 2.28.6 Reduction Goal Percentage Not Applicable.
- 2.28.7 Record Keeping Requirements Any information regarding new canine parks in the MS4 will be included in annual reports.
- 2.28.8 Environmental Benefits By locating canine parks away from receiving streams, it reduces the likelihood that pet waste will enter receiving streams.
- 2.28.9 Applicable MCMs This applies to MCM 6.

3. PROGRAMMATIC INDICATORS TRACKING

- 3.1.1 Required Programmatic Indicators
 - (1) Estimated or actual linear feet or percentage and location of MS4 conveyances cleaned or repaired.
 - (2) Estimated or actual linear feet or percentage and location of roadside shoulders and ditches stabilized, if applicable.
 - (3) Number and location of storm water outfall areas re-mediated from scouring conditions, if applicable.
 - (4) Number and location of deicing salt and sand storage areas covered or otherwise improved to minimize storm water exposure.
 - (5) Estimated or actual amount, in tons, of salt and sand used for snow and ice control.
 - (6) Estimated or actual amount of material by weight collected from catch basin, trash rack, or other structural BMP cleaning.
 - (7) Estimated or actual amount of material by weight collected from street sweeping, if utilized.
 - (8) If applicable, number or percentage and location of canine parks sited at least one hundred fifty (150) feet away from a surface waterbody.
- 3.1.2 MS4 Entity Initiated Programmatic Indicator Any information regarding new canine parks in the MS4 will be included in annual reports.

4. SUMMARY SHEETS

Forms

Additional Information

5. REFERENCE MATERIALS

TABLE 10.4 MCM-6: MUNICIPAL OPERATIONS POLLUTION PREVENTION AND GOOD HOUSEKEEPING SUMMARY OF MEASURABLE GOALS

BMP	MEASURABLE GOAL	SCHEDULE	RECORD KEEPING REQUIREMENTS	ENVIRONMENTAL BENEFIT
1. Website	Create website and post information.	Beginning in 2005, the GSWMD will create and maintain a website with stormwater information. This will be ongoing.	Track the number of visitors to the website.	By having informed citizens, it increases the likelihood of their participation in the program.
2. Citizen Watch Groups	Establish a Citizen Watch Group that meets on a regular basis.	Beginning in 2005 the GWSMD will initiate a Citizen Watch Group. This will be ongoing.	The GWSMD will document the number of groups formed, frequency of meetings, and activities in which the groups have participated.	By having informed citizens, it increases the likelihood of their participation in the program.
3. The City of Gary Stormwater Management Ordinance. This ordinance establishes regulatory authority and complies with the updated Rule 13 and Rule 5 requirements.	Adoption and enactment of the City of Gary Stormwater Management Ordinance.	The City of Gary Stormwater Management Ordinance will be adopted in 2005.	The MS4 operator will retain a copy of the ordinance and the adoption date.	By establishing an ordinance, it allows the City to comply with the state regulations.

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4. Pollution	The GWSMD	Beginning in 2006,	The GSWMD will	By informing
Prevention	will distribute a	the GWSMD will	retain a copy of the	residents and
Brochure	residential and	partner with	brochure for their	commercial
	commercial	NIRPC, and other	records. The	entities about
	pollution	agencies to	GWSMD will	pollution
	prevention	distribute a	record the number	prevention and
	brochure.	residential and	of brochures	illicit discharges,
		commercial	distributed.	the likelihood of
		pollution		pollution in the
		prevention		receiving streams
		brochure. This		will be reduced.
		will be ongoing.		
5. Stormwater	The City of	Implementation of	The GSWMD	Establishment of
Technical	Gary	the standard will	operator will retain	the Technical
Standards	Stormwater	be ongoing. The	a copy of the	Standards will
Manual	Technical	standards will be	current City of	provide for
	Standards	adopted in 2005.	Gary Stormwater	compliance with
	Manual will be		Technical	the state
	implemented for		Standards Manual.	regulations, and
	all development			consistency among
	or			new stormwater
	redevelopment			facilities.
	within the MS4			
	area that meets			
	the land			
	disturbance			
	criteria.			

6. Plan Review	All construction	The plan review	GSWMD will	By ensuring that
for SWPPP and	projects meeting	process will be	record the number	construction sites
Erosion and	the	developed during	of permits issued	have adequate
Sediment	requirements of	2005 and will be	by the MS4 each	plans in place
Control	327 IAC 15-5	reviewed annually.	year and the	prior to disturbing
	(Rule 5) will be		number of hours	soil, it reduces the
	reviewed for		dedicated to	amount of
	SWPP and		reviewing SWPP	sediment in the
	Erosion and		and Erosion and	receiving streams.
	Sediment		Sediment Control	
	Control		Plans.	
	measures. A			
	plan review			
	checklist for			
	SWPP and			
	Erosion and			
	Sediment			
	Control Plans			
	will be made			
	available to all			
	developers.			

7. Erosion and Sediment Control Inspections	All construction sites issued Rule 5 permits will be inspected by the MS4.	Erosion and sediment control inspections of construction sites will begin upon enactment of the City of Gary Stormwater Management Ordinance.	The results of inspections and enforcement actions will be recorded on inspection sheets and included in the monthly reports and the annual report. Record the	By inspecting construction sites, it ensures that sediment remains on site and not in the receiving streams.
			total number of construction sites inspected. Record the number of incidents of noncompliance or deficiencies identified through inspections. Document	
8. Enforcement	All enforcement	Policies and	corrective actions taken by project site owners/contractors based upon site inspections. Maintain copies of inspection forms. Record the number	Dy anforcing the
of Erosion and Sediment Control Requirements	actions will be recorded on inspection sheets, included in monthly reports to IDEM, and included in annual reports.	procedures and procedures for enforcement of erosion and sediment control requirements will be enacted once the City of Gary Stormwater Management Ordinance has been accepted and adopted.	and type of enforcement actions taken. Record the results of the enforcement actions (project termination, correction of deficiencies, etc.)	By enforcing the City of Gary Stormwater Management Ordinance and the City of Gary Stormwater Technical Standards Manual, a reduction of pollution in the receiving streams will be realized.

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9. Erosion and Sediment Control Construction Plan Review for MS4 Projects	All construction plans for applicable MS4 projects will be reviewed by the Lake County Soil and Water Conservation District for post-construction erosion and sediment control.	All GSWMD plans are currently reviewed by the SWCD. This process will continue until one year following the acceptance of the City of Gary Stormwater Management Ordinance in 2005, if the DNR and MS4 agree that the MS4 is in compliance and able to review its own plans.	Notices of Intent will be sent to IDEM after plans are approved. Correspondence between the SWCD/DNR and the MS4 regarding plan review will be kept on file for evaluation	By having Lake County Soil and Water Conservation District review MS4 operator's construction plans, it ensures that erosion controls are being applied appropriately.
10. Training of Plan Reviewer and Post- Construction Inspector	All MS4 reviewers and inspectors will receive training on an annual basis.	Training will begin in 2005 and will be conducted at least annually.	Documentation includes sign-in sheets, meeting agendas, and training handouts for post-construction training sessions.	By ensuring that the plan reviewer and construction site inspector are trained, it reduces the likelihood of improper erosion controls.
Water Quality for Flood Control Projects	Document that all new MS4 controlled flood management projects are evaluated for water quality impacts.	The City of Gary is already implementing this BMP. This practice will continue indefinitely.	Include a description of flood management projects that have been evaluated for water quality in annual reports.	By ensuring that flood management projects are evaluated for water quality impacts it will reduce the likelihood that pollution will enter receiving streams.
Coordinate Training Efforts	All municipal employees will receive annual storm water pollution prevention and good housekeeping training.	Training will begin in 2005 and will continue annually.	Retain copies of sign-in sheets, meeting agendas and training handouts.	By ensuring that the plan reviewer and construction site inspector are trained, it reduces the likelihood of improper erosion controls.

Street Sweeping	Create the street sweeping plan. Sweep all streets 3 to 4 times per year.	The street sweeping plan will be initiated in 2005. The street sweeping program will be ongoing.	The City of Gary will retain a copy of the street sweeping plan. The City will also report the streets swept, time swept and amount of material collected and properly disposed. These items will be included in the annual report.	Sweeping streets reduces the runoff debris, which would otherwise be deposited into the receiving streams.
Roadside / Municipal Litter Management	Remove litter from roadways, parks and other municipal properties.	The City of Gary will map litter pick-up areas and decide upon frequency in 2005. Litter pick-up will be ongoing.	The City of Gary will maintain records for the dates of debris pick-up, the location of the debris pick-up and the estimated amount of debris picked-up.	By properly disposing of debris from roadways, parks, and other municipal properties, it reduces the quantity of debris ending up in receiving streams.
Pet Waste Clean-up	The City of Gary will enact an ordinance requiring residents to pick up after their pets.	The City of Gary will enact an ordinance requiring owners to pick up after their pets in 2005.	Keep a copy of the ordinance on file. Maintain copies of citations.	By removing the pet waste and properly disposing of it, it reduces the likelihood of pet waste ending up in the receiving streams.
MS4 Entity Fleet Maintenance	The City of Gary will verify that fleet maintenance locations have measures to protect against stormwater pollution.	Beginning in 2005, the City of Gary will ensure that fleet maintenance is performed at locations with measures to protect against stormwater pollution. This will be ongoing.	The City will document the measures that have been taken at the fleet maintenance area or will require a certification form from private fleet maintenance areas. Documentation will be kept on file.	By making sure that the municipal fleet is maintained in an environmentally conscious way, it sets a good example and reduces the chances of automotive waste ending up in receiving streams.

MS4 Entity Fleet and Equipment Washing	The City of Gary will verify that fleet and equipment washing areas have measures to protect against stormwater pollution.	Beginning in 2005, the City of Gary will ensure that fleet and equipment washing is performed at locations with measures to protect against stormwater pollution. The City will distribute a memo to all City employees describing the requirement. This	The City of Gary will record a copy of the memo distributed.	By ensuring that the debris from municipal fleet and equipment is properly disposed of it reduces the possibility of the debris ending up in the receiving streams.
Landscaping and Lawn Care	Educational web site links will be posted on the City website.	will be ongoing. Beginning in 2006 the City of Gary will provide information about proper landscaping and lawn care. This will be ongoing.	The City of Gary will keep a copy of the information that was provided.	By reducing the amount of excess lawn care chemicals applied; it reduces the likelihood of those chemicals ending up in receiving streams.
Storm Sewer Cleaning	The City of Gary will create a storm sewer map and clean the storm sewers.	Beginning in 2005 as storm sewer mapping progresses, the City of Gary will institute a storm sewer-cleaning program. This will be ongoing.	The City of Gary will record the storm sewers cleaned and the amount of debris collected.	By cleaning the storm sewers it reduces the amount of debris that ends up in the receiving streams.

Municipal Hazardous Material Storage	Ensure that above ground storage tanks are equipped with secondary containment and that chemicals are stored and managed with appropriate containments. Conduct regular inspections and perform appropriate maintenance.	Beginning in 2005 inspect and maintain municipal hazardous material storage locations. This will be ongoing.	The City of Gary will record the number and locations of sites inspected and actions taken.	By reducing the amount of municipal hazardous material improperly stored, it decreases the likelihood of these hazardous materials ending up in the receiving streams.
Road Salt Storage	Investigate alternate road deicing measures. Reduce the potential for road salt entering storm water through the use of grass covered snow disposal areas located away from the receiving waters.	Beginning in 2005, the City of Gary will evaluate the need for road salt storage. This will be ongoing.	The City of Gary will review the applicability of a salt storage area. The City of Gary will record the amount of road deicing material.	By reducing the improper application and wasted deicing material, it reduces the likelihood of the material running off into the receiving streams.
Spill Prevention for Municipal Operations	Ensure that spill kits are maintained in close proximity to municipal operations.	Beginning in 2005, ongoing spill prevention plans will be reviewed. This will be an ongoing program.	Conduct regular inspection of municipal operations and document any deficiencies. Keep record of number and location of spill kits. Summarize information in annual reports.	By increasing the ability to properly clean up spills, it reduces the likelihood that the material will end up in the receiving streams.

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Automotive Fluids	The MS4 will	Recycling and	Record the locations that	By recycling and
	attempt to	waste disposal are		properly disposing of automotive
Recycling	reduce the	ongoing programs.	accept recycling	
	amount of		material and the	fluid and waste
	automotive fluid		type of material	material, it reduces
	from municipal		they accept.	the likelihood that
	areas and			it will end up in
	increase the			the receiving
	amount of			stream.
	material to be			
	recycled.			
Maintenance of	Demonstrate an	Beginning in 2005,	Document the total	By reducing
Roadside	increase in	annual training will	shoulder area or	roadside shoulders
Shoulders and	linear feet of	be conducted.	length of ditch	and ditch erosion,
Ditches	stabilized	Roadside shoulder	stabilized.	it reduces the
	roadside	and ditch	Information to be	amount of
	shoulders or	maintenance are	included in the	sediment in the
	ditches.	ongoing activities.	annual report.	receiving streams.
			_	
	Demonstrate an			
	increase in the			
	total area			
	revegetated.			
Outfall	Demonstrate	Beginning in 2005,	Outfall inspection	By repairing
Scouring	maintenance on	inspect outfalls	reports and repairs	outfall scouring, it
Repair	or an increase in	annually and repair	will be recorded	reduces the
	number of	as needed.	and kept on file.	likelihood of
	storm water		r · · · · · · · · · · · · · ·	sediment ending
	outfall areas			up in receiving
	remediated due			streams.
	to erosion and			Streams.
	scouring			
	conditions. All			
	outfalls will be			
	inspected			
	annually for			
	erosion and			
	scouring			
	conditions.			
	Outfalls with			
	scouring will be			
	_			
	repaired with			
	riprap or other			
	measures as			
	required.			

Snow Disposal Areas	Ensure that snow is only deposited in the designated location and not placed on an impervious surface. Incorporate into annual training sessions.	Designate the snow disposal area in 2005. Use the snow disposal area as needed during heavy snowfall.	The City will maintain a map showing the location of the snow disposal areas.	By placing excess snow in a designated snow disposal area it reduces the likelihood of road debris ending up in receiving streams.
Catch Basin Cleaning	Demonstrate an increase in the amount of debris collected from catch basin cleaning. All catch basins will be cleaned as needed and at least once during the permit term.	Beginning in 2005, cleaning will be performed on a periodic basis.	Vac-Truck operators will record the total amount of material removed from catch basins. Yearly totals will be recorded in the annual reports.	By cleaning the storm sewers it reduces the amount of debris that ends up in the receiving streams.
Canine Parks	No canine parks will be located within 150 feet of a receiving stream.	Stormwater Management Ordinance of Gary, Indiana to be passed in 2005, will regulate Canine Parks.	Any information regarding new canine parks in the MS4 will be included in annual reports.	By locating canine parks away from receiving streams, it reduces the likelihood that pet waste will enter receiving streams.