

**CITY OF WALKER
STORM WATER POLLUTION
PREVENTION INITIATIVE**

**PREPARED FOR:
CITY OF WALKER, MICHIGAN**

**APRIL 2006
PROJECT NO. F99511I**

REVIEW DRAFT

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LOWER GRAND RIVER WATERSHED STORM WATER POLLUTION PREVENTION INITIATIVE

CITY OF WALKER

This Storm Water Pollution Prevention Initiative (SWPPI) was developed pursuant to the Michigan Department of Environmental Quality (MDEQ) Wastewater Discharge General Permit (MIG619000) for storm water discharges from Municipal Separate Storm Sewer Systems subject to watershed plan requirements. The program will reduce the discharge of pollutants from the drainage system to the maximum extent practicable. It is consistent with the Lower Grand River Watershed Management Plan (WMP) developed and submitted to the MDEQ pursuant to Part I.B.1. of the permit. This SWPPI includes commitments for those actions expected to be implemented over the term of the permit and identifies methods for determining the effectiveness of the actions to be implemented. Implementation of the actions will commence upon approval of this document by the MDEQ.

This SWPPI includes actions required in the WMP with dates specified. It includes evaluation and implementation of appropriate pollution prevention and good housekeeping activities and the associated training and inspection programs for staff and contractors employed by this jurisdiction. It is a commitment to develop, implement, and enforce a comprehensive storm water management program for post-construction controls for areas of new development and significant redevelopment. For each of the actions or best management practices (BMPs), there is an associated method for assessing progress in storm water pollution prevention.

This submittal is due on April 1, 2006, in accordance with the Certificate of Coverage issued by the MDEQ.

THE LOWER GRAND RIVER WMP SUMMARY

The Lower Grand River WMP is a broad, reference-oriented document that builds upon and elevates existing water quality improvement efforts in the Grand River Watershed (Watershed). The members of the Grand River Forum (Forum) recognized that the plan should take a holistic, ecosystem approach, and provide a vision and broad strategic plan for the entire Watershed under which to operate. The Vision Committee created the following Vision and Mission Statement for the Watershed:

Lower Grand River Watershed (LGRW) Vision: Connecting water with life: swimming, drinking, fishing, and enjoying all the waters of our Grand River Watershed.

LGRW Mission Statement: “Discover and value all water resources and celebrate our shared water legacy throughout our entire Grand River Watershed community.”

The Grand River's headwaters begin in southern Jackson County and flow northwest across 260 miles to its confluence with Lake Michigan, making it the longest river located entirely in Michigan. The Lower Grand River WMP studies the portion of the Watershed below the Looking Glass River confluence, near the City of Portland. The LGRW has a drainage area of 2,909 square miles and encompasses large portions of Ottawa, Muskegon, Kent, Montcalm, Ionia, Barry, and Eaton Counties. Counties with very small portions of the LGRW include: Newaygo, Allegan, and Mecosta Counties. The LGRW contains two urban areas: the Grand Rapids Metropolitan area and the Muskegon metropolitan area, which includes the Grand Haven, Tri-cities areas. Three major tributaries flow into the Grand River: the Thornapple River, the Flat River, and the Rogue River. Most of the Watershed is covered by residences, urban centers, forests, and agriculture.

Past studies of the LGRW suggest that water quality within the Watershed is impacted by pollutants, originating from past and present agricultural, industrial, private, and municipal activities. Both point and nonpoint sources (NPS) of pollution impact water quality within the Watershed. NPS pollution contributes sediment, nutrients (such as nitrogen and phosphorus), and bacterial pathogens (such as *Escherichia coli* [*E. coli*]) to surface water. Sediment becomes suspended in surface water due to stream bank erosion, runoff from agricultural fields, construction sites, and storm water runoff. Pathogens enter surface water from septic systems, concentrated wildlife, farm animals, and pets. In addition, lawn and agricultural fertilizers contribute nutrients to surface water.

The MDEQ has identified 36 waterbodies within the LGRW that require total maximum daily load (TMDL) studies. Pollutants of concerns in these waterbodies include: polychlorinated biphenyls, mercury, sediment, nutrients, pathogens (*E. coli*), low dissolved oxygen, and untreated sewer discharges resulting in poor fish and macroinvertebrate communities and fish kills. MDEQ biological surveys have reported that the observed urbanization of the Watershed, with increased impervious surfaces, is accelerating sedimentation and flow fluctuations from storm water runoff, which causes impairments to its streams. NPS pollution from agricultural sources was cited as a source of nutrients and possibly pathogens in the Watershed.

WMP GOALS AND OBJECTIVES

Many of the water quality concerns of the LGRW are reflected in the Lake Michigan Lakewide Management Plan (LaMP), including NPS pollution, high bacteria counts at beaches, fragmentation of wildlife habitats, and invasive species. The recommendations described in the LaMP were reviewed for their applicability to the LGRW goals. Goals for the existing WMPs already developed within the LGRW were also evaluated to recognize any unique conditions that needed to be addressed. The goals developed for the Upper Grand River Watershed were assessed to ensure that conflicting recommendations would not be made. The goals of the Watershed were determined after discussing the sources and causes of the impairments in the LGRW and coordinating with these other studies and

reports. The following overall goals are based on improving or restoring the designated uses of the Watershed and attaining compliance with established TMDLs:

- Restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes basin ecosystem by enhancing river environments in their natural states for present and future generations.
- Maintain and improve water quality by promoting sound land management decisions.
- Assess relationships between water quality and storm water runoff by developing guidelines for storm water management to reduce impacts of urbanization.
- Preserve and restore, coldwater fisheries, and reintroduce indigenous game fish species where possible.
- Provide for flood protection, minimize risk of flooding, and assess necessity of flood control improvements.
- Ensure public safety in recreational opportunities in surface waters.
- Protect healthy habitats for native aquatic life and wildlife.

Desired uses of the Watershed reflect how the community wants to use the Watershed and what activities should be promoted within the Watershed. The ideas discussed by the Steering Committee, the Forum members, and local officials resulted in five categories: Recreational use, planning and development, wildlife habitat, educational opportunity, and water consumption.

Critical areas of the LGRW were identified as those areas having specific NPS pollution concerns that need to be addressed with appropriate BMPs. Specific goals and objectives were associated with each critical area. The objectives required to meet the specific goals are based on addressing the identified causes of the sources of NPS pollution in the LGRW.

WMP RECOMMENDATIONS

The Steering Committee administered the development of specific goals and objectives for each impairment to the designated uses, and gave the directive to attain compliance with established TMDLs and develop recommendations for action. BMP recommendations were based on the underlying cause of the source of the impairment. The recommendations include: Structural and vegetative BMPs, management and policy BMPs, and informational and educational activities.

The Urban, Rural, and Technical Subcommittees identified what structural and vegetative BMPs could be used to reduce potential sources of pollutants from both urban and rural areas in the Watershed. The Subcommittees then developed a spreadsheet that listed the structural and vegetative BMPs, and their characteristics that are currently being used or considered to address the pollutants. The structural and vegetative BMPs were categorized into practices of pretreatment, detention/retention, vegetated treatment, infiltration, filtration, and agricultural. A similar spreadsheet was developed for managerial BMPs. The managerial BMPs were categorized into practices of agricultural, zoning ordinance/land use policies, recycling/composting, turf management, operations and maintenance, and municipal operations. The Information and Education (I&E) strategy was developed with assistance from the I&E Subcommittee and outlines the activities and products needed to successfully maintain and improve water quality. The strategy provides 1) an outline of the developmental process for the planning phase, 2) a brief overview of the public participation during the planning phase, 3) an outline of the planning phase I&E strategy, and 4) an I&E strategy for the implementation phase of the project.

ACTIONS REQUIRED TO IMPLEMENT THE WMP GOALS AND OBJECTIVES

See TABLE I

One purpose of the SWPPI is to detail the specific actions or BMPs the community has determined will be implemented to meet the goals and objectives of the WMP. The goals and objectives of the WMP are listed in Table I, and are taken directly from the WMP Table 3.9 then sorted by objective. The left column identifies the critical areas of the Watershed that pertains to the objective. The next column lists the pollutant impairing the designated use. The third column contains the specific goals to be achieved through implementation of the WMP. The fourth column lists the objectives that can be accomplished through practicing best management techniques. The right column contains the abbreviation of the BMPs that work toward the objectives that the City of Walker commits to implementing. These BMPs or SWPPI commitments are described in Table IV along with a timeline and evaluation method.

The actions identified in the WMP do not have precise timelines and specific detail. However, this information needs to be included in the SWPPI. According to the MDEQ guidance, "If a commitment to an action was made by the permittee in the WMP, but not included in the SWPPI, an explanation of why the action was not included, along with an alternative action (if appropriate), should be in the SWPPI. Similarly, if the permittee determines that objectives in the WMP are not applicable in their jurisdiction, an explanation should be provided in the SWPPI if not previously provided in the WMP." Therefore all of the WMP objectives are listed with a specific commitment to implement one or more BMPs to help accomplish that objective. Alternatively, if the objective does not apply to the storm water program or to the City of Walker, an explanation is provided.

ACTIONS REQUIRED FOR POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

See TABLE II

Another purpose of the SWPPI is to detail the specific actions the community has determined will be implemented to prevent pollution through good housekeeping for municipal operations. Municipalities commonly have properties and infrastructure that can contribute pollutants to storm water during routine operation and maintenance. The MDEQ guidance asserts that, "Training and inspection procedures for staff and contractors employed by the permittee are required." Five specific areas are identified as needing to be addressed by the SWPPI:

1. Maintenance activities (both preventative and corrective), maintenance schedules, and inspection procedures for storm water structural controls (owned by the permittee),
2. Controls used for reducing or eliminating the discharges of water and pollutants from: streets, roads, and highways; parking lots; maintenance garages; and storage yards,
3. Procedures for the disposal of operation and maintenance waste from the separate storm water drainage system,
4. Procedures to ensure that flood management control projects assess impacts on water quality of the receiving waters, and
5. Implement controls to reduce discharge of pesticides, herbicides, and fertilizers (on permittee owned property).

Each of these activities must be included in the SWPPI or a statement needs to be provided to explain why they do not apply. These activities or objectives are listed in the left column of Table II. Abbreviations for the BMPs to work towards meeting these objectives are listed in the right column. These BMPs or SWPPI commitments are described in Table IV along with a timeline and evaluation method.

ACTIONS REQUIRED TO DEVELOP, IMPLEMENT, AND ENFORCE A COMPREHENSIVE STORM WATER MANAGEMENT PROGRAM FOR POST-CONSTRUCTION CONTROLS FOR AREAS OF NEW DEVELOPMENT AND SIGNIFICANT REDEVELOPMENT

See TABLE III

A third purpose of the SWPPI is to detail the development, implementation, and enforcement of a comprehensive Storm Water Management Program for post-construction controls for areas of new development and significant redevelopment. The goal of the Storm Water Management Program is to protect the designated uses in the receiving water from common impacts of urbanization. These impacts include:

- Flashiness associated with higher peak stream flows from wet weather events and reduced base flows during droughts
- Reduced streambank vegetation
- Falling trees
- Increased streambank erosion and slumping
- Degraded aquatic habitats and fish communities
- Loss of pools and riffles due to sedimentation
- Channel down-cutting and widening
- Increased pollutant loads, stream temperatures, and nutrients

Three requirements or objectives must be included in a Storm Water Management Program, as follows:

- A. Evaluation and implementation of site-appropriate, cost-effective structural and nonstructural BMPs,
- B. BMPs sufficient to effectively prevent or minimize post-construction impacts on water quality, and
- C. Requirements for long-term operation and maintenance of the post-construction controls.

Each of these activities must be included in the SWPPI. These activities or objectives are listed in the left column of Table III. Abbreviations for the BMPs to work towards meeting these objectives are listed in the right column. These BMPs or SWPPI commitments are described in Table IV along with a timeline and evaluation method. This SWPPI and the commitments listed in Table IV constitute the Storm Water Management Program.

METHODS OF ASSESSING PROGRESS IN STORM WATER POLLUTION PREVENTION

See TABLE IV

The BMP abbreviations from Tables I, II, and III are detailed in Table IV along with associated timelines and short-term evaluation methods. These methods are intended to indicate whether or not the commitments were kept. Many of the evaluations methods are narrative statements to describe the actions actually taken during the period between annual reports. The effect these actions have on protecting the environment from storm water pollution is much more difficult to measure or describe. Any one jurisdiction within the LGRW is not well suited to engage in environmental monitoring sufficient to determine the success of the overall storm water program. Only by working together as a watershed unit,

can environmental measures be used to gauge success of the program. Even then, many non-storm water influences can skew environmental measures.

LIST OF LONG-TERM EVALUATION METHODS

Communities in the Lower Grand River Watershed have agreed to investigate opportunities to address long-term environmental measures in a single, integrated environmental monitoring program. This program will involve a number of different types of monitoring geographically distributed around the Watershed. Implementation of the program will be a combination of professional services, MDEQ monitoring, volunteer monitoring, and municipal monitoring. The details of the program will be developed over the next 6 to 9 months through an open process of engagement between the jurisdictions, non-profit organizations, Grand Valley Metropolitan Council (GVMC), interested citizens, school districts, and the MDEQ. Recognizing that most governmental budgets are very tight due to the loss of revenue sharing and other issues, it is necessary that the resulting monitoring program provide the most meaningful information at the least cost. Active participation by the MDEQ in this process is necessary to accomplish this goal.

PEP AND IDEP IMPLEMENTATION

The approved Illicit Discharge Elimination Plan (IDEP) and Public Education Plan (PEP) are utilized in this SWPPI as Best Management Practices. No changes to either document are proposed at this time. Implementation of the IDEP and PEP are supportive of the WMP goals and objectives, as well as supportive of pollution prevention. The significant efforts involved in implementation of the IDEP and PEP should be considered when evaluating the federal mandate to reduce the discharge of pollutants to the maximum extent practicable.

OPPORTUNITIES FOR WATERSHED-WIDE (REGIONAL) COOPERATION

In addition to the long-term evaluation methods there are many additional opportunities for Watershed-wide or regional cooperation. While every community in the Watershed is committed to controlling storm water pollution to the maximum extent practicable, fiscal restraints reduce the capacity by which individual communities can accomplish this reduction independently. Some of the commitments of this SWPPI involve participation in activities if conducted on a Watershed basis. This is necessary for financial reasons, but is also advantageous because often more can be accomplished through cooperation than by any one jurisdiction alone.

The Grand Valley Metropolitan Council or the Lower Grand River Watershed Council will be requested to undertake watershed-wide or regional studies or assemble recommendations for various SWPPI commitments. Community and MDEQ participation in these efforts is essential.

CITY OF WALKER

TABLE I – WMP GOALS AND OBJECTIVES AND SWPPI COMMITMENTS

Critical Areas, Pollutant Impairing Designated Use, Specific Goals, and Objectives taken from WMP (Table 3.9) Sorted by Objectives

Critical Areas	Pollutant Impairing Designated Use	Specific Goals	Objectives	Best Management Practices to work toward meeting objectives: SWPPI COMMITMENTS
Residential areas served by storm sewers or located in a riparian area (1/8 mile from water's edge)	Nutrients (k)	Reduce amount of yard waste being dumped into drains and ditches	Create awareness of storm sewer systems and affects of yard waste in lakes and streams	IDEP ORD IDEP PEP LANDSCAPE RES
Entire watershed and industrial parks	Chemicals (s)	Eliminate spills from entering storm sewers, groundwater, and surface water	Develop emergency spill response plans and pollution prevention initiatives by municipalities and industry	IDEP ORD PEP SPILL RES PLAN PVT DUMPSTERS DEMO WASTE POLLUTION TRNG
Lakes and navigable waterways	Habitat fragmentation (k)	Reduce introduction of species from watercraft transport	Develop ordinance that prohibits transport or introduction of invasive and exotic species	PEP GROUNDSKEEPER TRNG
Watersheds with streams designated as coldwater fisheries	Temperature (k)	Increase amount of riparian buffers in designated coldwater streams	Develop stream buffer and green space protection programs	SW ORD WETLAND ORD BUFFER ORD LID ORD GREEN SPACE ORD WQ TRNG
Stream channels and riparian areas (1/8 mile from water's edge)	Unstable hydrology (k)	Protect wetlands and flood plains	Develop wetland and flood plain protection programs	WETLAND ORD FLOOD PLAIN ORD WQ TRNG
New developments in entire watershed	Habitat fragmentation (k)	Reduce loss of forested and wetland areas	Develop wetland and green space protection programs	WETLAND ORD NFI GREEN SPACE ORD

Critical Areas	Pollutant Impairing Designated Use	Specific Goals	Objectives	Best Management Practices to work toward meeting objectives: SWPPI COMMITMENTS
Entire watershed	Sediment (k)	Stabilize stream flow	Develop wetland, green space, and flood plain protection programs	GREEN SPACE ORD WETLAND ORD LID ORD FLOODPLAIN ORD
City of Grand Rapids	Nutrients (k)	Reduce number of discharge exceedances from waste water treatment plants	Encourage continual effort to separate combined sewers	No combined sewers in Walker
Watersheds with streams designated as coldwater fisheries	Temperature (k)	Decrease amount of storm water runoff from urban areas and increase amount of infiltration	Encourage infiltration where possible and implement green space protection programs	SW ORD WETLAND ORD BUFFER ORD LID ORD GREEN SPACE ORD WQ TRNG
Watersheds with TMDLs for <i>E. coli</i> and/or nutrients	Pathogens (k)	Reduce number of overflows from combined sewers and locate and repair sewer leaks	Encourage municipalities to continue to locate and repair sanitary sewers in areas with high levels of <i>E. coli</i>	IDEP Sanitary Sewers are under City of Grand Rapids jurisdiction
Agricultural areas with land application of manure fertilizer near riparian areas	Pathogens (k)	Improve manure management techniques	Encourage stronger county and state regulatory oversight	Manure management is not a storm water issue.
Agricultural riparian areas (1/8 mile from water's edge)	Nutrients (k)	Improve manure management techniques	Encourage stronger county and state regulatory oversight	Manure management is not a storm water issue.
Entire watershed in areas served by storm sewers	Chemicals (s)	Reduce amount of automotive and hazardous waste being illegally dumped into storm drains	Implement ordinances that prohibit dumping of any substance other than clean water into storm drains	PEP SW ORD IDEP ORD IDEP
Entire watershed	Nutrients (k)	Reduce amount of yard waste being dumped into drains and ditches	Implement ordinances that prohibit dumping of yard waste	PEP SW ORD IDEP ORD IDEP

Critical Areas	Pollutant Impairing Designated Use	Specific Goals	Objectives	Best Management Practices to work toward meeting objectives: SWPPI COMMITMENTS
Entire watershed	Unstable hydrology (k)	Reduce amount of impervious surfaces and storm water runoff	Implement storm water management ordinance with stream protection	SW ORD LID ORD
Land zoned for growth and development	Sediment (k)	Reduce erosion and contain sediment on construction site	Improve soil erosion and sedimentation control measures and construction site inspection	PEP IMPROVE SESC POLLUTION TRNG
Urban areas, near construction sites, and industrial impervious surfaces	Sediment (k)	Minimize urban storm water runoff and increase amount of infiltration	Increase amount and frequency of street sweeping	IDEP ORD SW MAINT ROAD MAINT PEP
Urban areas and commercial parking lots	Chemicals (s)	Reduce amount automotive fluids in storm water runoff	Increase amount and frequency of street sweeping	IDEP ORD SW MAINT ROAD MAINT PEP
Residential areas served by sanitary sewers	Nutrients (k)	Reduce number of discharge exceedances from waste water treatment plants	Increase awareness of waste water treatment plant discharge reports	PEP
Entire watershed	Sediment (k)	Stabilize stream flow	Increase development of storm water ordinances that require detention of runoff to protect streams	SW ORD LID ORD WQ TRNG
Watersheds with streams designated as coldwater fisheries	Sediment (k)	Minimize urban storm water runoff	Increase development of storm water ordinances that require infiltration, low impact development techniques, rain gardens, and extended detention that addresses channel forming flows where appropriate	SW ORD LID ORD WQ TRNG GREEN SPACE ORD

Critical Areas	Pollutant Impairing Designated Use	Specific Goals	Objectives	Best Management Practices to work toward meeting objectives: SWPPI COMMITMENTS
Watersheds with streams designated as coldwater fisheries	Unstable hydrology (k)	Reduce amount of impervious surfaces and storm water runoff	Increase infiltration where possible	SW ORD WETLAND ORD BUFFER ORD LID ORD GREEN SPACE ORD WQ TRNG
Land zoned for growth and development	Sediment (k)	Minimize urban storm water runoff	Increase infiltration where possible and implement green space protection programs and stream buffer ordinances	BUFFER ORD GREEN SPACE ORD WQ TRNG
Areas not served by sanitary sewers in unsuitable soils or near riparian areas	Pathogens (k), Nutrients (k)	Reduce <i>E. coli</i> inputs and nutrient loadings from failing or improperly maintained septic	Increase proper maintenance and installation of septic systems	HD COORD PEP IDEP ORD IDEP
Entire watershed	Sediment (k)	Stabilize stream flow	Increase stream buffer and green space ordinances	BUFFER ORD GREEN SPACE ORD WQ TRNG
Parks and high density residential areas	Pathogens (k)	Reduce amount of pet waste entering storm sewer systems	Increase the number of pet waste collection facilities and encourage their use with signage and educational media	PET ORD PEP
Agricultural areas with livestock	Pathogens (k), Sediment (k), Nutrients (k)	Reduce number of livestock in streams and increase quality of riparian buffers	Increase the use of livestock fencing and filter strips	Not a storm water issue.
Entire watershed	Habitat fragmentation (k)	Reduce spread and remove invasive species from sensitive habitats	Increase the use of native vegetation in landscaping	GROUNDSKEEPER TRNG PEP
Areas served by public water supplies, but not sanitary sewers	Pathogens (k), Nutrients (k)	Reduce <i>E. coli</i> inputs and nutrient loadings from failing or improperly maintained septic	Increase the use of sanitary sewers in high risk areas	IDEP EXTEND SEWERS

Critical Areas	Pollutant Impairing Designated Use	Specific Goals	Objectives	Best Management Practices to work toward meeting objectives: SWPPI COMMITMENTS
Agricultural areas with land application of manure fertilizer near riparian areas	Pathogens (k)	Improve manure management techniques	Increase use of agriculture incentive programs and comprehensive manure management plans	Not a storm water issue
Agricultural riparian areas (1/8 mile from water's edge)	Nutrients (k)	Improve manure management techniques	Increase use of agriculture incentive programs and comprehensive manure management plans	Not a storm water issue
Agricultural riparian areas (1/8 mile from water's edge)	Sediment (k)	Minimize runoff from agricultural areas	Increase use of appropriate agricultural best management practices (BMPs), such as cover crops and reduced tillage practices, in agricultural areas near surface water	Not a storm water issue.
Urban areas and parks with high populations of wildlife	Pathogens (k)	Reduce concentrations of nuisance wildlife (i.e. geese, raccoons, etc) in and around storm sewer systems	Increase use of goose management practices and install BMPs that exclude wildlife from storm sewers	Geese are not a problem in the City of Walker
Urbanized areas with municipal separate storm sewer systems	Pathogens (k), Nutrients (k)	Reduce number of illicit connections to storm sewers	Locate and remove or correct illicit connections to storm sewers	IDEP ORD PEP IDEP POLLUTION TRNG
Entire watershed	Habitat fragmentation (k)	Reduce loss of forested and wetland areas	Participate in a natural features inventory	NFI
Lakes and navigable waterways	Sediment (k)	Reduce streambank erosion from large and fast moving watercraft in sensitive areas	Work with Michigan Department of Natural Resources to establish no wake zones	PEP

TABLE II – OBJECTIVES FOR POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS AND SWPPI COMMITMENTS

Objectives taken from "MDEQ Guidance for Storm Water Pollution Prevention Initiatives" (II. Pollution prevention and good housekeeping activities)

Objectives	Best Management Practices to work toward meeting objectives: SWPPI COMMITMENTS
Maintenance activities (both preventative and corrective), maintenance schedules, and inspection procedures for storm water structural controls (owned by the permittee)	SW MAINT PROC SW MAINT POLLUTION TRNG
Controls used for reducing or eliminating the discharges of water and pollutants from: streets, roads, and highways; parking lots; maintenance garages; and storage yards	ROAD MAINT PROC ROAD MAINT RETRO-FITS STREET SWEEPING MUNI DUMPSTERS SPILL RES PLAN POLLUTION TRNG
Procedures for the disposal of operation and maintenance waste from the separate storm water drainage system	CHEM AND O&M WASTES TRNG CHEM AND O&M WASTES POLLUTION TRNG
Procedures to ensure that flood management control projects assess impacts on water quality of the receiving waters	FLOOD PLAIN ORD RETRO-FITS WQ TRNG SW ORD POLLUTION TRNG
Implement controls to reduce discharge of pesticides, herbicides, and fertilizers (on permittee owned property)	CHEM AND O&M WASTES TRNG CHEM AND O&M WASTES SPILL RES PLAN POLLUTION TRNG

TABLE III – OBJECTIVES FOR POST-CONSTRUCTION CONTROLS FOR AREAS OF NEW DEVELOPMENT AND SIGNIFICANT REDEVELOPMENT AND SWPPI COMMITMENTS

Objectives taken from "MDEQ Guidance for Storm Water Pollution Prevention Initiatives" (III. Post-construction controls for areas of new development and significant redevelopment)

Objectives	Best Management Practices to work toward meeting objectives: SWPPI COMMITMENTS
Evaluation and implementation of site-appropriate, cost-effective structural and nonstructural Best Management Practices	SW ORD LID ORD WQ TRNG
BMPs sufficient to effectively prevent or minimize post-construction impacts on water quality	SW ORD LID ORD WQ TRNG
Requirements for long-term operation and maintenance of the post-construction controls	SW ORD LID ORD WQ TRNG

TABLE IV – SWPPI COMMITMENTS, TIMELINES, AND EVALUATION METHODS FOR ASSESSING PROGRESS IN STORM WATER POLLUTION PREVENTION

SWPPI Commitment Or Best Management Practice (BMP)	Timeline	Evaluation Method
<p>01 Adopt a Storm Water Management ordinance (SW ORD)</p> <p>The storm water ordinance has been adopted and is being implemented</p> <p>The effectiveness of the Ordinance will be evaluated in terms of identifying problems with implementation, conflicts with other requirements, loopholes, and efficiency</p>	<p>Adopted in 2003</p> <p>Ongoing</p> <p>Ongoing</p>	<p>Complete</p> <p>Narrative statement regarding the number of site plans reviewed for conformance with the ordinance and issues/problems faced in implementing its provisions</p> <p>Activity will be included in narrative statement regarding implementation of the ordinance</p>
<p>02 Adopt an Illicit Discharge Elimination Program Ordinance (IDEP ORD)</p> <p>The SW ORD contains provisions for prohibiting and eliminating illicit discharges</p>	<p>Adopted in 2003</p> <p>Not Applicable</p>	<p>Complete</p> <p>Not Applicable</p>
<p>03 Continue working with Michigan Department of Environmental Quality (MDEQ) to protect wetlands in the city. Consider adoption of a Wetland Ordinance or other means to protect wetlands not regulated by MDEQ (WETLAND ORD)</p>	<p>Will consider as part of a watershed-wide evaluation</p>	<p>Narrative statement regarding the status of a watershed-wide evaluation of means to protect small wetlands</p>
<p>04 Consider adoption of a Stream Buffer Ordinance or other means to protect streambanks and stream corridors (BUFFER ORD)</p>	<p>Will consider as part of a watershed-wide evaluation</p>	<p>Narrative statement regarding the status of a watershed-wide evaluation of means to protect streambanks and stream corridors</p>
<p>05 The existing storm water ordinance and the existing building and zoning regulations address and restrict floodplain use within the City of Walker to a level that is satisfactory to the city. In addition the City of Walker will continue to coordinate and comply with MDEQ floodplain requirements. Existing regulations will be applied to revised floodplain. Consider adoption of a Flood Plain Ordinance or other means to protect flood plains not regulated by MDEQ (FLOOD PLAIN ORD)</p>	<p>Will consider ordinance revisions as part of a watershed-wide evaluation</p>	<p>Narrative statement regarding the status of a watershed-wide evaluation of means to protect flood plains not regulated by MDEQ</p>

SWPPI Commitment Or Best Management Practice (BMP)	Timeline	Evaluation Method
<p>06 Consider adoption of a Low Impact Development (LID) Ordinance or other means that encourages or requires use of infiltration practices in developments and re-developments (LID ORD)</p> <p>Develop a Low Impact Development informational packet to be handed out with planning commission applications and also available for download on the City of Walker website</p>	<p>Will consider as part of a watershed-wide evaluation</p> <p>April 1, 2007</p>	<p>Narrative statement regarding the status of a watershed-wide evaluation of means to increase infiltration of storm water</p> <p>Logs for: number of packets handed out and number of developers using LID techniques in their design.</p>
<p>07 Consider adoption of a Green Space Preservation Ordinance or other means to encourage or require preservation of vegetated pervious surfaces (GREEN SPACE ORD)</p> <p>Will continue to use wetland, conservation and drainage easements where applicable to preserve green space</p>	<p>Will consider as part of a watershed-wide evaluation</p> <p>Ongoing</p>	<p>Narrative statement regarding the status of a watershed-wide evaluation of means to preserve vegetated pervious areas</p> <p>Activity will be included in narrative statement regarding Green Space Ordinance</p>
<p>08 Consider adoption of a Pet Waste Ordinance or other means to reduce amount of pet feces in public places (PET ORD)</p> <p>Will participate in a watershed-wide public education effort</p> <p>Will provide "Mutt Mitts" in some parks</p>	<p>Will consider as part of a watershed-wide evaluation</p> <p>At such time as initiated by others</p> <p>Ongoing</p>	<p>Narrative statement regarding the status of a watershed-wide evaluation of means to reduce amount of pet feces in public places</p> <p>Activity will be included in narrative statement regarding pet wastes</p> <p>Activity will be included in narrative statement regarding pet wastes</p>
<p>09 Discuss improved coordination procedures with the county health department regarding septic system operation and maintenance, and obtain septic system data for the city. (HD COORD)</p>	<p>April 1, 2007</p>	<p>Narrative statement regarding the status of improved coordination</p>
<p>10 Participate in a Natural Features Inventory if initiated by others (NFI)</p>	<p>At such time as initiated by others</p>	<p>Narrative statement regarding the status of a NFI</p>
<p>11 Develop training program for employees and contractors on proper maintenance procedures for storm water structural controls (SW MAINT PROC)</p> <p>Implement annual training program</p>	<p>April 1, 2007</p> <p>April 1, 2008</p>	<p>Determination of whether program is on schedule or not</p> <p>Number of employees trained</p>

SWPPI Commitment Or Best Management Practice (BMP)	Timeline	Evaluation Method
<p>12 Clean and maintain storm drain channels, storm inlets, catch basins, and structural BMPs (e.g. basins) in accordance with current procedures and schedules (SW MAINT)</p> <p>Clean and maintain storm drain channels in accordance with new written procedures and schedules</p>	<p>Ongoing</p> <p>April 1, 2009</p>	<p>Narrative statement describing maintenance conducted and an assessment of the adequacy of the level of maintenance</p> <p>Narrative statement describing the results of periodic inspections by supervisors</p>
<p>13 Develop training program for employees on reducing or eliminating the discharges of water and pollutants from: streets, roads, and highways; parking lots; maintenance garages; and storage yards. police, fire, and public works departments to participate (ROAD MAINT PROC)</p> <p>Implement annual training program</p>	<p>April 1, 2007</p> <p>April 1, 2008</p>	<p>Determination of whether program is on schedule or not</p> <p>Number of employees trained</p>
<p>14 Inspect and maintain streets, roads, highways, parking lots, maintenance garages, and storage yards in accordance with current procedures and schedules (ROAD MAINT)</p> <p>Inspect and Maintain Streets, Roads, Highways, Parking Lots, Maintenance Garages, and Storage Yards in accordance with new written procedures and schedules</p> <p>Consider salt/sand issues (pre-wetted salt, rate of travel sensors, storage, loading, etc)</p> <p>Review current auto accident clean-up procedures and revise as appropriate</p>	<p>Ongoing</p> <p>April 1, 2009</p> <p>Will consider as part of a watershed-wide evaluation</p> <p>April 1, 2007</p>	<p>Narrative statement describing maintenance conducted and an assessment of the adequacy of the level of maintenance</p> <p>Narrative statement describing the results of periodic inspections by supervisors</p> <p>Narrative statement regarding the status of a watershed-wide evaluation</p> <p>Narrative statement describing the results of procedure review</p>

SWPPI Commitment Or Best Management Practice (BMP)	Timeline	Evaluation Method
<p>15 Consider retro-fits for existing municipal drainage facilities for better watershed protection (RETRO-FITS)</p> <p>Install rain garden at City Hall. Maintain rain garden according to MDEQ approved maintenance schedule once installation is complete</p>	<p>As opportunities occur</p> <p>October 31, 2007</p>	<p>Narrative statement describing retro-fit opportunities considered</p> <p>Narrative statement describing installation and maintenance of the rain garden</p>
<p>16 Determine whether existing procedure for street sweeping is appropriate and collect baseline data. (STREET SWEEPING)</p> <p>Develop revised procedures for 2008 SWPPI revision if necessary</p> <p>Require construction sites to sweep up their track out</p>	<p>April 1, 2007</p> <p>After January 2008 if necessary</p> <p>As needed</p>	<p>Data collected</p> <p>Narrative statement regarding the determination of whether revisions were necessary</p> <p>Narrative statement describing the experience of construction site track out</p>
<p>17 Develop training program for employees on proper selection, storage, application, and disposal of chemicals and other materials such as O&M wastes, including catch basin cleanout and street sweeping material (CHEM AND O&M WASTES TRNG)</p> <p>Implement annual training program</p>	<p>April 1, 2007</p> <p>April 1, 2008</p>	<p>Determination of whether program is on schedule or not</p> <p>Number of employees trained</p>
<p>18 Dispose of Chemicals and O&M Waste in accordance with Current Procedures and Schedules (CHEM AND O&M WASTES)</p> <p>Select, store, apply, and dispose of chemicals and O&M waste in accordance with new written procedures and schedules to minimize storm water pollution.</p> <p>Implement a materials management plan</p>	<p>Ongoing</p> <p>April 1, 2009</p> <p>April 1, 2009</p>	<p>Narrative statement describing the procedures with an assessment of the adequacy of the procedures.</p> <p>Disposal and Recycling data tracked in SWPPI resource manual</p> <p>Facility map specifying storage locations of all wastes and potentially hazardous materials</p>
<p>19 Compost and recycle most landscaping residuals (LANDSCAPE RES)</p>	<p>Ongoing</p>	<p>Narrative statement describing the city's program for composting or recycling landscape residuals</p>

SWPPI Commitment Or Best Management Practice (BMP)	Timeline	Evaluation Method
<p>20 Develop training program for employees on how to ensure that water quality impacts are assessed in association with flood management projects (WQ TRNG)</p> <p>Implement annual training program</p> <p>Continue current process for assessing water quality impacts of flood management projects</p>	<p>April 1, 2007</p> <p>April 1, 2008</p> <p>Ongoing</p>	<p>Determination of whether program development is on schedule or not</p> <p>Number of employees trained</p> <p>Narrative statement regarding the experience of assessing various projects for water quality impacts</p>
<p>21 Implement the current emergency spill response and prevention plan (SPILL RES PLAN)</p> <p>Develop a revised plan if current plan needs revision</p>	<p>Ongoing</p> <p>April 1, 2009</p>	<p>Narrative statement describing the spill response plan and when it is used</p> <p>Determination of whether program is on schedule or not</p>
<p>22 Inform employees on proper dumpster use at municipal facilities (MUNI DUMPSTERS)</p>	<p>April 1, 2008</p>	<p>Employee newsletter article or staff meeting minutes</p>
<p>23 Ensure groundskeepers are trained in proper use of native vegetation and proper removal of invasive species (GROUNDSKEEPER TRNG)</p>	<p>April 1, 2008</p>	<p>Narrative statement regarding the groundskeepers' knowledge and experience along with training received and still needed</p>
<p>24 Implement Public Education Program (PEP)</p>	<p>Ongoing</p>	<p>In accordance with approved PEP</p>
<p>25 Implement Illicit Discharge Elimination Program (IDEP)</p>	<p>Ongoing</p>	<p>In accordance with approved IDEP</p>
<p>26 Improve soil erosion and sedimentation control program (IMPROVE SESC)</p> <p>Participate in West Michigan Soil Erosion Control Network</p>	<p>Ongoing</p> <p>Ongoing</p>	<p>Narrative of steps taken to improve SESC</p> <p>Narrative of activities undertaken by the network</p>

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<p>27 Extend sanitary sewers to densely populated areas where septic systems have been found to have failed (EXTEND SEWERS)</p> <p>Conduct a public education meeting on the benefits of replacing septic fields with sanitary sewer in south Walker</p>	<p>As necessary</p> <p>April 1, 2008</p>	<p>Number of existing homes provided with sewer service</p> <p>Number or residents in attendance and materials provided at meeting for the purpose of public education</p>
<p>28 Train staff on procedure for receiving citizen calls to the hot line for reporting pollution (HOT LINE)</p>	<p>April 1, 2007</p>	<p>Number of calls received/resolved</p>
<p>29 Ensure proper handling of demolition waste/construction waste (DEMO WASTE)</p> <p>Review current procedures and revise if warranted</p>	<p>Ongoing</p> <p>April 1, 2008</p>	<p>Narrative statement regarding requirements for demolition and construction waste</p> <p>Narrative statement on procedure review and need for revision</p>
<p>30 Municipal vehicle washing to be indoors or at private car washes (MUNI CAR WASH)</p>	<p>Ongoing</p>	<p>Report of incidents where procedure is not followed</p>
<p>31 Institute policies and procedures to ensure proper dumpster use at commercial/private facilities (PVT DUMPSTERS)</p>	<p>Ongoing</p>	<p>Description of current procedures in the building code and actions taken for violations</p>
<p>32 Training building inspectors, zoning enforcers, public works workers in recognizing storm water pollution sources (POLLUTION TRNG)</p>	<p>April 1, 2008</p>	<p>Number of employees trained</p>