STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
GRAND RAPIDS DISTRICT OFFICE

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

December 14, 2016

Mr. Peter Klooster, Deputy Drain Commissioner
Allegan County Drain Office
113 Chestnut Street
Allegan, Michigan 49010

Dear Mr. Klooster:

SUBJECT: Pollution Prevention and Good Housekeeping (PP/GH) Plan
National Pollutant Discharge Elimination System (NPDES)
Certificate of Coverage (COC) No. MIG610140
Municipal Separate Storm Sewer System (MS4)

On October 10, 2016, the Department of Environmental Quality (DEQ), Water Resources Division (WRD), received the final version of the PP/GH Plan for Allegan County. The revised PP/GH Plan was submitted on your behalf by the Macatawa Area Coordinating Council (MACC). The PP/GH Plan was reviewed in accordance with the requirements of NPDES General Permit No. MIG619000. NPDES General Permit No. MIG619000, authorizes discharges of storm water from municipal separate storm sewer systems (MS4s) to the surface waters of the state, and thus you are subject to the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq; the "Federal Act"), Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18.

The PP/GH Plan has been reviewed and is approved. At the request of the MACC, this document was also reviewed in accordance with the requirements of the 2016 MS4 permit application. The 2016 PP/GH Plan appears to meet the new MS4 permit requirements as well as those of the current permit.

Please begin implementing the October 10, 2016, version of the PP/GH Plan immediately to maintain compliance with your current permit.

Should you require further information, please contact me at 616-356-0215; stamoura@michigan.gov; or at the address below.

Sincerely,

Amanda St. Amour
Senior Environmental Quality Analyst

as/lr

cc: Ms. Kelly Goward, MACC

POLLUTION PREVENTION & GOOD HOUSEKEEPING PROGRAM HANDBOOK

2016

Prepared by

Macatawa Area Coordinating Council

301 Douglas Ave, Holland MI 49424

www.the-macc.org

616-395-2688

Cover Photos

Top: Lake Macatawa, © Marge Beaver - Photography Plus, 1571 Goody Rd., Muskegon Michigan 49441, 231-798-2395

Middle: April 23, 1999, Noordeloos Creek flooding at 104th Ave, Macatawa Area Coordinating Council

Bottom: storm drain stencil in the Macatawa Watershed, Macatawa Area Coordinating Council

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SECTION 1: The Importance of Pollution Prevention and Good Housekeeping

1.1 Introduction

Storm water runoff occurs when rain and snowmelt flows over land and does not soak into the ground. Runoff is part of the natural water cycle. However, human activity in urban areas impacts the natural water cycle by increasing runoff and reducing infiltration. Runoff in urban areas tends to pick up trash, chemicals, sediment, and other pollutants and deliver them directly to local drains, rivers and lakes untreated. This can lead to poor water quality and impair uses, such as recreation and fish habitat.

Many municipal activities have the potential to impact surface water. Some activities, such as construction site management, vehicle washing and street maintenance can negatively impact water quality. Other activities, such as street sweeping, storm drain cleaning and employee training, can help improve water quality. Negative impacts can be reduced through the use of best management practices to protect water quality. A municipal pollution prevention and good housekeeping program can help control and reduce storm water pollution while addressing local land and water restoration goals and objectives.

1.2 Purpose and Scope

This guidebook was developed by the Macatawa Area Coordinating Council in coordination with the Allegan County Drain Commissioner's (ACDC's) office (on behalf of Allegan County) and other members of the Macatawa Watershed Storm Water Committee to document the pollution prevention and good housekeeping (PPGH) program in order to maintain compliance with the State of Michigan's NPDES permit for discharge of storm water to surface waters of the state from a municipal separate storm sewer system (Part 31 of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended). The guidebook provides detailed information about the ACDC's storm water controls, inspection procedures, operation and maintenance procedures, best management practices, and other required program components that must be followed in order to maintain compliance with the MS4 permit.

1.3 Users of the Guidebook

This guidebook is intended to be used and maintained at all facilities owned and operated by the ACDC that fall within the jurisdiction of the MS4 permit. Users will include facility managers and employees that are engaged in pollution prevention and good housekeeping activities that are described in the guidebook.

1.4 Organization of the Guidebook

The guidebook is divided into the following sections:

Section 1: The Importance of Pollution Prevention and Good Housekeeping

> This section provides an overview of the purpose and use of the guidebook. Included is information about the Macatawa Watershed, regulatory program requirements and definitions and acronyms.

Section 2: Municipal Structural Storm Water Control Inventory

> This section contains detailed information about storm water structural controls owned by the ACDC within the urbanized area.

Section 3: Structural Storm Water Control Operation and Maintenance Activities

Section 3 provides procedures for inspecting and maintaining catch basins owned by the ACDC that are located in the urbanized areas of Allegan County.

Section 4: Municipal Operations and Maintenance Activities

This section provides an assessment of operation and maintenance activities that are performed by the ACDC and the potential pollutants associated with those activities. Best management practices are described for these activities. Also included is a procedure for conducting street sweeping.

Section 5: Additional Program Components

The final section of the handbook provides information on other program components that are required by the MS4 permit. Included is information related to vegetation management, contractor oversight and an employee training program.

1.5 Watershed Information

Allegan County contains three major watersheds: the Macatawa, the Kalamazoo River and the Black River. Regulated urban areas are only located with the Macatawa Watershed (Figure 1), therefore information about the Kalamazoo and Black River Watersheds is not provided.

The Macatawa Watershed covers 175 square miles, 37% of which is in Ottawa County, and the landuse (2009) is 46% agriculture, 33% urban and 21% natural/forested and water/wetland (MACC 2012). The watershed has lost over 85% of its wetlands and 75% of its forestland to agriculture and urbanization. From 1978 to 2009, urban land increased from 15% of the watershed area to 33% (MACC 2012). With this increase in urbanization came an increase in impervious surfaces, with most of the urbanized subwatersheds having more than 20% impervious surface cover (Fongers 2009). An increase in impervious surfaces resulted in dramatic increases in the volume of storm water runoff (89% on average from 1978 to 2005), which has resulted in a flashy stream system that is plagued by erosion and sediment laden flows during many rain or snowmelt events. Most peak flows have increased by more than 100% and runoff volumes in most subwatersheds have increased by over 75% since 1978 (Fongers 2009).

This history of landuse changes in the Macatawa Watershed has led to most of the tributaries being listed as impaired and not supporting water quality for a variety of uses, most commonly warm water fishery and other aquatic wildlife due to sedimentation and phosphorus. A phosphorus total maximum daily load (TMDL) was approved for Lake Macatawa in 2000 (Walterhouse 1999). The majority of the phosphorus load in Lake Macatawa, 90%, was determined to be from nonpoint sources. Since the TMDL was developed prior to the issuance of the Phase II program, discharges from MS4s are part of the nonpoint source load allocation. The *Nonpoint Source Phosphorus Reduction Plan for the Macatawa Watershed* was developed and approved in 2000. Numerous efforts were made to reduce nonpoint sources of phosphorus throughout the watershed, but by 2008, water quality monitoring showed little improvement. The TMDL was renewed at that time and a process was started to update the plan. The *Macatawa Watershed Management Plan* was approved in 2012 and provides best management practice recommendations for reducing sediment and phosphorus loads from priority areas in the watershed, including recommendations for urban areas.

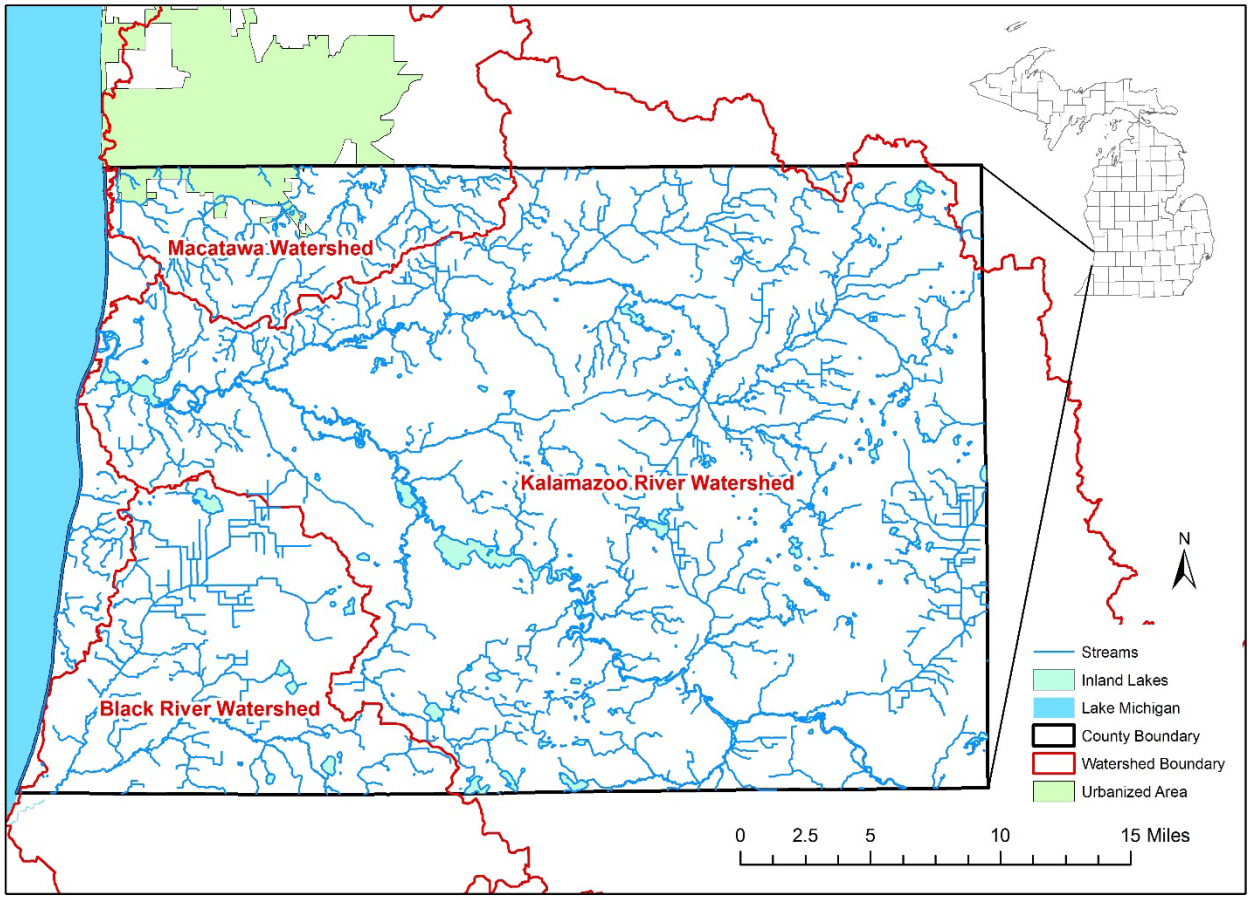

Figure 1. Allegan County Watershed Map

1.6 Regulatory Requirements

The federal Clean Water Act (CWA), as amended in 1987, is the principal legislation for establishing requirements for the control of storm water pollutants. Enforcement of the CWA and other federal laws has generated numerous federal, state and local requirements and programs that deal directly or indirectly in controlling storm water discharges. In the following sections, various programs are discussed in relation to the control of pollutants from municipal storm water systems.

Federal NPDES Program

In 1972, provisions of the federal Water Pollution control Act, also known as the Clean Water Act (CWA) was amended so that discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p) that established a framework for regulating municipal, industrial and construction storm water discharges under the NPDES program. In 1990, the EPA published final Phase I regulations that established application requirements for storm water permits for municipal separate storm sewer systems (MS4s) serving populations over 100,000 and certain industrial facilities, including construction sites greater than 5 acres. In 1999, the EPA published final Phase II regulations for communities with an MS4 serving populations less than 100,000 and operators of construction sites 1 to 5 acres in size.

Municipal NPDES Storm Water Programs

In Michigan, municipalities were given the option to apply for a jurisdictional permit or a watershed permit and work together with other MS4s within a watershed to meet Phase II requirements. The watershed approach uses the local watershed management plan as a basis for guiding water quality protection activities. MS4 communities whose jurisdictions spanned multiple watersheds were allowed to select which watershed to work with. The six communities that have jurisdictional boundaries within the Macatawa Watershed all elected to work collectively under a watershed permit with the assistance of the Macatawa Area Coordinating Council.

On April 1, 2016, all Macatawa Watershed permittees reapplied for MS4 permit coverage under the new individual permit required by the State of Michigan as of 2013. As part of the new permit, phase II communities are required to develop and implement a Storm Water Management Plan with the following six minimum control measures:

Public Participation/Involvement Program – Provide opportunities for citizens within the jurisdiction to review the Storm Water Management Plan and participate in the implementation and periodic review of the plan.

Public Education Program – Distribute education materials and perform outreach to inform citizens about storm water issues and actions they can take to help prevent storm water pollution.

Illicit Discharge Elimination Program – Develop and implement a plan to detect and eliminate illicit discharges and connections to the storm drain system, including illegal dumping.

Construction Storm Water Runoff Control Program – Develop, implement and enforce an erosion and sediment control program for construction activities that disturb one or more acres of land.

Post-Construction Storm Water Runoff Program – Develop, implement and enforce a program to address discharge of storm water runoff from new and redeveloped areas to minimize water quality impacts and maintain or restore stable stream hydrology.

Pollution Prevention and Good Housekeeping Program – Develop and implement a program to prevent or reduce pollutant runoff from municipal facilities and operations. This is the purpose of this guidebook.

In addition to the six measures listed above, the Storm Water Management Plan must identify measureable goals for each for each control measure. The goals will be used by the MS4 and the MDEQ to gauge compliance and evaluate effectiveness of individual best management practices or of the storm water management program as a whole. Phase II communities must also monitor their efforts and prepare periodic progress reports demonstrating that they are implementing their minimum control measures and are in compliance with the permit requirements.

1.7 Definitions and Acronyms

The following is a list of terms and acronyms that are commonly used throughout the guidebook.

ACDC – Allegan County Drain Commissioner

BMP – best management practice. Methods or techniques that are used to achieve an objective. In the context of this guidebook, a BMP is any physical structure or behavioral activity that prevents or minimizes the potential for pollution to enter storm water.

CWA – Clean Water Act. Passed in 1972, it is the primary federal law in the United States governing water pollution. The act specifically addresses point and nonpoint source pollution, wastewater treatment and wetland protection.

EPA – Environmental Protection Agency. A federal agency that was established to consolidate federal research, monitoring, standard-setting and enforcement activities to ensure environmental protection. The EPA is in charge of enforcing the Clean Water Act including authorizing states to implement the Stormwater NPDES permitting program.

NPDES – National Pollutant Discharge Elimination System. NPDES is the national program for administering and regulating Sections 307, 318, 402, and 405 of the Clean Water Act. In Michigan, the Michigan Department of Environmental Quality issues permits for storm water discharges associated with Phase II and Phase I communities.

MACC – Macatawa Area Coordinating Council. The MACC is a designated inter-municipality study committee, also known as a metropolitan planning organization, which is the local decision-making body responsible for carrying out the metropolitan transportation planning process. The mission of the MACC is "to encourage cooperation among neighboring units of government on area wide issues."

MDEQ – Michigan Department of Environmental Quality. The Michigan Department of Environmental Quality promotes wise management of Michigan's air, land, and water resources to support a sustainable environment, healthy communities, and vibrant economy. MDEQ is the regulatory agency that, among other things, administers the NPDES program in Michigan and oversees MS4 permitting.

MS4 – Municipal Separate Storm Sewer System. An MS4 is a conveyance or system of conveyances that is owned by a public entity that discharges to waters of the state and is designed to collect and convey storm water. It is not a combines sewer nor part of a publically owned sewage treatment facility.

Phase I Community – Medium to large cities or counties that own or operate a MS4 with a population of 100,000 or more. Phase I of the NPDES permit program was initiated in 1990.

Phase II Community – Small communities who own or operate a MS4 in an urbanized area with a population less than 100,000. Phase II of the NPDES permit program was initiated in 1999.

TMDL – Total Maximum Daily Load. A TMDL is a document that describes the process used to determine how much pollutant a lake or stream can assimilate and meet water quality standards. TMDLs are developed by the MDEQ and must be approved by the EPA.

1.8 References and Resources

Fongers, D. 2009. Macatawa Watershed Hydrologic Study. Hydrologic Studies Unit. Land and Water Management Division. Michigan Department of Environmental Quality.

Macatawa Area Coordinating Council (MACC). 2012. Macatawa Watershed Management Plan.

Walterhouse, M. 1999. Total Maximum Daily Load (TMDL) for Phosphorus in Lake Macatawa. Great Lakes and Environmental Assessment Section, Surface Water Quality Division, Michigan Department of Environmental Quality.

SECTION 2: Municipal Structural Storm Water Control Inventory

2.1 Introduction

One key component of the PPGH Program is a comprehensive inventory of the facilities and storm water controls that are owned or operated by the MS4. Allegan County does not own any municipal facilities within the Holland urbanized area, but does own and operate storm water controls. Digital and hard copy maps of the storm water controls are maintained at the Allegan County Drain Commissioner's office in Allegan (113 Chestnut St, Allegan, MI 49010). The inventory of storm water controls, both contained in this document and within ACDC maps, will be updated within 30 days of the addition, removal or transfer of ownership of any facility or storm water control. The ACDC will make updates to their digital maps and notify the MACC to update this document. Should any facilities be constructed within the Holland urbanized area, or the current urbanized area be expanded to include existing Allegan County facilities, the MACC will facilitate an update of this document to include new facilities or urbanized areas within 30 days of new construction or being made aware of changes to the urban boundaries per US Census and State of Michigan guidelines.

Any facilities that are constructed within the urbanized area or added due to urbanized area boundary changes will be assessed for their potential to discharge pollutants to surface waters of the state within 30 days of construction or addition to the urbanized boundary. The assessment will be conducted by the MACC using the assessment checklist provided in Appendix A.

2.2 Structural Storm Water Control Inventory

Table 1 provides a list of current storm water structural controls owned by Allegan County within the Holland urbanized area.

Table 1. Allegan County Storm Water Structural Controls

County Drain		Catch Basin	Detention Basin	Open Ditch / Swale	Notes
Name	No.				
Downda Drain	744			1	original constr dwg in permanent drain file
Heritage Meadow Drain (1)	761	4			asbuilts in permanent drain file
Heritage Meadow Drain (2)	761	10	1		asbuilts in permanent drain file
Laketown Village Drain	715			1	original constr dwg for LV Condo in permanent drain file, bypass only, not onsite system
Laketown Village Drain (West Wind Village Phase I)	715	12	3	2	asbuilts in permanent drain file
Virginia Park Intercounty Drain (Pine Hollow & E. Br.)	570	14		1	original constr dwg in permanent drain file
Virginia Park Intercounty Drain (West Br.)	570	13			original constr dwg in permanent drain file
Camelot Woods Drain	138	3	1		copies of constr dwg in permanent drain file (also see Camelot Woods #2 plat file)
Pine Drive & Pine Drive No. 2 Drains	706, 730	5,9			copies of constr dwg in permanent drain file (also see Camelot Woods plat file)
Tanglewood Drain	712	15	5		original constr dwg in permanent drain file
Jack Pine Ridge Drain	683	4	1		original constr dwg in permanent drain file
TOTALS		**77**	**8**	**3**	

SECTION 3: Structural Storm Water Control Operation and Maintenance Activities

3.1 Catch Basin Inspection and Maintenance

All Allegan County owned MS4 catch basins will be inspected at least once during ACDC's 3-year rotational maintenance schedule (see Table 1 for locations). Catch basins are inspected by the Drain Maintenance Supervisor (DMS) or other trained ACDC employees. At each catch basin the inspector will look for debris and sediment blocking the inlet and remove if found. They will also check for sediment and trash in the sump. The inspection will also include checking for damage or cracks to frame, grate, basin walls, etc. All maintenance needs will be documented on the standard ACDC Inspection Report. Catch basin sumps that are 50% or more full of sediment will be scheduled for cleaning within 30 days. Other maintenance needs are assessed at the time of inspection. Maintenance that can be performed with hand tools (such as small obstruction and rubbish removal) is generally addressed immediately by the inspector. Maintenance that will require a contractor and equipment will be scheduled within 30 days and completed within 90 days.

Once catch basins have been inspected and identified for cleaning, this information will be given to the DMS. The DMS will schedule cleaning with a certified contractor who will properly clean the catch basins and appropriately dispose of removed materials. The ACDC will retain a receipt from the contractor noting the quantity of collected material and the location where it was disposed. All catch basin cleaning and material disposal will be conducted following the MDEQ Catch Basin Cleaning Activities Guidance Document (Appendix B).

Citizens are invited to call the main ACDC office to report issues related to catch basins. When a request or complaint is received, a message is sent to the DMS for response. A phone call or inspection is usually performed within 2 business days for routine maintenance calls. If a blockage or flooding due to a county drain is reported, follow-up is performed within 24 hours. Citizens with complaints not related to county drains are forwarded to the appropriate public agency, otherwise ACHD is the county enforcing agency for soil erosion and sedimentation control issues on private developments.

3.2 Other Storm Water Controls

Table 1 also lists other storm water controls owned by Allegan County not associated with facilities. These controls are also inspected at least once during ACDC's 3-year rotational maintenance schedule by the DMS or other trained ACDC employees. A visual inspection will include verifying accessibility of the storm water controls and ensuring that they are free of debris and other pollutants. Vegetated controls will be checked for erosion and noxious weeds or invasive species. The inlet and outlet pipes will be inspected for blockage and physical damage. Any problems discovered or maintenance needs will be documented on the standard ACDC Inspection Reports. Copies of the inspection reports are kept in the permanent drain files at the Drain Commissioner's office. Storm water structural controls will be scheduled for maintenance when they reach 50% capacity. Most maintenance needs will be contracted out, but some simpler maintenance may be performed by ACDC staff. A filter bag will be used on the pump outlet to filter small sized particles when dewatering detention basins. Water will be discharged to a location downstream of the basin utilizing appropriate soil erosion measures. The material removed from the detention basins will be will be transported by truck and disposed of at an approved landfill.

Allegan County requires that all construction of new County-owned facilities or new storm water controls designed for water volume control will be designed, installed and maintained in accordance with the county's post construction runoff control performance standards and long-term operation and maintenance requirements.

SECTION 4: Municipal Operations and Maintenance Activities

4.1 Assessment

All Allegan County owned drainage systems were assessed by the ACDC's Engineer to determine which operation and maintenance (O&M) activities are occurring within right of ways. The county does not own any facilities within the urbanized area. The following activities were assessed: drain system O&M and landscape maintenance.

A summary of the operation and maintenance activities and associated potential pollutants is found is Table 2. The assessment will be revised within 30 days of any significant changes to operation and maintenance activities or to the best management practices that are implemented.

4.2 Best Management Practices

Best management practices (BMPs) are physical structures that are installed or actions that are taken to prevent or reduce the potential for storm water pollution when undertaking certain activities. Best management practice summary sheets for operations and maintenance activities conducted by Allegan County within the urbanized area are found in the pages following Table 2. These BMPs will be implemented for all applicable activities that are occurring on Allegan County property and right-of-ways within the regulated urbanized area. Though not required by the storm water permit, the BMPs will also be used for applicable activities conducted outside of the urbanized area.

Table 2. Operation and Maintenance Activities and Associated Pollutants

		POLLUTANTS									
Field Programs	**Activities**	**Sediment**	**Nutrients**	**Trash**	**Metals**	**Bacteria**	**Oil & Grease**	**Organics**	**Pesticides**	**Oxygen Demanding Substances**	**BMP Summary Sheet (page #)**
Landscape Maintenance	Mowing/Trimming	X	X	X		X			X	X	11
	Fertilizer & Pesticide Management	X	X						X		11
Drainage System Operation and Maintenance	Inspection and Cleaning of Stormwater Conveyance Structures	X	X	X		X		X		X	12
	Controlling Illicit Connections and Discharges	X	X	X	X	X	X	X	X	X	See Illicit Discharge Elimination Plan
	Controlling Illegal Dumping	X	X	X	X	X	X	X	X	X	13
	Maintenance of Inlet and Outlet Structures	X		X	X		X			X	14

Lawn Care and Landscape Maintenance

Category of Municipal Operation: Landscape Maintenance

BMP Description:

- Use phosphorus-free fertilizer in all cases except when starting a new lawn from seed, patching/repairing a lawn with seed or when a soil test has shown there is a need
- The area of lawn will be measured prior to applying fertilizer to ensure that the proper amount is applied
- Maintain at least a 3-foot buffer of no fertilizer application when applying adjacent to surface water or storm water controls
- Grass should be cut no shorter than three inches to encourage root growth
- All grass clippings and fertilizer will be swept or blown off impervious surfaces back onto lawns to prevent runoff into storm drains
- When irrigating, follow a schedule to maximize efficiency and prevent excess water from running off
- When selecting landscape plants, choose species that are appropriate for the site conditions. Use of native species is encouraged to minimize the need for fertilizing and irrigation.
- Any pesticide application will be completed by an employee or contractor that is certified by the State of Michigan as a pesticide applicator in the applicable category

Measurable Goals:

100% of fertilizer used within the urbanized area is phosphorus free

100% of pesticide applications completed by a certified individual

Timeline/Implementation Schedule:

Employee training once every 5 years or within 1 year for new hires

Specific Components and Notes:

Responsible Party for this BMP

Indicate who specifically is responsible for the implementation and monitoring of this BMP. This should be the individual who is actively involved with the BMP.

Name:

Department:

Phone:

E-mail:

Based on Macatawa Watershed Project's Lawn Care Seal of Approval criteria

Storm Water Conveyance Structures

Category of Municipal Operations: Drainage System Operation and Maintenance

BMP Description:

- Check surface over the pipe system for settlement or lost cover
- Inspect structural condition of outlet and inlets including headwalls and aprons for cracks, separation or collapsed ends
- Look for scouring or undermining, including evidence of animal burrows
- Look for scour at inlets and outlets due to heavy volumes and flows and assess need for erosion control measures
- Check for obstructions due to excessive vegetation, particularly trees or other woody vegetation
- Check pipe structure for collapse or deformation
- Check for corrosion on metal pipe, particularly at the inlet
- Look for deposition of sediment and other debris and remove as necessary

Measurable Goals:

Inspections conducted annually

100% of maintenance needs addressed within 90 days of discovery

Timeline/Implementation Schedule:

Employee training once every 5 years or within 1 year for new hires

Specific Components and Notes:

Responsible Party for this BMP

Indicate who specifically is responsible for the implementation and monitoring of this BMP. This should be the individual who is actively involved with the BMP.

Name:

Department:

Phone:

E-mail:

Based on Storm Water System Inspection and Maintenance Manual, *Georgia Department of Transportation, 2015.*

Controlling Illegal Dumping

Category of Municipal Operations: Drainage System Operation and Maintenance

BMP Description:

- Develop and implement public awareness program to prevent illegal dumping and encourage reporting
- Train staff to recognize and report incidents
- Establish system to track incidents that will identify:
  - Dumping hot spots
  - Types and quantities of waste
  - Patterns of occurrence (time of day, season, etc.)
  - Method of dumping
  - Responsible parties

Measurable Goals:

Decrease number of illegal dumping reports/discoveries

Timeline/Implementation Schedule:

Employee training once every 5 years or within 1 year for new hires
Public education plan – FY2017, FY2019, FY2021
Tracking system in place as of October 2016

Specific Components and Notes:

Responsible Party for this BMP

Indicate who specifically is responsible for the implementation and monitoring of this BMP. This should be the individual who is actively involved with the BMP.

Name:

Department:

Phone:

E-mail:

Based on BMP: Illegal Dumping Controls*, Springville City Corporation Public Works Department, Springville UT*

Inlet and Outlet Structure Maintenance

Category of Municipal Operations: Drainage System Operation and Maintenance

BMP Description:

- Inspect riser/standpipe cover for trash and debris and remove as needed
- Inspect inlet, outlet pipes and emergency spillways for trash or debris that may be blocking
- Remove accumulated sediment at inlets, outlets, forebays, and emergency spillways
- Inspect pipes for structural integrity
- Inspect rip rap and replace as necessary
- Check for erosion around inlets, outlets and other features and install stabilization measures as necessary

Measurable Goals:

Annual inspections

100% of identified maintenance needs addressed within 90 days

Timeline/Implementation Schedule:

Employee training once every 5 years or within 1 year for new hires

Specific Components and Notes:

Responsible Party for this BMP

Indicate who specifically is responsible for the implementation and monitoring of this BMP. This should be the individual who is actively involved with the BMP.

Name:

Department:

Phone:

E-mail:

Based on Best Management Practices for Maintenance of Private Storm Water Facilities, *City of Cedar Rapids, Iowa Public Works Department, 2014.*

SECTION 5: Additional Program Components

5.1 Managing Vegetated Properties

If pesticide application is determined to be necessary, Allegan County will require proof that the contractor or its employees are certified by the State of Michigan as a pesticide applicator in the appropriate category. As much as possible, contractors will use integrated pest management techniques to minimize the use of pesticides to protect the environment and avoid potential surface or groundwater contamination.

Any County staff that may apply pesticides during vegetation management on properties or in right of ways will be certified by the State of Michigan as a pesticide applicator in the applicable category. Allegan County staff will be trained in the use of integrated pest management in order to consider all potential solutions before applying pesticides.

5.2 Contractor Requirements and Oversight

Allegan County hires contractor to complete routine O&M procedures that are described in this handbook, such as catch basin cleaning and detention basin mowing. Any contractors that are hired to perform O&M activities are required to follow all pollution prevention and good housekeeping practices described in this handbook. Language will be included in any bid packets and contracts to this effect. Contracts will also include language that allows designated County staff to perform inspections to ensure that all PPGH practices are being followed. A copy of the handbook will be made available to all contractors performing O&M on ACDC properties or right of ways.

5.3 Employee Training

The MACC provides training opportunities to Allegan County and other MS4 communities within the Macatawa Watershed. In class training will be scheduled for staff responsible for PPGH activities within 1 year of adopting this manual. Online training modules are being developed to cover PPGH required activities and staff responsible for PPGH activities will be required to complete the modules once during each permit cycle. Any new staff will be required to complete the online training modules within one year of their date of hire. In-class training sessions will be available and scheduled as needed. Additional online modules will be created for special interest topics, such as lawn care or rain garden maintenance Employees will be encouraged to participate in these as applicable.

APPENDIX A

MUNICIPAL PROPERTY ASSESSMENT CHECKLIST

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Allegan County

INVENTORY OF MUNICIPAL PROPERTIES

Common Name of Property: _____

Property Location: _____

Person(s) completing this form: _____ **Date:** _____

Property type (check one)

☐Administration building	☐Animal control building	☐Airport	☐Bus station/terminal
☐Cemetery	☐Composting facility	☐Equipment storage/maintenance	
☐Fire station	☐fuel farm	☐Hazardous waste disposal	
☐Landfill	☐Library	☐Material storage yard	
☐Park/open space	☐Pesticide Storage	☐Police station	☐Public parking lot
☐Public School	☐Public works yard	☐ Recycling facility	☐Salt storage
☐Solid waste handling facility	☐Vehicle storage/maintenance	☐Other: _____	

Does storm water from this property enter the MS4 owned conveyance or Waters of the State?

☐ YES ☐ NO, stormwater goes to the sanitary sewer
☐ NO, there is no runoff ☐ DON'T KNOW

If NO, then go to next Municipal Property. If YES or DON'T KNOW, then continue with this form.

Structural Stormwater Controls at this Facility

Control Measure or BMP	**Qty.**	**Inspection Frequency**	**Maintenance Schedule**	**BMP operation & maintenance program**
☐ vegetated swales				
☐ infiltration facility (e.g. seepage pond, drywell)				
☐ detention pond or sedimentation facility				
☐ bioretention facility (e.g. raingarden)				
☐ storm water devices (swirl separation or other proprietary device)				
☐ curb, gutter, catch basins, storm sewers				
☐ filter				
☐ grit separator				
☐ oil/water separators				
☐ isolated sump				
☐ vegetated buffer strips				
☐ porous pavement				
☐ underground storage tanks				
☐ any other controls _____				

Is there a map available of the stormwater structural controls? ☐**YES** ☐**NO**

Municipal Operations at the Property: complete attached

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FACILITY/BUILDING NAME

Activity																					
Stormwater Drainage and Conveyance System																					
Not applicable																					
Dredging																					
Inspections of system components (how often)																					
Record keeping and frequency tracking																					
Maintenance, repair, cleanout of system components																					
Maintenance of open drain ditches																					
Dumping of vactor spoils																					
Winter Maintenance																					
Snow stored on site																					
Snow removed off site - where?																					
Snow is stored away from wells																					
Snow is stored out of wetlands/floodplains																					
Snowmelt is directed to structual control																					
Parking Lot/Sidewalk Salting Performed																					
Salt Storage On-site																					
Alternative Materials Used (ie.sand)																					
Salt Vehicle Washing																					
Sensitive or Priority Waterbody Considerations																					
Spreaders Calibrated and Maintained																					

Activity																					
Municipal Building Maintenance																					
Contractor Used for Maintenance																					
Bulk Fuel Storage																					
Other bulk fluid storage (list)																					
Hazardous Materials Storage																					
Spill Prevention and Response																					
Flourescent Light Recycling																					
Paper/Plastic Recycling																					
Roof Drainage Systems																					
Building Washing Performed																					
Sidewalk Cleaning (powerwashing)																					
On Site Septic System systems																					
Septic Inspections and Record Keeping																					
Dumpsters covered																					
Dumpsters have secondary containment																					
Contractor used for lawn care/landscaping																					
Lawn mowing																					
Lawn/landscape watering																					
Lawn/landscape fertilizing																					
Pesticide application																					
Lawn equipment and chemical stoarge onsite																					
Staff have been trained re. Stormwater mgmt Principles																					
Sump pumps connected to storm sewer																					

Activity																					
Vehicle Equipment Maintenance																					
Not applicable																					
Vehicle storage (indoor or outdoor)																					
Vehicle washing done outside																					
Vehicle washing done at commercial facility																					
Maintenance done outside																					
Maintenance done inside																					
Maintenance done at commercial garage																					
Vechicle fluid bluk storage (list)																					
Recycling oil and antifreeze																					
Spill prevention and response plan																					
Wastewater disposal and treatment from wash water																					
Oil water separator on site																					
Staff have been trained re. stormwater mgmt principles																					
Impervious Surfaces Maintenance																					
Not applicable																					
Sidewalks and parking lots cleaned (sweeping)																					
Dumping of Sweeper Waste																					
Repairs done by staff																					
Repairs done by contractors																					

Activity																						
Streambank and Hydrologic Habitat Maint.																						
Not applicable																						
Stream bed dredging																						
Creek bottom sediment removal																						
Removal of woody debris																						
Bank reshaping																						
Cleaning culverts and outfalls																						
Priority setting for streambank stabilization projects																						
Use of alternative "soft" engineering approaches																						
Inventory of ponds																						
Pond maintenance program																						
Buffer strips																						
Parks & Open Space Maintenance																						
Not applicable																						
Maintenance Contractor Used																						
Fertilizer Application																						
Pesticide Application																						
Fertilizer and Pesticide Usage Records																						
Integrated Pest Management Use																						
Lawn mowing																						
Lawn equipment and chemical storage onsite																						
Lawn/landscape watering																						
Erosion Control Practices																						
Pet Waste Present																						
Pet Waste Education																						
Recycling																						
Litter Control																						
Dumpsters covered																						
Dumpsters secondary containment																						
Hazardous Materials Storage																						
Staff have been trained re. Stormwater mgmt Principles																						

APPENDIX B

CATCH BASIN CLEANING ACTIVITIES GUIDANCE DOCUMENT

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Catch Basin Cleaning Activities Guidance Document

Catch Basin Cleaning

Catch Basin Cleaning Activities

Catch basins are included in storm sewer system designs in order to remove solids such as gravel, sand, oils, and organic material carried by storm water. Catch basins also contain elevated concentrations of metals (attached to the solids) from street runoff or drainage from industrial, commercial and residential properties. In order to maintain the storm sewer systems effectiveness, catch basins must be periodically cleaned out. The Department of Environmental Quality (DEQ) Water Bureau (WB) and Waste and Hazardous Materials Division (WHMD) oversee environmental regulations pertaining to this activity. The Michigan Occupational Safety and Health Administration (MIOSHA) within the Department of Labor and Economic Growth oversee confined space entry and other worker health and safety standards.

In the past, the waste generated from the catch basin cleaning activities was typically discharged back into the storm sewer system. This type of discharge is unauthorized per Part 31, Water Resources Protection (Part 31) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) and is therefore illegal. The combined solid and liquid waste stream (solid/liquid waste) from cleaning storm sewers systems is legally defined as “liquid industrial waste” pursuant to Part 121, Liquid Industrial Wastes (Part 121) of NREPA.

The following are options recommended to properly deal with the waste stream generated from catch basin cleaning activities:

1. Have the waste transported to drying beds to separate the solid/liquid waste. This is usually performed at a publicly owned treatment plant or at a privately owned permitted facility where the liquid portion of the waste stream is separated from the solids and treated.

2. Request permission from the local wastewater treatment plant operator to discharge the combined solid/liquid waste into the sanitary system. Most treatment plants will require pre-treatment prior to the discharge. All applicable local ordinance provisions must be followed.

3. When conducting catch basin maintenance activities where the above options are not available, the following method can be used as long as there are no discharges to surface waters during dry weather conditions.

- Conduct visual inspection to ensure the water in the sump has not been contaminated. If necessary, collect a grab sample of the water and look for signs of contamination such as visible sheen, discoloration, obvious odor, etc. See the EPA Visual Inspection guidance for more tips. If there is any doubt of the quality of the water, it should be collected into the Vactor truck and treated as waste under Part 121 or Part 115 Solid Waste Management (Part 115) of NREPA.

- Using a sump pump, or any other pumping mechanism, remove the majority of water in the sump of the basin without disturbing the solid material below. Do not use pumps connected to the Vactor truck's holding tank.

- The clear water may then be directly discharged to one of the following:
  - Sanitary system (with prior approval from local sewer authority)
  - Curb and gutter
  - Back into the storm sewer system as long as it is contained within the system during dry weather condition to ensure no discharge into surface water
  - Applied to the ground adjacent to the catch basin (evenly distributed at a maximum rate of 250 gallons/acre/year)

- The remaining liquid/solid in the sump should be collected with a Vactor truck and disposed of off-site in accordance with Parts 115 or 121.

The entity whose catch basin is being cleaned is responsible for meeting the generator requirements under Part 121. See the Liquid Industrial Waste Generator guidance for more information.

The entity transporting the solid/liquid waste must meet the applicable transporter requirements. A local, state, or federal government may use its own vehicle to service catch basins or other parts of the sewer system without being a permitted and registered transporter under the provisions of the Hazardous Materials Transportation Act, 1998 PA 138, as amended (HMTA).

If the local government contracts with a private company to transport the liquids generated from cleaning the catch basins or other parts of the sewer system, that entity must be registered and permitted as a uniform liquid industrial waste transporter under the provisions of HMTA.

The transporter must notify the WHMD about their activity and obtain a site identification number. Follow the instructions and links to the form EQP5150 and online paying option posted at www.deq.state.mi.us/wdspi. There is a fee.

A uniform hazardous waste manifest must accompany the load, or a consolidated manifest may be used per Operational Memo 121-3, when the liquid waste is transported over public roadways by the local government or by a contract transporter. Keep the records at least three years from shipment. The waste transporting portion of the vehicle and/or containers used to

transport the waste must be kept closed except when adding or removing the waste, and the exteriors must be kept free of the liquid waste and residue.

The facility accepting the solid/liquid waste must meet operating requirements:

- They must notify the WHMD that they are operating a liquid industrial waste designated facility, obtain a site identification number, and meet operating requirements under Part 121. This includes practices to prevent unauthorized discharge of the waste, sign manifests, and keep required records. If waste containers are used, they must be kept closed and protected from the weather, fire, physical damage and vandals.

- The discharge of the liquids into the treatment plant that is permitted by the WB must meet the wastewater treatment plant requirements. Any other discharge of the liquids would require a separate DEQ discharge permit.

- The resulting solid waste must be managed under Part 115 requirements. Dispose of the solid waste in a licensed landfill. Contact the landfill authority for their specific disposal requirements, including any tests they require to document the solids are not hazardous or liquid waste. Do not use the solids as fill on local government or private property, or for any other use, unless it meets the conditions of being an inert material according to the solid waste rules R299.4114 through R299.4118. See the Waste Characterization Guidance for information how to determine if the waste is hazardous or not.

Street sweeping activities are also subject to the above solid waste requirements. Street sweeping involves the use of specialized equipment to remove litter, loose gravel, soil, pet waste, vehicle debris and pollutants, dust, de-icing chemicals, and industrial debris from road surfaces. See the BMPs for Street Sweeping and Parking Lot and Street Cleaning.

Follow-up Answers Can be Found as Follows:	
Topic	**Contact:**
Using the solids as fill or other use under Part 115	Duane Roskoskey at 517-335-4712
Part 121 transportation requirements and HMTA	WHMD District Office
Managing waste under Part 31, or general questions regarding this guidance	Mark Fife at 517-241-8993
Confined space entry requirements	MIOSHA Consultation, Education and Training Division at 517-322-1809