

Rock County Municipal Storm Water Management Plan

Adopted as a Policy of the Rock County Land Conservation Department
by the
Land Conservation Committee
March 3, 2021

The elements included in this plan were created to satisfy the requirements the County Municipal Separate Storm Sewer Systems (MS4) Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit and are intended to supplement programs that are already administered via County Ordinance. The plan was developed with assistance from the Rock County Public Works Department and will be amended when required to maintain compliance with the permit.

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CHAPTER I

1.1 Introduction

The County of Rock (County) was authorized by the Department of Natural Resources on November 13, 2006 to discharge stormwater from the County owned Municipal Separate Storm Sewer Systems (MS4) in the Urbanized Area in Rock County under a Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit (herein after simply referred to as “permit”). The most recent permit updated occurred in May 2019 and is referenced as Permit No. WI-S050075-3. The original permitted Urbanized Area was determined by population density based on the 2000 census. The permitted area was revised based on the 2010 census population density. The County’s WPDES MS4 general permit outlines certain minimum programs and documentation that must be developed to maintain compliance with the permit conditions of approval. The elements included in this plan were created to satisfy these requirements and/or supplement programs that are already administered via County Ordinance. It is the intention that this document be approved by the Rock County Land Conservation Committee as an internal policy.

1.2 Area of Study

This plan is intended, at minimum, to be implemented in the County’s permitted area, as shown on the Storm Sewer System Maps developed for this permit and shown in Figure 1 (the overview map of the MS4). Areas excluded from permit coverage, and thus from this plan, are agricultural facilities and practices, industrial or land disturbing construction activities that require separate WPDES permit coverage and storm water discharges that do not enter the County’s MS4. Based on census block data from 2010, approximately 2100 people live in Census Blocks that at least partially drain to the County’s MS4. It is not the intention that this plan will be administered county-wide nor within the Cities of Janesville or Beloit.

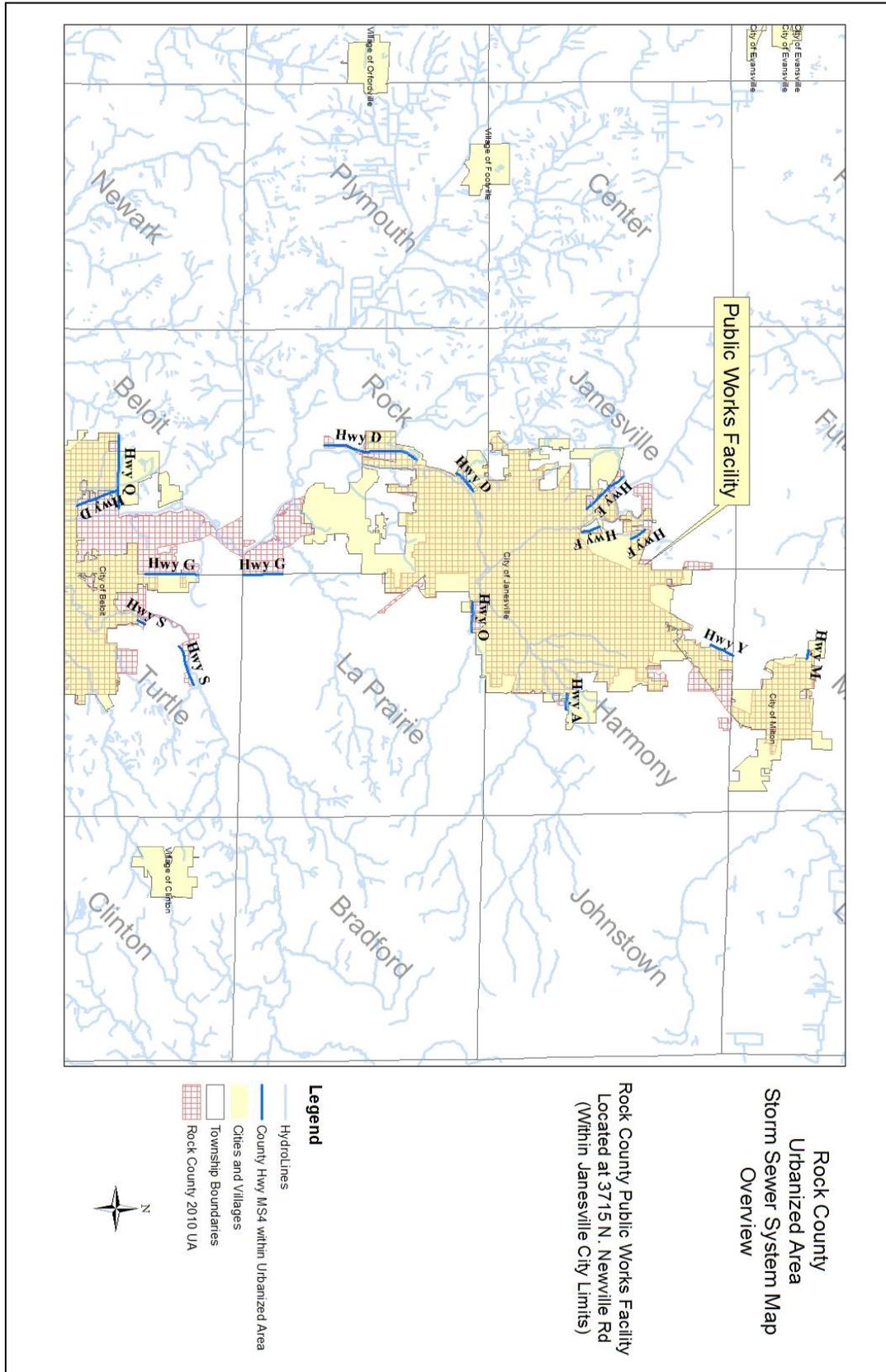
The stormwater conveyance systems maintained by the County within the MS4 primarily consist of swales alongside rural section roadways. In some instances, the ditches simply discharge to flat areas where infiltration occurs or the water disperses as overland flow into the natural drainage network. As of 2020, the County owns or maintains only a short segment of curb and gutter storm sewer system within the MS4 (approximately 0.2 miles along Hwy S in Turtle Township).

1.3 Exceptional and Outstanding Resource Waters

State Administrative Code NR 102 establishes water quality standards for surface waters of the state pursuant to s. 281.15 (2) (b), Stats. This chapter describes the designated use categories for such waters and the water quality criteria necessary to support these uses. Water quality standards protect the public interest, which includes the protection of public health and welfare and the present and prospective uses of all waters of the state for public and private water supplies, propagation of fish and other aquatic life and wild and domestic animals, domestic and recreational purposes, and agricultural, commercial, industrial, and other legitimate uses.

NR 102 establishes what are considered outstanding and exceptional resources waters for each County. These waters have been designated for special protection due to existing water quality and may be impacted by pollutants from new and existing MS4 discharges. There are currently eight streams in Rock County that are designated as exceptional resources waters, however, there are currently no County owned MS4 discharges to these waters in the permitted area.

Figure 1. MS4 Overview Map



1.4 Impaired Water Bodies and Total Maximum Daily Load Requirements

Section 303(d) of the federal Clean Water Act requires states to develop a list of impaired waters. Waters are considered impaired if they do not meet applicable water quality standards. The County's MS4 currently discharges into two impaired water bodies in permitted area, Markham Creek and the Rock River (both within the Rock River Basin). The DNR has developed Total Maximum Daily Load for the Upper and Lower Rock River Basin. According to the DNR's website, a Total Maximum Daily Load (TMDL) is a plan to reduce the amount of specific pollutants reaching an impaired lake or stream to the extent that water quality standards will be met. As part of the TMDL, the amount of a pollutant that the water can tolerate and still meet water quality standards must be identified. That identified amount is allocated between point sources (wasteload allocation) and nonpoint sources (load allocation).

The Rock River and Markham Creek are each considered impaired due to sediment, while the Rock River is also considered impaired due to polychlorobiphenyls (pcbs) and phosphorus. As indicated by the DNR's website, the TMDL for the Rock River Basin focuses on excessive sediment and phosphorus impairments. These pollutants can cause low dissolved oxygen, degraded habitat and excessive turbidity in waterways, resulting in harm to fish and aquatic life, water quality, recreation and even navigation. The TMDL provides a quantitative analysis of the amount of sediment and/or phosphorus that the waterbodies can receive from both point and nonpoint sources and still meet water quality standards.

The MS4 discharges to Rock River and Markham Creek are open, grassed lined swales with good vegetative cover. These systems typically provide adequate water quality treatment and do not contribute to the pollutant of concerns when maintain properly, as discussed in the Storm Water Quality Management portion of this plan. The County currently has no plans to establish new MS4 discharges to the Rock River or Markham Creek. The County intends to revise the applicable portions of this plan, if necessary, when field conditions change or Permit standards require revisions. The Markham Creek discharge serves a small drainage basin and is located within the Janesville City limits where the County has no jurisdiction to enforce the ordinances (see storm sewer map for Hwy D 4 of 9).

CHAPTER 2 MINIMUM PROGRAM REQUIREMENTS

The following programs have been compiled in consideration of the fact that the County's permitted area includes portions of the Towns of Beloit, Harmony, Janesville, La Prairie, Milton, Rock and Turtle, in some of which the County has no authority to enforce selected ordinances or exercise control over particular activities of concern (the unincorporated areas of the County are subject to Town Zoning Control). The County's permitted area also extends, in some cases, into areas under the jurisdiction of the Cities of Beloit, Janesville and Milton, which the County's authority is further limited or none. The language in this section of the permit was adopted in part from Reference Documents listed in Appendix 2 of this plan.

2.1 Public Education and Outreach

An informed and knowledgeable community is crucial to the success of a storm water management program. Without a public knowledge of local water quality problems caused by urban runoff, it is difficult to obtain public support for local storm water quality programs. This support ranges from individuals changing their daily actions to community backing for this overall storm water management plan. As with all of the aspects of this plan, the goal of this program is to reduce the degradation of local water bodies and improve chemical, physical and biological quality of waters of the state. In order to achieve this water quality benefit, this Public Education program is targeted to encourage changes in public behavior by improving the understanding of the reasons why storm water quality programs exist. The long-term goal is to achieve greater compliance with all of the programs included in this plan as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters. While this program is specifically targeted at citizens within the Urbanized Area of Rock County served by the County's MS4, some of the measures listed below will be developed in consideration of all citizens, whether they reside within the unincorporated portion of Rock County or within a city or village.

Topics

As per the Permit, the County shall address a minimum of six topics in Table 1 each year. Topics may be repeated as necessary. These tasks will be complete by County Staff in the Land Conservation Department, with assistance from the Planning and Development Agency, Public Health Department and Public Works if applicable on a case by case basis.

Public Education Delivery Mechanisms and Target Audience

The County shall use at least four public education delivery mechanisms from Table 2 each year, with at least one from the Active/Interactive Mechanisms column. The County shall identify the target audience for each public education and outreach topic. Target audiences may include the general public, public employees, residents, businesses, contractors, developers, industries, and/or other appropriate audiences.

Table 1: Public Education and Outreach Topic Areas and Descriptions

#	Topic Area	Description
1	Illicit Discharge Detection and Elimination	Promote detection and elimination of illicit discharges and water quality impacts associated with such discharges from municipal separate storm sewer systems.
2	Household Hazardous Waste Disposal/Pet Waste Management/Vehicle Washing	Inform and educate the public about the proper management of materials that may cause storm water pollution from sources including automobiles, pet waste, household hazardous waste and household practices.
3	Yard Waste Management/Pesticide and Fertilizer Application	Promote beneficial onsite reuse of leaves and grass clippings and proper use of lawn and garden fertilizers and pesticides.
4	Stream and Shoreline Management	Promote the management of streambanks and shorelines by riparian landowners to minimize erosion and restore and enhance the ecological value of waterways.
5	Residential Infiltration	Promote infiltration of residential storm water runoff from rooftop downspouts, driveways and sidewalks.
6	Construction Sites and Post-Construction Storm Water Management	Inform and educate those responsible for the design, installation, and maintenance of construction site erosion control practices and storm water management facilities on how to design, install and maintain the practices.
7	Pollution Prevention	Identify businesses and activities that may pose a storm water contamination concern, and educate those specific audiences on methods of storm water pollution prevention.
8	Green Infrastructure/Low Impact Development	Promote environmentally sensitive land development designs by developers and designers, including green infrastructure and low impact development.

Note: Additional information on green infrastructure and low impact development may be found on the USEPA's Internet site at: <https://www.epa.gov/green-infrastructure>

Table 2: Public Education and Outreach Delivery Mechanisms (Active and Passive)

Active/Interactive Mechanisms	Passive Mechanisms
<ul style="list-style-type: none"> • Educational activities (school presentations, summer camps) • Informational booth at event • Targeted group training (contractors, consultants, etc.) • Government event (public hearing, council meeting) • Workshops • Tours • Other 	<ul style="list-style-type: none"> • Passive print media (brochures at front desk, posters, etc.) • Distribution of print media (mailings, newsletters, etc.) via mail or email • Media offerings (radio and TV ads, press release, etc.) • Social media posts • Signage • Website • Other

2.2 Public Involvement and Participation

The public can provide valuable input and assistance to the County's municipal storm water management program. Since it is the activities of the public within urban landscapes that produce diffuse pollution, and the public that funds municipalities, it is imperative that the public be given opportunities to play an active role in both the development and implementation of the program. An active and involved community is crucial to the success of a storm water management program because it allows for: Broader public support, since citizens who participate in the development and decision making process are partially responsible for the program and are more likely to take an active role in its implementation; A broader base of expertise and economic benefits, since the community can be a valuable, free, intellectual resource; and A conduit to other programs, as citizens involved in the storm water program development process provide important cross-connections and relationships with other community and government programs.

The County will make an effort to encourage input and participation from the public regarding the programs included in this plan. All meetings where these programs are discussed and voted upon by the governing body are public meetings and are noticed accordingly. The Rock County Land Conservation Department will be the responsible department for accepting, documenting and following up on information, questions, or concerns submitted by the public in relation to erosion control and storm water management.

As per the Permit, the County shall implement the following measurable goals related to public involvement and participation:

Permit activities

The County shall provide a minimum of one opportunity annually for the public to provide input on each of the following permit activities: annual report, storm water management program, and if applicable, the adoption or amendment of storm water related ordinances. At a minimum, the public will be invited to attend the Land Conservation Committee meeting when the annual report is discussed.

Delivery mechanism

The County shall identify the public involvement and participation delivery mechanism for each permit activity above. Delivery mechanisms may include public workshop, presentation of storm water information, government event (public hearing, council meeting, etc.), citizen committee meeting, or website.

Volunteer activities.

The County shall implement at a minimum one of the following volunteer activities per year: group best management practice (BMP) installation or maintenance, storm drain stenciling, planting community rain garden, clean up event, stream monitoring, citizen committee meeting, public workshop, presentation of storm water information, or other hands-on event.

Target participants

The permittee shall identify the targeted participants for each permit activity and volunteer activity. Participants may include general public, public employees, residents, businesses, contractors, developers, industries, and/or other appropriate audience.

To address the above Permit requirements, the County will:

1. Encourage public turnout at meetings relating to storm water management by posting notices on the website, in newspapers and sending emails/letters to interested parties.
2. Continue participation in the Rock River Basin Citizen Monitoring Program. Expansion of this program will be encouraged based on available equipment and funding. This activity will be targeted at all residents.
3. Continue the annual County held Household and Agricultural Clean Sweep Program. Maintain or increase participation dependent on funding. This activity will be targeted primarily at residents but it is also available to business (depending on quantity)
4. Provide annual “reminders” to local earth moving contractors, developers and engineers of erosion control and storm water management permit requirements when doing development in the County.
5. Provide a mechanism on the County Website where feedback may be obtained providing suggestions or concerns from citizens regard erosion control or storm water management concerns.
6. Contribute to Public Involvement and Participation activities in the major urbanized areas of Janesville and Beloit where applicable.

2.3 Illicit Discharge and Elimination

An illicit discharge is defined by the permit as any discharge to an MS4 that is not composed entirely of storm water except discharges authorized by a WPDES permit or other discharge not requiring a WPDES permit such as landscape irrigation, individual residential car washing, fire fighting and similar discharges. Illicit discharges can result in untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria, to receiving waterbodies. Pollutant levels from these illicit discharges have been shown in EPA studies to be high enough to significantly degrade receiving water quality and threaten aquatic life, wildlife, and human health.

Regulatory Requirements

The County has adopted an Illicit Discharge Ordinance (Chapter 4, Part 13 of the Rock County Code of Ordinances, adopted January 14, 2021) to prevent and eliminate illicit discharges and connections to the MS4 within the permitted area. This Ordinance contains provisions for the prohibition of discharge, spilling or dumping of non-storm water substance or materials into the waters of the state or the MS4 and establishes inspection and enforcement authority. The Ordinance identifies non-storm water discharges that are not considered illicit and establishes inspection and enforcement authority to the County Conservationist or his/her designated representative. The sections of this portion of the Plan are intended to complement the Ordinance and include the requirements of the County MS4 Permit that are not included in the Ordinance.

Currently, the ordinance enumerates the following as non-stormwater discharges that are not considered illicit discharges: water line flushing, landscape irrigation, diverted stream flows, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, fire-fighting and discharges authorized under a WPDES permit. However, the occurrence of a discharge listed above may be considered an illicit discharge on a case-by-case basis if the permittee or the Department identifies it as a significant source of a pollutant to waters of the state.

Field Screening

Considering the limit permitted area, the County shall conduct on-going dry weather field screening at all outfalls at an annual basis. Furthermore, considering that the County's MS4 consists primarily of open swale drainage systems, sources of illicit discharges are more simply located. This inspection schedule exceeds the requirements of the Permit. At a minimum, field screening shall be documented and include:

- Visual Observation - A narrative description of visual observations including color, odor, turbidity, oil sheen or surface scum, flow rate and any other relevant observations regarding the potential presence of non-storm water discharges or illicit dumping.
- Field Analysis - If flow is observed, a field analysis shall be conducted to determine the presence of illicit non-storm water discharges or illicit dumping. The field analysis shall include sampling for pH, total chlorine, total copper, total phenol and detergents, unless the permittee elects instead to use detergent, ammonia, potassium and fluoride as the indicator parameters. Other alternative indicator parameters may be authorized by the Department of Natural Resources in writing.
 - Field screening points shall, where possible, be located downstream of any source of suspected illicit activity.

- Field screening points shall be located where practicable at the farthest manhole or other accessible location downstream in the system. Safety of personnel and accessibility of the location shall be considered in making this determination.

Illicit Discharge Source Investigation and Elimination

The County hereby establishes the following procedures for responding to known or suspected illicit discharges within the permitted area of the County's WPDES MS4 Permit. Andrew Baker, Director, Land Conservation Department (phone: 608-754-6617 ext 4755) will be the primary contact for responding to reports of illicit discharges and spills.

1. The County will, as soon as possible, investigate portions of the MS4 that, based on the results of field screening or other information, indicate a reasonable potential for containing illicit discharges or other sources of non-storm water discharges.
2. The County will respond to spills that discharge into and/or from the MS4 including tracking and locating the source of the spill if unknown.
3. The County will prevent and contain spills that may discharge into or are already within the MS4.
4. The County will promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s through a central contact point, including a form, website, email address, and/or telephone number for complaints and spill reporting, and publicize to both internal permittee staff and the public.
5. The County will notify the DNR immediately in accordance with ch. NR 706, Wis. Adm. Code, in the event that the permittee identifies a spill or release of a hazardous substance, which has resulted or may result in the discharge of pollutants into waters of the state. The Department shall be notified via the 24-hour toll free spill hotline at 1-800-943-0003. The County shall cooperate with the DNR in efforts to investigate and prevent such discharges from polluting waters of the state. Enforcement action will follow the procedures adopted in the Rock County Illicit Discharge Ordinance.
6. The County shall detect and eliminate cross-connections and leakage from sanitary conveyance systems into the MS4.
7. The County shall provide the DNR with advanced notice of the time and location of dye testing within an MS4. DNR notification prior to dye testing is required due to the likelihood that dye observed in waterways will be reported to the DNR as an illicit discharge or spill.
8. The County shall take appropriate action to remove known illicit discharges from its MS4 system discovered under section this program as soon as possible. If it will take more than 30 days to remove an illicit connection or if the potential illicit discharge is from a facility with WPDES permit coverage, the DNR shall be contacted to discuss an appropriate action and/or timeframe for removal. Notwithstanding this 30-day timeframe and notification of the DNR, the permittee shall be responsible for any known illicit connections to its MS4 system that are a significant risk to human health and the environment.

9. In the case of interconnected MS4s, the County shall notify the appropriate municipality within one working day of either of the following: **a.** An illicit discharge that originates from the permittee's permitted area that discharges directly to a municipal separate storm sewer or property under the jurisdiction of another municipality. **b.** An illicit discharge that has been tracked upstream to the interconnection point with or outfall from another municipality.

10. To properly administer preceding procedures and maintain compliance with the Permit, the County will complete necessary documentation as follows:
 - a. Dates and locations of IDDE screenings conducted in accordance with this section
 - b. Reports of alleged illicit discharges received, including dates of the reports, and any follow-up actions taken by the County.
 - c. Dates of discovery of all illicit discharges.
 - d. Identification of outfalls, or other areas, where illicit discharge have been discovered.
 - e. Sources (including a description and the responsible party) of illicit discharges (if known).\
 - f. Actions taken by the County, including dates, to address discovered illicit discharges.

2.4 Construction Site Pollution Control

Polluted storm water runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Sediment is usually the main pollutant of concern. Sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats. Additional pollutants are also often present in storm water runoff from construction sites and may result in degradation of receiving water. Nutrients (nitrogen and phosphorous) are of specific concern and can cause significant impairment. In addition, solid and sanitary wastes, pesticides, oil and grease, concrete truck washout, construction chemicals, construction debris and metals may be discharged and cause an impact on receiving waters.

Rock County originally adopted a Construction Site Erosion Control Ordinance in March 2004 based on the NR 152 Model Ordinance and has been revised when Model changes were made. The current version is hereby adopted by reference to meet the requirements of this program. The DNR approved the Ordinance on March 26, 2008, thus satisfying the MS4 ordinance requirement along with amendments thereafter. The Ordinance references the DNR's technical standards and specifications and maintains the performance standards found in NR 151 and the plan requirements contained in NR 216. The Erosion Control Ordinance currently has jurisdiction in the unincorporated portions of Rock County, except Beloit Township (in which the Town has adopted it's own ordinance), and in areas annexed by a city or village that does not have an erosion control ordinance that meets or exceeds the standards of the DNR and Rock County (as per 59.693(10) Wis. Stats.)

The County ordinance exceeds the required threshold of applicable construction sites (1 acre) by having jurisdiction over sites exceeding 4,000 square feet in upland areas and 1,000 square feet in Shoreland Zoning areas. The Ordinance includes written procedures for construction site plan review with incorporate consideration of potential water quality impacts. Plan and permit approval is required prior to any land disturbing activity.

The Land Conservation Department has been tasked by the Rock County Board of Supervisors with administering the Construction Site Erosion Control Ordinance and the Ordinance provides the inspection and enforcement authority to do so. One LCD staff member is assigned to respond or follow up to information and concerns submitted by the public regarding matters related to this program. Contact information is posted on approved permit on site. Other County Departments have been provided with this contact information if citizens come to them with concerns. The LCD tracks permit applications and active permits via a spread sheet system.

Inspection and Enforcement

The County Ordinance requires that permit holders conduct inspections in accordance with the permit approval. Those inspection logs are made available to County staff upon request. The Ordinance does not dictate a specific inspection schedule for County staff because it is the permit holder's obligation to do so. Staff does conduct periodic inspection based on the scope of the project, location and rain events. Staff also ensures that stabilization occurs in a timely fashion and all practices are installed prior to permit expiration.

The County MS4 requires that County staff inspect construction sites within the MS4 permitted area based on the following schedule. The inspection schedule below is approved as a policy addendum to the Ordinance. Staff shall maintain property documentation of inspections in the permit file, such as using DNR Form 3400-187.

Site	Inspection Frequency
(1) All sites one acre or more in size	<ul style="list-style-type: none"> • New projects shall be inspected within the first two weeks of commencement of land disturbing activity • All active sites shall be inspected at least once every 45 days • All inactive sites shall be inspected at least once every 60 days
(2) Follow up inspection	<ul style="list-style-type: none"> • Follow up inspections are required within 7 days of any sediment discharge or inadequate control measure, unless corrections were made and observed by the inspector during initial inspection or corrections were verified via photographs submitted to the inspector
(3) Final inspection	<ul style="list-style-type: none"> • Confirm that all graded areas have reached final stabilization and that all temporary control measures are removed, and permanent storm water management BMPs are installed as designed

2.5 Post-Construction Storm Water Management

Post-construction storm water management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly affect receiving water bodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management. There are generally two forms of substantial impacts from post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the water body during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include stream bank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

Rock County adopted a Post-Construction Storm Water Management Ordinance in March 2004 based on the NR 152 Model Ordinance and has been revised when Model changes were made.

The current version hereby adopted by reference to meet the requirements of this program. The DNR approved the Ordinance on March 26, 2008, thus satisfying the MS4 ordinance requirement along with amendments thereafter. The Ordinance references the DNR's technical standards and specifications and maintains or exceeds the performance standards found in NR 151 and the plan requirements contained in NR 216. The Ordinance outlines inspection and maintenance requirements for the permit holder and establishes inspection and enforcement authority for County Staff. Long-term maintenance provisions are established in the ordinance and an agreement is recorded at the Register of Deeds as a covenant running with the land. The Storm Water Ordinance currently has jurisdiction in the unincorporated portions of Rock County, except Beloit Township (where the Town has adopted its own ordinance), and in areas annexed by a city or village that does not have a storm water ordinance that meets or exceeds the standards of the DNR and Rock County (as per 59.693(10) Wis. Stats.)

The Land Conservation Department has been tasked by the Rock County Board of Supervisors with administering the Post Construction Storm Water Management Ordinance and the Ordinance provides the inspection and enforcement authority to do so. Plan and permit approval is required prior to any land disturbing activity. One LCD staff member is assigned to respond or follow up to information and concerns submitted by the public regarding matters related to this program. Contact information is posted on approved permit on site. Other County Departments have been provided with this contact information if citizens come to them with concerns. The LCD tracks permit applications and active permits via a spread sheet system.

Long-term maintenance, Inspections and Enforcement

The County maintains a database with the location permitted storm-water management facilities and contact information for responsible parties. Sites are mapped on the internal GIS as well. The authority for the County to inspect sites and ensure long-term maintenance is being conducted is found in the Ordinance and dictated in the recorded maintenance agreement/covenant noted above. The County inspects facilities on a semi-annual basis, maintains documentation and follows up with a list of required maintenance when necessary. When needed, formal enforcement action is authorized by Ordinance, including citations, until the matter is remediated.

2.6 Pollution Prevention/Good Housekeeping

The Pollution Prevention/Good Housekeeping for Municipal Operations minimum control measure is a key element of the MS4 storm water management program. This measure requires the MS4 operator to examine and subsequently alter their own actions 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 street maintenance, environmentally damaging municipal 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 activities, facility operations and property management, the MS4 operator can also realize cost savings from such things as spill prevention (thus reducing clean-up costs), inventory control, and re-use/recycling of materials.

2.6.1 Inventory of Storm Water Management Best Management Practices (BMP)

Figure 2 contains a table of Rock County owned and operated storm water BMPs. The table contains the following information: location of each BMP; description of the BMP; confirmation there is an inspection, operation and maintenance (IOM) plan for the BMP; confirmation if a record (as-built) drawing exist. The inventory table will be maintained annually and updated as BMPs are added or deleted from Rock county ownership and operation.

2.6.2 Maintenance Plan for Best Management Practices (BMP)

The storm water systems maintained by the County within the Urbanized Area primarily consist of swales alongside rural section roadways which are mowed periodically to be kept free of brush and woody debris, thereby promoting water quality by slowing water velocity through the dense grassy vegetation and filtering out sediment. In some instances, the ditches simply discharge to flat areas where infiltration occurs or the water disperses as overland flow into the natural drainage network. The swales are inspected in the spring and fall. If required, repairs are made as soon as possible.

As of 2020, the County owns and maintains only 0.2 miles of curb and gutter system with storm sewer (County Rd S in Turtle Township) and there are no catch basins associated with this system. There are other minor areas of curb and gutter system, such as at intersections, but these areas drain to adjacent grassed road ditches and not storm sewer.

Dry basins, grass swales and a grass buffer reside at the Rock County Public Works location. The basins are inspected annually for the purpose of insuring proper operations, to remove trash and sediment as needed. The grass swales and grass buffer are mowed periodically throughout the growing season with any dead grass removed and reseeded immediately.

2.6.3 Rock County Public Works Storm Water Pollution Prevention Plan

The Rock County Department of Public Works facility is located at the intersection of Hwy 14 and Newville Rd, within the City of Janesville. Overall responsibility for the facility is the Rock County Public Works Director who can be contacted at 608-757-5453. Figure 3 contains a map of the facility showing areas of major activities, storage areas, drainage patterns, and potential sources of storm water contamination, discharge points, nearby receiving waters and/or wetlands, and connections to MS4.

Storm water runoff from approximately the southern third of the property flows to a series of dry basins on the east side of the property (along Newville Rd). The basins have been seeded with a variety of seed mix that tolerates both dry and wet conditions. This water then flows to the north in the road ditch. The remaining northern two-thirds of the property flows via overland flow, through a grass buffer, to the road ditch.

The County submits fees to the City of Janesville Storm Water Utility for this property and it is not within the County Permitted Area for the purposes of the WPDES Permit. The City of Janesville Storm Water Utility is set up to provide a storm water drainage system with adequate capacity to accommodate major storms while maintaining the quality of storm water discharged into receiving streams and rivers.

The interior maintenance areas at the DPW are served by floor drains connected to sanitary sewer. This system also serves the outside areas immediately adjacent to the overhead doors. Catch basins are periodically placed throughout the system to collect floatable contaminants, such as fuel or oil. As these separator systems fill up, a vacuum truck is used to pump out the material for disposal. A majority of vehicle washing is done in wash bays connected to the sanitary sewer system. Minimal washing is done outside. Various types of spill response materials are available on site and the staff is trained to use the kits.

Rock County Public Works staff conducts daily inspections of exterior and interior facility areas that have potential to contaminate storm water. If deficiencies are discovered, improvements and/or repairs are made immediately.

Salt and sand/salt mix storage will continue to be accomplished in compliance with Trans 277, Wis. Adm. Code. In the future at the Public Works Facility, a settling basin will be considered on the east side of the granular material (i.e. sand, road gravel) storage area to trap any sediment that may flow out of the area.

2.6.4 Measures to Reduce Contamination Within Source Water Protection Areas

The Rock County Public Works Facility is not located within a source water protection area.

2.6.5 Collection Services/Storm Sewer System Maintenance Activities

The County does not conduct street sweeping or a leaf collection in any of the Permitted Area. However, general clean-up is done in the spring to remove excess sand and sediment from roadways where needed. There are no catch basins to clean in the permitted area. Material handling and disposal does not apply considering there is no a regular schedule for street sweeping and catch basin cleaning. Leaves and grass clippings from County properties are mowed and mulched on site. There is no leaf collection program.

2.6.6 Winter Road Management

Overall responsibility for winter roadway maintenance is the Rock County Public Works Director who can be contacted at 608-757-5453.

Salt is the primary type of deicing product used on the County Highways within this permit.

The amount of deicing product used varies depending on the month and severity level of winter events. It is estimated that the yearly average amount of salt used is 5,457.50 Tons. Equipment used to plow snow and apply deicing products include trucks (quad, tri and tandem axle). Semi tanker (6,000 gallon) used for anti-icing when conditions permit.

Approximately 440 lane miles of County Highways are treated with deicing products. Approximately 4 acres of parking lot located at the Rock County Public Works Facility (3715 N. Newville Road) are treated with deicing products.

There are no snow disposal locations because snow is not hauled, it is plowed into highway ditches.

Salt spreading equipment is calibrated annually by Rock County Public Works employees. Road temperatures are monitored by plow trucks and superintendent trucks that have pavement temperature/ambient temperature sensors.

Currently, Public Works is evaluating the potential of using brine on the County road system and there is a plan to have a brine making facility at Main Shop to produce our own salt brine in the near future. Other measurable data or information that Rock County uses to evaluate or modify deicing activities include implementing a route optimization plan which was developed with Wisconsin Department of Transportation. This allows for the most efficient routes for the plow sections with the intent of most efficiently using deicing materials.

2.6.7 Nutrient Management

Lawn fertilizers are not used on Rock County controlled properties except for new grass establishment. Nutrients are applied following University of Wisconsin recommendations for new grass plantings.

2.6.8 Environmentally Sensitive Development

Rock County applies for and receives federal, state and local permits for municipal projects. Specifically, the County focuses on meeting Rock County Construction Site Erosion Control and Storm Water Management Ordinance standards which prioritizes minimizing soil erosion and protecting water quality. Plans and designs for municipal projects incorporate environmentally sensitive land development, green infrastructure and low impact development.

2.6.9 Internal Training and Education

Rock County Public Works and Land Conservation Department conducts biannual training (one day in April, one in November for Rock County Public Works staff for the purpose of educating staff how to implement the pollution prevention program under this section 2.6. Rock County Public Works staff shall document the date, the number of people attending the training, the names of each person attending and a summary of their responsibilities, and the content of the training. If the County utilizes contractors to perform any services to implement section 2.6, the contractors shall be invited to the biannual trainings.

Rock County Public Works Director and County Conservationist shall also inform their oversight committees (elected officials) of the permit requirements and expectations once every two years.

Figure 2

Inventory of Rock County Owned Storm Water Best Management Practices (BMP)

Location of BMP	Description of BMP	Does IOM Plan Exist	As-Built Drawing Available	County Owned	Permission from owner required
0.23 miles of Cty Hwy M in east Milton	roadside grassed swales	<i>yes</i>	no	yes	n.a.
Corner of State Hwy 14 and Newville Road in east Janesville (DPW Facility)	Retention basin, grass buffer and grass swales	<i>yes</i>	no	yes	n.a.
1.0 miles of Cty Hwy F in northeast Janesville	roadside grassed swales	<i>yes</i>	no	yes	n.a.
1.25 miles of Cty Hwy E in northeast Janesville	roadside grassed swales	<i>yes</i>	no	yes	n.a.
0.41 miles of Cty Hwy A in east Janesville	roadside grassed swales	<i>yes</i>	no	yes	n.a.
0.73 miles of Cty Hwy O in east Janesville	roadside grassed swales	<i>yes</i>	no	yes	n.a.
4.1 miles of Cty Hwy D in southwest Janesville and northwest Beloit	roadside grassed swales	<i>yes</i>	no	yes	n.a.
1.32 miles of Cty Hwy G in north Beloit	roadside grassed swales	<i>yes</i>	no	yes	n.a.
1.25 miles of Cty Hwy S in NE ¼ Town of Turtle	roadside grassed swales, curb/gutter	<i>yes</i>	no	yes	n.a.
1.84 miles of Cty Hwy Q in west Beloit	roadside grassed swales	<i>yes</i>	no	yes	n.a.
0.61 miles of Cty Hwy Y in south Milton	roadside grassed swales	<i>yes</i>	no	yes	n.a.

Figure 3
Public Works Facility Storm Water Map



Appendix 1

Definitions (from MS4 Permit Issue May 2019)

5.1 Department means the Wisconsin Department of Natural Resources.

5.2 Development means residential, commercial, industrial and institutional land uses and associated roads.

5.3 Erosion means the process by which the land's surface is worn away by the action of wind, water, ice or gravity.

5.4 Hazardous substance means any substance or combination of substances including any waste of a solid, semisolid, liquid or gaseous form which may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or which may pose a substantial present or potential hazard to human health or the environment because of its quantity, concentration or physical, chemical or infectious characteristics. This term includes, but is not limited to, substances which are toxic, corrosive, flammable, irritants, strong sensitizers or explosives as determined by the Department.

5.5 Illicit connection means any man-made conveyance connecting an illicit discharge to a municipal separate storm sewer system.

5.6 Illicit discharge means any discharge to a municipal separate storm sewer system that is not composed entirely of storm water except discharges authorized by a WPDES permit or other discharge not requiring a WPDES permit such as landscape irrigation, individual residential car washing, fire fighting, diverted stream flows, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, lawn watering, flows from riparian habitats and wetlands, and similar discharges. However, the occurrence of a discharge listed above may be considered an illicit discharge on a case-by-case basis if the permittee or the Department identifies it as a significant source of a pollutant to waters of the state.

5.7 Impaired water means a waterbody impaired in whole or in part and listed by the Department pursuant to 33 USC § 1313(d)(1)(A) and 40 CFR 130.7, for not meeting a water quality standard, including a water quality standard for a specific substance or the waterbody's designated use.

5.8 Infiltration means the entry and movement of precipitation or runoff into or through soil.

5.9 Jurisdiction means the area where the permittee has authority to enforce its ordinances or otherwise has authority to exercise control over a particular activity of concern.

5.10 Land disturbing construction activity means any man-made alteration of the land surface resulting in a change in the topography or existing vegetative or non-vegetative soil cover that may result in storm water runoff and lead to increased soil erosion and movement of sediment into waters of the state. Land disturbing construction activity includes clearing and grubbing, demolition, excavating, pit trench dewatering, filling and grading activities.

5.11 Maximum Extent Practicable has the meaning given it in s. NR 151.002(25), Wis. Adm. Code.

5.12 Major outfall means a municipal separate storm sewer outfall that meets one of the following criteria:

5.12.1 A single pipe with an inside diameter of 36 inches or more, or from an equivalent conveyance (cross sectional area of 1,018 square inches) which is associated with a drainage area of more than 50 acres.

5.12.2 A municipal separate storm sewer system that receives storm water runoff from lands zoned for industrial activity that is associated with a drainage area of more than 2 acres or from other lands with 2 or more acres of industrial activity, but not land zoned for industrial activity that does not have any industrial activity present.

5.13 Municipality means any city, town, village, county, county utility district, town sanitary district, town utility district, school district or metropolitan sewage district or any other public entity created pursuant to law and having authority to collect, treat or dispose of sewage, industrial wastes, storm water or other wastes.

5.14 Municipal Separate Storm Sewer System or MS4 means a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:

5.14.1 Owned or operated by a municipality.

5.14.2 Designed or used for collecting or conveying storm water.

5.14.3 Which is not a combined sewer conveying both sanitary and storm water.

5.14.4 Which is not part of a publicly owned wastewater treatment works that provides secondary or more stringent treatment.

5.15 New MS4 discharge of a pollutant means an MS4 discharge that would first occur after the permittee's original date of initial coverage under an MS4 permit to a surface water to which the MS4 did not previously discharge storm water, and does not include an increase in an MS4's discharge to a surface water to which the MS4 discharged on or before coverage under this permit.

5.16 Outfall means the point at which storm water is discharged to waters of the state or to a storm sewer (e.g., leaves one municipality and enters another).

5.17 Permittee means a person who has applied for and received WPDES permit coverage for storm water discharge. For the purposes of this permit, permittee is the owner or operator of a municipal separate storm sewer system authorized to discharge storm water into waters of the state.

5.18 Permitted area means the areas of land under the jurisdiction of the permittee that drains into a municipal separate storm sewer system, which is regulated under a permit issued pursuant to subch. I of NR 216, Wis. Adm. Code.

- 5.19 **Pollutants of concern** means a pollutant that is causing impairment of a waterbody.
- 5.20 **Reach** means a specific stream segment, lake or reservoir as identified in a TMDL.
- 5.21 **Reachshed** means the drainage area contributing runoff to a given reach.
- 5.22 **Redevelopment** means areas where development is replacing older development.
- 5.23 **Riparian landowners** are the owners of lands bordering lakes and rivers.
- 5.24 **Sediment** means settleable solid material that is transported by runoff, suspended within runoff or deposited by runoff away from its original location.
- 5.25 **Start Date** is the date of permit coverage under this permit, which is specified in the Department letter authorizing coverage.
- 5.26 **Storm water management practice** means structural or non-structural measures, practices, techniques or devices employed to avoid or minimize soil, sediment or pollutants carried in runoff to waters of the state.
- 5.27 **Storm Water Pollution Prevention Plan or SWPPP** refers to the development of a site-specific plan that describes the measures and controls that will be used to prevent and/or minimize pollution of storm water.
- 5.28 **Structural storm water management facilities** are engineered and constructed systems that are designed to provide storm water quality control such as wet detention ponds, constructed wetlands, infiltration basins and grassed swales.
- 5.29 **Total maximum daily load or TMDL** means the amount of pollutants specified as a function of one or more water quality parameters, that can be discharged per day into a water quality limited segment and still ensure attainment of the applicable water quality standard.
- 5.30 **Urbanized area** means a place and the adjacent densely settled surrounding territory that together have a minimum population of 50,000 people, as determined by the U.S. bureau of the census based on the latest decennial federal census.
- 5.31 **Wasteload Allocation or WLA** means the allocation resulting from the process of distributing or apportioning the total maximum load to each individual point source discharge.
- 5.32 **Waters of the State** has the meaning given it in s. 283.01(20), Wis. Stats.
- 5.33 **WPDES permit** means a Wisconsin Pollutant Discharge Elimination System permit issued pursuant to ch. 283, Wis. Stats.

Appendix 2

REFERENCE DOCUMENTS

This information included in this report was compiled from the following sources. In some instances, text was included directly from existing resources and reference materials.

Department of Natural Resources (Wisconsin DNR). 2008. Storm Water Management Website, www.dnr.state.wi.us/runoff/stormwater.htm

Department of Natural Resources (Wisconsin DNR). 2006. General Permit to Discharge Under the Wisconsin Pollutant Discharge Elimination System, WPDES Permit No. WI-S050075-1 dated January 19, 2006.

South Dakota Department of Environment and Natural Resources. 2002. "Phase II Municipal Guidance - A guide to application requirements and program development for coverage under South Dakota's Phase II municipal storm water discharge permit" (developed by the Colorado Department of Public Health and Environment). December.

United States Environmental Protection Agency, Office of Water (EPA). 2005. "Stormwater Phase II Final Rule Fact Sheet Series". EPA 833-F-00-00x (multiple Fact Sheet numbers). December, Revised.

United States Environmental Protection Agency, Office of Water (EPA). 2000. "Storm Water Phase II Compliance Assistance Guide". EPA 833-R-00-002. March.

Montgomery Associate Resource Solutions, LLC. 2008. "Rock Co. Towns Consortium Storm Water Management Plan". MARS Project 1322, Madison, WI. April.

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Joint Storm Water Permit Group, Dane County WI. 2003. "A Storm Water Information and Education Strategy for 19 Dane County Municipalities". January.

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