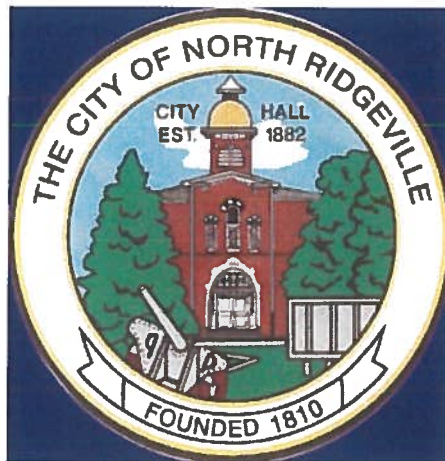


**Ohio EPA General MPDES Permit for Small MS4s  
#OHQ000003**

*Storm Water Management Program Update 2016*

North Ridgeville MS4 -- Ohio EPA Facility Permit Number 3GQ10009\*BG



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### Acronyms Used in this Report Include:

BMP:	Best Management Practice
E&SC:	Erosion and Sediment Control
HSTS:	Home Sewage Treatment System
MCM:	Minimum Control Measure
MOU:	Memorandum of Understanding
MS4:	Municipal Separate Storm Sewer System
NOACA:	Northeast Ohio Areawide Coordinating Agency
NOI:	Notice of Intent
NPDES:	National Pollutant Discharge Elimination System
OEPA:	Ohio Environmental Protection Agency
SWMP:	Storm Water Management Program
SWP3:	Storm Water Pollution Prevention Plan
TMDL:	Total Maximum Daily Load

### GENERAL INFORMATION:

#### Certification:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge, and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*



G. David Gillock, Mayor

## **Executive Summary:**

The City of North Ridgeville submitted a storm water management program (SWMP) in accordance with 40 CFR Part 122.32 and Ohio Law on March 7, 2003. The document outlined the City of North Ridgeville program to continue implement and enforce the city's storm water management program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality and to satisfy the appropriate requirements of the Clean Water Act (CWA) in accordance with the Ohio Environmental Protection Agency (OEPA) Phase II program. The SWMP addressed the six minimum control measures as required by state regulations. The plan also identified the city's legal authority to implement the general permit. This update includes information on how the city's BMPs will address the identified pollutants that have TMDL recommendations for the receiving streams in the city's watersheds along with other miscellaneous updates required by the Ohio EPA September 11, 2014 five-year permit OHQ000003.

## **Legal Authority to Implement the Storm Water Management Program:**

The City of North Ridgeville Codified Ordinance Chapters 660, 1028, 1040, 1056 and 1442 provide the city with authority to control the quality of separate storm water discharge to its storm water system. This authority addresses both industrial and municipal discharges.

## **Storm Water Management Implementation Committee:**

### **Board of Drainage and Flood Control**

A Board of Drainage & Flood Control is required by the North Ridgeville Codified Ordinance Chapter 1442 (Appendix 8). This Board consisting of a total of thirteen (13) members, eight (8) are members of the general public who are residents, one (1) member represents the City Administration, three (3) are members of Council and one (1) member is from the Board of Zoning and Building Appeals. This Board also serves as the standing committee for Water Quality and Storm Water Management in compliance with federal and state regulations.

## **Overview of community Storm Water System:**

The City of North Ridgeville contains twenty-five (25) square miles within its corporation limits and has a population of 29,492 residents (2011 data). The City is located in the Black River watershed. There are 565 storm water outfalls in the city. The majority of the City is served by sanitary sewer. Approximately 4 square miles of undeveloped area is being farmed.

## **Reporting Requirements:**

The City of North Ridgeville submits its required report annually by April 1. The report includes the status of compliance with the permit conditions, an assessment of the appropriateness of the best management practices (BMP) and progress towards achieving the measurable goals for each of the six

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minimum control measures, a summary of the activities the City of North Ridgeville will undertake during the reporting cycle and any changes to BMPs or measurable goals and all relevant data (monitoring) obtained during the reporting period.

### **Storm Water Management Program:**

The plan outlines the six minimum control measures, which are expected to result in significant reductions in pollutants discharged by the City of North Ridgeville.

The Six Minimum Storm Water Management Controls are:

1. Public Education and Outreach
2. Public Participation / Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Storm Water Management
6. Pollution Prevention / Good Housekeeping for Municipal Operations

The City of North Ridgeville has chosen a mix of BMPs to address the MCMs as discussed below.

## **WATERSHEDS, TMDL REQUIREMENTS and CHOSEN BMPs:**

A Total Maximum Daily Load (TMDL) is a regulatory term in the U.S. Clean Water Act, describing a value of the maximum amount of a pollutant that a body of water or a stream can receive while still meeting water quality standards. A TMDL is an allocation of that water pollutant deemed acceptable to the subject receiving waters. TMDLs have been established for the receiving streams in the North Ridgeville watersheds. The receiving streams and subwatersheds and the identified water quality problems requiring TMDLs within the City of North Ridgeville are listed in the table below. This information was supplied by the Northeast Ohio Storm Water Training Council.

### **Watershed: Willow Creek Subwatershed of the East Branch of the Black River**

Pollutant Parameters of Concern:	
<input checked="" type="checkbox"/> TSS	<input type="checkbox"/> Habitat
<input checked="" type="checkbox"/> Nutrients -- Phosphorous, Nitrogen	<input type="checkbox"/> Flow
<input checked="" type="checkbox"/> Bacteria	<input checked="" type="checkbox"/> Dissolved Oxygen / Organic Enrichment

The Willow Creek subwatershed covers an area of about five percent (5%) of the entire city. The portion of the entire Willow Creek subwatershed located inside the City of North Ridgeville is less than ten percent (10%). Most of it is outside the city in farmed or wooded areas. The Willow Creek watershed inside the city is approximately 50 percent developed with mostly single family homes and some commercial and industrial buildings. The remaining 50 percent of the watershed is either farmed or wooded. There are still some unsewered properties on Island Road, Lorain Road, Reed Road and Root Road.

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### **Watershed: French Creek Subwatershed of the Black River**

Pollutant Parameters of Concern:	
<input type="checkbox"/> TSS	<input type="checkbox"/> Habitat
<input type="checkbox"/> Nutrients	<input type="checkbox"/> Flow
<input checked="" type="checkbox"/> Bacteria	<input checked="" type="checkbox"/> Dissolved Oxygen / Organic Enrichment

The French Creek subwatershed of the Black River encompasses the entire northeast quadrant of the city, the northeast half of the northwest quadrant of the city and most of the southeast quadrant of the city (except the Willow Creek subwatershed).

### **Watershed: Black River**

Pollutant Parameters of Concern:	
<input type="checkbox"/> TSS	<input type="checkbox"/> Habitat
<input type="checkbox"/> Nutrients	<input type="checkbox"/> Flow
<input checked="" type="checkbox"/> Bacteria	<input checked="" type="checkbox"/> Dissolved Oxygen / Organic Enrichment

The remaining watershed in the city (excluding the French Creek and Willow Creek subwatersheds) drains directly to the Black River watershed. This area encompasses the entire southwest quadrant of the city (except the Willow Creek subwatershed) and the southwest half of the northwest quadrant of the city.

In summary, the identified pollutants requiring TMDLs for the entire city are 1) total suspended solids, 2) phosphorous and nitrogen nutrients, 3) bacteria, and 4) dissolved oxygen. Bacteria and dissolved oxygen pollutants have been identified as concerns for the entire city.

Phosphorous, nitrogen and TSS have been identified as concerns just for the Willow Creek subwatershed of the Black River in the southern part of the city. The Willow Creek subwatershed covers an area of about five percent (5%) of the entire city. The portion of the entire Willow Creek subwatershed located inside the City of North Ridgeville is less than ten percent (10%).

Each of the identified pollutants of concern with TMDL recommendations are discussed below:

### **Total Suspended Solids:**

TSS has been identified as a pollutant of concern for the Willow Creek subwatershed in just a small portion of the city.

The BMPs that have been selected for use in the storm water management program are:

MCM #1:

- 1) Protection and maintenance of natural vegetative buffers along waterway
- 2) Management of manure and pet wastes
- 3) Reduction and management of residential and agricultural fertilizers
- 4) Reduction of soil erosion on residential and agricultural land uses
- 5) Composting and management of grass clippings and yard wastes
- 6) Operation and maintenance of on-site sewage treatment systems
- 7) Construction site erosion and sediment control practices

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MCM #2:

- 1) Streamside plantings and cleanups

MCM #3:

- 1) Maintain and continue updating the MS4 map on an annual basis
- 2) Develop and maintain a list and map of Sewage Treatment Systems that discharge to the MS4
- 3) Establish a prioritization schedule for ongoing dry-weather screenings of outfalls
- 4) Develop an IDDE plan that clearly defines the department(s) and agency(s) responsible for investigating and resolving confirmed sources of illicit discharges
- 5) Develop an enforcement escalation plan that outlines how your community will address illicit discharges
- 6) Document in the SWMP how community emergency spill response and cleanup plans are communicated and coordinated between departments
- 7) Train service department, maintenance department, and parks and recreation staff to identify sources of illicit discharge

MCM #4:

- 1) Update the existing construction runoff code to meet the requirements of the NPDES Construction General Permit (OHC000003)
- 2) City of North Ridgeville Codified Ordinance 1056.05(i)(1) currently requires that Erosion and sediment control practices used should meet the standards and specifications in the **current** edition of Rainwater and Land Development Manual.
- 3) Complete Storm Water Pollution Prevention Plan (SWP3) reviews and approvals prior to construction commencement
- 4) Conduct monthly site inspections throughout construction, as well as a final site inspection to ensure correct implementation of erosion, sediment and non-sediment control BMPs in the approved SWP3
- 5) Develop an escalation plan that outlines how and when the city will address noncompliance with erosion, sediment and non-sediment control plans
- 6) There is already a standard operating procedure to respond to complaints
- 7) Require by code that on-site protected areas (i.e., wetlands, riparian areas, and other valuable resources) be physically marked in the field prior to commencement of earth disturbing activities
- 8) Require MS4 compliance inspectors to provide a written report of findings to construction site operators for every site inspection

MCM #5:

- 1) Update the existing storm water management code to meet or exceed the requirements of NPDES OHC000003
- 2) City of North Ridgeville Codified Ordinance 1056.05(i)(1) currently requires that storm water management practices used to satisfy the performance standards should meet the standards and specifications in the **current** edition of Rainwater and Land Development Manual.

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- 3) Complete Storm Water Pollution Prevention Plan (SWP3) reviews and approvals prior to construction commencement
- 4) Conduct monthly site inspections throughout construction, as well as a final site inspection to ensure correct implementation of post-construction BMPs in the approved SWP3
- 5) Establish a program to ensure long-term maintenance of post-construction BMPs
- 6) Prior to commencing earth-disturbing activities, ensure 100% of applicable sites have a fully executed Maintenance Agreement for the site
- 7) Require by code that on-site protected areas (i.e., wetlands, riparian areas, and other valuable resources) be physically marked in the field prior to commencement of earth disturbing activities
- 8) Require MS4 compliance inspectors to provide a written report of findings to construction site operators for every site inspection
- 9) A performance bond for post-construction BMPs is already required
- 10) As-built drawings for post-construction BMPs to ensure correct installation are already required
- 11) Riparian setbacks have already been adopted
- 12) Downspout disconnections are already required by ordinance
- 13) Private property owners are already required to submit an annual maintenance report

**MCM #6:**

- 1) Update and implement facility SWP3s to reflect minimum requirements of the Ohio EPA General NPDES Permit for Storm Water Associated with Industrial Activities (OHR000005)
- 2) Quarterly visual inspections and an annual comprehensive site inspections are already required
- 3) Annual training for applicable employees at the Street Service Department, Grounds Maintenance Department and Parks and Recreation Department is already required
- 4) Street sweeping is already performed
- 5) Catch basin cleaning is already performed
- 6) Ditch cleaning is already performed
- 7) Protection of catch basins during water line repairs, road repairs and other maintenance activities is already performed
- 8) Minimization of the amounts of fertilizer, herbicide and pesticide used by the Grounds Maintenance Department is already performed

## **Nutrients -- Phosphorous and Nitrogen:**

The nutrients phosphorous and nitrogen have been identified as pollutants of concern for the Willow Creek subwatershed in just a small portion of the city.

The BMPs that have been selected for use in the storm water management program are:

**MCM#1:**

- 1) Protection and maintenance of natural vegetative buffers along waterways
- 2) Management of manure and pet wastes
- 3) Reduction and management of residential and agricultural fertilizers
- 4) Reduction of soil erosion on residential and agricultural land uses
- 5) Composting and management of grass clippings and yard wastes
- 6) Operation and maintenance of on-site sewage treatment systems

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- 7) Pond maintenance education

MCM #2:

- 1) Streamside plantings and cleanups

MCM #3:

- 1) Maintain and continue updating the MS4 map on an annual basis
- 2) Develop and maintain a list and map of Sewage Treatment Systems that discharge to the MS4
- 3) Establish a prioritization schedule for ongoing dry-weather screenings of outfalls
- 4) Develop an IDDE plan that clearly defines the department(s) and agency(s) responsible for investigating and resolving confirmed sources of illicit discharges
- 5) Develop an enforcement escalation plan that outlines how your community will address illicit discharges
- 6) Document in the SWMP how community emergency spill response and cleanup plans are communicated and coordinated between departments
- 7) Train service department, maintenance department, and parks and recreation staff to identify sources of illicit discharge
- 8) Perform at least one screening in areas where at least one previous test indicated elevated bacteria levels
- 9) Regular meetings are already established between the Lorain County General Health District and the MS4 manager

MCM #4:

- 1) Update the existing construction runoff code to meet the requirements of the NPDES Construction General Permit (OHC000003)
- 2) City of North Ridgeville Codified Ordinance 1056.05(i)(1) currently requires that Erosion and sediment control practices used should meet the standards and specifications in the **current** edition of Rainwater and Land Development Manual.
- 3) Complete Storm Water Pollution Prevention Plan (SWP3) reviews and approvals prior to construction commencement
- 4) Conduct monthly site inspections throughout construction, as well as a final site inspection to ensure correct implementation of erosion, sediment and non-sediment control BMPs in the approved SWP3
- 5) Develop an escalation plan that outlines how and when the city will address noncompliance with erosion, sediment and non-sediment control plans
- 6) There is already a standard operating procedure to respond to complaints
- 7) Require by code that on-site protected areas (i.e., wetlands, riparian areas, and other valuable resources) be physically marked in the field prior to commencement of earth disturbing activities
- 8) Require MS4 compliance inspectors to provide a written report of findings to construction site operators for every site inspection

MCM #5:

- 1) Update the existing storm water management code to meet or exceed the requirements of NPDES OHC000003
- 2) City of North Ridgeville Codified Ordinance 1056.05(i)(1) currently requires that storm water

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management practices used to satisfy the performance standards should meet the standards and specifications in the **current** edition of Rainwater and Land Development Manual

- 3) Complete Storm Water Pollution Prevention Plan (SWP3) reviews and approvals prior to construction commencement
- 4) Conduct monthly site inspections throughout construction, as well as a final site inspection to ensure correct implementation of post-construction BMPs in the approved SWP3
- 5) Establish a program to ensure long-term maintenance of post-construction BMPs
- 6) Prior to commencing earth-disturbing activities, ensure 100% of applicable sites have a fully executed Maintenance Agreement for the site
- 7) Require by code that on-site protected areas (i.e., wetlands, riparian areas, and other valuable resources) be physically marked in the field prior to commencement of earth disturbing activities
- 8) Require MS4 compliance inspectors to provide a written report of findings to construction site operators for every site inspection
- 9) A performance bond for post-construction BMPs is already required
- 10) As-built drawings for post-construction BMPs to ensure correct installation are already required
- 11) Riparian setbacks have already been adopted
- 12) Downspout disconnections are already required by ordinance
- 13) Private property owners are already required to submit an annual maintenance report

**MCM #6:**

- 1) Update and implement facility SWP3s to reflect minimum requirements of the Ohio EPA General NPDES Permit for Storm Water Associated with Industrial Activities (OHR000005)
- 2) Quarterly visual inspections and an annual comprehensive site inspections are already required
- 3) Annual training for applicable employees at the Street Service Department, Grounds Maintenance Department and Parks and Recreation Department is already required
- 4) Street sweeping is already performed
- 5) Catch basin cleaning is already performed
- 6) Ditch cleaning is already performed
- 7) Protection of catch basins during water line repairs, road repairs and other maintenance activities is already performed
- 8) Minimization of the amounts of fertilizer, herbicide and pesticide used by the Grounds Maintenance Department is already performed
- 9) Establish "pick-up pet waste" stations in community parks and open space. Three pet waste stations have been installed in South Central Park.

**Bacteria:**

Bacteria has been identified as a pollutant of concern throughout all watersheds in the city.

The BMPs that have been selected for use in the storm water management program are:

**MCM#1:**

- 1) Protection and maintenance of natural vegetative buffers along waterway
- 2) Management of manure and pet wastes
- 3) Composting and management of grass clippings and yard wastes

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- 4) Operation and maintenance of discharging and non-discharging sewage treatment systems
- 5) Open or illegal dumping

MCM#2:

- 1) Establish “pick-up pet waste” stations for residents on public property, parks, city buildings, cemeteries, etc.
- 2) Work with local health department to educate property owners on sewage treatment system operation and maintenance
- 3) Open or illegal dumping
- 4) Establish public reporting mechanism (complaint hotline, webpage, etc.) to identify noncompliance from construction sites

MCM#3: In addition to the required BMPs, the following have been selected:

- 1) Establish an IDDE surveillance plan focused on sources of bacteria such as:
  - a. Sewage treatment systems
  - b. Cross-connections
  - c. Infiltration and inflow (I&I)
  - d. Animal waste (pet)
  - e. Grass clippings and yard waste
- 2) Establish a schedule for regular meetings or other communications between third-party service providers (Cuyahoga County Board of Health, Lorain County General Health District) and the MS4 manager
- 3) Ensure that the IDDE surveillance program includes commitments to perform annual dry weather screening in areas where at least one previous test indicated elevated bacteria levels
- 4) Perform at least one screening of all outfalls during the permit term

MCM#4: In addition to the construction runoff code in place, the following BMPs are selected:

- 1) Ensure proper storage of landscape materials on construction sites
- 2) Develop an enforcement escalation plan that outlines how and when your community will address noncompliance with approved erosion, sediment and non-sediment control plans

MCM#5: In addition to the required BMPs, the following have been selected:

- 1) Develop an enforcement escalation plan that outlines how and when your community will address noncompliance with approved storm water management plans
- 2) Riparian setback ordinance has already been adopted
- 3) Downspout disconnection ordinance has already been adopted
- 4) Require the Engineering Department to perform public and private post-construction BMP inspections as time is available or require private property owners to submit an annual maintenance report. Ensure corrective actions are performed as needed by the applicable party.

MCM#6: In addition to the required SWP3, the following BMPs have been selected:

- 1) Street and parking lot sweeping
- 2) Catch basin cleaning

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- 3) Ditch cleaning
- 4) Waste storage in lidded or covered containers
- 5) Protection of catch basins and other appropriate catch basin inlets when conducting road repairs, waterline repairs, and other maintenance activities of the Service Department
- 6) Establish "pick-up pet waste" stations for residents on public property, parks, community buildings, cemeteries, etc.
- 7) Relocate stockpiles of waste materials and erodible materials away from stream banks and steep slopes and/or install appropriate sediment controls around such materials
- 8) Implement a road-kill program and properly store collected carcasses or take to a compost facility licensed to accept

## **Dissolved Oxygen:**

Dissolved oxygen has been identified as a pollutant of concern throughout all watersheds in the city.

The BMPs that have been selected for use in the storm water management program are:

### **MCM#1:**

- 1) Protection and maintenance of natural vegetative buffers along waterway
- 2) Management of manure and pet wastes
- 3) Reduction and management of residential and agricultural fertilizers
- 4) Reduction of soil erosion on residential and agricultural land uses
- 5) Composting and management of grass clippings and yard wastes
- 6) Operation and maintenance of on-site sewage treatment systems
- 7) Construction site erosion and sediment control practices
- 8) Pond maintenance education

### **MCM #2:**

- 1) Streamside plantings and cleanups

### **MCM #3:**

- 1) Maintain and continue updating the MS4 map on an annual basis
- 2) Develop and maintain a list and map of Sewage Treatment Systems that discharge to the MS4
- 3) Establish a prioritization schedule for ongoing dry-weather screenings of outfalls
- 4) Develop an IDDE plan that clearly defines the department(s) and agency(s) responsible for investigating and resolving confirmed sources of illicit discharges
- 5) Develop an enforcement escalation plan that outlines how your community will address illicit discharges
- 6) Document in the SWMP how community emergency spill response and cleanup plans are communicated and coordinated between departments
- 7) Train service department, maintenance department, and parks and recreation staff to identify sources of illicit discharge
- 8) Regular meetings are already established between the Lorain County General Health District and the MS4 manager

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MCM #4:

- 1) Update the existing construction runoff code to meet the requirements of the NPDES Construction General Permit (OHC000003)
- 2) City of North Ridgeville Codified Ordinance 1056.05(i)(1) currently requires that Erosion and sediment control practices used should meet the standards and specifications in the **current** edition of Rainwater and Land Development Manual.
- 3) Complete Storm Water Pollution Prevention Plan (SWP3) reviews and approvals prior to construction commencement
- 4) Conduct monthly site inspections throughout construction, as well as a final site inspection to ensure correct implementation of erosion, sediment and non-sediment control BMPs in the approved SWP3
- 5) Develop an escalation plan that outlines how and when the city will address noncompliance with erosion, sediment and non-sediment control plans
- 6) There is already a standard operating procedure to respond to complaints
- 7) Require by code that on-site protected areas (i.e., wetlands, riparian areas, and other valuable resources) be physically marked in the field prior to commencement of earth disturbing activities
- 8) Require MS4 compliance inspectors to provide a written report of findings to construction site operators for every site inspection

MCM #5:

- 1) Update the existing storm water management code to meet or exceed the requirements of NPDES OHC000003
- 2) City of North Ridgeville Codified Ordinance 1056.05(i)(1) currently requires that storm water management practices used to satisfy the performance standards should meet the standards and specifications in the **current** edition of Rainwater and Land Development Manual
- 3) Complete Storm Water Pollution Prevention Plan (SWP3) reviews and approvals prior to construction commencement
- 4) Conduct monthly site inspections throughout construction, as well as a final site inspection to ensure correct implementation of post-construction BMPs in the approved SWP3
- 5) Establish a program to ensure long-term maintenance of post-construction BMPs
- 6) Prior to commencing earth-disturbing activities, ensure 100% of applicable sites have a fully executed Maintenance Agreement for the site
- 7) Require by code that on-site protected areas (i.e., wetlands, riparian areas, and other valuable resources) be physically marked in the field prior to commencement of earth disturbing activities
- 8) Require MS4 compliance inspectors to provide a written report of findings to construction site operators for every site inspection
- 9) A performance bond for post-construction BMPs is already required
- 10) As-built drawings for post-construction BMPs to ensure correct installation are already required
- 11) Riparian setbacks have already been adopted
- 12) Downspout disconnections are already required by ordinance
- 13) Private property owners are already required to submit an annual maintenance report

MCM #6:

- 1) Update and implement facility SWP3s to reflect minimum requirements of the Ohio EPA General

NPDES Permit for Storm Water Associated with Industrial Activities (OHR000005)

- 2) Quarterly visual inspections and an annual comprehensive site inspections are already required
- 3) Annual training for applicable employees at the Street Service Department, Grounds Maintenance Department and Parks and Recreation Department is already required
- 4) Street sweeping is already performed
- 5) Catch basin cleaning is already performed
- 6) Ditch cleaning is already performed
- 7) Protection of catch basins during water line repairs, road repairs and other maintenance activities is already performed
- 8) Minimization of the amounts of fertilizer, herbicide and pesticide used by the Grounds Maintenance Department is already performed

## MCM #1 PUBLIC EDUCATION AND OUTREACH:

This control measure targets homeowner, business/industry and the general public. An informed and knowledgeable community is crucial to the success of the storm water management program. 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, a greater compliance with the storm water program will result.

Likewise, support by the citizenry is crucial to the success of the storm water management plan. This measure involves all socio-economic groups. The public participation program is a key component of the public education measure. Broader public support in the development and decision making process will minimize potential legal challenges.

### Minimum Control Measure #1 Public Education and Outreach:

BMP #1 Description: Distribute storm water quality and pollution prevention educational materials at City Hall Engineering Dept. and Building Dept. lobbies to residents, contractors and the general public visiting these departments and waiting in line.	Legal Authority:	N/A
	Measurable Goal:	Reach 10% of the target audience.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Misc. handouts and articles can be offered for public pickup and browsing while waiting in line at the lobby counters.
BMP #2 Description: City Engineer to make storm water quality and pollution prevention educational reports to City Council at Council meetings.	Legal Authority:	N/A
	Measurable Goal:	Reach 50% of the target audience by making approximately 8 reports each year.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Educate the general public, business community, and contractors attending the meeting or viewing the television broadcast on the local cable channel.
BMP #3 Description: Attach storm water quality and pollution prevention educational	Legal Authority:	N/A
	Measurable Goal:	Reach 100% of the target audience by adding approximately 2

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messages to residents' utility bills.		messages to bills per year.
	Responsible Party(ies):	Safety Service Director
	Rationale Statement:	All residents and property owners receive utility bills for water, sewer and/or garbage pickup.
BMP #4 Description: Publish various educational articles regarding storm water quality and pollution prevention in local newspapers.	Legal Authority:	N/A
	Measurable Goal:	Reach 50% of the target audience by adding approximately 1 article per year.
	Responsible Party(ies):	Mayor
	Rationale Statement:	Many residents and property owners read the local newspapers.
BMP #5 Description: Publish various educational articles regarding storm water quality and pollution prevention in the Mayor's Community Connection newsletter.	Legal Authority:	N/A
	Measurable Goal:	Reach 100% of the target audience by adding at least 1 article per year.
	Responsible Party(ies):	Mayor
	Rationale Statement:	All residents and property owners receiving utility bills also receive the Mayor's Community Connection newsletter.
BMP #6 Description: Play various educational videos regarding storm water quality and pollution prevention on the city's cable television channel.	Legal Authority:	N/A
	Measurable Goal:	Reach 50% of the target audience by playing approximately 8 different videos per year.
	Responsible Party(ies):	Safety Service Director
	Rationale Statement:	Many residents watch the cable television channel to obtain information about local issues and events.
BMP #7 Description: Post various educational articles regarding storm water quality and pollution prevention on the city's website.	Legal Authority:	N/A
	Measurable Goal:	Reach 50% of the target audience by posting at least 9 articles on the city's website.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Many residents, developers, contractors and the general public access the city's website to obtain information about drainage or construction issues.
BMP #8 Description: Send informational mailings to homeowners associations to educate them about maintenance of storm water quality structures.	Legal Authority:	NRCO 1056
	Measurable Goal:	Reach 5% of the target audience by mailing at least informational letters to at least 2 associations each year.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Many homeowners associations are unaware of storm water quality structure maintenance



		responsibilities and need to be educated.
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The City of North Ridgeville currently provides Educational brochures at the lobby window. Articles on storm water management have been and will continue to be included in the Mayor's Community Connection newsletter.

The City also has a very active website with an average of 1,800 hits per day.

The City has over 100 retention/detention basins and/or storm water quality structures, and the homeowners associations responsible for these structures need to be educated about maintaining them.

Because North Ridgeville is a rapidly developing community with many open ditches, new home construction and areas that do not yet have sanitary sewers, much of the attention is focused on increasing public awareness of the effects that waste dumping into ditches, land use practices and properly operating/maintained HSTS's (or the elimination of same) have on storm water pollution.

The City of North Ridgeville currently has a recycling program. Recycling is contracted through Allied Waste (aka Republic Services). A recycling program has an impact on improving the quality of rivers and streams.

## **MCM #2 PUBLIC INVOLVEMENT/ PARTICIPATION:**

This control measure targets homeowner, business/industry and the general public. An informed and knowledgeable community is crucial to the success of the storm water management program. 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, a greater compliance with the storm water program will result.

Likewise, support by the citizenry is crucial to the success of the storm water management plan. This measure involves all socio-economic groups. The public participation program is a key component of the public education measure. Broader public support in the development and decision making process will minimize potential legal challenges.

### **.Minimum Control Measure #2 Public Involvement/Participation:**

BMP #1 Description: Drainage and Flood Control Board (Storm Water Quality Committee) Meetings	Legal Authority:	NRCO 1442
	Measurable Goal:	Reach 10% of the target audience by holding at least 4 meetings per year with attendance of at least 10 residents per year and publishing the meeting minutes on the city's website.
	Responsible Party(ies):	Mayor, Safety Service Director, City Engineer
	Rationale Statement:	The city will receive input from

		residents and the general public on flood control, drainage and storm water quality and pollution prevention issues.
BMP #2 Description: Pride Day Spring Cleanup	Legal Authority:	N/A
	Measurable Goal:	Reach 5% of the target audience by participation of at least 100 volunteers per year to clean up the city parks and waterways in the parks.
	Responsible Party(ies):	Mayor, Parks and Recreation Director
	Rationale Statement:	Each year trash is collected by volunteers and various other activities include planting and weeding gardens on city property.
BMP #3 Description: Household hazardous waste collection at the City Service Department	Legal Authority:	N/A
	Measurable Goal:	Reach 50% of the target audience by collecting approximately 1,500 gallons of used oil and 100 gallons of used antifreeze each year.
	Responsible Party(ies):	Safety Service Director
	Rationale Statement:	Many residents want to recycle their used oil and antifreeze so that it is not dumped into streams or storm sewers, and they need a local facility that will collect it.
BMP #4 Description: Establish "pick-up pet waste" stations for residents on public property, parks, city buildings, cemeteries, etc.	Legal Authority:	N/A
	Measurable Goal:	Reach 50% of the target audience by distributing XXX pet waste bags each year.
	Responsible Party(ies):	Parks and Recreation Director
	Rationale Statement:	Many residents want to pick up their pet's waste when in public parks to prevent the spread of disease, keep the park and storm water runoff clean, be a responsible pet owner, prevent flies, etc.

### **MCM #3 ILLICIT DISCHARGE DETECTION AND ELIMINATION:**

The illicit discharge detection measure involves the Lorain County General Health District staff, Lorain County Soil & Water Conservation District, North Ridgeville municipal employees (primarily Service, Fire, Police, Engineering and Building Departments) and local citizens.

The Lorain County General Health District will locate illicit home sewage discharge problem areas through public complaints, visual screening, and dry weather screening and sampling results provided by the North Ridgeville Engineering Department. The program will work to detect and eliminate illicit discharges. The City will continue its effort to extend sanitary sewers to areas currently not sewered in order to eliminate the need for home sewer treatment systems (HSTS). City municipal employees will participate in locating illicit discharges when appropriate.

The City of North Ridgeville has already adopted ordinances in Chapters 660, 1028, and 1040, prohibiting illicit discharges into the storm sewer system. These ordinances provide for appropriate enforcement procedures and actions.

The City of North Ridgeville currently has a storm water ditch map and storm sewer outfall map. Storm sewers and post-construction water quality measures are shown on the city's GIS map.

The City of North Ridgeville contracts with a surveying and engineering consulting company to produce the required storm sewer map with the City's storm sewers and water quality structures using a GPS/GIS system.

The City of North Ridgeville contracts with the Cuyahoga County Board of Health to provide dry weather screening and sampling of storm sewer outfalls for illicit discharges. If dry weather flows are detected, the flow is sampled. The samples are tested by the Cuyahoga County Board of Health. If illicit discharges are detected, the North Ridgeville Service Department with the aid of the Engineering Department and Lorain County General Health District traces the flow through the storm system to its origin.

As the illicit discharge is traced, additional samples are taken as needed to isolate areas. Dye-testing and televising of sewers are utilized if necessary. Appropriate enforcement actions are taken to eliminate the illicit discharge. If access to private property or private facilities is needed, it is secured using any legal means possible.

The Lorain County General Health District currently maintains all records for HSTS in North Ridgeville. The Lorain County General Health District will continue to evaluate the operation of North Ridgeville's HSTSs on a routine basis. Systems that do not meet the Ohio EPA's NPDES water quality parameters will be updated with HSTSs that meet these parameters. These systems will be monitored by The Lorain County General Health District as directed by the NPDES permit issued to the homeowner.

**Minimum Control Measure #3 Illicit Discharge Detection and Elimination:**

BMP #1 Description: Storm Sewer System and Storm Water Quality Structure Mapping	Legal Authority:	N/A
	Measurable Goal:	Map entire storm sewer system including storm water quality structures and outfalls. Update GIS map annually.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Mapping of the storm sewer system and post-construction storm water quality structures satisfied the

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		NPDES permit requirements and is useful in tracing illicit discharges back to their source and eliminating them and bacteria entering the waterways.
BMP #2 Description: HSTS Mapping and List	Legal Authority:	N/A
	Measurable Goal:	Mapping completed in 2006 by a consulting engineering and surveying firm. A separate map was also generated by the Lorain Co. Gen. Health District.
	Responsible Party(ies):	City Engineer / Lorain County General Health District
	Rationale Statement:	Mapping of the HSTS is useful in locating the sources of illicit discharges which allow bacteria to pollute the local waterways.
BMP #3 Description: Source tracking of illicit discharges to the storm sewer system.	Legal Authority:	NRCO 660.11 and 660.18
	Measurable Goal:	Identify source of illicit discharges found during storm water outfall screening and sampling. Identify approximately two sources each year. Work with the Lorain Co. General Health District if the source is determined to be a failing HSTS.
	Responsible Party(ies):	City Engineer / Lorain County General Health District
	Rationale Statement:	Tracking illicit discharges to their source allows the city or Lorain Co. Gen. Health District to work with the property owner to solve the problem.
BMP #4 Description: Dry weather screening and sampling of storm sewer outfalls.	Legal Authority:	NRCO 660.11 and 660.18
	Measurable Goal:	Screen approximately ¼ of the city's 565 outfalls each year. Sample 30 outfalls each year.
	Responsible Party(ies):	City Engineer / Lorain County General Health District
	Rationale Statement:	Screening and sampling outfalls is a tool that can be used to trace illicit discharges to their source and eliminate failing HSTSs. This will reduce bacteria levels in the city's waterways.
BMP #5 Description: Document Fire Department response to waste spills to waters of the State	Legal Authority:	N/A
	Measurable Goal:	Collect all documentation annually.
	Responsible Party(ies):	City Engineer. Fire Chief
	Rationale Statement:	All documentation regarding waste

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		spills to waters of the State will be reviewed to determine if proper cleanup procedures were followed. The City Engineer will make recommendations to the Fire Chief if necessary regarding spill cleanup in order to protect the waters of the State.
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## **MCM #4 CONSTRUCTION SITE RUNOFF CONTROL:**

The City of North Ridgeville recognizes that construction sites can deposit a significant amount of silt and sediment in a short period of time. The Phase II rules require the City of North Ridgeville to develop and enforce a storm water management program. The City of North Ridgeville currently requires an erosion control plan along with a complete drainage plan to be submitted for the development of all new and modified drainage systems as stated in Chapter 1056 of the Codified Ordinances. This plan reduces construction pollutants in its storm water runoff. The ordinance requires that land disturbance be regulated. It requires developers to submit a plan that contains measures to reduce soil erosion and practices to control sediments. Additionally, the erosion control plan requires the submittal of construction plans prior to ground being broken. These plans must be approved by the Engineering Department. If construction commences prior to the submittal and approval of the plans, potential fines can be levied.

The City of North Ridgeville Engineering Department staff performs plan review and inspection. Once a plan is reviewed and approved by the City, the staff's job is to ensure that the plan is followed. The ordinance requires the developer to install and maintain the specified measures and practices agreed to the plan. Sites are inspected monthly for compliance and if found lacking, the City Engineer may issue a permit violation, stop work order, fine or other measure to ensure compliance.

Commercial development construction sites are inspected monthly for compliance with erosion control measures on a daily basis. Sites are also inspected to determine if waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary wastes are being controlled so that there will not be any adverse impacts to water quality.

When a complaint is received from the public, the complaint is forwarded to the best inspector suited to investigate the complaint. When the complaint has been investigated and a course of action determined, the action may be to notify the responsible party to correct the problem. If this is not possible, the Service Department will be notified to take action on the complaint.

### **Minimum Control Measure #4 Construction Site Runoff Control:**

BMP #1 Description: Develop a standard operating procedure to respond to complaints	Legal Authority:	NRCO 1056
	Measurable Goal:	Address all sediment and erosion control complaints. Track number of complaints investigated annually.

	Responsible Party(ies):	City Engineer
	Rationale Statement:	Addressing sediment and erosion control issues will reduce storm water pollution—TSS and improve dissolved oxygen levels.
BMP #2 Description: Review SWP3 construction plans to ensure compliance.	Legal Authority:	NRCO 1056
	Measurable Goal:	Review SWP3 plans for all sites requiring them.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Reviewing SWP3 plans will ensure that storm water pollution prevention plans are designed correctly for construction projects.
BMP #3 Description: Inspection construction sites to prevent storm water pollution.	Legal Authority:	NRCO 1056
	Measurable Goal:	Inspect all construction sites (new subdivisions, commercial sites and city projects) on a monthly basis. Do a visual inspection at least weekly. Inspector to provide written results of inspection to construction site operator.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Inspection of construction sites will ensure that storm water pollution prevention plans are implemented and followed correctly during construction activities.
BMP #4 Description: Enforce compliance of storm water erosion and sediment control issues.	Legal Authority:	NRCO 1056
	Measurable Goal:	Send violation letters to all site operators who have not responded to inspectors' written report notifications. Issue stop work orders or citations if appropriate.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Enforcement of sediment and erosion control violations will result in a reduction of storm water pollution—TSS and improve dissolved oxygen levels.
BMP #5 Description: Update Chapter 1056 ordinance to require that riparian setbacks be physically marked in the field prior to commencement of earth disturbing activities	Legal Authority:	To be added to NRCO 1056
	Measurable Goal:	Mark all riparian setbacks in the field prior to construction.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Marking riparian setbacks in the field prior to construction will eliminate accidental disturbance of this area during construction and prevent storm water pollution by

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		TSS. It will also improve dissolved oxygen levels in the waterways.
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## **MCM #5 POST-CONSTRUCTION STORM WATER MANAGEMENT:**

The City of North Ridgeville is primarily a residential community with limited commercial and industrial developments. The water quality concerns are those related to increases in storm water runoff as impervious cover increases and include sedimentation due to stream bank erosion, increased flooding due to increases in storm water volume, temperature due to increases in storm water temperature in detention facilities, and habitat loss as riparian and wetland areas are impacted by development.

Chapter 1056 of the North Ridgeville Codified Ordinances currently requires storm water storage facilities. These facilities can be either underground or above ground. Because of area limitations, some commercial and industrial developments will use underground storage. However, the vast majority choose above ground storage. This ordinance requires that the owners continuously maintain storm water storage facilities. It states that the developer shall cause the maintenance obligation to be inserted in the chain of title to the affected lands as a covenant running with the land. The North Ridgeville Engineering Department is charged with the duty of inspecting all storm water storage facilities. The ordinance states that the owner or persons in control of private property shall permit the inspection of such systems. The ordinance states that the City Engineer shall notify the property owner of any malfunctions of the system. If the owner fails to perform the corrective work, the City will perform the work and bill the property owner for the cost of it.

The current ordinance contains strict requirements to limit the amount of post-development stormwater runoff to levels much less than the pre-development runoff.

North Ridgeville Codified Ordinance Chapter 1028 establishes riparian setback requirements of thirty-seven and a half (37 ½ ) feet for the ditch centerline for major ditches and twenty-five (25) feet for the ditch centerline for minor ditches. Other requirements protecting the ditches are also listed.

The City's post-construction water quality ordinance 1056 contains the required applicable provisions as outlined by Ohio EPA. This ordinance is updated when new requirements are issued.

There are over 100 storm water storage / water quality structures in the city, and most are located on common property owned by homeowners associations. The North Ridgeville Engineering Department will send informational mailings to homeowners associations to educate them on the maintenance of these systems. If systems are properly maintained, they will function as designed and help to reduce storm water pollution.

### **Minimum Control Measure #5 Post-Construction Storm Water Management:**

BMP #1 Description: Update the storm water management ordinance 1056 to meet or exceed the requirements of new NPDES permit OHC000003.	Legal Authority:	NRCO 1056 to be updated
	Measurable Goal:	Update NRCO 1056 in 2015 or 2016
	Responsible Party(ies):	Mayor / City Engineer
	Rationale Statement:	Updating the current storm water

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		management ordinance will satisfy the minimum performance standards of the new NPDES permit and aid in the city in implementation of it to reduce storm water pollution.
BMP #2 Description: Inspect permanent storm water quality structures.	Legal Authority:	NRCO 1056
	Measurable Goal:	Inspect all construction sites annually. Inspect 10 existing sites annually.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Inspection of storm water quality structures will ensure that they are operating as designed and help to prevent storm water pollution including TSS. It will also improve dissolved oxygen levels in the waterways.
BMP #3 Description: Review construction plans to ensure that storm water quality structures are being designed as required by ordinance 1056.	Legal Authority:	NRCO 1056
	Measurable Goal:	Review all construction plans annually.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Reviewing construction plans will ensure that storm water quality structures are designed correctly for construction projects.
BMP #4 Description: Inspect construction sites to ensure permanent water quality structures are built correctly.	Legal Authority:	NRCO 1056
	Measurable Goal:	Inspect all construction sites (new subdivisions, commercial sites and city projects) on a monthly basis. Do a visual inspection at least weekly.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Inspection of construction sites will ensure that storm water quality structures are constructed correctly.
BMP #5 Description: Enforce construction of permanent storm water quality structures.	Legal Authority:	NRCO 1056
	Measurable Goal:	Ensure that all storm water quality structures are constructed per plan. Send letters to all property owners who are found to be in violation advising them to make corrections. Issue citations if appropriate.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Correct construction of storm water quality structures will result in a reduction of storm water pollution—TSS and nutrients, and improve dissolved oxygen levels.

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BMP #6 Description: Obtain maintenance agreements for all new permanent water quality structures.	Legal Authority:	NRCO 1056
	Measurable Goal:	Obtain maintenance agreements for all new residential properties having new permanent water quality structures. Require annual inspection reports be submitted to the City Engineer for all new commercial and residential storm water quality structures.
	Responsible Party(ies):	City Engineer
	Rationale Statement:	Properly maintained storm water quality structures will ensure that they are operating as designed to prevent storm water pollution – TSS and nutrients and improved dissolved oxygen levels in waterways.

## **MCM #6 POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS:**

The City of North Ridgeville's Pollution Prevention/Good Housekeeping goal is to reduce polluted runoff from municipal operations.

Application of fertilizer, pesticides and herbicides is documented by the Grounds Maintenance Department. It is applied when winds are calm, according to manufacturer's directions, and when the grounds are dry. Riparian areas are avoided. An outside contractor applies the pesticides. Fertilizer is applied by a subcontractor in the city parks and is a lump sum contract. Fertilized properties include City Hall, the Root Road Soccer Complex, Frontier Park and Shady Drive Baseball Complex.

The City of North Ridgeville refuse pick-up is contracted through Allied Waste. Allied Waste also provides dumpsters to the Service Department for disposal of construction debris from City projects, disposal of catch basin material, disposal of street sweepings and municipal parking lot sweeping. The collected material is then pick up by Allied Waste and delivered to an approved landfill site in Oberlin, Ohio.

Scrap metal is recycled by Allied Waste.

All construction debris, except concrete, is deposited in the dumpsters mentioned above. Concrete debris is taken to Medina Concrete Supply Company in Medina, Ohio for recycling.

Material collected from the City's regular catch basin cleaning program and material collected from the three (3) times a year street sweeping are first dumped into a concrete pit. The solids are placed in one of the above mentioned dumpsters while the liquids flow into a catch basin with sump and into the sanitary sewer.

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Fleet maintenance is done only at the Service Garage. All oil, antifreeze and tires are collected for recycling. Used oil is re-used for heating the Service Garage pole barn.

The City currently has no leaf recycling program. Allied Waste picks up the bagged material at the curb.

The City contracts with the Cuyahoga County Board of Health to provide Good Housekeeping Training.

The City's salt stock pile is in an enclosed building. Only main streets are salted. Local streets are salted only at intersections and horizontal curves.

The City of North Ridgeville has an extensive ditch cleaning program. The soil recovered from this cleaning is reused as fill material is needed for city projects.

**Min. Control Measure #6 Pollution Prevention / Good Housekeeping for Municipal Operations:**

BMP #1 Description: Employee Training Program	Legal Authority:	N/A
	Measurable Goal:	Provide training to all Service Dept., Grounds Maintenance Dept. and Parks and Recreation Dept. employees at least once annually.
	Responsible Party(ies):	Mayor, Safety Service Director, City Engineer
	Rationale Statement:	Properly trained employees will dispose of street sweepings, catch basin materials and hazardous waste properly so that storm water pollution is prevented. TSS and nutrient levels will be reduced and dissolved oxygen levels will improve in waterways.
BMP #2 Description: Proper disposal of wastes generated by Service Department	Legal Authority:	N/A
	Measurable Goal:	Sweep 158 miles of streets annually. Dispose of catch basin cleanings and sewer vacuuming materials properly.
	Responsible Party(ies):	Safety Service Director
	Rationale Statement:	Proper sweeping and disposal of catch basin and sewer vacuuming materials will prevent storm water pollution.
BMP #3 Description: Proper application of road salt.	Legal Authority:	N/A
	Measurable Goal:	Salt only main streets and local streets at intersections and horizontal curves.
	Responsible Party(ies):	Safety Service Director
	Rationale Statement:	Minimization of salt usage will help prevent pollution of waterways by reducing the amount of salt that runs off into them.

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BMP #4 Description: Proper application of pesticides, herbicides and fertilizers.	Legal Authority:	N/A
	Measurable Goal:	Apply all pesticides, herbicides and fertilizers per manufacturer's instructions, when it is not raining, winds are calm, and not near waterways. Document annual usage of chemicals.
	Responsible Party(ies):	Safety Service Director
	Rationale Statement:	Proper application of chemicals will reduce the amount that is carried into waterways by storm water runoff.