IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

ENFORCEMENT RESPONSE PROCEDURE (ERP)

IRA TOWNSHIP
ENFORCEMENT RESPONSE PROCEDURE

Introduction:

An Enforcement Response Procedure (ERP) has been developed which outlines the procedures followed by Township's Enforcement Coordinator (EC), Chris Hiltunen, to identify, document and respond to violations not in compliance with the Illicit Discharge Elimination Program (IDEP), Ira Township Ordinances and the Township's Storm Water Management Plan. Incorporated into the ERP are specific criteria by which the Enforcement Coordinator can determine the enforcement action most appropriate to the nature of the violation. In addition, the ERP describes the duties of the methods the Enforcement Coordinator used to determine compliance with applicable regulations; procedures to review compliance data.

Definitions

Administrative Orders: Enforcement documents, which direct the Violator to undertake or to cease, specific activities. Administrative Orders may incorporate compliance schedules, timeframes, administration penalties, and termination of services orders. Administrative orders include:

- Finding of Non-compliance - a written notice instructing the Violator to identify and correct causes of non-compliance.
- Consent Order- documents non-compliance and includes actions required to be accomplished by specific dates. Consent Orders are developed during Compliance Meetings and both parties agree to terms.
- Compliance Order - directs the Violator to achieve or restore compliance by a date specified in the order. A compliance Order is often a stipulated agreement that may include a compliance schedule, the payment for monetary penalties, or cost recovery for and the imposition of fines when milestones are not meet.
- Cease and Desist Order - directs a Violator to cease illegal or unauthorized discharges or to terminate discharges altogether.
- Termination of Services or Permit Revocation - a notice delivered to a Violator of the intent to revoke the User's Permit or the termination of services.

Compliance Inspection: An inspection to determine compliance status and to identify practices, which may lead to non-compliance. Compliance inspection are normally not scheduled.

Compliance Meeting: A meeting with the Violator to discuss the causes of non-compliance, corrective actions to achieve compliance, and time frames for the implementation of corrective actions.

Compliance Schedule: A timetable for the implementation of corrective actions by the Violator in order to achieve consistent compliance.

IRA TOWNSHIP
ENFORCEMENT RESPONSE PROCEDURE

Good Faith Effort: Prompt and vigorous pollution control measures undertaken by the Violator which shows that extraordinary efforts have been made to achieve compliance. Good faith may also be defined as the user's honest intention to remedy its non-compliance coupled with actions, which support to this intention.

Notice of Violation (NOV): An official notice that a violation of discharge regulations has occurred. A written response to the Notice of Violation identifying causes of the violation and corrective actions taken to prevent recurring violations is required within two weeks of the mailing date.

Verbal Warning: A documented warning communicated to the Violator orally. The violation is usually slight or within the range of analytical error.

Warning Notice: A written notice that a violation has occurred. The Warning Notice directs the Violators to take actions to correct the violations.

Duties of the Enforcement Coordinator

The Enforcement Coordinator (EC) is to ensure that the Enforcement Response Procedure is followed in a timely and consistent manner. To achieve this, the EC conducts the following duties:

- Reviews monitoring results and verifies violations.
- Determines if violation of Part 91 (SESC Permit) has occurred. EC notifies all complaints to St. Clair County Health Department Environmental Health Division (Part 91 agency).
- Reviews violation of Part 91 (SESC Permit) with St. Clair County Health Department Environmental Health Division, determine severity of violation, if it warrants further review the St. Clair County Health Department Environmental Health Division will contact MDEQ.
- Verify Violator has responded, in a timely manner, to Notices Violations, Compliance Meetings, and Compliance Schedules.
- Review Violator's response letters to ensure the response adequately addresses compliance issues.
- Review compliance meeting schedules and ensure that deadlines are being met.
- Assists in the preparation and running of compliance meetings. Review compliance meeting schedules and ensure that deadlines are being met.
- Prepare non-routine compliance letters, Administrative Orders and Citations.
- Review Violator's compliance history reports.

IRA TOWNSHIP
ENFORCEMENT RESPONSE PROCEDURE

Enforcement Response Guide

The Enforcement Response Guide (ERG) lists the routine types of non-compliance and enforcement actions taken. These routine actions include Verbal Warnings, Warning Notices, Notices of Violation, Administrative Citations and Compliance Meetings. This guide is a matrix, which describes violations and indicates minimum enforcement actions.

Prior to taking **any** enforcement action, including Verbal Warnings, the EC will ensure that the type of enforcement action proposed is consistent with the enforcement response guide and is appropriate to the level of violation.

If multiple violations for one or more parameters occur during a calendar day, the Violator will only be issued one enforcement action, and all violations will be listed. If during an inspection multiple violations are discovered, over a number of days, those violations will be grouped by day and each group of violations will be issued an enforcement action.

When considering the type of enforcement action to be taken, the ERG serves as a **minimum standard**. EPA's Guidance for Developing Control Authority Enforcement Response Plans, Chapter 4.1 discusses the criteria what the Control Authority should consider when determining a proper enforcement response. Enforcement action may be **escalated** when considering the criteria for evaluating the degree of non-compliance. When an enforcement action is increased over the minimum, written documentation will detail the reasons for the increased enforcement action. The six criteria for evaluating the degree of non-compliance are:

- **Magnitude of the violation**

  Generally an isolated instance of noncompliance can be met with an enforcement response listed in the Enforcement Response Guide. However, since even an isolated violation could threaten public health and the environment, damage public and private property, or threaten the integrity of the Control Authority's program, the enforcement response to this type of violation must be escalated to 1) mitigate the violation quickly, 2) prevent a reoccurrence of violation(s), 3) provide an appropriate level of response and 4) provide for cost recovery as appropriate.

- **Duration of the violation**

  Violations (regardless of severity) which continue over prolonged periods of time should subject the Violator to escalated enforcement actions. The response to these situations must prevent extended periods of noncompliance from recurring.

- **Effect of the violation on the receiving water**

  One of the primary objectives of the Program is to prevent pollutants from

  "passing through" and entering the receiving waters. Consequently, any violation which results in environmental harm will be met with an escalated enforcement response.

  A minimum response to these types of violations would be an administrative order and referral to the attorney. In addition, the response should ensure the recovery from the Violator of any NPDES fines and penalties. Termination of service may also be considered for repeat violations.

- **Compliance History of the Violator**

  When evaluating the level of enforcement action to be taken for a violation, the last twelve month compliance history of the Violator shall be reviewed. If a pattern of recurring violations for the same parameter is noted, then an escalated enforcement action may be warranted.

- **Good Faith of the Industrial User**

  The Violator's "good faith" effort in correcting its noncompliance is a factor in determining which enforcement action to take. "Good faith" maybe defined as the user's honest intention to remedy its noncompliance, coupled with actions which give support to this intention. However, good faith does not eliminate the necessity of an enforcement action.

Types of Enforcement Actions

A **Verbal Warning** is generally issued for Slight Violations. In this case, the inspector notifies the Violator that a violation occurred and directs the Violator to take corrective actions. This notification serves as the enforcement action. Written documentation of a Verbal Warning will be posted to the company's file. The Inspector may schedule additional inspections and/or sampling, or may elect to implement more stringent enforcement action. A more stringent enforcement action may be the issuance of a Warning Notice in place of a Verbal Warning in cases where there have been previous recent violations for the same parameter and according to the guidelines. The issuance of a Verbal Warning will be documented in the facility's file.

IRA TOWNSHIP
ENFORCEMENT RESPONSE PROCEDURE

A **Warning Notice** is a written notice and is generally issued for a Slight or Moderate Violation depending on the criteria evaluation. A Warning Notice documents the type of violation that occurred and directs the Violator to identify and correct the cause of the violation. The Inspector may schedule additional inspections and/or sampling, or may elect to implement more stringent enforcement action. A more stringent enforcement action may be the issuance of a Notice of Violation in place of a Warning Notice in cases where there have been previous recent violations for the same parameter and according to the guidelines.

A **Notice of Violation** is generally issued for a Severe or reoccurring violations. The Notice of Violation documents the type of violation that occurred and directs the Violator to identify and correct the cause of the violation. The Violator is required to respond in writing, within two weeks, describing the cause of the violation and the corrective actions taken.

Compliance Meetings are held when Severe Violations occur or when previous violations appear to remain uncorrected as evidenced by repeated violations. Many Notices of Violation do not require a compliance meeting. During a compliance meeting, a compliance schedule and timeline are established. Progress on the compliance schedule is tracked by the Enforcement Coordinator. Compliance schedules are completed when all tasks are completed and consistent compliance is achieved.

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

PUBLIC PARTICIPATION/INVOLVEMENT PROGRAM

(PPP)

National Pollutant Discharge Elimination System (NPDES) Application for Discharge of Stormwater to Surface Waters from a Municipal Separate Storm Sewer System (MS4)

COLLABORATIVE PUBLIC PARTICIPATION PROGRAM (PPP) PLAN

Representing the following St. Clair County Anchor Bay Watershed Permitees:

- **IRA TOWNSHIP**
- **CITY OF ALGONAC**

PUBLIC PARTICIPATION PROGRAM (PPP) PLAN

St. Clair County (SCC) and the local municipalities that are also storm water permittees with urbanized area in the Anchor Bay Watershed (ABay) will work collaboratively to implement the following activities and comply with the PPP requirements of the NPDES Application for Discharge of Stormwater to Surface Waters from an MS4.

Responsible Party	*Activity/ Goal*	*Measure of Assessment*	*Schedule*	*Interim Milestone*	*Frequency*
SCC, Ira Township, and Algonac	Post Storm Water Management Plan (SWMP) on each permittee's respective website.	The SWMP of each permittee is available on their respective website.	Within 3 months of each permit being issued	None	1x; Maintain throughout the permit
	Post an invitation on the respective permittee's website for the public to review the SWMP and provide contact info for providing comments.	Invitation to comment and contact info for each permittee is available on their respective website.			
	Post information/ links re: storm water public education programs on a collaborative storm water website	Information re: storm water public education and involvement programs are posted and kept up-to-date on a collaborative storm water website	Within 6 months of each permit being issued		Establish collaborative website 1x; Update 4x/yr.
	Post an invitation and link to collaborative storm water website for the public to engage in storm water education programs on each permittee's website.	Invitation and link to collaborative storm water website is present on each permittee's website.			1x; Maintain throughout the permit

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

PUBLIC EDUCATION PROGRAM (PEP)

St. Clair County, Michigan

Public Education Plan
April 1, 2014

National Pollutant Discharge Elimination System Application for Discharge of Stormwater to Surface Waters from a Municipal Separate Storm Sewer System representing the following Anchor Bay Watershed partners:

IRA TOWNSHIP
CITY OF ALGONAC

TABLE OF CONTENTS

I. INTRODUCTION

Purpose of the Public Education Plan

This collaborative Public Education Plan (PEP) was developed to fullfill the public education requirements of the State of Michigan's National Pollutant Discharge Elimination System (NPDES) Application for Discharge of Stormwater to Surface Waters from a Municpal Separate Storm Sewer System (MS4). This PEP provides an outline of the actions St. Clair County (SCC), and the permittees within the Anchor Bay (ABay) will take to inform the residents, businesses and officials of St. Clair County about their role in protecting water quality and preventing stormwater pollution in their community. This PEP outlines the eleven public education topics that must be communicated, prioritizes them based on a procedure for assessing high-priority community-wide issues, and targets issues to reduce pollutants in stormwater runoff.

The goal for this PEP is to promote, publicize and facilitate a watershed education program that encourages the public to reduce stormwater pollution to the greatest extent possible. The "public" is defined as all persons who potentially could affect the quality of stormwater discharges, including, but not limited to, residents, public employees, businesses, industries, construction contractors and developers.

This PEP was created by SCC who is subject to the aforementioned NPDES stormwater regulations. These permitees within the ABay watershed will be referred to in the remainder of this document as the "ABay Partners".

Objectives

The following objectives were developed to guide implementation of the Best Management Practicies (BMP) outlined in this PEP:

- Raise awareness and knowledge among the residents of SCC on how their daily activities impact the watershed.
- Educate the public regarding the importance of watersheds as a significant natural resource and community asset by fostering stewardship and enthusiasm for the resource.
- Improve understanding of the impacts of individual and group behaviors on water quality.
- Increase the number of individuals, schools and other organizations participating in water education and stewardship activites.

II. COLLABORATION OF WATERSHED PARTNERS

In developing this PEP, SCC continues its cooperative partnerships with the ABay Partners, who agree that approaching stormwater education on a watershed and county-wide basis is both cost-effective and environmentally sound. The collaborative approach provides a consistent and effective mechanism for protecting water resources across the county in the most cost effective manner.

Because this plan is collaborative, SCC and the ABay Partners are all responsible for ensuring its implementation. Currently SCC implements and provides leadership on the majority of the public education activities listed in this plan while the ABay Partners are responsible for financially supporting these activities, promoting and participating in them. The roles and financial arrangements between SCC and the ABay Partners are agreed upon annually at ABay Watershed Group meetings. Should the current roles or financial arrangements change, it is still the

responsibility of this collaborative group to ensure that the activities outlined in this plan are implemented.

The following entities are committed to implementing this collaborative plan:

St. Clair County (SCC)

ABay Partners:
Ira Township
City of Algonac

III. Required Permit Elements

This PEP outlines the program to promote, publicize, and facilitate education for the purpose of encouraging the public to reduce the discharge of pollutants in stormwater to the maximum extent practicable. The PEP describes current and proposed BMPs that will be implemented to meet the minimum control measure required in the permit.

PEP Priority Topics

The public education topics A – K listed in the chart below are identified in the permit application. The procedure for identifying high-priority watershed-wide or targeted topics suited for collaborative public education efforts includes:

- A review of pertinent Watershed Management Plans including any established Total Maximum Daily Loads for waterbodies in each watershed;
- A review of the effectiveness of PEP activities implemented prior to this permit cycle;
- Topics identified by permitees at advisory group meetings prior to and throughout the permit cycle; and
- Discussion and input from permitees regarding potential public outreach opportunities, and existing and future programs.

Code	PEP Topic	Priority Ranking
A	Promote public responsibility and stewardship in the watershed	High
B	Inform and educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have on surface waters of the state	High
C	Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4	High
D	Promote preferred cleaning materials and procedures for car, pavement, and power washing	Low
E	Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers	High
F	Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4	High
G	Identify and promote the availability, location and requirements of facilities for collection of disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, yard wastes, and motor vehicle fluids	Medium
H	Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure	High

I	Educate the public on, and promote the benefits of, green infrastructure and Low Impact Development	Medium
J	Promote methods for managing riparian lands to protect water quality	High
K	Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to storm water runoff	Low

A measurable goal with a measure of evaluation is included for each PEP activity. As appropriate, a schedule for implementation (months and years), with interim milestones and the frequency of the BMP is also provided. In addition, for topics A - K the PEP identifies:

1. Target audience
2. Key message
3. Delivery mechanism
4. Year and frequency of BMP
5. Responsible party

IV. OVERALL EVALUATION

This PEP provides the procedure for evaluating and determining the effectiveness of the overall PEP. The procedure includes a method for assessing changes in public awareness and behavior resulting from the implementation of the PEP and the process for modifying the PEP to address ineffective implementation.

A variety of mechanisms are described in the "Evaluation" of each of the PEP's individual activities. Evaluation of accumulated measures of the effectiveness of the PEP's individual activities can be categorized in terms of output (i.e., effort or activity) that measures short-term goals and milestones. Examples of output measurements include tracking web site hits or the number of literature pieces distributed to a target audience. When practicable, measurements of outcome (i.e. results that indicate actual behavior change) will be incorporated into BMP evaluations. Such measures are expected to include public comment and feedback and level of participation in programs and events. These mechanisms can be useful in determining whether the education effort is reaching the audience; however it is difficult to evaluate behavior change resulting from the education activity using these purely quantitative methods.

Through SCC's Stream Leaders water quality monitoring program, it is possible to evaluate long-term changes in water quality. The results are compiled in a scorecard which allows a simple mechanism for measuring improvements or declines in water quality across the various subwatersheds. Improvements in water quality cannot be attributed solely to a successful public education effort, but indicate the overall effectiveness of the storm water management efforts in the community, subwatershed, and county.

V. PROGRESS REPORT

By the date indicated on SCC and the ABay Partner's permits, they will submit to the Michigan Department of Environmental Quality (MDEQ) a Progress Report on the implementation status of its permit and the progress of pollution prevention. This report will include documentation of PEP efforts, a summary of the evaluation of its effectiveness when appropriate, and any proposed revisions or amendments.

VI. PROPOSED PUBLIC EDUCATION BMPs

The BMP activities to be implemented as part of this PEP are summarized below. Activities will be completed by the responsible parties noted in each activity description. Time lines for implementation of proposed activities extend from (year 1) when implementation of the PEP begins to (year 5) when the permit expires.

Activity #1: Distribute Educational Materials

Delivery Mechanism:	Utilize print and digital materials developed by SCC, by the Southeast Michigan Council of Governments (SEMCOG), and/or other organizations. Materials will be distributed at municipal offices, events, public locations, and on websites.
Key Messages:	A - K
Target Audience:	Residents, visitors, students, public employees, businesses, industries, construction contractors and developers
Year & Frequency:	Materials will be disseminated throughout the year for the duration of the permit cycle.
Goal:	50 pieces of materials distributed per year per permitee
Evaluation:	Number of materials distributed; location materials were distributed
Responsible Party:	SCC, ABay Partners

Activity #2: Provide Content in Newsletters, Websites, Social Media

Delivery Mechanism:	Information will be developed and distributed to watershed stakeholders to keep them informed about ongoing watershed issues, individual actions to protect water resources, and stewardship opportunities. Information on similar topics will also be included in permitee's newsletters and/or other types of notices mailed and/or emailed to watershed residents. Information will also be posted on a collaborative storm water website and/or via social media tools.
Key Messages:	A - K
Target Audience:	Residents, visitors, public employees, schools, businesses, industries, construction contractors and developers
Year & Frequency:	Developed and distributed throughout the year and for the duration of the permit cycle
Goal:	1 article in newsletter/ year; 1,000 hits/year on the collaborative storm water website
Evaluation:	Frequency and number of articles, number of newsletters distributed, content of newsletters, number of website hits, type of social media tools used; content of messages
Responsible Party:	SCC, ABay Partners

Activity #3: Conduct Outreach at Local Fairs and Community Events

Delivery Mechanism:	Participate in and/or promote county-wide environmental education events such as Earth Fair, River Day, Stream Leaders, Adopt-A-Road and/or Adopt-A-Stream, or other similar water-themed fairs and festivals
Key Messages:	A - K

Target Audience:	Residents, visitors, students, public employees, businesses
Year & Frequency:	Ongoing annually and for the duration of the permit cycle
Goal:	Participate in and/or promote 2 events per year
Evaluation:	Number of participants, number of activities, amount and type of media coverage received
Responsible Party:	SCC, ABay Partners

Activity #4: Display Water Quality Exhibits

Delivery Mechanism:	Provide water-quality and/or watershed themed exhibits and/or table-top displays at public events and/or public facilities
Key Messages:	A - J
Target Audience:	Residents, visitors, public employees, schools, businesses, and industries
Year & Frequency:	1 display per permit cycle
Goal:	SCC display at 3 events/ year; Permitee 1x/ permit cycle
Evaluation:	Period of time exhibit is on display, location exhibit is on display, content of exhibit topics
Responsible Party:	SCC, ABay Partners

Activity #5: Promote SCC water quality hotline

Delivery Mechanism:	Promote SCC's 24-hour anonymous water quality hotline for reporting illicit discharges and pollution problems
Key Messages:	C
Target Audience:	Residents, public employees, businesses, industries
Year & Frequency:	Ongoing throughout permit cycle
Goal:	Regular maintenance and update of a pollution hotline and record of the complaints per year
Evaluation:	Number of calls to hotline; nature of complaints; follow-up actions
Responsible Party:	SCC, ABay Partners

Activity #6: Conduct Mass Media Outreach

Delivery Mechanism:	Provide press releases and media materials related to watershed activities to local radio, TV, and newspapers. This may include PSA's developed by SEMCOG; videotapes of presentations and workshops described above; other text derived from existing digital materials and articles
Key messages:	A - K
Target Audience:	Residents, visitors, public employees, businesses, and industry
Year & Frequency:	Regularly throughout the permit cycle, depending on season, messaging and budget
Goal:	3 published and/or broadcast messages per year
Evaluation:	Number of times information is aired, period of time, content of material
Responsible Party:	SCC, ABay Partners

Activity #7: Water Quality Presentations

Delivery Mechanism:	Conduct presentations that teach about current watershed issues, water pollution sources and solutions to these impacts. Provide free presentations to civic groups, organizations, schools and service clubs.

Key messages:	A - K
Target Audience:	Residents, students, schools, public employees, businesses, industries
Year & Frequency:	Ongoing throughout permit cycle
Goal:	16 presentations per year
Evaluation:	Number of participants; number of presentations; content of program; participant's surveys
Responsible Party:	SCC, ABay Partners

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

ILLICIT DISCHARGE ELIMINATION PROGRAM (IDEP)

ILLICIT DISCHARGE ELIMINATION PLAN

ST. CLAIR COUNTY'S NORTHEASTERN WATERSHEDS

(LAKE HURON DIRECT DRAINAGE, LOWER BLACK RIVER, AND

ST. CLAIR RIVER DIRECT DRAINAGE WATERSHEDS),

THE BELLE AND PINE RIVER WATERSHEDS AND ANCHOR BAY

PORTION OF ST. CLAIR COUNTY

Prepared on behalf of

ST. CLAIR COUNTY;

AND ST. CLAIR COUNTY'S NESTED JURISDICTIONS:

- EAST CHINA SCHOOL DISTRICT,
- MARYSVILLE PUBLIC SCHOOOLS DISTRICT,
- PORT HURON AREA SCHOOL DISTRICT,
- REGIONAL EDUCATIONAL SYSTEM AGENCY,
- ST. CLAIR COUNTY COMMUNITY COLLEGE,
- ALGONAC COMMUNITY SCHOOLS DISTRICT

AND THE FOLLOWING LOCAL MUNICIPALITIES IN THE

NORTHEASTERN WATERSHEDS:

- CITY OF MARINE CITY
- CITY OF MARYSVILLE
- CITY OF ST. CLAIR
- CLYDE TOWNSHIP
- EAST CHINA CHARTER TOWNSHIP
- FORT GRATIOT CHARTER TOWNSHIP
- KIMBALL TOWNSHIP
- PORT HURON CHARTER TOWNSHIP

ANCHOR BAY WATERSHED:

- CITY OF ALGONAC
- IRA TOWNSHIP
- CLAY TOWNSHIP

- **TABLE OF CONTENTS**

APPENDICES

A. Municipal Separate Storm Sewer System Maps

B. Illicit Discharge Elimination Program Discharge Point Screening Spreadsheet

C. Spill Response Procedures

I. PROGRAM OVERVIEW

A. Purpose

This Illicit Discharge Elimination Program (IDEP) plan was developed on behalf of St. Clair County (SCC), its nested jurisdictions, and the local municipalities who have jurisdiction over a municipal separate storm sewer system (MS4) in the urbanized area (as defined by the 2000 census), and are also located within SCC's Northeastern Watersheds (NEW) or Anchor Bay Watershed (ABay). These local municipalities will hereafter be referred to as the "NEW and ABay Partners". This plan was developed to assist the county, these educational institutions and local municipalities to collaboratively meet IDEP requirements of the State of Michigan National Pollutant Discharge Elimination System (NPDES) Application for Discharge of Storm Water to Surface Waters from a Municipal Separate Storm Sewer System (MS4). This application will hereafter be referred to as the "Permit Application".

This IDEP plan outlines activities that SCC, its nested jurisdictions, the NEW and ABay Partners will implement to comply with questions 8 – 19 of the Permit Application to the maximum extent practicable.

This plan outlines IDEP activities which generally can be described as looking for and correcting sources of pollution in regulated MS4s. This includes, but is not limited to, pollution sources such cross connections between the sanitary and storm sewer systems, failing septic systems, dumping of illegal grass and leaf clippings, garbage, pet waste, and/or hazardous materials in the MS4. Activities to correct any of these pollution sources, or other sources unnamed, are considered IDEP activities and shall be recorded for the purposes of evaluating permittee's IDEP activities and this plan.

B. Partners:

This IDEP plan represents the following nineteen partners:

SCC:

- SCC Health Department (HD)
- SCC Road Commission (RC)
- SCC Drain Commissioner's Office (DO)
- SCC Parks and Recreation Commission (PARC)
- SCC Building and Operations Department (BOD)

SCC's nested jurisdictions:

- Algonac Community School District (ACSD)
- East China School District (ECSD)
- Marysville Public School District (MPSD)
- Port Huron Area School District (PHASD)
- SCC Regional Educational Service Agency (RESA)
- St. Clair County Community College (SC4)

The NEW Partners:

- City of Marine City
- City of Marysville
- City of St. Clair
- East China Charter Township
- Fort Gratiot Charter Township
- Kimball Township

- Clyde Township
- Port Huron Charter Township

The Anchor Bay Watershed Partners:

- City of Algonac
- Clay Township
- Ira Township

C. **Timeline**

This plan describes activities that will begin as soon as a permit is issued for SCC and each of the NEW Partners. Activities will occur over the five year permit cycle or until SCC and its NEW Partners' Permits expire. It is anticipated that permits will be issued by the Michigan Department of Environmental Quality (MDEQ) in the fall of 2014. Currently, the Anchor Bay Watershed is starting its MS4 Application process as of April, 2014 and should have permits in the fall of 2015.

D. **Geographic Scope**

This plan addresses regulated MS4s, under the jurisdiction of SCC, its nested jurisdictions and the NEW Partners, which are located in the urbanized areas of SCC as defined by the 2000 census, and are also contained within the NEW, Pine and Belle River Watersheds. The NEW is comprised of three watersheds: Lake Huron Direct Drainage, Lower Black River, and the St. Clair River Direct Drainage Watersheds. The regulated MS4s within the Pine and Belle River Watersheds also have regulated MS4s in these watersheds. The Anchor Bay Watershed is on the edge of the St. Clair River and Lake St. Clair. The bay encompasses 38,000 acres of wetland habitat for fish and wildlife, including St. Johns Marsh, a 2,500-acre coastal wetland located in Clay and Ira Townships. Although much of the flow to the bay comes from the St. Clair River, the major streams draining the watershed include:

St. Clair County: Crapaud Creek, Marsac Creek, Swan Creek, Meldrum Creek, Beaubien Creek, Swartout Creek, the Marine City Dredge Cut and the Harsen's Island Drain (aka Krispin Drain).

Macomb County: Auvase Creek, Crapaud Creek, and the Salt River.

Since the DEQ has not provided a schedule for submitting permit applications for these watersheds, these regulated MS4s have been included in this plan. The ACSD MS4 has also been included in this plan, its location is in the Anchor Bay Watershed, because ACSD is a nested jurisdiction of SCC and participates in the NEW it will be easier coordinating permit activities.

E. Collaborative Partnership and Interagency Agreement

While SCC has developed this plan in collaboration with its nested jurisdictions, the NEW and Anchor Bay Partners, SCC is not responsible for implementation of IDEP activities by the NEW and Anchor Bay Partners within their own MS4s. Collaboration and coordination between SCC, the NEW and Anchor Bay Partners are important components of this IDEP plan, especially in regards to IDEP prioritization and evaluation, but in no way is any one permittee more responsible for this coordination than another. SCC, its nested jurisdictions, the NEW and Anchor Bay partners currently meet

as a Watershed Advisory Group (WAG) on a regular basis. It is within this group that decisions must be made regarding how collaborative actions of this plan will be accomplished and funded.

As part of this IDEP plan, all of the permittees and partners that are collaborating on this plan (SCC, its nested jurisdictions, the NEW and Anchor Bay Partners) agree that if one becomes aware of a non-stormwater discharge that is being generated within their MS4 and is entering another of one the permittee's downstream MS4, than the permittee who owns and operates the upstream MS4 will eliminate this discharge as soon as possible. This interagency agreement, between all of the permittees and partners of this plan, eliminates the requirement for each to perform field observation at every one of its points of discharge. Most importantly it allows prioritization of time and resources towards IDEP activities that will be most effective. The submission of this plan by each permittee signifies that all permittees and partners listed in this plan are in agreement with this interagency agreement and nullifies the need for separate agreements between each.

II. LOCATION/ NUMBER OF DISCHARGE POINTS/ OUTFALLS

The number of discharge points/ outfalls each partner has in the NEW, Anchor Bay, Pine and Belle River Watersheds, is indicated in the following table.

Regulated Entity/ Agency	*# of discharge points/ outfalls*
SCC Building and Operations Dept. (SCCBOD)	12
SCC Drain Office (SCCDO)	33
SCC Road Commission (SCCRC)	33
SCC Parks and Recreation Commission (SCCPARC)	0
St. Clair County's SUBTOTAL	**78**
East China School District (ECSD)	8
Marysville Public School District (MPSD)	26
Port Huron Area School District (PHASD)	41
SCC Regional Educational School Agency (RESA)	5
St. Clair County Community College (SC4)	7
Algonac Community School District (ACSD)	12
St. Clair County's nested jurisdictions SUBTOTAL	**99**
City of Marine City	38
City of Marysville	14
City of St. Clair	60
Clyde Township	1
East China Charter Township	4
Fort Gratiot Township	5
Kimball Township	1
Port Huron Charter Township	13
NEW Partners' SUBTOTAL	**140**
City of Algonac	47
Clay Township	8
Ira Township	5
Anchor Bay Partners' SUBTOTAL	**60**
TOTAL	**377**

Maps that provide the general location of the above discharge points/ outfalls are provided as **Attachment A.** Blueprints and design maps providing a more detailed location of these discharge points/ outfalls are available from each permittee as outlined in their individual Permit Applications.

Note: *Each member responsible for their own outfall / discharge point screening. St. Clair County Health Department will only screen those outfalls designated being owned by the county of St. Clair, per this document there are 78.*

III. ILLICIT DISCHARGE IDENTIFICATION & INVESTIGATION

A. Prioritization Process

Screening and investigation of MS4s for illicit discharges/ connections, and eliminating those found demands significant municipal resources. Currently municipal resources are very limited due to an extremely poor economy in St. Clair County. Therefore it is of utmost importance that IDEP activities be prioritized to accomplish its goals in an economical manner that is feasible for the permittees included in this plan.

Currently the NEW, Pine, Anchor Bay and Belle River watersheds have the following characteristics important for understanding the prioritization process of this plan:

- There are twelve Great Lakes beaches located in the Lake Huron Direct Drainage watershed.

- There are three Great Lakes beaches located in the St. Clair River Direct Drainage watershed.

- Krafft Road Beach and Chrysler Beach are currently on the 303(d) list of impaired waterbodies which are due for EPA evaluation in 2015 and 2018 respective.ly.

- Chrysler Beach has consistently had the highest closure rate among SCC's beaches over the last five years. These closures are an impediment to re-designating the beach closure impairment for the St. Clair River Area of Concern.

- There are two beaches located in the Anchor Bay region, New Baltimore's public beach at Walter and Mary Burke Park in downtown New Baltimore and Lake St. Clair Metrobeach, both are routinely tested for *E.coli.*

- The Black River, within the urbanized area, has a Total Maximum Daily Load (TMDL) for *E.coli* that was developed in 2010.

- The Pine and Belle Rivers, within the urbanized area, do not have a TMDL or any waterbodies listed on the 303(d) list of impaired waterbodies.

- The St. Clair River, downstream of Marysville, was evaluated for an *E.coli* TMDL in 2009. This portion of the river was removed from the 303 (d) list of impaired waterbodies demonstrating dramatic improvements in *E.coli* levels and the progress made correcting illicit discharges which were relatively common in previous years.

- The St Clair River, upstream of Marysville, was evaluated for an *E.coli* TMDL in 2009. This portion of the river remains on the 303 (d) list of impaired waterbodies and is scheduled for re-evaluation once sewer improvement projects are completed by the City of Port Huron and City of Marysville.

- An *E.coli* Reduction Plan was developed for St. Clair County's portion of the Anchor Bay watershed in 2011.

Considering the previous information and the need for prioritization of resources, SCC, its nested jurisdictions and the NEW Partners will focus their IDEP activities on the following priorities:

1. Screening and field investigations of MS4s that are upstream of a waterbody that is subject to *E.coli* TMDL requirements or is listed on the 303 (d) list of impaired waterbodies;

2. Screening and field investigations in MS4s that drain directly to a beach that is subject to *E.coli* TMDL requirements, is listed on the 303 (d) list of impaired waterbodies, or is located along the St. Clair River Area of Concern;

3. Screening and field investigations in MS4s zoned industrial and/or commercial, especially those with infrastructure > 50 years old.

Within three months after SCC, the NEW Partners, and Anchor Bay (ABay) Partners have received their individual Permits, they will hold a watershed meeting to discuss the above priorities in relation to their respective MS4 systems and the IDEP work each needs to comply with the IDEP requirements of their Permit. Three years into the permit cycle, SCC and the NEW Partners will hold a second meeting to review IDEP work accomplished and potential revision of priorities for the remaining two years of their permit cycle.

These two meetings will also include a discussion regarding implementation of IDEP activities as a group and a financial structure for funding a collaborative approach. Having one agency, or environmental consultant, lead IDEP efforts for SCC, the NEW and ABay Partners can provide economies of scale which may reduce costs for each permittee. It can also provide a more comprehensive and effective program than if IDEP is implemented individually. This discussion may or may not result in collaborative implementation or a collaborative financial structure, but the alternatives and economies of this potential approach will be discussed and recorded in the meeting minutes.

B. Geographical Location for Prioritized Areas

The following narrative outlines the locations of prioritized areas for SCC, its nested jurisdictions, and the NEW and ABay Partners' IDEP work during the next permit cycle. Should these priorities change before each permit is issued, each permittee will reprioritize actions based on the aforementioned criteria.

St. Clair County

SCC's top priority for IDEP work, within the urbanized area of the NEW, Anchor Bay, Pine and Belle River Watersheds, includes the following:

- Investigating issues with suspect drains within the Lake Huron Direct Drainage Watershed; and
- Investigating SCC's MS4 in the Stocks Creek and the Howe Brandymore subwatersheds of the Black River's TMDL watershed.
- Investigating suspect areas in the Anchor Bay watershed in St. Clair County.

The following are the geographical areas of highest priority for SCC and a short background description of the problem to be investigated:

- Dixie Park Plat drain, Lake Huron Direct Drainage Watershed

The Dixie Park Plat Drain discharges into the Norman Road Drain, upstream of Lake Huron beaches in Burtchville Township. Currently there is a side-tap (orphan drain) into the Dixie Park Plat Drain in Burtchville Township. This area will be monitored every two years to determine its status as it may be a source for bacteria.

- Carrigan Drain and Branches, the Grace Drain and the Keewahdin Drain, Lake Huron Direct Drainage

The Carrigan, Grace and Keewahdin Rd. drains receive runoff from the Birchwood Mall area, which is highly urbanized, and conveys water towards Lake Huron. These drains regularly contain large amounts of debris and garbage from the mall area and are also upstream of the Krafft Road Beach which is on the 303(d) list of impaired waterbodies. Walking surveys, source investigations, and clean-up of debris found in these drains will be conducted as needed.

- Stocks Creek and the Howe Brandymore Drains, Black River Watershed

The SCCHD recently received grant funding to conduct weekly surface water sampling for *E.coli* at locations in the Stocks Creek and Howe-Brandymore subwatersheds. The geomean for each sample location's *E.coli* results, over the course of the summer, was < 1,000 cfu/ 100 mL, but there were single day exceedences of water quality standards especially during wet weather events. As a result, the SCCHD and the SCCDO conducted walking surveys to screen Stocks Creek for illicit connections/ discharges. Sample results from Drain #206 and the Oakwood Drain in Port Huron Township indicate source investigations are needed in these drains. The SCHD's sampling results in the Howe Brandymore and knowledge from the SCCDO also indicate that screening and potentially source investigations are needed in the Parker Road area of the Howe Brandymore Drain.

SCC's nested jurisdictions

- SC4 and PHASD

SC4's entire complex and all of PHASD's regulated facilities were dye tested, between 2007 and 2010, during the city's sewer separation project. Dye tests confirmed that all of these facilities currently do not have any illicit discharges or connections. No further screening or investigations are required at these facilities. Any sources of pollution for their MS4s will be addressed with Pollution Prevention and Good Housekeeping Best Management Practices (BMPs) as required by SCC's permit.

- ACSD, ECSD, MPSD and RESA

Screening of above ground discharge points at these nested jurisdictions' facilities has revealed no signs of illicit discharges/ connections. If there were any at these discharge points/ outfalls, they would readily be seen by the myriad of people and children that regularly use the school grounds around these locations. For this reason, ACSD, ECSD, MPSD and RESA will not screen their above ground discharge points. They will focus screen their below ground discharge points in the first two years of SCC's permit and conduct follow up investigations and/or corrections as necessary. If dye testing records for these facilities can be found and demonstrate that these nested jurisdiction's facilities are properly connected, then these nested jurisdictions will be exempt from screening these discharge points similar to SC4 and PHASD. If past dye testing records show any potential cross connections, than source investigations and/or correction of potential cross connections will be ACSD, ECSD, MPSD and RESA's top priority.

NEW Partners

Underground MS4s provide greater opportunity for cross connections and illicit discharges to go undetected and therefore are of a high priority among the NEW Partners. NEW Partners with MS4s that are above ground and only drain local municipal property are of the lowest priority. Sources of pollution for these small drainage systems on municipal property can readily be seen by staff and the public and if there were any problems complaints would be generated and followed-up on by the local municipality.

- Marine City: Marine City has thirty-eight discharge points/ outfalls in the NEW, Pine River and Belle River Watersheds. They will screen their outfalls once every permit cycle of five years as is required, unless other arrangements are agreed upon.

- City of Marysville: The City of Marysville has fourteen discharge points/ outfalls all located in the St. Clair River Direct Drainage Watershed. They will screen their outfalls once every permit cycle of five years as is required, unless other arrangements are agreed upon.

- City of St. Clair: The City of St. Clair has 60 discharge points/ outfalls, most of which are located in the Pine River and St. Clair River Direct Drainage Watersheds. There are no waterbodies within the City of St. Clair with a TMDL or 303(d) designation and there are no beaches of any kind within, or downstream of, the city. The City will then focus its IDEP resources on screening discharge points in areas of commercial and industrial zoning, especially areas where infrastructure is > 50 years old. There are two commercial blocks bounded by Vine, 3rd, Clinton and South Riverside Streets and Clinton Street between S. Riverside and 10th street that contain the following outfalls: SCC-91 through 96, SCC-81 through 89. There are also industrial areas north of Laura and Mary that have the following outfalls: Pine 12 and 13, CSC 18, and Pine 11. Outfalls in these commercial and industrial areas that also have infrastructure > 50 years old will be screened one time during the permit cycle with associated follow-up investigations being conducted as needed.

- Clyde Township: Clyde Township has one discharge point in the Black River Watershed that is also on the edge of the Black River's *E.coli* TMDL watershed. This MS4 consists of an above ground swale that is approximately twelve feet wide and has an outfall to the SCCRC's MS4 (open ditch) along Vincent Road. This swale only serves to drain Clyde Township's municipal parking lot and tennis courts. No problems have ever been associated with this discharge point, and in 2012, screening revealed no signs of illicit discharges or even erosion. Clyde Township need not dedicate any resources towards further screening or investigation of this tiny MS4 during the permit cycle. Any sources of pollution for this above ground and extremely small MS4 will be addressed with Pollution Prevention and Good Housekeeping Best Management Practices (BMPs) as required by Clyde Township's permit.

- East China Charter Township: East China Charter Township has four above ground discharge points that are all located on municipal property within the St. Clair River Direct Drainage and the Belle River Watersheds: two of them drain their main park off Recor Rd, one drains their parking lot at the Waste Water Treatment Plant, and one drains their Township offices. No problems have ever been associated with these discharge points, and in 2012, screening revealed no signs of illicit discharges or even likely sources for the future. East China Township will only dedicate resources towards screening or investigation of this very small MS4 once during each 5 yr permit cycle. Any sources of pollution for their MS4s will be addressed with Pollution Prevention and Good Housekeeping Best Management Practices (BMPs) as required by East China Township's permit.

- Fort Gratiot Charter Township: Fort Gratiot Charter Township has six discharge points which only drain property managed by the municipality. One of the discharge points is located in the Lake Huron Watershed and five are located in the Black River Watershed. Because these five discharge points drain into the Black River's *E.coli* TMDL watershed, and some have septic systems within their drainage area, these will be screened one time every five years during a permit cycle. The discharge point in the Lake Huron Direct Drainage watershed need not be screened during the permit cycle as it is above ground, only drains municipal property, and has no likely sources of pollution. Any sources of pollution for this discharge point will be addressed with Pollution Prevention and Good Housekeeping Best Management Practices (BMPs) as required by Fort Gratiot Township's permit.

- Kimball Township: According to DEQ staff, Kimball Township has one discharge point at its fire hall. This discharge point is indistinct, above ground, and comprised of sheet runoff from the facility. There has never been a problem associated with this facility or its storm water runoff which discharges into the SCCRC's MS4 (road ditch) along Allen Road. Kimball Township will not screen this discharge point during the permit cycle. Any sources of pollution for this

discharge point will be addressed with Pollution Prevention and Good Housekeeping Best Management Practices (BMPs) as required by Kimball Township's permit.

- Port Huron Charter Township: Port Huron Charter Township has thirteen discharge points which all eventually direct storm water into the Black River *E.coli* TMDL area. Ten of the discharge points drain directly to Stocks Creek and three via road ditches to the Black River. Screening performed in 2012 did not reveal problems at any of the discharge points/ outfalls, but the Eastside storm drain was submerged making it difficult to determine if dry weather flow was present. The Eastside Storm Sewer is approximately seventeen years old making it relatively new. Because of the Black River *E.coli* TMDL, Port Huron Township will continue to screen all of their discharge points/ outfalls once every five years. At the Eastside Storm Sewer discharge point, they will screen the manhole closest to the discharge point.

Anchor Bay Partners

- City of Algonac: The City of Algonac has listed 47 outfalls and point sources either going to waters of the state or to another jurisdictions MS4 (typically MDOT). These outfall / point sources of storm water are located throughout the city and at14 locations along the waterfront. The city has made it a priority to assure that it discharges only stormwater from its MS4 system to the maximum extent practicable. It will be prioritizing its system in the future. All IDEP resources should be directed at the investigation, source location and correction of this illicit discharge before the city moves onto screening discharge points in areas of commercial and industrial zoning where its storm and sanitary infrastructure is > 50 years old.

- Clay Township; According to staff, Clay Township is responsible for eight discharge points at its township properties. One at the township Fire Station on Harsens Island, one at the Fire Station on the mainland, one at the township DPW and finally, one discharge point at the township hall and four discharge points around the park. These discharge points are distinct and comprised of a graded site leading to catchbasins for site drainage and discharge from the outfall. There has not been a documented problem associated with these township properties. Clay Township will screen these discharge points once during the five year permit cycle. Any sources of pollution for this discharge point will be addressed with Pollution Prevention and Good Housekeeping Best Management Practices (BMPs) as required by Clay Township's permit.

- Ira Township; According to staff, Ira Township has five discharge points at its township complex. These discharge points are distinct and comprised of graded runoff from the site. There has never been a problem associated with this facility or its storm water runoff which discharges into the SCCRC's MS4 (road ditch) along Meldrum Road or towards Meldrum Creek. Ira Township will screen these

discharge points once during the five year permit cycle. Any sources of pollution for this discharge point will be addressed with Pollution Prevention and Good Housekeeping Best Management Practices (BMPs) as required by Ira Township's permit.

C. Screening Procedure

The purpose of screening MS4 discharge points is to determine whether potential illicit discharges exist and if there is an MS4 that needs investigation and potential source control upstream.

Screening will include visiting an MS4 discharge point during dry weather (no rain in the previous 48 hours) and recording the following parameters:

- Id. number
- Date
- Crew name
- Address/ Location
- Municipality
- Watershed
- Vegetation Condition
- Receiving water
- Odor
- Color
- Outfall Material
- Outfall Diameter
- Turbidity
- Flow
- Structural Condition
- Floatables
- Deposits
- Stains
- *E.coli*
- Diluted for *Ecoli* testing
- Surfactants
- Notes
- Biology (bacterial sheens, algae, slimes)

A copy of the spreadsheet that will be used to screen discharge points can be found in **Appendix B** of this plan. Dry weather screening will be performed once every permit cycle. If the outfall is from a MS4 with no history or no new construction the dry weather screening may be eliminated to save resources for use in areas with known issues, or a higher priority status.

If it is observed that flow is being discharged from the MS4 discharge point during screening, and there are illicit discharge characteristics (staining, smell, suds or floatables observed), and/ or the source of the discharge cannot be easily identified (i.e. someone is washing a car nearby), a sample of the discharge will be collected and tested for *E.coli* and/or surfactants. *E.coli* and/or surfactants are the only parameters tested because:

a. *E.coli* is the number one pollutant of concern for IDEP partners as indicated by their current Watershed Management Plans.
b. Protection of recreational uses is one of the top concerns for watershed stakeholders;
c. Correction of failing septic systems (whether grey or black water discharges) is one of the top recommendations in these same WMPs; and
d. *E.coli* samples are currently relatively easy for the SCCHD to process for its own and its partner's investigations.

E.coli and surfactant tests may not be good indicators for all potential pollutants of concern, but partners will also be screening discharge points for flow, floatables, oil sheen, color, odor, turbidity, vegetation condition, and other variables listed previously. All screening and survey results, whether they are only observations or sample results,

will be used to determine if there is reason for additional investigations upstream of the outfall.

Because screening is a one-time grab sample event and can indicate a variety of point or non-point sources upstream, initial sample results must be taken with a grain of salt. A common example of a non-point source that can result in high *E.coli* counts at a discharge point but that cannot be easily corrected, or even located, is a wild animal living in the MS4 itself. Resources to follow up screening results are limited and must be prioritized. Resampling a discharge point during dry weather will occur two more times when an initial screening sample demonstrates *E.coli* levels > 1000cfu/ 100 mL before concluding that source investigations are needed.

Procedure to establish rationale for further investigation:

- Locate outfall/discharge point, complete data sheet with site information.
- If new outfall/discharge point, assign identification number and mark location on map
- If flow apparent, test discharge with field kit for temperature, pH, *E.coli* and surfactants, collect additional sample if necessary, and record flow information and test results on data sheet. Readily observable sources of flow to the storm sewer will be noted. For example, lawn irrigation may be misdirected onto impermeable surfaces or irrigation runoff may be entering the drainage system.
- Assign follow-up prioritization
  - **Immediate - report to appropriate agency when discharge found, agency to follow up within one week.**
  - **High - notify stormwater manager, follow up within 14 days.**
  - **Low - notify stormwater manager conduct visual observations within 30 days.**
- In follow-up visits, test flow again with field test kits. If test results still indicate follow up necessary, collect additional samples for lab analysis, if necessary, and follow steps in "Finding the Source" section below.
- If no flow apparent, evaluate the areas for indicators of pollution, i.e. the presence of algae, unusual vegetative growth, staining, bacterial sheens, or debris.
- If indicators show a sign that pollution may exist, assign follow-up prioritization.
  - **Immediate - report to appropriate agency when discharge found, agency to follow up within one week to check for dry-weather flow.**

- **High - notify stormwater manager; follow up within 14 days to check for dry-weather flow.**

- **Low - notify stormwater manager, conduct visual observations within 30 days for dry-weather flow.**

Other variables where screening will result in additional investigation upstream will include the following:

- There is a steady flow from the site,
- Surfactants are indicated in the testing sample,
- There is visual evidence of excessive plant growth (nutrients)
- There is visual evidence of staining or materials present
- There is visual evidence of sheens or discolored water
- There is olfactory evidence of fecal matter or hydrocarbons, or chemicals
- There are residential areas upstream from the site, or
- There are industrial / commercial areas upstream from the site.

If three of these variables are present then there will be a preliminary upstream search for a source or sources will happen the day of screening. If not immediately discovered, then research of the contributing area will be completed and information gathered to narrow the search area. Then follow up inspections will begin in a timely manner, approximately 30 days. The ultimate goal will be to eliminate the source(s).

D. Source Investigation Procedure

Source investigative procedures are investigative efforts in a waterbody where screening and/ or other monitoring results indicate a potential illicit discharge upstream. Surveys may involve reviewing storm and sanitary system maps, walking or driving open drains upstream, testing catch basins upstream for *E.coli*, surfactants, ammonia, conductivity and/or temperature, dye testing, televising or smoke testing. Source investigations can be very resource demanding in an enclosed system. Investigating of the age of infrastructure and land use where illicit discharges may be more likely and the location of discharge points in the area to be investigated is essential before initiating field work. Procedures vary based upon the methods used and will be determined before initiation of investigative activities.

IV. RESPONDING TO ILLEGAL DUMPING AND SPILLS

A. Schedule for responding to an illicit discharge complaint

Evaluation of an illicit discharge complaint is very important and shall be initiated within two (2) business days of a complaint being received, if not sooner. The only exception is when the nature of the complaint includes dumping and/ or a spill of a potentially hazardous material in which case the response will be as immediate as possible.

All actions initiated as a result of a complaint shall be recorded as part of the complaint's file until it is resolved and/or closed. The initial response to a complaint shall include

referral to the appropriate staff for a field visit to the complaint location. As part of this initial response, staff shall record:

- visual observations,
- conversations with the complainer or neighbors in the vicinity of the complaint,
- pictures of the complaint location and/or characteristics, and
- follow-up actions that result.

If, after staff conduct an initial field visit, it is determined that the complaint is not worthy of further response, the reasons for closing the complaint shall be recorded, the complaint shall be closed, and this shall all remain documented in the permittee's complaint files.

If a complaint is received regarding hazardous material that has any chance of entering the MS4 or the waters of the state, response shall be initiated as immediately as possible. Staff shall follow the attached spill response plan or their own spill response plan if different from that attached in **Appendix C**.

B. Schedule for field screening and source investigations

If the initial site visit that results from a complaint warrants performing further field screening and/or source investigations, these actions shall be initiated within seven (7) days of the initial site visit. All field investigations shall be recorded as part of the complaint's file until that complaint has been solved and/or officially closed.

V. RESPONDING TO ILLICIT DISCHARGES OUTSIDE OF PRIORITY AREAS

A. Schedule for performing field observations and follow-up screening and source investigations

Staff shall respond to illicit discharges that are discovered outside of their priority area for IDEP investigations within five (5) days of receipt unless the illicit discharge is concerning the potential release of hazardous materials. In this case response is more immediate as described in the previous section. If, after staff's initial visit, it is determined that follow-up screening and source investigations are needed, these actions shall be initiated within three months from when the complaint was received.

VI. REPORTING RELEASES FROM MS4s

The procedures for responding to spills (or illegal dumping) of various sizes and hazards are detailed in **Appendix C**, as are the reporting requirements.

VII. RESPONSE TO ILLICIT DISCHARGES ONCE A SOURCE IS IDENTIFIED

Permittees shall correct and/or enforce the correction of illicit discharges within 90 days of notification to the property owner or confirmation of source identification to the maximum extent practicable.

SCC, the NEW and ABay Partners are committed to expeditiously correcting any illicit discharges within their MS4. Once the source of an illicit discharge has been confirmed as privately owned, IDEP partners will use the following procedures to correct the illicit

discharge. If a partner decides to modify the following procedure they will make note of the alternative procedures in their IDEP records and annual progress reports for their permit.

1. First Notice: Notification of Problem and Correction Needed

Once the source(s) of an illicit discharge is located, within 5 business days of the confirmation, the permittee will provide the first written notice to the owner of the illicit discharge by registered mail. The first written notice will notify the discharge owner of the illicit discharge, the regulatory authority to require correction, and the potential enforcement actions that will take place if the discharge is uncorrected in 90 days. All notifications will request that the discharge owner contact the permittee regarding plans for correction within 90 days. Tracking of all notifications and documentation of registered mail receipts will be retained by the permittee.

2. Second Notice: Forty-Five Days Left to Respond

If forty-five days has passed from the date of the 1st written notice and no response has been received by the discharge owner, the second written notice will be sent. The second written notice will remind the discharge owner of the illicit discharge, the prior notice, the regulatory authority to require correction, the potential enforcement actions that will take place if the discharge is uncorrected in forty-five days, and a request for the owner to contact the permittee regarding plans for correction.

3. Final Notice

If ninety days has passed from the date of the first written notice, the third written notice will be sent. The third notice will remind the discharge owner of the illicit discharge, the prior notice, the regulatory authority to require correction, and plans to enforce the correction of the illicit discharge.

Enforcement for correcting an illicit discharge is outlined in each permittee's regulatory mechanism as outlined in each of their Permit Applications. Enforcement should include an extension process for unforeseen and complicated circumstances.

VIII. IDEP TRAINING AND EVALUATION

A. IDEP Training

Permittees will train staff who are involved in storm water management related activities, or who have jobs with the potential for witnessing illicit discharges and connections. Staff will be trained at least one time every five years and within the first year of employment.

The IDEP training will be accomplished by implementing one of the following activities as appropriate to the staff's level of involvement in the IDEP program:

- Review of an IDEP fact sheet
- Attendance at an IDEP workshop.

The IDEP fact sheet and training will include, at a minimum, the following information:

- The definition of illicit discharges and connections;
- Techniques for finding illicit discharges include field screening, source identification, and recognizing illicit discharges and connections; and
- Methods for eliminating illicit discharge and the proper enforcement response.

In 2013, St. Clair County and several counties in Southeast Michigan formed a partnership with the Alliance of Rouge Communities to provide IDEP training workshops throughout the region. This partnership agreement provides for the following IDEP training:

- General IDEP training workshop at a Southeast Michigan location every other year;
- IDEP Field Screening and Source Investigation Training at a Southeast Michigan location every other year.

Sign in sheets at staff meetings where IDEP topics are discussed, documentation of attendance at an IDEP workshop, and education materials used will be kept for documentation purposes of this permit.

B. IDEP Evaluation

While it is tempting to use ambient water quality monitoring at local beaches to rate the effectiveness of this plan, it is not appropriate. Many problems with *E.coli* testing has been documented and the EPA is currently undergoing research to try and improve *E.coli* testing and subsequent closures of beaches. Many times *E.coli* levels at beaches may not be due to local MS4s but physical conditions at the beach and/or meteorological conditions such as wind, current and rain. Therefore, while beach testing during the summer season does provide guidance for permittees in their prioritizing of MS4s for screening and investigations, it does not provide an effective evaluation tool. Therefore, SCC and the NEW group will use questionnaires and task completion to evaluate the effectiveness of this IDEP plan.

1) Questionnaires

In the second and fourth years of the permit cycle, SCC, the NEW and ABay WAG will develop and distribute a questionnaire to rate the effectiveness of this IDEP plan. This questionnaire shall evaluate the effectiveness of the following IDEP components:

a. Implementation of a county-wide IDEP;
b. Ordinance or Regulatory Method used by each permittee;
c. Separate Storm Sewer System Map;
d. Prioritization of IDEP activities;
e. Procedures used as part of screening and source investigations;
f. Procedures used for correction and enforcement; and
g. Methods used for Training.

This questionnaire will be distributed to the storm water permit representative for SCC, the NEW and ABay Partners. The questionnaire will be developed, tabulated and discussed collaboratively at a NEW WAG and Anchor Bay WAG meeting to determine if IDEP implementation procedures should be revised.

2) Task Completion

At approximately the same time the above questionnaire is developed, SCC, the NEW and ABay Partners will evaluate whether the following tasks in this IDEP plan have been completed as planned:

- Screening;
- Source Investigations (as applicable);
- Correction of illicit discharges;
- Response to illegal dumping and spills;
- Response to illicit discharges outside of priority areas
- Reporting releases from MS4s; and
- Response to illicit discharges once a source is identified.

The completion of these tasks, as outlined in this IDEP plan, will be used in conjunction with the questionnaire results to determine the overall effectiveness of this IDEP plan and if any revisions in priorities or procedures shall be initiated.

IX. RECORD KEEPING AND REPORTING

Records that will be generated as part of this IDEP plan are critical for demonstrating compliance with IDEP requirements. Records and documentation that shall be kept by each permittee include:

- a spreadsheet documenting MS4 discharge point screening activities;
- chain-of-custody records for laboratory samples;
- laboratory data sheets;
- a spreadsheet of screening and/or source investigations;
- a spreadsheet of complaints and follow up actions;
- a spreadsheet of spill response and follow up actions; and
- a spreadsheet of notification, enforcement and correction actions.

All of this information will be kept on file for a period of 3 years and/or submitted to the DEQ as required by permit.

X. PROCEDURES AND QUALITY ASSURANCE

A. Parameters and Associated Analytical Procedures

All *E.coli* samples shall be collected in a sterile container (available from the SCCHD or other lab servicer). The sample bottle will be labeled with the MS4 identification # and/ or an address, the sampler's initials, and the date and time of sampling. Samples should be collected as close to the center of the waterbody as possible or directly from the MS4 discharge point. The container should not be allowed to touch other surfaces and collectors shall wear gloves. Samples from enclosed drains will use a sampling pole. Samples will immediately be put on ice and transferred to the SCCHD by 2pm on the day of collection or transferred to another certified lab facility for *E.coli* analysis within 8 hours using a proper chain-of-custody documentation. The SCCHD cannot take samples on Fridays and must be notified in the morning of any samples coming in for analysis that afternoon. .

A detailed description of bacteriological sampling procedures, sample handling procedures, and sample documentation and chain-of-custody procedures is available from the SCCHD and is part of the Comprehensive Quality Assurance Program Plan (QAPP) previously approved for SCC IDEP in 2004.

The surfactant test kit that can be used in this project is a CHEMetrics Surfactants test kit (0-3ppm). A detailed description of operating procedures for the surfactants test kits can also be found in the Standard Operating Procedures for Field Instruments Used as Part of Storm Water Sampling which was also part of the SCC IDEP QAPP previously approved in 2004.

The SCCHD will analyze the samples for *E.coli* using analytical method SM9223B. The SCCHD will follow QA/QC protocol as outlined in the Quality Assurance A Manual for Membrane Filtration and Colilert Quanti-Tray 2000 which is available at the SCCHD. In addition the SCCHD laboratory undergoes proficiency testing on an annual basis by Environmental Resource Associates.

If IDEP partners use a separate facility for *E.coli* analysis, the lab must be certified, and must use a similar analytical method as the SCCHD so sample results are comparable.

B. Calibration Procedures

The colormetric test kits of surfactants do not require calibration. However if the expiration data on the color comparator, ampoules, vacu-vials, stabilizer solution, or any other component is exceeded, a replacement component will be ordered from the manufacturer immediately.

C. Quality Control Checks

Field blanks and duplicate samples will be used as quality control checks when sampling storm water for *E.coli* as part of this project.

Field blanks will be used to monitor potential contamination introduced into the samples by collection and handling procedures. The blank will be generated in the field by filling an empty sample container with sterile deionized water. The blank will be placed in the cooler with the regular samples and delivered to the lab in the sample manner as the rest of the samples. A field blank will be performed for every 20 samples collected or for each collector.

Duplicate samples will be used to assess the consistency and precision of analytical methods. The duplicate samples will be collected by filling a clean sample container, of appropriate volume, with the source water and pouring its contents into two individual laboratory containers.

D. Data Quality Objectives/ Requirements

If the *E.coli* concentration in a field blank is equal to or greater than 10cfu/100ml, then the associated sample results will be regarded as estimates and qualifiers will be placed on the data from that day.

If the *E.coli* results for the duplicate samples vary by more than 10%, then the results form that day will be regarded as estimates and qualifiers will be placed on the data.

Illicit Discharge Elimination Program
Discharge Point Screening

Date and Sampler Name(s)													
Drain Name/ Address/ Twp or City	Watersheds	Outfall ID#	GPS location	Diameter	Material	Flow	Odor	Color	Turbidity	Floatables	Deposits/ Stains	Ecoli results	Stream conditions/ Additional Notes

SPILL REPORTING FORM

Date of Incident	
Time of Incident	
Location & Cross Streets	
Type of Spill	
Estimated Quantity	
Reported To	
Time Reported	
Reported By	
Reporter's Address	
Phone Number/Contact	
Additional details about spill:	
Describe materials used to clean up spill:	
Completed By:	

Additional Notes:

If there was a release to waters of the state of any polluting material in excess of the threshold reporting quantities in Part 5 Rules (see Appendix 2) this Spill Reporting Form should be sent to: **MDEQ, Southeast Michigan District Office, 27700 Donald Court, Warren MI 48092-2793**

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) POLICY

IRA TOWNSHIP
Illicit Discharge Detection and Elimination (IDDE) policy

Purpose

Under the National Pollutant Discharge Elimination System Wastewater Discharge Permit No.MIG610000, the Ira Township is required to develop and adopt appropriate policies prohibiting illicit discharges and illegal dumping to Ira Township separate storm sewer system. The permit also requires Ira Township to develop and implement an enforcement plan using identified enforcement mechanisms to ensure compliance with the illicit discharge policy.

The purpose of this IDDE policy is to protect the water quality and public health and safety on and around Ira Township, and to meet all requirements of Ira Township Municipal Stormwater Permit. This policy addresses the following discharges to Ira Township separate storm sewer system: storm water drainage from Township owned property as well as illicit connections and non-stormwater discharges including spills of hazardous materials.

Illicit Connections

Illicit connections include any manmade conveyances connected to the Ira Township municipal separate storm sewer system without a permit, excluding roof drains and all other similar type connections. Examples of illicit connections include, but are not limited to: sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to Ira Township municipal separate storm sewer system.

It is the Ira Township policy that no illicit connections to the Ira Township municipal separate storm sewer system are permitted. This includes, but us not limited to, the construction, use, maintenance or continued existence of illicit connections to the storm drain system. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or prevailing policy at the time of connection.

Illicit Discharges

Illicit discharges are any discharges to the Ira Township municipal separate storm sewer system that are not composed entirely of storm water, except discharges pursuant to an NPDES stormwater permit (other than the NPDES permit for discharges from the Ira Township municipal separate storm sewer system) and discharges resulting from the firefighting activities.

This policy prohibits the following categories of non- stormwater discharges unless the stated conditions are met:

- Discharges from potable water sources, including water line flushing, hyper chlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.
- Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through public education efforts conducted by the Ira Township and/or St. Clair County Health Department.
- Water is used to control dust and routine external building wash down that does not use detergents. The Ira Township shall reduce these discharges through public education activities conducted by the Ira Township and/or St. Clair County Health Department. To avoid washing pollutants into the MS4, the Ira Township shall minimize the amount of street wash and dust control water used.

- Other non-stormwater discharges shall be in compliance with the requirements of a stormwater pollution prevention plan reviewed by the Ira Township which addresses control of such discharges.

Ira Township policy does not prohibit the following categories of non-stormwater discharges unless identified as significant contributors to violations of Water Quality Standards.

- Water line flushing and discharges from potable water sources
- Landscape irrigation runoff, lawn watering runoff, and irrigation waters
- Diverted stream flows and flows from riparian habitats and wetlands
- Rising groundwaters and springs
- Uncontaminated groundwater infiltration and seepage
- Uncontaminated pumped groundwater, except for groundwater cleanups specifically authorized by NPDES permits
- Foundation drains, water from crawl space pumps, footing drains, and basement sump pumps
- Air conditioning condensation
- Waters from noncommercial car washing
- Street wash water
- Dechlorinated swimming pool water from single, two, or three family residences.

Onsite Discharges

Ira Township has five discharge points on its complex. These discharge points are comprised of graded runoff from the site which releases into a road ditch along Meldrum Road and towards Meldrum Creek. The two discharge points that drain to Meldrum Creek are high priority and the other three that drain to the Meldrum Rd. ditch are low to medium priority. The outlets were prioritized based on the areas of focus noted in the St. Clair County Illicit Discharge Elimination Program (SCC-IDEP) (pg 9).

Drainage Assessment

All drainage points have been assessed and prioritized. The assessment considered the following items:

- Proximity to open drains and water bodies
- The possible discharge of pollutants
- The amount and/or quality of pollutants stored in each point's sub watershed
- The possibility of polluting activities within each area
- The possibility of offsite pollutants

Monitoring & Enforcement Procedures

Since the Township's MS4 drainage flow is directly from areas within the Township's property and control, violations to the permit will be prevented by employee training and inspection. However, Ira Township as a whole has storm water issues that coordinate with St. Clair County's Drain Commissioner, Road Commission and the State of Michigan and Federal Regulatory Agencies. Therefore, The Township monitors for illicit connections and illicit discharges in the following manner:

1. By comprehensively mapping Ira Township storm water system, including maintaining a database of all known storm drain outfalls, labeling receiving waters, and delineating areas contributing runoff to each outfall.
2. By providing Ira Township staff with regular training and education on best management practices for preventing and identifying illicit discharges, including spills. Training is explained below.
3. By conducting field inspections of all known Township owned outfalls once every permit period.

Inspections will follow the County's screening procedure as explained in the SCC-IDEP (pg 14). The Inspection reports are recorded and filed at the Township. In the event of the discovery of an illicit discharge, the discharge is recorded to determine the source, extent and substance of the discharge. If the BMPs fail the inspection, the Township will contact the Township Engineer to reassess the flow, area, and BMP.

4. If an offsite complaint is called in, information regarding the location, nature of the violation, and date and time will be recorded.
5. A determination of the type of complaint will be determined and the complaint will be forwarded to the appropriate department or agencies. The complaint may also be forwarded to the appropriate State or Federal agency.
6. In the events where the Township is the enforcement authority the procedures below are implemented.

    a) Contact the responsible party of the illicit discharge and establish corrective action in compliance with the Ira Township.
    b) Upon repeat or continued illicit discharges, the Ira Township shall promptly dispatch a St. Clair County environmental employee to conduct an assessment to determine the source of the discharge and risk of reoccurrence. Upon determination of the severity of the discharge and risk of occurrence, the environmental employee, in conjunction with the Public Works Superintendent, may contact the Ira Township Property Manager/Owner to report the discharge as a potential violation.

Public Participation

Ira Township works in conjunction with the County to encourage public participation for protection of its surface waters. The County sends out an electronic newsletter twice a year updating recipients of the Blue Watershed news. The County regularly updates their websites and posts water quality themed news pieces to social media daily as well as distributes education material. The Township maintains watershed road signs.

Township Employee Training

Ira Township regularly trains it's employees to detect and maintain the storm drainage from it's property. New employees are trained within the first year of employment and existing employment attend training every two years. Contractors hired are given the Township's Standards of Operating Procedures, are trained on pollution prevention and good housekeeping measures as well as given oversight of the construction activities to ensure compliance. A description of the training programs can be found on page 2 of the Employee Training Program.

Review of Policy

This policy shall be reviewed as deemed appropriate by the Public Service Superintendent.

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

ORDINANCE NO. 62

ARTICLE III

251.300 DRAINS AND DRAINAGE OF PROPERTY

251.301 Regulating drains and drainage.

Sec. 1.

A. No person may alter, divert or block, or cause to be altered, diverted, or blocked, any drain, drainage course, ditch, watercourse, or body of water, whether natural or artificial, public or private, which causes or which is likely to cause an increase in the runoff of water onto adjacent properties, beyond that which would occur without the proposed action, without first obtaining a Grade Compliance Permit from the Building Official.

B. All applications for permits under this section shall be accompanied by a written description of the proposed action, the reason for the proposed action, a plan drawn to scale showing the existing and proposed drainage patterns, and payment of the required inspection fee.

C. All plans submitted, except those in connection with single-family dwellings, or farm buildings, shall be prepared by a registered professional engineer and are subjected to approval by the Township.

D. Prior to the issuance of a permit, the Building Official shall examine the application and plan, make a site inspection of the property involved and make a determination that the proposed action will not cause an increase in the runoff or flow of water onto adjacent properties beyond that which would occur without the proposed action. In making the determination, the Building Official shall refer to the County drain map for Ira Township as prepared by the County Drain Commissioner, the United States Geological Survey Quadrangle Maps covering Ira Township, Official Flood Hazard Boundary and Flood Insurance Rate Maps as prepared by the Federal Insurance Administration, and other available and applicable sources of information regarding drainage patterns. In cases where an engineered plan would not normally be required, a plan prepared by a registered professional engineer shall be submitted if the Building Official deems such information essential in making a determination.

E. Upon completion of the proposed action, the Building Official shall make an additional visit to the site and make a determination that the proposed action was completed in accordance with the terms of the permit and, if satisfactory, shall issue a Certificate of Completion.

F. In no case shall a Grade Compliance Permit or Certificate of Completion be issued when, in the opinion of the Building Official or Township Engineer action is likely to cause, or the completed action causes, an increase in the runoff or flow of water onto adjacent properties beyond that which would occur without the proposed or completed action.

G. In cases involving official county drains plans shall be submitted and approved by the St. Clair County Drain Commissioner.

H. In cases involving the county road ditching, plans shall be submitted and approved by the St. Clair County Road Commissioner.

I. Nothing contained herein shall be construed to prohibit or interfere with the installation or alteration of normal, proper, and generally accepted agricultural drainage methods and systems when part of a bona fide farm as defined by the Department of Agriculture.

J. Fees for applications made to pursuant to this Section shall be paid at the time of application for a permit. The amount of such fees shall be established by the Township Board and shall the cover of the necessary review and inspections. In cases where it is necessary for a review to be made by the Township Engineer or the Township officials or consultants, the applicant shall be required to pay the Township such additional reasonable fees as are necessary to conduct and complete said reviews.

(amend. of June 5, 2006)

251.302 Prohibited discharges.

Sec. 2.

A. It is unlawful for any person to discharge, or cause to be discharged, to a storm water drainage system or water body any substance or material, including, but not limited to, pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water or an authorized discharge. This prohibition includes the commencement, conducting, or continuance of any illicit discharge by any person to a storm water drainage system or water body.

B. Any person discharging storm water shall effectively prevent pollutants from being discharged with the storm water, except in accordance with BMPs.

C. The Township is authorized to require dischargers to implement pollution prevention measures, using Storm Water Pollution Prevention Plans and BMPs, as determined necessary by the Township to prevent or reduce the discharge of pollutants to a storm water drainage system or water body.

D. The discharge prohibitions of this section shall not apply to any non-storm water discharge authorized under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the EPA, provided the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm water drainage system.

(amend. of June 5, 2006)

251.303 Prohibited illicit connections.

Sec. 3.

A. It is unlawful for any person to construct, use, maintain (or to allow the construction, use, maintenance or continued existence of) an illicit connection.

B. This prohibition expressly includes, without limitation, illicit connections made prior to the effective date of this Ordinance, and regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(amend. of June 5, 2006)

251.304 Authorized discharges.

Sec. 4. The following non-storm water discharges are permissible, but only if they do not result in a violation of State of Michigan water quality standards and provided that they are undertaken in compliance with any applicable or required BMPs:

(1) Water supply line flushing.
(2) Landscape irrigation runoff.
(3) Diverted stream flows.
(4) Rising groundwater.
(5) Uncontaminated groundwater infiltration to storm drains.
(6) Uncontaminated pumped groundwater.
(7) Discharges from potable water sources.
(8) Foundation drains.
(9) Air conditioning condensate.
(10) Irrigation water.
(11) Springs.
(12) Water from crawl space pumps.
(13) Footing drains and basement sump pumps.
(14) Lawn watering runoff.
(15) Waters from non-commercial car washing.
(16) Flows from riparian habitats and wetlands.
(17) Residential swimming pool water and other dechlorinated swimming pool water, provided that any filter backwash water that is present is treated.
(18) Residual street wash water.
(19) Discharges or flows from emergency fire fighting activities.
(20) Discharges specifically authorized in writing by the Township as being necessary to protect public health, welfare, and safety or the environment.

(amend. of June 5, 2006)

251.305 Storage of hazardous or toxic materials in drainageway.

Sec. 5. Except as permitted by law, it shall be unlawful for any person to store or stockpile within a drainageway any hazardous or toxic materials unless adequate protection and/or containment has been provided so as to prevent any such materials from entering a storm water drainage system or waterbody.
(amend. of June 5, 2006)

251.306 Inspection and sampling.

Sec. 6. The Township may inspect and/or obtain samples from any discharger's premises as necessary to determine compliance with the requirements of this Ordinance. Upon request, the discharger shall allow properly identified representatives of the Township to enter the premises of the discharger at all hours necessary for the purposes of such inspection or investigation, including, but not limited to, smoke/dye testing, televising pipes, sampling, and excavation. The Township shall provide the discharger reasonable advance notice of the need for such access, if possible and consistent with protection of public health and safety and the environment. The properly identified representatives may place on the discharger's premises the equipment or devices used for such sampling or inspection. Unreasonable delays in allowing access to premises is a violation of this Ordinance.
(amend. of June 5, 2006)

251.307 Storm water monitoring facilities.

Sec. 7. If directed in writing to do so by the Township, a discharger of storm water runoff from any premises used for commercial or industrial purposes shall provide and operate equipment or devices for the monitoring of storm water runoff to provide for inspection, sampling, and flow measurement of each discharge to a water body or a storm water drainage system, as specified by the Authorized Enforcement Agency. The Authorized Enforcement Agency may require a discharger to provide and operate such equipment and devices if it is necessary or appropriate for the inspection, sampling, and flow measurement of discharges in order to determine whether adverse effects from, or as a result of, such discharges may occur. All such equipment and devices for the inspection, sampling, and flow measurement of discharges shall be installed and maintained at the discharger's expense in accordance with applicable laws, ordinances, and regulations.
(amend. of June 5, 2006)

251.308 Accidental discharges.

Sec. 8. Any discharger who accidentally discharges into a storm water drainage system or a water body any substance other than storm water or an authorized discharge shall immediately notify the Township of the discharge. If

the notification is given orally, a written report concerning the discharge shall be filed with the Township within 5 days. The written report shall specify all of the following:

(1) The composition of the discharge and the cause thereof.
(2) The exact date, time, and estimated volume of the discharge.
(3) All measures taken to clean up the discharge, all measures taken or proposed to be taken to mitigate any known or potential adverse impacts of the discharge, and all measures proposed to be taken to reduce and prevent any recurrences.
(4) The names and telephone numbers of the individual making the report, and (if different) the individual who may be contacted for additional information regarding the discharge.

(amend. of June 5, 2006)

251.309 Record keeping requirement.

Sec. 9. Any person that violates any requirement of this Ordinance or that is subject to monitoring under this Ordinance shall retain and preserve for no less than three years any and all books, drawings, plans, prints, documents, memoranda, reports, correspondence, and records, including records on magnetic or electronic media, and any and all summaries of such records relating to monitoring, sampling, and chemical analysis of any discharge or storm water runoff from any premises connected with the violation or subject to monitoring.
(amend. of June 5, 2006)

251.310 Buffer strips.

Sec. 10. For all new developments, a buffer strip, minimum 25 feet wide measured from the bank, shall be established and/or preserved around all waterbodies. For streams, the 25-foot buffer strip must be established and/or preserved on both sides of the stream.
(amend. of June 5, 2006)

ARTICLE IV

251.400 NATURAL RESOURCE PROTECTION WOODLAND PRESERVATION IRA TOWNSHIP, MICHIGAN

A. The intent of this Article is to preserve the wooded and shrubbed areas of Ira Township to the extent preservation is compatible with reasonableness and the following purposes cited in the adopted Ira Township Master Plan:
- Erosion control.
- Conserving water quality.
- Maintaining the ecology.
- Filtering pollution from the atmosphere.

- Decreasing noise.
- Providing a habitat for wildlife.
- Visual character.

B. Recognizing the above-cited benefit of vegetation and woodlands, it is important to integrate these natural features into future development to improve the community's environmental qualities and to enhance the visual character of the constructed environment. Site plan or subdivision review by the Planning Commission shall be consistent with this intent and the following provisions:

1) The developer shall provide the Planning Commission with a detailed description of the natural features and characteristics located on the site to be developed. Alterations of the site, such as tree removal, grading or filling, are prohibited prior to the submission of an inventory and preservation plan to the Planning Commission. Any such site alteration shall be considered a violation of the Article and may require substantial replacement prior to issuance of a Certificate of Occupancy.

2) The review provisions of this Article shall be coordinated with and be undertaken as part of the review process for site plan in (Section 1615); Zoning Ordinance condominium subdivisions (Section 1627); and Ira Township subdivision regulations (Ordinance No. 49).

3) An inventory and preservation plan shall be submitted to the Planning Commission if the subject site presently has, or since 1990 has had, grouping of six (6) or more trees that are six (6) inches or more in diameter as measured four (4) feet above the ground. Aerial photographs or other sources may be used to determine necessity for submission. The inventory and preservation plan shall include the following:

a. Aerial photographs and U.S.G.S. quadrant maps of the area to provide as a vegetation map source at the largest scale available and practical.

b. A preliminary field survey of typical size and type of trees and other vegetation.

c. All groupings of existing trees containing trees that are six (6) inches or more in diameter, as measured four (4) feet above the ground.

d. A preservation plan with specifications describing removal of all trees, individually or as groupings, that are six (6) inches or more in diameter, as measured four (4) feet above the ground, as well as shrubbed areas. The plan shall also describe the method to be employed for protection of trees and shrubbed areas designated to remain during construction. The plan and specifications shall include grade changes or other work adjacent to the remaining

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

ENGINEERING CHECKLIST

ENGINEERING REVIEW CHECKLIST
IRA TOWNSHIP
PROJECT NAME: PCE No. _____

DESIGN ENGINEER: DATE: _____

I. General Review Items, Including General Plan (if applicable)	YES	NO
1. Engineering plans match the approved site plan or preliminary plat.	☐	☐
2. Plans signed and sealed by a Professional Engineer (cover sheet).	☐	☐
3. Developer name, address, and phone number provided.	☐	☐
4. Title block information filled in (i.e., project name, location etc.).	☐	☐
5. Location map, North arrow, and legal description(s) provided.	☐	☐
6. Ira Township Standard Detail Sheets attached.	☐	☐
7. Three bench marks provided.	☐	☐
8. Street names and R.O.W. widths (existing and proposed).	☐	☐
9. All existing and proposed municipal and private utilities.	☐	☐
10. Adequate separation provided between all utilities.	☐	☐
11. Location of proposed buildings on property.	☐	☐
12. Location and elevations of ditches, culverts, natural waterways, and county drains.	☐	☐
13. Lot numbers and dimensions or tract acreage shown.	☐	☐
14. Flood plain area shown per topographic survey and current FIRM map.	☐	☐
15. Plans on 24” x 36” sheets of paper.	☐	☐
16. Provide location, dimensions for all proposed structures and utilities.	☐	☐
17. Engineers Cost Estimate Provided	☐	☐
18. Existing and proposed easements provided on plan set.	☐	☐

II. Sanitary Sewer	YES	NO
1. Location in accordance with the township engineering design stds.	☐	☐
2. 10’ min. separation between adjacent utilities.	☐	☐
3. Diameter, finish grade, and number provided for manholes	☐	☐
4. Maximum spacing: 350’	☐	☐
5. Provide drop connections when inverts are over 18" apart.	☐	☐
6. Pipe size, slope, material, inverts, and rim elevations provided in profiles.	☐	☐
7. Label any type of special bedding required	☐	☐
8. All utility crossings labeled.	☐	☐
9. Manhole sump and temporary bulkhead provided.	☐	☐
10. Service leads provided.	☐	☐
11. One lead shown for each unit to be served by public sewer.	☐	☐
12. Grease, Oil or Sand Interceptor (Trap)	☐	☐
13. Quantities provided.	☐	☐
14. Basis of design provided	☐	☐
15. Service district map provided with current and future service areas labeled.	☐	☐
16. 12’ minimum easements shown for all proposed public sanitary sewer.	☐	☐

III. Water Main	YES	NO
1. Location in accordance with the Township Engineering Design Stds.	☐	☐
2. 10’ min. separation between adjacent utilities.	☐	☐
3. Finished grade for all hydrants and valves in wells.	☐	☐
4. Maximum spacing 500'	☐	☐
5. Spacing for valves: 1000' maximum, not more than 30 units disconnected, when closing sections not more than 4 gate valves to close off section.	☐	☐
6. Provide 45 degree bends or less for water main (no 90 degree bends)	☐	☐
7. One water service lead shown for each unit on site.	☐	☐
8. For all river and county drain crossings, show detailed section with elevations	☐	☐
9. 12' minimum easement shown for all public water mains.	☐	☐
10. Quantities provided.	☐	☐
11. Special backfill shown and labeled on plan view where water main is under the influence of pavement.	☐	☐

IV. Storm Sewer	YES	NO
1. Catch basins with 2' min. sumps at low points.	☐	☐
2. All pavement catch basins shall have edge drain (6" Diameter) around their perimeter or along the back of curb (Minimum length: 40 LF total).	☐	☐
3. Provide drainage districts and furnish design calculations based on 10-year storm	☐	☐
4. All necessary calculations provided.	☐	☐
5. Show sump pump connections to storm sewer (and connection detail)	☐	☐
6. Provide at least 3' of cover over top of pipe to rim elevation.	☐	☐
7. Show hydraulic gradient in profile when it is above top of pipe.	☐	☐
8. Oil Trap (Gas Stations and Car Washes)	☐	☐
9. Show all utility crossings.	☐	☐
10. Provide sufficient slope to get at least 2.5 fps velocity	☐	☐
11. Pipe size, slope, material, sewer inverts and rim elevations provided on profiles.	☐	☐
12. Location in accordance with the Township Engineering design Stds.	☐	☐
13. Storm sewer manholes assigned a number.	☐	☐
14. Catch basins located at all changes of grade, direction, and/or pipe size.	☐	☐
15. 12' minimum easement shown for all public storm sewers.	☐	☐
16. Special backfill shown and labeled on plan view where storm sewer is under	☐	☐
17. the influence of pavement.		

V. Paving and Grading	YES	NO
1. Topographic Survey Plan (show existing ground contour lines).	☐	☐
2. Offsite elevations (100' beyond each property line).	☐	☐
3. Pavement cross sections shown.	☐	☐
4. Indicate in plan view where the standard curb and gutter and where the reverse curb and gutter will be used.	☐	☐
5. Pavement grades:		
Concrete: Minimum 0.5%, Maximum 7%.	☐	☐
Asphalt: Minimum 1%, Maximum 7%.	☐	☐
6. Provide vertical curve, if grade change exceeds 2% (Only for public roads).	☐	☐
7. Provide minimum of 0.30' drop around curb returns.	☐	☐
8. Provide intersection and cul-de-sac details (elevations, dimensions and drainage scheme).	☐	☐
9. Show stationing left to right (for roads only).	☐	☐
10. Show top-of-curb elevations.	☐	☐
11. Show proposed pavement drainage slopes.	☐	☐
12. Provide adequate handicap access per ADA standards.	☐	☐
13. Sidewalks provided.	☐	☐

VI. Detention	YES	NO
1. Designed to contain a 100-yr storm or 2 inch over site, whichever greater	☐	☐
2. Minimum of 1' freeboard provided	☐	☐
3. Maximum discharge = to 0.2 cfs per acre (0.1 cfs in Crapaud Creek district)	☐	☐
4. Pond designed to be total drained in 24-48 hours	☐	☐
5. Maximum side slopes 1:4	☐	☐
6. Ponds with side slopes greater than 1:6 are fenced	☐	☐
7. Fenced ponds have minimum 14' wide gate	☐	☐
8. Bottom of pond has minimum 1% slope toward outlet	☐	☐
9. Maximum pond depth for dry pond 8'	☐	☐
10. Overflow with capacity for 10-yr storm	☐	☐
11. Pond cross sections provided with high and low water elevations	☐	☐
12. Riprap at all pipe entrances to basin	☐	☐
13. Minimum 12' wide paved access road provided	☐	☐
14. Pump Stations		
a. Pump discharge does not exceed max. allowable	☐	☐
b. Pump discharges to min. 4' dia structure with sump	☐	☐
c. Pump housed in concrete manhole	☐	☐
d. Pump design specs included	☐	☐
e. Min. 2 pumps installed in parallel, each capable of handling max. flow	☐	☐
f. Pump access hatch is lockable, positioned for easy pump removal, water/tamper proof	☐	☐
g. Minimum 12' wide paved access road to pump provided	☐	☐
h. Check valve provided	☐	☐
i. Gate valve with access from surface provided	☐	☐
j. Pump controls include lead pump start/stop, lag pump start/stop, alternator, high water alarm, all pumps off	☐	☐
k. Electrical equipment installed in a stainless steel weatherproof enclosure	☐	☐
l. Back-up generator hookup provided	☐	☐

VII	**Soil Erosion (SECE Permt)**	YES	NO
1.	Earth disturbing under 1 acre in size/within 500' of lake, stream, body of water	☐	☐
2.	Earth Disturbance between 1 and 5 acres (part 91 permit required)	☐	☐
3.	Earth Disturbance over 5 acres Part 91 permit and NPDES NOC required	☐	☐
4.	Provided Owner with copy of R 323.2190 Permit-By-Rule For Construction Activities	☐	☐

VIII	**Water Qualtiy Treatment (BMPs)**	YES	NO
1.	Disturbance to any Wetland Resource Area?	☐	☐
2.	Reduced Impervious Area (Redevelopment Only)	☐	☐
3.	Minimizing distrubance to existing trees and shrubs	☐	☐
4.	Use of drainage ditches versus curb and gutter conveyance and pipe	☐	☐
5.	Bioretention Cells (includes Rain Gardens)	☐	☐
6.	Water Quallity Swale	☐	☐
7.	Other (describe)	☐	☐
8.	Outlets have been designed so there is no erosion or scouring.	☐	☐
9.	Runoff from all impervious areas at the site discharging to the infiltration BMP?	☐	☐
10.	High risk sites (stormwater hot spots, ie. gas stations) provided spill containment?	☐	☐
11.	Coordinate with St. Clair County Drain Commission staff required.	☐	☐
12.	Coordinate with the MDEQ staff required.	☐	☐

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

STORMWATER MANAGEMENT SYSTEM OPERATIONS AND MAINTENANCE PLAN

TOWNSHIP OF IRA

IRA TOWNSHIP

STORMWATER MANAGEMENT SYSTEM

OPERATIONS AND MAINTENANCE PLAN

OCTOBER 2015

TABLE OF CONTENTS

TABLES

APPENDICIES

I. PURPOSE

The primary purpose of the Operations & Maintenance Plan (O&M Plan) shall be to minimize stormwater pollution from operation and maintenance activities conducted by the Township of Ira in its management of the DPS and Water Department.

II. COVERAGE AREA

The coverage area considered in this document includes All Township of Ira Entities.

III. APPLICABLE OPERATIONS

The O&M Plan covers the following Township operations:

- All routine and preventative maintenance of the Township of Ira stormwater system
- Road, Bridge, sidewalk, and parking lot maintenance practices, including: deicing, snow removal, and salting.
- Vehicle fleet maintenance, including: mechanical repairs, fueling, and washing.
- External building maintenance, including: exterior cleaning, washing, painting, and other maintenance activities.
- Grounds maintenance, including: fertilizer, pesticides, and herbicide application, green waste disposal, trash management, and sediment and erosion control.
- Materials storage, including: stockpiling of gravel or other debris and heavy equipment storage.
- Maintenance of green roof and rain garden
- E. coli testing.

lV. OPERATION AND MAINTENANCE PROCEDURES

All scheduled inspections and maintenance of the Township of Ira stormwater system are contained in the stormwater Management System Inspection and Maintenance Logs included as Appendix A.

All Township operations listed in section III above shall be conducted in accordance with the applicable Standard Operating Procedures as outlined below. Standard Operating Procedures for Township operations & maintenance are included in Appendix B and are summarized in Table 1 below.

Table 1. Summary of Standard Operating Procedures for Township Operations & Maintenance

STANDARD OPERATING PROCEDURES	APPLICABLE WORK
General Good Housekeeping Procedures	All work conducted by Township of Ira employee
Stormwater System Maintenance	Routine and preventative work on the Township of Ira's Stormwater System
Road, Parking Lot, & Sidewalk Maintenance	Snow plowing, winter salt, sand, or deicer application, paving or patching asphalt or concrete work, painting and striping, trash and debris removal.
Vehicle Maintenance and Fueling	Vehicle and equipment maintenance, good housekeeping and waste disposal, vehicle washing, vehicle fueling, fuel spill clean-up.
Building Maintenance	Janitorial practices, waste management, pressure washing and exterior surface cleaning, painting, sanding, and sandblasting, HVAC system maintenance
Grounds Maintenance	Landscape Maintenance, mowing, mulching, graveling trails and parking lots, trash removal/waste management
Fertilizer, Herbicide, & Pesticide App.	Storage, mixing, and application of fertilizers, herbicides, and pesticides
Materials Storage	Liquid materials storage, hazardous materials storage, stockpiling materials including: sand & gravel, wood products, including lumber, chips, sawdust, demolition debris including asphalt and concrete, decommissioned equipment
Incidental Spill Response and Clean-up	Limited actions taken to respond to an incidental release of potentially hazardous material
DPW Yard	Inspections and any maintenance work done at the DPW Yard.
Rain Garden and Green Roof	Maintenance of the vegetation and inspection of green roof and rain garden.

APPENDIX A

STORMWATER MANAGEMENT SYSTEM

INSPECTION AND MAINTENANCE LOGS

Ditches/Swales

1. Inspect ditches and swales once in the spring and fall.
2. When cleaning, remove obstacles/debris
3. Whenever possible, cut/remove vegetation (as opposed to scraping) to allow capture of sediment
4. ID excessive siltation in ditching-may indicate the need to re-grade the ditch
5. During ditch scraping, maintain vegetation (downstream of ditch) to capture sediment

IRA TOWNSHIP
STORMWATER MANAGEMENT SYSTEM
INSPECTION AND MAINTENANCE SCHEDULE

(CIRCLE ONE)

SPRING (To be completed annually between March 1st and May 1st, after the last significant snow & ice event)

FALL (To be completed annually between September 1st and November 1st, before the beginning of leaf collection)

Inspection date:_____ Location:_____

Inspection conducted by:_____

Instructions: Complete inspection by answering yes/no questions and check follow-up boxes when action is complete. Make any notes necessary to document the condition of the location and maintenance actions taken. When inspection & maintenance actions are completed, submit form to Public Service Supervisor.

Swales		**Notes:**
Is there evidence of erosion or channeled flow?	Yes:____ No:____	
☐ If yes, consult engineer and regrade		
Are there bare spots?	Yes:____ No:____	
☐ If yes, reseed and monitor		
Is there sediment build-up?	Yes:____ No:____	
☐ If yes, remove, correct source, and monitor		
Additional Maintenance		
☐ Grass mowed & maintained at 4-9"		
☐ Clean Curb cuts		
Ditches:		**Notes:**
Is there evidence of erosion or channeled flow?	Yes:____ No:____	
☐ If yes, consult engineer and regrade.		
Are there bare spots?	Yes:____ No:____	
☐ If yes, reseed and monitor.		
Is there sediment or debris build-up?	Yes:____ No:____	
☐ If yes, remove, correct source, and monitor		

Catch basins

1. Inspect catch basins once in the spring and fall.
2. Identify catch basins that need frequent maintenance, and prioritize
3. During cleaning, identify the need for repair of structure (also pertains to manholes and piping).
4. Clean catch basins when debris has filled it 1/3 of the way to the outlet
5. Inspect/determine the need for cleaning after storm events
6. Coordinate catch basin cleaning with related street/parking lot sweeping events

Prior to catch basin maintenance, conduct visual inspection to ensure the water in the sump has not been contaminated. If necessary, collect a grab sample of the water and look for signs of contamination such as visible sheen, discoloration, obvious odor, etc.

If there is any doubt of the quality of water, it should be collected into a vactor truck and treated as waste under part 121 or part 115 Solid waste Management (part 115) of NREPA.

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

The clear water may be directly discharged to one of the following:

- Sanitary system (with prior approval from St Clair County sewer plant)
- Curb and gutter
- Back into the storm sewer system as long as it is contained within the system during dry weather conditions to ensure no discharge into surface water
- Applied to the ground adjacent to the catch basin (evenly distributed at a maximum rate of 250 gallons/acre/year)

The resulting solid waste must be disposed of in a licensed landfill.

*Bi-annual updates and or revisions shall be made to prioritize problem areas based on inspection findings and citizen complaints.

IRA TOWNSHIP
STORMWATER MANAGEMENT SYSTEM
INSPECTION AND MAINTENANCE SCHEDULE

Catch Basins:		**Notes:**
Has debris accumulated in the catchbasin?	Yes:____ No:____	
☐ If yes, clear obstructions/debris		
Has more than 1" of oil or 6" of sludge?	Yes:____ No:____	
☐ If yes, schedule vactoring		

Additional Maintenance:

☐ Schedule street sweeping of all municipal parking lots

☐ Re-seed any exposed ground in the system

Additional notes:

Vactor contractor:

Tri-County VAC

810-650-2244

E. coli Reduction

The expected potential sources of E. coli contamination within the Township's property is improper pet waste disposal on the Park Grounds. Signage with pet waste bag dispensers will be placed in the park reminding park goers to pick up their pet's waste.

It is possible for wildlife to contribute to any E. coli contamination at the outfalls. If E. coli testing shows results above standards the area will be monitored for avian or other wildlife grouping.

E. coli Testing

1. E. coli testing should be performed twice a permit cycle (5 years), during a stretch of wet weather.
2. Areas that direct flow to Meldrum Creek are considered high priority areas and should be tested. Identify those areas on site.
3. Take water sample per manufacturer's directions.

Prior to sampling, conduct visual inspection to ensure the water flowing into the Meldrum Drain from the Township property is clean. Note the condition of the water on the log form. Include the color of the water and any obvious odors. Note any noticeable earth disturbances, debris or damage to structures at the outlet as well as any obstructions to flow.

Once the test results are found, compare the results to the following standards from the Michigan Department of Environmental Quality:

***Water Quality Standard for* E. coli**

Total Body Contact (May1 - October 31):
Daily Maximum Geometric Mean: 300 E. coli per 100 milliliters (ml)
30-Day Geometric Mean: 130 E. coli per 100 ml

Partial Body Contact (all year):
Daily Maximum Geometric Mean: 1,000 E. coli per 100 ml

If test results are below these standards no further action is needed.

If test results are above these standards action should be taken to indentifiy the source(s) of E.coli.

1. Inspect the entire area that flows to Meldrum Creek from the Township's property.
2. Perform the applicable Standard Operating Procedures to determine contamination cause.
3. Once the contaminant is located, perform the necessary maintenance, disposal or storage procedure.
4. Retest the location 30 days later.
5. If the E. coli levels are still above normal, continue investigating potential sources and/or implementing additional BMPs.

IRA TOWNSHIP
STORMWATER MANAGEMENT SYSTEM
INSPECTION AND MAINTENANCE SCHEDULE

E. coli Testing:	
Name:	Date:
Weather Conditions:	
Area 1:	(Location of sample)
Area 2:	(Location of sample)
Sample ID:	
Area 1:	
Area 2:	

Observations:	
Location:	
Water color:	
Odor:	
Disturbances at outlets:	
Structure damage at outlet:	
Obstructuions to flow	
Notes:	
Location:	
Water color:	
Odor:	
Disturbances at outlets:	
Structure damage at outlet:	
Obstructuions to flow	
Notes:	

IRA TOWNSHIP

STORMWATER MANAGEMENT SYSTEM

INSPECTION AND MAINTENANCE SCHEDULE

E. coli Testing (con't.):

Test Results

Area 1: _____

Is further action needed?: Yes No

Area 2: _____

Is further action needed?: Yes No

Further Actions

Area: _____

Determine if any maintenance work was performed within the drainage area that did not meet Standard Operating Procedure guidlines.

Notes:

Perform the following Standard Operating Procedures:

General Good Housekeeping	Date: _____	By: _____
Stormwater System Maintenance	Date: _____	By: _____
Road, Parking Lot, & Sidewalk Maintenance	Date: _____	By: _____
Grounds Maintenance	Date: _____	By: _____
DPW Yard	Date: _____	By: _____
Rain Garden and Green Roof	Date: _____	By: _____

Found cause of E. coli contamination and corrective actions:

IRA TOWNSHIP
STANDARD OPERATING PROCEDURES
FOR
TOWNSHIP OPERATIONS & MAINTENANCE

STANDARD OPERATING PROCEDURES (SOPs)

GENERAL GOOD HOUSEKEEPING FOR OUTDOOR OPERATIONS & MAINTENANCE	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Public Services Supervisor

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The City will provide copies of the SOP to municipal hired contractors. The City will provide oversight of contractor's activities to ensure compliance.

Equipment and Materials Required

1. Weatherproof containment and storage materials – containers, drums, pallets, tarps, etc.
2. Spill kit and equipment for dry cleanup – kitty litter, absorbent pads, broom & dust pan.
3. Stormdrain inlet protection – drain covers, berms, wattles, etc.

Standard Operating Procedures

1. Familiarize yourself with the location of all storm drains and conveyance facilities in all work areas.
2. Protect stormwater facilities during all work to ensure that only rain water enters the drainage system.
3. Do not dump liquids or other materials outside.
4. Pick up trash and dispose outside.
5. Keep trash receptacles closed at all times.
6. Do not put liquids in trash receptacles.
7. Do not put hazardous materials in trash receptacles.
8. Keep outside work areas clean and sweep up after projects
9. Do not hose down outside work areas.
10. Promptly clean up and contain all solids or liquid pollutant spills. Use solid absorbents and rags for clean-up of liquid spills and leaks.
11. Sweep paved maintenance and material handling areas regularly as needed, for collection of dust or debris that could contaminate stormwater.
12. Promptly repair or replace leaking connections, pipes, valves, hoses, or other leaking equipment that could contaminate stormwater.
13. Report any suspected illegal connections or illicit discharges to the storm system to the Department of Public Services Superintendent.

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, herbicides, and pesticides, oil, fuels, acids, poisons, antifreeze, brake fluid, and solvents.

2. These materials may ***not*** be disposed of in Township property.
3. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. SOP: Stormwater Systems Maintenance
2. SOP: Road & Parking Lot Maintenance
3. SOP: Vehicle Maintenance & Fueling
4. SOP: Building Maintenance
5. SOP: Grounds Maintenance
6. SOP: Fertilizer, Herbicide, and Pesticide Application
7. SOP: Materials Storage
8. SOP: Incidental Spill Response

STANDARD OPERATING PROCEDURES (SOPs)

STORMWATER SYSTEM MAINTENANCE	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Department of Public Services Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
   - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The City will provide oversight of contractor's activities to ensure compliance.

Equipment and Materials Required

1. Stormwater Management System Inspection and Maintenance Logs – Spring and Fall.
2. Stormwater Management System Map.
3. Vactor truck, Catch Basin Spoon.
4. E.coli testing kit.

Standard Operating Procedures

1. Inspect and maintain stormwater system according to the Stormwater Management System Inspection and Maintenance Logs once every six months, once in the spring and fall. All structural and non structural stormwater controls should be comprehensively inspected.
   This includes: Catch Basins, Swales & Ditches, Rain Garden, Green Roofs, all outlets and downstream of outlets.
2. E.coli testing of all the outlets will take place twice during the permit period. E.coli testing should be done during wet weather periods. See E.coli testing kit for instructions.
3. Schedule catch basin cleaning or spooning annually based on inspection.
4. Maintain side slopes on ditches at a grade that does not cause side – slope erosion.
5. Maintain 4 to 9 inches of vegetation in ditches.
6. Remove mowed or cut vegetation from the ditch and do not dispose of in adjacent waterway or storm drainage system.
7. Do not apply herbicides, pesticides, or fertilizer in ditches or on adjacent roadways.
8. Inspect storm drainage outlets after major storm events.
9. Reseeding of ditches should be done in late spring or early fall. This allows vegetation to be re- established before the next wet season to minimize erosion.
10. Report any suspected illegal connections or illicit discharges to the storm system to the SCCHD at (810)-987-5300

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & Maintenance
2. SOP: Grounds Maintenance
3. SOP: Fertilizer, Herbicides, & Pesticides Application
4. SOP: Incidental Spill Response

STANDARD OPERATING PROCEDURES (SOPs)

ROAD, PARKING LOT, & SIDEWALK MAINTENANCE	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Department of Public Services Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide oversight of contractor's activities to ensure compliance.

Equipment and Materials Required

1. Spill kit and equipment for dry cleanup – kitty litter, absorbent pads, broom & dust pan.
2. Storm drain inlet protection – drain covers, berms, wattles, etc.
3. Tarps

Standard Operating Procedures

General Maintenance

1. Familiarize yourself with the location of all storm drains and conveyance facilities in all work areas.
2. Collect and dispose of trash along roadsides and in parking lots when observed

Parking Lot Maintenance

1. Clean leaves, trash, sand, and other debris from parking lots regularly or as needed to prevent debris from reaching any storm drain inlet or storm detention area.
2. Any automotive leaks, drips, or spills must be cleaned up with dry methods (absorbents) and disposed of properly.
3. Inspect dumpsters and waste disposal areas bi-weekly. Clean up any trash, spills, or leaks and report leaking dumpsters to the disposal company.
4. Twice a year volunteers will sweep the parking lots and dispose of the waste in the dumpster.

Paving/Patching

1. Conduct all patching, paving, or re-sealing of asphalt on dry days when no rain is present.
2. Stop paving during and immediately after a rainfall.
3. Pre-heat, transfer or load hot asphalt far away from any storm drain inlet.

4. Protect downstream waters and storm drain inlets from debris including grinding, sawing, or pavement demolition dust.
5. Cover and seal all storm drains before applying seal coat or slurry seal. Leave covers in place until the job is compete and all water from emulsified oil sealants has drained or evaporated. Clean up debris from inlets and dispose of properly

Concrete Pouring

1. Do not allow slurry from saw cutting to enter storm drains.
2. Protect nearby storm drains using drain covers, inserts, berms, wattles, etc. around or over inlets when working within 25 feet of an inlet.
3. Designate a "wash out area" on the job site in a grassy or gravel area where pooled water can soak into the ground. Never wash out on a street or paved area or near a storm drain.
4. If no "wash out area" is immediately available, wash out into a container (5-gallon bucket or wheelbarrow) and dispose of the material at the closest suitable grassy or graveled area where pooled water can soak into the ground.

Painting and Striping

1. Schedule painting and striping projects for dry weather only.
2. Stop painting if rain is expected.
3. Block nearby storm drain inlets (within 25 feet gradient from work site).
4. Promptly clean up any spill of paints, cleaners or other chemicals.
5. Conduct all loading, mixing, and cleanup activities at covered location, far from any storm drain inlet.

Cleaning Sidewalks and Parking Lots

1. Do not hose down sidewalks or parking lots except where wash water will only enter grassy or graveled areas where it can soak into the ground.
2. If you do not use any chemicals or detergents and are only cleaning surfaces of ambient dust, then you may direct the wash water to nearby landscaping or contain it on site and allow it to evaporate. When discharging to landscaping, make sure the water is being absorbed in the ground and not running off into a storm drain or paved area.
3. Dry cleanup methods should be used prior to any pressure washing. These include using absorbents (kitty litter, rags, sand, etc.) to clean up spills, sweeping or washing. The waste material should be disposed of properly.
4. If you must pressure wash, identify where all storm drains are located before starting. Wash water must not be allowed to flow down gutters or enter storm drains. All wash water must be captured for proper disposal.

    - ✓ Determine where water will pool for collection.

    - ✓ Use the following types of equipment to protect storm drains and to contain and collect wash water: vacuum pumps, booms/berms, portable containment areas, weighted storm drain covers, inflatable plumber's plugs, oil/water separators, holding tanks, portable sump pumps, hoses, absorbents.

Snow Plowing

1. Avoid plowing, pushing, blowing or storing excess snow or other debris into storm drains.

Snow Storage and Disposal

1. Do not dispose of snow in wetlands, ditches, open water, or directly on top of storm drains.
2. **Establish snow areas that are:**
   - ✓ On a grass or gravel surface where melt water can infiltrate.
   - ✓ Down gradient from water courses or wetlands.
   - ✓ Not located on or near storm drains.
3. Cleanup and sweep sediment and debris from paved surfaces after snowmelt.

Salting

1. Use only clean salt for winter parking lot maintenance.
2. Use the lowest application rate that will be effective.
3. Sweep parking lots after winter salting operations.

Salt Loading and Storage

1. Stockpiled salt should be stored under cover or covered with a tarp.
2. When loading salt, care should be taken not to overload the truck.
3. Loading areas and yards should be swept frequently to prevent salt build up and runoff.

Salt/Deicer Application

1. Hand apply salt and/or chemical deicer on sidewalks where required for pedestrian safety.
2. Use the lowest amount of product that will be effective.
3. Do not apply salt and/or chemical deicers near storm drains.

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, herbicides, and pesticides, oil, fuels, acids, poisons, antifreeze, brake fluid, and solvents.
2. These materials may not be disposed of on Township property.
3. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & Maintenance
2. SOP: Stormwater Systems Maintenance
3. SOP: Vehicle Maintenance & Fueling
4. SOP: Materials Storage
5. SOP: Incidental Spill Response

STANDARD OPERATING PROCEDURES (SOPs)

VEHICLE MAINTENANCE & FUELING	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Public Service Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide oversight of contractor's activities to ensure compliance.

Equipment and Materials Required

1. Weather proof containers
2. Polly or plastic pallets
3. Drum covers
4. Tarps
5. Spill kit and equipment for dry cleanup (socks, absorbent pads, kitty litter, broom and dust pan)
6. Drip pan
7. Parts washer

Standard Operating Procedures

Vehicle & Equipment Maintenance

1. Conduct all maintenance and repair work inside or under cover.
2. Only emergency maintenance or maintenance that does not involve fluids may be performed outside.
3. Move leaking vehicles or equipment indoors or under cover.
4. Use drip pans for leaking vehicles that need to be stored outside.
5. Contain leaking fluids and tag the vehicle to alert drivers that vehicle is non-operational.
6. Perform all maintenance activities involving fluids indoors only (except in emergency cases).
7. Dispose of wastewater from tire leak check to sanitary sewer, not storm drain.
8. Use designated parts washer for all parts washing and solvent use work.
9. Promptly transfer used fluids to recycling drums or hazardous waste containers.
10. Dispose of liquid waste properly.
11. Store cracked batteries in leakproof secondary containers.

Vehicle & Equipment Fueling

1. Fuel carefully to minimize drips on the ground.
2. Do not "top off" fuel tanks.
3. Remain present at the fueling station during the entire fueling operation.
4. When fueling small equipment in the field such as lawn mowers, portable generators, etc., do so over a paved surface, at a location that is down gradient from and far away from the nearest storm drain.

Clean Up of Leaks, Drips, or Spills

1. Clean up leaks, drips, or spills thoroughly and promptly.
2. Always use dry methods for clean-up of fuel spills (gas, diesel, or kerosene).
   - ✓ Spread absorbents (kitty litter or loose absorbents, sheets, pillows, pigs, or socks) on the spill.
   - ✓ Sweep up or pick up the absorbed materials.
   - ✓ Dispose of wastes properly
3. If fluids leak or have spilled on an impervious surface, such as a road or parking lot, locate nearest down gradient storm drain and dike or berm the drain to prevent fluids from entering.
4. Put absorbent on the spill area.
5. After clean up, sweep up the contaminated absorbent and remove berm or dike from the storm drain.
6. If spills occur on a pervious surface such as gravel or grass, mark the area and contact the Ira Fire Department at (586)725-7771.
7. Never hose down leaks, drips, or spills.

Vehicle & Equipment Washing

1. Wash all vehicles and equipment in the designated wash rack.
2. Oversized vehicles or vehicles that cannot be moved to the designated area can be washed at a commercial wash facility.
3. If washing cannot be conducted at the designated wash facility or a commercial was facility, vehicle and equipment may be rinsed with water only on a pervious surface (grass or gravel) at a location where wash water will not drain to a storm drain inlet, waterway, or wetland. Do not use soap or detergent in these areas.

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, herbicides, and pesticides, oil, fuels, acids, poisons, antifreeze, brake fluid, and solvents.
2. These materials may not be disposed of on Township property.
3. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & Maintenance
2. SOP: Road & Parking Lot Maintenance
3. SOP: Grounds Maintenance
4. SOP: Materials Storage
5. SOP: Incidental Spill Response

STANDARD OPERATING PROCEDURES (SOPs)

BUILDING MAINTENANCE	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Department of Public Services Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide oversight of contractor's activities to ensure compliance.

Equipment and Materials Required

1. Spill kit and equipment for dry cleanup (socks, absorbent pads, kitty litter, broom, and dust pan)
2. Inlet protection (wattles, drain covers, berms, and/or filter fabric)
3. Containers for collecting paint wastes
4. Tarps or ground cloths

Standard Operating Procedures

Janitorial Practices and waste Management

1. Never dump mop water or cleaning wastewater outside, on paved surfaces, or into storm drains. Dispose of wastewater in mop sink or other sanitary sewer drain.
2. Do not pour, transfer, or dispose of any material outdoors or near a storm drain.
3. All waste containers must be leak-tight with tight-fitting lids or covers.
4. Keep al container lids closed at all times unless adding or removing material. If possible, store waste receptacles.
5. Sweep around outdoor waste containers regularly.
6. When working in the field, collect all wastes in or other leak-proof containers and bring back to the shop for proper disposal.
7. Do not wash dumpsters with water outdoors. If a dumpster requires washing, contact the service provider and have them remove it for cleaning, or move it to the designated wash down facility for washing to sanitary sewer.
8. Minimize waste by purchasing products that have minimal packaging. Recycle cardboard, plastics, and paper products in the proper container.
9. Purchasing the least toxic cleaning product possible to accomplish the job. Purchase biodegradable cleaning products where possible.

Painting, Staining, Scraping, and Sandblasting

1. Use a ground cloth securely attached to the base on the building for any scraping or sanding of the exterior surface.
2. Use a ground cloth or oversized tub for paint mixing and tool cleaning. Properly dispose of the wastes.
3. Enclose spray-painting operations with tarps or other means, as possible, to minimize wind drift and to contain overspray.
4. Clean paintbrushes and tools used to apply water-based paints in sinks plumbed to a sanitary sewer or in portable containers that can be emptied into sanitary sewer drains.
5. Brushes and tools used for oil-based paints, finishes, thinners, solvents or other materials must be cleaned over a tub or container and the cleaning wastes disposed or recycled at an approved hazardous waste facility.
6. Never clean tools over a storm drain or outside.
7. Promptly clean any spills of paints, cleaners or other maintenance chemicals or supplies.
8. When sand blasting exterior surfaces, place tarps or ground cloths beneath the work area to capture sand blasting media and debris. Enclose the sand blasting area with tarps or plastic to protect it from wind and to capture airborne particles (dust).
9. Cease all sand blasting operations on windy days.

Pressure Washing & Exterior Surface Cleaning

1. Prior to pressure washing, identify where all storm drains are located; wash water must not be allowed to flow down gutters or enter storm drains.
2. Block or cover all storm drains with booms and weighted storm drain covers before pressure washing.
3. Determine where water will pool for collection. Use a wet vac to vacuum up the wastewater or allow water to evaporate.
4. Use dry cleanup methods, including sweeping, and scrapping off dried debris prior to pressure washing any surface.
5. Pressure wash with minimal water.
6. If you are not using any chemicals or detergents, the wash water can be directed to a grassy area where it can infiltrate. Verify that water is not running out of the area and encountering a paved surface.
7. If any additives are used in the wash water, the waste water must be captured for disposal to sanitary sewer.
8. Solids should be removed from the area prior to pressure washing and a filter bag or similar filtration device should be used to remove suspended solids from the wastewater.
9. A visible sheen must not be evident in the discharge. Use an absorbent pad or boom to eliminate any oil from the discharge.
10. Do not pressure wash an entire building. Spot clean, steam clean, or scrape dirty areas rather than pressure washing the entire structure.

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, herbicides, and pesticides, oil, fuel, acids, poisons, antifreeze, brake fluid, and solvents.
2. These materials may not be disposed of on Township property.
3. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & Maintenance
2. SOP: Incidental Spill Response

STANDARD OPERATING PROCEDURES (SOPs)

GROUNDS MAINTENANCE	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Department of Public Services Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide oversight of contractor's activities to ensure compliance.

Equipment and Materials Required

1. Dumpster Covers
2. Tarps
3. Spill kit and equipment for dry cleanup (socks, absorbent pads, kitty litter, broom, and dustpan)

Standard Operation Procedures

Mowing and Landscaping Maintenance

1. Mulch-mow grass. Sweep and dispose of any grass clippings on paved surfaces.
2. Do not dispose of green waste or clippings in waterways, ditches, or stormwater detention basins.
3. Maintain sprinkler systems at rates that do not exceed the infiltration rate of the soil. Observe any runoff on paved surfaces and reposition or adjust sprinkler heads to irrigate only pervious surfaces.
4. Sweep areas around landscape beds regularly and after applying new mulch to keep wood products from entering the storm drain system.

Graveling Trails and Parking Lots

1. Stockpiled gravel should be stored under cover with a tarp.
2. When loading graver, care should be taken not to overload vehicle.
3. Sweep area after loading to keep gravel from entering the storm water management system.
4. Take care not to cover any storm drain inlets with gravel.

Non-Hazardous Waste Management and Disposal

1. When working in the field, collect all waste in bags or other leak-proof containers and bring back to the shop for proper disposal.
2. Minimize waste by purchasing products that have minimal packaging. Recycle cardboard,

plastics and paper products in the proper container.
3. Never place hazardous materials, liquids, or liquid-containing wastes in the dumpster. If liquid wastes must be disposed of in the trash, absorb them first with kitty litter or other absorbents.
4. Non-hazardous liquid waste may be disposed on in sanitary sewer.

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, herbicides, and pesticides, oil, fuels, poisons, antifreeze, brake fluid, and solvents.
2. These materials may not be disposed of on Township property.
3. Hazardous wastes ***must*** be disposed of at the St. Clair County Transfer Station.
4. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & Maintenance
2. SOP: Vehicle Maintenance & Fueling
3. SOP: Fertilizer, Herbicides, & Pesticides Application
4. SOP: Materials Storage
5. SOP: Incidental Spill Response

STANDARD OPERATING PROCEDURES (SOPs)

FERTILIZERS, HERBICIDES & PESTICIDES APPLICATION	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Department of Public Services Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide oversight of contractor's activities to ensure compliance.
4. Pesticide application must be done under the supervision of staff holding a Public Applicator's License
5. All employees who handle or apply fertilizers, herbicides, or pesticides must be trained on the most recent Material Safety Data Sheets (MSDS).

Equipment and Material Required

1. Spill kit and equipment for dry cleanup (socks, absorbent pads, kitty litter, broom, and dustpan).
2. ANSI approved sprayers.
3. Polly or plastic pallets and pails for secondary containment.
4. Proper PPE (Rubber gloves and eye protection).

Standard Operating Procedures

General

1. Always follow the manufacturer's recommendations for mixing, application, and disposal.
2. Use manual or mechanical methods for weed control whenever possible.
3. When chemicals are used, use the least toxic and most biodegradable product possible.

Mixing

1. Mix fertilizers, herbicides, and pesticides inside a protected area with impervious secondary containment so that spills and leaks will not contact soil or enter the storm water system.
2. Label all containers.
3. Only mix the minimum amount of product that will be needed for the immediate job.
4. If possible, use rinse water from cleaning of containers and application equipment as a dilution for the next batch.

Application

1. Follow application guidance on the product label.
2. Time the application to coincide with manufacturer's recommendation for best results. Do not spray if rain is expected.
3. Limit use of pesticides in general and do not broadcast spray pesticides.
4. Spot spray herbicides whenever possible.
5. Use herbicide only when there is vegetation to manage (do not use preventatively or more often than required).
6. Fertilizers may be broadcast sprayed, with care taken to avoid waterways or any inlet to the storm drain system.
7. Use granular materials when possible to avoid application losses.
8. Do not apply fertilizers, herbicide, or pesticides within 50 feet of any open water, drainage ditch, wetland, storm water basin or inlet to the storm drain system.
9. See Manager of Planning & Environmental Services to obtain an NPDES permit before spraying any herbicides in wetland mitigation areas for weed control.

Cleanup

1. Follow all manufacturers' recommendations for cleanup of the chemical.
2. Sweep paved areas where any granular product has fallen and direct product into grassy areas.
3. Cleanup any spills of product quickly using the methods described in SOP: Incidental Spill Response & Cleanup.
4. Dispose of excess chemicals and empty expired fertilizer, herbicide or pesticide containers according to the instructions on the label and preferably on the target vegetation or pest.
5. If possible reuse the triple rinse from containers as dilution for the next batch.
6. Never dispose of rinse by pouring into the storm drain system.
7. Any product that cannot be disposed of through application on the target vegetation or pest ***must*** be disposed of as Hazardous Waste.

Storage

1. Store fertilizer, herbicides, and pesticides inside a protected area with impervious secondary containment so that spills or leaks will not enter the soil or the storm drain system.
2. All containers must be clearly and accurately labeled.

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, herbicides, and pesticides, oil, fuels, acids, poisons, antifreeze, brake fluid, and solvents.
2. These materials may not be disposed of on Township property.
3. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & Maintenance
2. SOP: Grounds Maintenance
3. SOP: Materials Storage
4. SOP: Incidental Spill Response

STANDARD OPERATING PROCEDURES (SOPs)

MATERIALS STORAGE	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Department of Public Services Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide oversight of contractor's activities to ensure compliance.

Equipment and Materials Required

1. Weather Proof Containers
2. Polly or plastic pallets
3. Drum covers
4. Tarps
5. Spill kit and equipment for dry cleanup (socks, absorbent pads, kitty litter, broom, and dustpan)
6. Inlet protection (wattles, drain covers, berms, and/or filter fabric)

Standard Operating Procedures

Outdoor Storage Areas

1. If possible, store all containers indoors whenever possible. If they must be stored outdoors, place them in a shed or under a roof.
2. All containers and dry chemicals should be covered or have secondary containment
3. Place all containers on a plastic pallet or other device that elevates them off the ground or pavement and provides containment. This avoids contact with storm water on the ground.
4. Place containers on paved, impervious surfaces and as far from (or at lower elevation than) storm drain inlets and drainage ditches as possible.
5. Keep a spill kit near storage areas. Clean up any spill , leaks, or discharges promptly.
6. Inspect all containers outdoors regularly.
7. If a container is found leaking either empty the contents into a leak-tight container or place entire container inside of a larger leak-tight container. Clean up spills promptly.

8. If rain water collects in a secondary containment structure, allow the water to evaporate if possible. If not possible, verify with sight & smell that the water is not contaminated with a hazardous substance and then pump to sanitary sewer for disposal. If water is suspected of containing hazardous waste (oil sheen, odor), the water must be treated as hazardous waste and be disposed of properly.

Sand, Salt, Dirt or Gravel Stockpiles

1. Cover sand/salt piles with a tarp or store inside a building or under a roof.
2. Contain stormwater runoff from dirt, salt, and gravel stockpiles by using barriers or berms.

Liquid Bulk Material Storage

1. Provide impervious secondary containment for all Above Ground Storage Tanks (ASTs), except double-walled tanks, sufficient to contain the entire contents of the largest single tank plus an additional 4 inches of rainfall.
2. Keep drain valves in secondary containment at ASTs locked in the closed position at all times. Open for draining only under supervision.
3. Make sure an adequate spill kit with sufficient equipment and supplies is located near storage areas where spills are possible. Clean up any spills, leaks or discharges immediately.

Hazardous Waste Storage & Disposal

1. Hazardous wastes should be labeled as such and may include cleaning supplies, paints, fertilizers, and pesticides, oil, fuels, acids, poisons, brake fluid, antifreeze, and solvents.
2. These materials may not be disposed of on Township property.
3. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Construction & Demolition Materials

1. Stockpile only materials that have value and a high likelihood of being reused on Township projects.
2. Locate stockpiled materials far from storm drains and cover any materials that could erode or leach in stormwater.
3. Treated timber, sand, gravel, and asphalt debris must be stored under cover or tarps with provisions to avoid contact with surface runoff (placed on tarp/pallet or berm).
4. Chipped or ground wood products must be stored under cover where they will not be mobilized by stormwater.
5. Dispose of all other building demolition, land clearing, pavement maintenance, or other construction debris immediately after completing project.

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & maintenance
2. SOP: Road & Parking Lot Maintenance
3. SOP: Vehicle Maintenance & Fueling
4. SOP: Building Maintenance
5. SOP: Ground Maintenance
6. SOP: Incidental Spill Response

STANDARD OPERATING PROCEDURES (SOPs)

INCIDENTAL SPILL RESPONSE & CLEANUP	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the Course of conducting all outside operations & maintenance work At the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	March 2014
Administrator of SOP:	Department of Public Services Superintendent

NOTE: THIS SOP APPLIES ONLY TO INCIDENTAL RELEASES OF POTENTIAL HAZARDOUS MATERIALS, WHICH MEANS SMALL SPILLS THAT ARE NOT HIGHLY TOXIC.TOWNSHIP PERSONNEL ARE NOT TRAINED TO RESPONDTO ANY UNCONTROLLED RELEASE OF POTENTIALLY HAZARDOUS MATERIALS, WHICH MEANS ANY MEDIUM OR LARGER SPILL OR SMALL SPILLS OF EXTREMELY HAZARDOUS OR DANGEROUS MATERIALS? NO TOWNSHIP EMPLOYEE SHOULD RESPOND TO ANY RELEASE OF A POTENTIALLY HAZARDOUS MATERIAL WITHOUT PROPER TRAINING.

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under *Related Procedures* at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide oversight of contractor's activities to ensure compliance.
4. Employees should read and attend training on the Township of Ira Emergency Spill Response Plan.
5. **Any employee undertaking the actions outlined in this SOP must have received training to the First Responder Operations Level as outlined in the Emergency Spill Response Plan.**

Equipment & Materials Required

1. Spill kit and equipment for dry cleanup (socks, absorbent pads, kitty litter, broom, and dustpan)
2. Inlet protection (wattles, drain covers, berms, and/or filter fabric)
3. Stormwater Management System Map
4. PPE (gloves, protective clothing, respirator – only if the employee is properly trained and fitted)
5. Material Safety Data Sheet (MSDS)

Standard Operating Procedures

Upland Spills

1. Confirm that the spill is an incidental release before proceeding, if the spill is an uncontrolled release of hazardous materials as defined in the *Township of Ira Emergency Spill Response Plan (ESRP)*, this SOP does not apply and the employee should initiate an emergency response by calling 911 per the *ESRP*.
2. Consult the MSDS sheet for the product of concern. MSDS sheets are transported with all hazardous materials and are kept in a binder in each Township maintenance shop.

3. Block nearby storm drain inlets and place containment materials (boom) around the spill if it is or has the potential to become mobile.
4. Don the appropriate PPE, as specified in the MSDS sheet. Only use a respirator if you have been properly trained and fitted for a personal respirator, and are using the appropriate cartridge for the spilled chemical
5. Place absorbents on the spill and sweep the dry material into a containment vessel.
6. Dispose of the material as hazardous waste.
7. Notify the Department of Public Services Superintendent of the spill and initiate cleanup as soon as practical.

NOTE: If a spill is too large to clean up easily with absorbent from the spill kit and a broom, it is not an incidental release and this SOP does not apply. The employee should consult the *ESRP* and initiate a response for an uncontrolled release.

In-Water Spills

1. For small spills that can be contained with materials in the spill kit, deploy containment boom and absorbent pads.
2. Notify the MDEQ 24-hour Spill Response & Reporting Line at (800) 424-8802. For marine spills, also notify the U.S. Coast Guard at 313-586-9680. Provide the following information:

    - ✓ Reporting Party
    - ✓ Contact Phone Number
    - ✓ Responsible Party
    - ✓ Time of Spill
    - ✓ Materials Released
    - ✓ Approximate Quantity
    - ✓ Location
    - ✓ Clean-up Status
    - ✓ Resource Damages

3. Contact a cleanup contractor, if needed to complete the in-water cleanup.
4. For any spill involving flammable liquid (i.e. fuel), any spill involving more than a minor and very small area of sheen, or any spill of a substance representing an immediate hazard to life or the aquatic environment, call 911 and initiate the *ESRP* emergency response actions.

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, and pesticides, oil, fuels, acids, poisons, antifreeze, brake fluid, and solvents.
2. These materials may not be disposed of on Township property
3. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. Township of Ira Emergency Response Plan

STANDARD OPERATING PROCEDURES
(SOPs)

DPW YARD	
Purpose of SOP:	To prevent the discharge of pollutants to stormwater in the course of conducting all outside operations & maintenance work at the DPW yard of the Township of Ira.
Location of SOP:	A hard copy of this SOP shall be kept at the DPS. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	May 2017
Administrator of SOP:	Department of Public Services Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
   - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under
   Related Procedures at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide supervision of contractor's activities to ensure compliance.

Equipment and Materials Required

1. Spill kit and equipment for dry cleanup (socks, absorbent pads, kitty litter, broom, and dust pan)
2. Inlet protection (wattles, drain covers, berms, and/or filter fabric)
3. Containers for collecting paint wastes
4. Tarps or ground cloths

Significant Materials Stored Onsite

Materials stored onsite	Handling & storage requirements	Potential to Discharge
Sodium Chloride	Store inside in a clean, dry area. Avoid skin and eye contact when used.	Low potential at storage area
Motor Oil	Store in a sealed container away from heat and fire hazards, in a dry area. Avoid skin and eye contact when used.	Low potential at storage area
Paint Supplies	Store in a dry metal cabinet. Wear gloves when used and avoid eye contact.	Low potential at storage area
Automotive Fluids (brake fluids, antifreeze)	Store in sealed containers away from heat and fire hazards. Store in a dry metal cabinet. Avoid skin and eye contact.	Low potential at storage area

*No material is stored outside.

Standard Operating Procedures

General

1. Familiarize yourself with the location of all storm drains and conveyance facilities in all work areas.
2. Protect stormwater facilities during all work to ensure that only rain water enters the drainage system.
3. Do not dump liquids or other materials outside.
4. Pick up outside trash and dispose of it.
5. Keep trash receptacles closed at all times.
6. Do not put liquids in trash receptacles.
7. Do not put hazardous materials in trash receptacles.
8. Keep outside work areas clean and sweep up after projects.
9. Do not hose down outside work areas.
10. Promptly clean up and contain all solids or liquid pollutant spills. Use solid absorbents and rags for clean-up of liquid spills and leaks.
11. Sweep paved maintenance and material handling areas regularly as needed, for collection of dust or debris that could contaminate stormwater.
12. Promptly repair or replace leaking connections, pipes, valves, hoses, or other leaking equipment that could contaminate stormwater.
13. Report any suspected illegal connections or illicit discharges to the storm system to the Department of Public Services Superintendent.

Bi-Weekly Inspections

1. Inspections should be conducted every two weeks under both rainy and dry conditions.
2. Inspect under and around equipment to establish if there is any leakage.
3. Inspect the points of discharge for the area. Note anything other than storm water present and if there is any obstruction or debris.
4. Walk the yard and pick up any trash, debris, leaves, etc. that could find its way to the outlets.
5. Check all significant materials mentioned in the above table and note that all are stored correctly.

Bi-Annual Inspections

1. Bi-annual inspections should be performed in the spring and fall.
2. Inspect under and around equipment to establish any leakage.
3. Walk the yard and pick up any trash, debris, leaves, etc. that could find its way to the outlets.
4. Check all significant materials mentioned in the table above. Check that they're properly enclosed and that there are no deficiencies in their containers.
5. Inspect waste disposal areas and note that all waste is contained properly.
6. Thoroughly walk the yard for any misplaced containment items or signs of improperly disposed of material.
7. Inspect the points of discharge for the area. Note anything other than storm water present and if there is any obstruction or debris.
8. Inlet structures should be checked for any damage or deterioration.
9. Check downstream of the outlets for any noticeable traces of pollutants.

Pavement Repair

See SOP Road & Parking Lot Maintenance

Graveling Trails and Parking Lots

See SOP Grounds Maintenance

Vehicle & Equipment Maintenance
Clean up of Leaks, Drips, or Spills
Vehicle & Equipment Washing

See SOP Vehicle Maintenance & Fueling

Janitorial Practices and Waste Management
Pressure Washing & Exterior Surface Cleaning
Painting, Staining, Scraping, and Sandblasting

See SOP Building Maintenance

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, herbicides, and pesticides, oils, fuels, poisons, antifreeze, brake fluid, and solvents.
2. These materials may not disposed of on Township property.
3. Hazardous wastes ***must*** be disposed of at the St. Clair County Transfer Station.
4. The Township shall hire a contractor removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & Maintenance
2. SOP: Stormwater System Maintenance
3. SOP: Road & Parking Lot Maintenance
4. SOP: Vehicle Maintenance & Fueling
5. SOP: Building Maintenance
6. SOP: Grounds Maintenance
7. SOP: Material Storage
8. SOP: Incidental Spill Response & Cleanup

IRA TOWNSHIP
STORMWATER MANAGEMENT SYSTEM
INSPECTION AND MAINTENANCE SCHEDULE

BI-WEEKLY DPW YARD INSPECTIONS

Date of Inspection: _____

Inspection Conducted By: _____

Instructions: Inspect the locations of all the discharge points on the property. Note condition and the presence of any hazardous materials.

Discharge Location Inspected:	Condition of area:

Instructions: Check the storage areas of all significant materials listed in the DPW Yard SOP.

Material	Storage Container (good/fair/replace)	Leakage (yes/no)	Correctly contained (yes/no)

File inspection report in the appropriate file. .

IRA TOWNSHIP
STORMWATER MANAGEMENT SYSTEM
INSPECTION AND MAINTENANCE SCHEDULE

BI-ANNUAL DPW YARD INSPECTIONS
Date of Inspection: _____
Inspection Conducted By: _____

Instructions: Inspect under and around equipment to establish any leakage. Comment on any apparent leaks and note the problem equipment.

_____
_____
_____
_____
_____

Instructions: Check all waste disposal areas. Note any improper disposal and location.

_____
_____
_____

Instructions: Thoroughly walk the yard. Note any misplaced containment items or signs of improper disposal. Comment on findings.

_____
_____
_____
_____

Instructions: Inspect the locations of all the discharge points on the property. Note condition and the presence of any hazardous materials.

Discharge Location Inspected:	Condition of area:

BI-ANNUAL DPW YARD INSPECTIONS (cont.)

Instructions: Check the storage areas of all significant materials listed in the DPW Yard SOP.

Material	Storage Container (good/fair/replace)	Leakage (yes/no)	Correctly contained (yes/no)

File inspection report in the appropriate file. .

STANDARD OPERATING PROCEDURES
(SOPs)

RAIN GARDEN AND GREEN ROOF	
Purpose of SOP:	To prevent the discharge of pollutants through the maintenance of green stormwater management.
Location of SOP:	A hard copy of this SOP shall be kept at both the DPS and Water Plant. A hard copy and electronic copy shall be kept in the office of the Public Service Superintendent.
Last Update:	May 2017
Administrator of SOP:	Department of Public Services Superintendent

Prerequisites

1. Employees should attend training on Municipal Stormwater Pollution Prevention.
    - At least once every five years and new hires within the first year.
2. Employees should read the procedures contained in this SOP and any related SOPs listed under
   Related Procedures at the end of the SOP.
3. The Township will provide copies of the SOP to municipal hired contractors. The Township will provide oversight of contractor's activities to ensure compliance.
4. Pesticide application must be done under the supervision of staff holding a Public Applicator's License
5. All employees who handle or apply fertilizers, herbicides, or pesticides must be trained on the most recent Material Safety Data Sheets (MSDS).

Equipment and Material Required

1. Spill kit and equipment for dry cleanup (socks, absorbent pads, kitty litter, broom, and dustpan).
2. ANSI approved sprayers.
3. Polly or plastic pallets and pails for secondary containment.
4. Proper PPE (Rubber gloves and eye protection).

Standard Operating

Procedures

General

1. Always follow the manufacturer's recommendations for the use of any fertilizers, herbicides and pesticides.
2. Use manual or mechanical methods for weed control whenever possible.
3. When chemicals are used, use the least toxic and most biodegradable product possible.

Green Roof

1. Fertilize the green roof once in the spring. If needed, seed any areas that appear sparse.
2. During dry periods (<0.5 inches in a 10-15 day period) and prolonged periods of 85°+ temperatures within the growing season the vegetation will require watering. 1 inch of water per week until moderate precipitation patterns return. While watering inspect the

roof drains to insure that water not being utilized by the vegetation can freely drain off the roof.

3. Visually inspect the green roof for weeds once or twice a month during the growing season and remove them, manually if possible.
4. During inspection, monitor the health of the vegetation. Note any bare or infested areas.
5. Do not apply any herbicides, chemical pest control or other toxic treatments without first consulting the Department Superintendent.

Rain Garden

1. Visually inspect the rain garden once or twice a month. Note areas of excess vegetation, sparse vegetation, health of plants, moisture of the soil, erosion, sediment accumulation, and debris.
2. Remove any trash and debris.
3. Trim and prune any excess vegetation. Remove dead or dying plants.
4. Manually remove any weeds. Do not use any chemical weed control without consulting the Department Superintendent.
5. Water rain garden during seasonal dry periods and prolong period of high temperatures if needed. Rain garden plants are meant to live in wet conditions.
6. Manually remove any accumulated sediment. Determine the cause of the sediment and install a BMP to prevent further accumulation. Replant or reseed in the damaged area.
7. If erosion is present, install a BMP to prevent further scoring. Replace lost soil and replant or reseed vegetation.
8. After any reseeding, mulch if necessary.
9. During the winter season, snow should not be piled on the rain garden.

Mixing Fertilizers, Herbicides and Pesticides and Application
Cleanup and Storage of Fertilizers, Herbicides and Pesticides

See SOP Grounds Maintenance

Hazardous Waste Disposal

1. Hazardous wastes should be labeled as such and may include cleaning products, paints, fertilizers, herbicides, and pesticides, oil, fuels, acids, poisons, antifreeze, brake fluid, and solvents.
2. These materials may not be disposed of on Township property.
3. The Township shall hire a contractor for removal of hazardous wastes that the Township ***cannot*** safely transport.

Related Procedures

1. SOP: General Good Housekeeping for Outdoor Operations & Maintenance
2. SOP: Grounds Maintenance
3. SOP: Incidental Spill Response

APPENDIX C

EMERGENCY SPILL RESPONSE PLAN

STORMWATER POLLUTION PREVENTION & SPILL RESPONSE PLAN FOR THE TOWNSHIP OF IRA

Plan Implementation Date:March 2014
Revision Date(s):_____

_____

Facility's Responsible Person(s) in charge of spill response planning, implementation and maintenance of this plan:

Name	Phone #
CHRIS HILTUNEN	586-557-0822
ERIC JARVI	586-405-3265

RESPONSIBILITIES

- The "**Facility Responsible Person"** has primary responsibility for coordinating the response to emergencies, including chemical spills.
- **Superintendent/Foreman** should ensure that employees are familiar with these procedures and receive any necessary training.
- **All employees** should follow these procedures in the event of a chemical spill.

EMERGENCY CONTACT NUMBERS

The following telephone numbers should be posted near telephones and in other conspicuous locations:

- Outside emergency services (police, fire department, ambulance service): 911
- Hospital: [River District , East China, MI 810-329-7111, McLaren Port Huron Hospital, Port Huron, MI 810-987-5000]
- Facility Responsible Person: Chris Hiltunen
- Alt. Facility Responsible Person: Eric Jarvi
- Poison Control Center: 800-222-1222
- Regional EPA Office: 312-353-2000
- MDEQ District Office (during regular business hours): 586-753-3700
- MDEQ (after hours): 800-292-4706
- OSHA area office:1-800-321-OSHA (6742), 517-248-7777
- National Response Center: 1-800-424-8802
- St. Clair County Office of Emergency Management: 810-989-6965
- St. Clair County Illicit Discharge Hotline: 810-987-7253
- St. Clair County Disaster Preparedness Team: 810-989-6965
- St. Clair County Dispatch (non-emergency):1-810-985-8115
- Others: _____

CLEAN-UP PROCEDURES

Spilled chemicals should be effectively and quickly contained and cleaned up. Employees should clean up spills themselves ***only if properly trained and protected.*** Employees who are not trained in spill cleanup procedures should report the spill to the Responsible Person(s) listed above, warn other employees, and leave the area.

In the event of spills greater than normal, contact the appropriate responders listed in the Emergency Contact Numbers listed above.

The following general guidelines should be followed for evacuation, spill control, notification of proper authorities, and general emergency procedures in the event of a chemical incident in which there is potential for a significant release of hazardous materials.

1. **Evacuation**

   Persons in the immediate vicinity of a spill should *immediately* evacuate the premises (except for employees with training in spill response in circumstances described below). If the spill is of "medium" or "large" size, or if the spill seems hazardous, immediately notify emergency response personnel.

2. **Spill Control Techniques**

   Once a spill has occurred, the employee needs to decide whether the spill is small enough to handle without outside assistance. Only employees with training in spill response should attempt to contain or clean up a spill.

   NOTE: If you are cleaning up a spill yourself, make sure you are aware of the hazards associated with the materials spilled, have adequate ventilation, and proper personal protective equipment. Treat all residual chemical and cleanup materials as hazard waste**.**

   Spill control equipment should be located wherever significant quantities of hazardous materials are received or stored. MSDSs, adsorbents, over-pack containers, container patch kits, spill dams, shovels, floor dry, acid/base neutralizers, and "caution-keep out" signs are common spill response items.

3. **Spill Response and Cleanup**

   Chemical spills are divided into three categories: Small, Medium and Large. Response and cleanup procedures vary depending on the size of the spill.

   Small Spills: Any spill where the major dimension is less than 18 inches in diameter. Small spills are generally handled by internal personnel and usually do not require an emergency response by police or fire department HAZMAT teams.

   - Quickly control the spill by stopping or securing the spill source. This could be as simple as up righting a container and using floor-dry or absorbent pads to soak up spilled material. Wear gloves and protective clothing, if necessary.
   - Put spill material and absorbents in secure containers if any are available
   - Consult with Facility Responsible Person and the MSDS for spill and waste disposal procedures.
   - In some instances, the area of the spill should **not** be washed with water. Use Dry Cleanup Methods and ***never*** wash spills down the drain, into a storm drain or onto the driveway or parking lot.

- Both the spilled material and the absorbent may be considered hazardous waste and must be disposed if in compliance with state and federal environmental regulations.

Medium Spills: Spills where the major dimension exceeds 18 inched, but less than 6 feet. Outside emergency response personnel (police and fire department HAZMAT teams) should usually be called for medium spills. Common sense, however, will dictate when it is necessary to call them.

- Immediately try to help contain the spill at its source by simple measures inly. This means quickly up righting a container, or putting a lid on a container, if possible. Do not use absorbents unless they are immediately available. Once you have made a quick attempt to contain the spill, or once you have quickly determined you cannot take any brief containment measures, leave the area and alert Emergency Responders at 911. Closing doors behind you while leaving helps contain fumes from spills. Give police accurate information as to the location, chemical, and estimated amount of spill.

- Evaluate the area outside the spill. Engines and electrical equipment near the spill area must be turned off. This eliminates various sources of ignition in the area. Advise Emergency Responders on how to turn off engines or electrical sources. Do not go back into the spill area once you have left. Help emergency responders by trying to determine how to shut off heating, air conditioning equipment, or air circulating equipment, if necessary.

- If emergency responders evacuate the spill area, follow their instructions in leaving the area.

- After emergency responders have contained the spill, be prepared to assist them with any other information that may be necessary, such as MSDSs and questions about the facility. Emergency responders or trained personnel with proper personal protective equipment will then clean up the spill residue. Do not re-enter the area until the responder in charge gives the all clear. Be prepared to assist these persons from outside the spill area with MSDSs, absorbents, and containers

- Reports must be filed with proper authorities. It is the responsibility of the spiller to inform both his/her supervisor and the emergency responders as to what caused the spill. The response for large spills is similar to the procedures for medium spills, except that the exposure danger is greater.

Large Spills: Any spill involving flammable liquid where the major dimension exceeds 6 feet in diameter; and ant “running” spill, where the source of the spill has not been contained or flow has not been stopped.

- Leave the area and notify Emergency Responders (911). Give the operator the spill location, name of chemical spilled, and approximate amount.

- From a safe area, attempt to get MSDS information for the spilled chemical for the emergency responders to use. Also, be prepared to advise responders as to any ignition sources, engines, electrical power, or air conditioning/ventilation systems that may need to be shut off. Advise responders of any absorbents, containers, or spill control equipment that may be available. This may need to be done from a remote area, because an evacuation that

would place the spiller far from the scene may be needed. Use radio or phone to assist from a distance, if necessary.

- Only emergency response personnel, in accordance with their own established procedures, should handle spills greater than 6 feet in any dimension or that are continuous. Remember, once the emergency responders or HAZMAT team is on the job cleaning up spills or putting out fires, the area is under their control and no one may re-enter the area until the responder in charge gives the all clear.

- Provide information for reports to supervisors and responders, just as in medium spills.

REPORTING SPILLS

All chemical spills, regardless of size, should be reported as soon as possible to the Facility Responsible Person. The Responsible Person will determine whether the spill has the potential to affect the environment outside the facility and must be reported to Emergency Responders (911).**Examples of spills that could affect the outside environment include spills that are accompanied by fire or explosion and spills that could reach nearby water bodies.**

Accidental releases of certain toxic substances must be reported to the Michigan Office of Emergency Management and the St. Clair County Disaster Preparedness Team (which can both be found at 810-989-6965), as required by the Emergency Planning and Community Right-to-Know Act. The Responsible Person will also make this determination. Also report accidental release of certain toxic substances to the MDEQ at 586-753-3700 during normal business hours and 800-292-4706 after hours.

LABEL SPILL KITS

- Label each spill kit prominently with the words "SPILL KIT" or "ABSORBENTS" etc.

- Label or stencil the necessary emergency telephone number(s) or pager number(s) of persons to be contacted in case of a spill or leak that is beyond the training and equipment available on or near each spill locker:

  Facility Responsible Person/Phone Number: Chris Hiltunen/(586) 557- 0822

  Spill Response Contractor (if any)/ Phone Number:_____/(___)____-_____

  State 24-Hour Emergency Spill Reporting Hot-Line: 800-292-4706

- Stencil the following warning *PROMINENTLY* on each spill locker:

"WARNING: NEVER HOSE DOWN A SPILL!!
CLEAN IT UP PROMPTLY AND DISPOSE OF THE WASTE PROPERLY."

SPILL KIT INVENTORY

List the spill response equipment that will be maintained in designated locker (refer to MSDSs to determine recommended clean-up methods and supplies)

Locker Location	Absorbents	Tools	PPE	Other Supplies
- - - - -	Floor Dry absorbent Rolls of sheets Containers of neutralizing agent	Flat Shovel Broom Dust pan Waste container Squeegee	Impervious Gloves Goggles, Aprons, Boots, Dust mask,	Warning Tape, Warning labels

PERSON RESPONSIBLE FOR MAINTAINING THIS INVENTORY: Chris Hiltunen Water Plant Superintendent

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGEMENT PROGRAM

EMPLOYEE TRAINING PROGRAM

TOWNSHIP OF IRA

EMPLOYEE TRAINING

(POLUTION PREVENTION AND GOOD HOUSEKEEPING TRAINING PROGRAM)

Township Employees: Dept. of Public Services, Water Department, and hired Contractors

Training schedule:

1. Existing employees every two years
2. New employees within the first year
3. Contractors immediately upon hiring
    - Provide SOP handout to each employee of the contractor
    - Provide training pollution prevention and good housekeeping measures
    - Provide oversight of contractor activity to ensure compliance

Description:

1. Municipal employees/contractor training program is designed to teach about potential sources of Stormwater contaminations and ways to minimize the water quality impacts of municipal activities, such as park and open space maintenance, fleet and building maintenance, construction and land disturbances and storm drain system maintenance. The training program includes general storm water awareness messages, pollution prevention / good housekeeping measures, spill response and prevention, and information about the operating and maintenance of best management practices (BMP's). Training program also includes information on Stormwater pollution prevention plans (SWPPP's) for municipal facilities and BMP's recommended for use in the field to prevent contaminated discharges

2. Municipal employees will be educated about Stormwater issues by in-house training programs (review of Stormwater maintenance program, IDEP, ERP, Emergency spill response program, and SOP's), on the job reinforcement, general awareness, education material, workshops, or conferences.

IRA TOWNSHIP, MI - MS4 PERMIT APPLICATION

SECTION VII - STORMWATER MANAGMENT PROGRAM

TOWNSHIP'S COMMITMENT LIST

TOWNSHIP COMMITMENTS

Task Interval	Task	Reference
Annually	Clean out catch basins	Standard Operating Procedures, Stormwater System Maintenance, pg 4
Spring	Inspect ditches/swales	Storm Water Management System, Inspection and Maintenance Logs, pg 6
	Inspect catch basins	Storm Water Management System, Inspection and Maintenance Logs, pg 8
	Hand sweep parking lots	Standard Operating Procedures, Road, Parking Lot & Sidewalk Maintenance, pg 5
	Check downstream of outlets	Standard Operating Procedures, Stormwater System Maintenance, pg 4
	Inspect Green Roof/Rain Garden	Standard Operating Procedures, Stormwater System Maintenance, pg 4
Fall	Inspect ditches/swales	Storm Water Management System, Inspection and Maintenance Logs, pg 6
	Inspect catch basins	Storm Water Management System, Inspection and Maintenance Logs, pg 8
	Hand sweep parking lots	Standard Operating Procedures, Road, Parking Lot & Sidewalk Maintenance, pg 5
	Check downstream of outlets	Standard Operating Procedures, Road, Parking Lot & Sidewalk Maintenance, pg 5
Bi-Weekly	Inspect waste disposal areas, DPW Yard	Standard Operating Procedures, DPW Yard, pg 22
	Inspect under and around equipment, DPW Yard	Standard Operating Procedures, DPW Yard, pg 22
	Inspect points of discharge, DPW Yard	Standard Operating Procedures, DPW Yard, pg 22
	Pick up trash/debris, DPW Yard	Standard Operating Procedures, DPW Yard, pg 22
	Check stored significant materials, DPW Garage	Standard Operating Procedures, DPW Yard, pg 22
	Visually inspect green roof/rain garden	Standard Operating Procedures, Rain Garden and Green Roof, pg 28
Post Major Storm Event	Inspect storm drainage outlets	Standard Operating Procedures, Stormwater System Maintenance, pg 4
As-needed	Clean debris/trash from parking lots	Standard Operating Procedures, Road, Parking Lot & Sidewalk Maintenance, pg 5

E-Coli Testing	
Testing Interval	Test points of discharge twice per permit cycle (5 years)
Reference	Storm Water Management System, Inspection and Maintenance Logs, pg 10