



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 SCHOOLS 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

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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 and Anchor Bay Partners, which are located in the urbanized areas of SCC as defined by the 2010 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, then 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.

<i>Regulated Entity/ Agency</i>	<i># of discharge points/ outfalls</i>
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	0
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. Procedure for Prioritization

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 respectively.
- 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 NPDES MS4 Group 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 Brandywine 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 Brandywine 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-Brandywine subwatersheds. The geometric mean 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 SCCHD's sampling results in the Howe Brandywine and knowledge from the SCCDO also indicate that screening and potentially source investigations are needed in the Parker Road area of the Howe Brandywine 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, then 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 an old filled in swale on the south edge of their parcel in the Black River Watershed which is also on the edge of the Black River's *E.coli* TMDL watershed. This is not a discrete MS4, it consists of an above ground swale that is approximately twelve feet wide which is an inlet for the SCCRC's MS4 (open ditch) along Vincent Road which drains to a wooded wetland to the east. This swale only partially 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 and 2015 screening revealed no signs of illicit discharges or even erosion. Clyde Township should not dedicate any resources towards further screening or investigation of this tiny swale, as it is not a discrete MS4, during the permit cycle. Any sources of pollution for this above ground and extremely small swale will be addressed with Pollution Prevention and Good Housekeeping Best Management Practices (BMPs) as may be 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. This is not an MS4 per definition (not a pipe). 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 at 14 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 during the next permit cycle. All IDEP resources should be directed at the investigation, source location and correction of any 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 which 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 A Bay 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 A Bay 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 colorimetric 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 from that day will be regarded as estimates and qualifiers will be placed on the data.