City of Niles

Illicit Discharge Elimination Plan

Prepared for:
The Lower St Joseph River Watershed

October 17, 2013
Revised December 20, 2013
Project No. G100006

Fishbeck, Thompson, Carr & Huber
engineers • scientists • architects • constructors

LOWER ST. JOSEPH RIVER WATERSHED
MS4 COMMUNITIES IN
BERRIEN AND CASS COUNTIES

ILLICIT DISCHARGE ELIMINATION PLAN

CITY OF NILES

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LIST OF ABBREVIATIONS/ACRONYMS

BCRC	Berrien County Road Commission
BCDC	Berrien County Drain Commissioner
BMP	Best Management Practice
CCRC	Cass County Road Commission
CCWRC	Cass County Water Resources Commissioner
IDEP	Illicit Discharge Elimination Plan
LSJRW	Lower St. Joseph River Watershed
MDEQ	Michigan Department of Environmental Quality
MS4	Municipal Separate Storm Sewer Systems
OSDS	Onsite Sewage Disposal Systems
PEAS	Pollution Emergency Alert System
PEP	Public Education Plan
SSOs	Sanitary Sewer Overflows
SWMPC	Southwest Michigan Planning Commission
SWPPI	Stormwater Pollution Prevention Initiative

1.0 INTRODUCTION

This Illicit Discharge Elimination Plan (IDEP) has been prepared in accordance with the requirements of the General Permit Application for Storm Water Discharges from Municipal Separate Storm Sewer Systems (MS4) subject to watershed plan requirements. The IDEP is intended to prohibit and effectively eliminate illicit discharges to the MS4.

The IDEP includes the following section headings:

- IDEP goals
- Legal authority
- Outfall and discharge point maps and lists
- Identification and elimination of existing illicit discharges
    - Locating problem areas
    - Finding the source of illicit discharges
    - Removing/correcting illicit connections
- Minimizing seepage from septic systems and sanitary sewers
- Spill response procedures
- Preventive measures
- Documentation and reporting

Communities in the Lower St. Joseph River Watershed are pursuing a cooperative approach to conducting dry weather screening. Coordinated efforts through consultants and the Michigan Department of Environmental Quality (MDEQ) will provide training and assistance to all communities in identifying outfalls in need of dry-weather screening, completing field sheets to collect data, following proper procedures to sample dry-weather flows, and reporting the findings, including further investigation needed.

2.0 IDEP GOALS

- Find, prioritize, and eliminate illicit discharges and illicit connections identified during dry-weather screening activities.
- Minimize infiltration of seepage from sanitary sewers and onsite sewage disposal systems (OSDS) into the MS4.
- Establish the legal authority for the community to eliminate illicit discharges found entering the MS4.
- Maintain a map of the MS4, point sources, and stormwater outfalls.
- Establish a system to document and report information regarding the IDEP including complaints, outfall screening, and illicit connections found and removed.
- Determine a method to evaluate the effectiveness of the illicit discharge elimination activities based on the watershed goals.

3.0 LEGAL AUTHORITY - IDEP ORDINANCES

Local ordinances, the Michigan Plumbing Code of 2000, the Michigan Drain Code of 1956, Michigan Act 451, and the Federal Clean Water Act provide the basic legal tools to implement the IDEP. Local ordinances effectively prohibit illicit connections and discharges; allow surveillance, monitoring, and inspections when needed; and provide enforcement authority and penalties.

An ordinance (or other regulatory mechanism where an ordinance is not feasible or appropriate) to effectively prohibit illicit discharges into the MS4 has been adopted by the following participating communities in the Lower St. Joseph River Watershed (LSJRW).

Participating Communities with an IDEP Ordinance or Regulatory Mechanism

Community	Illicit Discharge and Connection Ordinance Adoption Date
Benton Harbor, City of	March 28, 2005
Berrien County Drain Commissioner	Regulatory Mechanism
Berrien County Road Commission	Regulatory Mechanism
Bridgman, City of	July 21, 2004
Buchanan, City of	November 15, 2005
Cass County Road Commission	Regulatory Mechanism
Cass County Water Resources Commissioner	Regulatory Mechanism
Edwardsburg, Village of	November 20, 2006
Lincoln Charter Township	May 2, 2004
Niles, City of	July 12, 2004
St. Joseph, City of	December 19, 2005
Stevensville, Village of	June, 2007

Each ordinance or other regulatory mechanism:

- Regulates the contribution of pollutants to the MS4, owned by the permittee.
- Prohibits illicit discharges, including the direct dumping or disposal of materials, into the MS4, owned by the permittee.
- Establishes the authority to investigate, inspect, and monitor suspected illicit discharges into the MS4, owned by the permittee.
- Requires elimination of illicit discharges and connections into the MS4, owned by the permittee.

The Berrien County Road Commission (BCRC), the Berrien County Drain Commissioner (BCDC), and Cass County Road Commission (CCRC) do not have ordinance authority; however, the BCDC has broad authority to control water pollution in county drains provided by the state Drain Code of 1956. The following are pertinent excerpts.

> The Michigan Drain Code states:
> *Sec. 423. (1) A person shall not continue to discharge or permit to be discharged into any county drain or intercounty drain of the state any sewage or waste matter capable of producing in the drain detrimental deposits, objectionable odor nuisance, injury to drainage conduits or structures, or capable of producing such pollution of the waters of the state receiving the flow from the drains as to injure livestock, destroy fish life, or be injurious to public health.*
>
> *(10) Failure to comply with any of the provisions of this section subjects the offender to the penalties described in section 602.*
>
> *Sec. 602. If any person shall willfully or maliciously remove any section or grade stake set along the line of any drain, or obstruct or injure any drain, he shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding $100.00 and the costs of prosecution, or in default of the payment thereof, by imprisonment in the county jail not exceeding 90 days.*

The BCRC and CCRC have limited authority under state law to control water pollution in statutory road right-of-ways. When evidence of an illicit discharge to a Road Commission ditch or drain is found, and voluntary correction is not forthcoming, the BCRC or CCRC will contact the appropriate agency, depending on the nature of the illicit discharge, and work with the BCDC, CCWRC, County Health Department, local unit of government, local policing authority and/or the Michigan Department of Environmental Quality (MDEQ) to require elimination. The MDEQ has broad authority to control pollution, either directly or indirectly, to waters of the state provided by Act 451 of 1994.

A summary of indicators typically used to detect certain illicit discharges is included in Appendix 1.

4.0 OUTFALL AND DISCHARGE POINT MAPS AND LISTS

Maps and lists of outfalls and discharge points are kept updated, showing the location of all outfalls and discharge points the permittee owns and the names and locations of all surface waters of the state that receive stormwater runoff from an MS4. The lists include a discrete identification number, description of the location of the outfall or discharge point, the name of the receiving water or other owner of MS4, the latitude and longitude, and the prioritization given to that point for screening purposes. Newly discovered outfalls and discharge points will be identified in the Progress Report.

A copy of the current map and list of outfalls and discharge points is included in Appendix 2.

5.0 TRAINING

Municipal employees, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection, will receive training on recognition and reporting of illicit discharges and connections. This will be accomplished through the IDEP training as identified in Appendix 2 of the Stormwater Pollution Prevention Initiative (SWPPI). Examples of training mechanisms identified in the SWPPI include the review of a Water Pollution Report Form with employees for recording and reporting suspected illicit discharges and an article to be distributed to employees (Appendix 3).

Field personnel will be provided additional training prior to conducting Dry-Weather Screening. Training will include health and safety, documentation and reporting procedures, and visual and olfactory outfall screening procedures. This will be accomplished by hands-on training by a professional engineer or other qualified individual for the field personnel in 2013 or 2014, depending on when screening is scheduled. Alternatively, train-the-trainer sessions will be conducted for each community followed by community training of field personnel, if desired. Additional training will be provided for activities associated with sampling, identifying, and eliminating the source of unauthorized discharges and illicit connections. This will be accomplished, where needed, by hands-on training for the field personnel or by training-the-trainer for each community as appropriate.

6.0 IDENTIFICATION AND ELIMINATION OF EXISTING ILLICIT DISCHARGES

The field work to identify and eliminate illicit discharges and illicit connections will be completed in three steps. The initial step involves *Locating Problem Areas* and will focus on dry-weather screening stormwater outfalls for evidence of illicit discharges. The process is illustrated in Figure 1. The second step will be *Finding the Source* of any illicit discharges and will involve tracing illicit discharges through the stormwater drainage system to the source of the discharge or the illicit connection. This process is illustrated in Figure 2. The final step consists of *Removing/Correcting Illicit Connections*, which will require facilities to disconnect illicit connections and may require enforcement pursuant to existing ordinances and follow-up inspections. Information and test results are recorded on a data sheet, included as Figure 3.

6.1 LOCATING PROBLEM AREAS

Locating the presence of unauthorized discharges will be conducted during the permit cycle using the following techniques:

- Priority areas for detecting non-stormwater discharges will be identified. All permitted outfalls and discharge points will be placed into one of the following priority groups.
    - **High Priority** - Outfalls to waters of the State within the Urbanized Areas that have a history of past illicit discharges, outfalls reported by the public as suspicious, outfalls in areas with a history of illegal dumping, and outfalls serving areas suspected of having illicit discharges.
    - **Medium-High Priority** - Outfalls to waters of the State within the Urbanized Areas that are not in the High Priority group.
    - **Medium Priority** - MS4 to MS4 discharge points within the Urbanized Areas that have a history of past illicit discharges and that serve areas suspected of having illicit discharges due to the land use activities.
    - **Medium-Low Priority** - Outfalls to waters of the State that are within the watershed boundary, but outside of the Urbanized Areas.
    - **Low Priority** - MS4 to MS4 discharge points, within the watershed boundary, that are not in the Medium priority group.

  All High Priority and Medium-High Priority outfalls in the Cities of Bridgman and Niles, the Village of Stevensville, and Lincoln Township will receive dry-weather screening during the period from 2008 to 2013. The Cities of Benton Harbor, Buchanan, and St. Joseph; the Village of Edwardsburg; and CCRC/CWRC, BCDC and BCRC will complete dry-weather screening by 2014. Medium, Medium-Low, and Low Priority outfalls and discharge points will be scheduled for dry-weather screening by 2019, unless reports of suspected illicit discharges warrant expedited screening or investigation.

- Preferably, dry-weather screening will not commence until at least 48 hours after any rainfall event, but may commence if less than 0.1 inch of rain occurred during the previous 48 hours. Optionally, the field crew will attempt to identify known legitimate dry-weather discharges prior to conducting the field work. Dry-weather screening of all outfalls and MS4-MS4 discharge points will be completed in accordance with the following, and as illustrated as a flowchart in Figure 1:
  - 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, ammonia, 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, landscape 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 30 days.
      - Low - notify stormwater manager conduct visual observations within 3 months.
    - 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 30 days to check for dry-weather flow.
      - Low - notify stormwater manager, conduct visual observations within 3 months for dry-weather flow.
    - In follow-up visits, if flow present, test with field test kits. If test results indicate follow up necessary, collect additional samples for lab analysis, if necessary, and follow steps in “Finding the Source” section below. If no flow is present on immediate or high priority sites, proceed to steps in “Finding the Source” section below.
  - If no dry-weather flow is present and no indication that pollution may exist, close outfall file.
  - If the outfall is submerged or otherwise unsafe to approach, the next available and safe location upstream from the outfall will be screened.

- The results of the Dry-Weather Screening will be ranked according to the guide in Table 1 and then used to locate problem areas and prioritize the locations for finding the source:

    - **Immediate** - If, in the opinion of the field crew, immediate action to address the dry-weather flow is indicated, the field crew will inform the stormwater program manager, or the appropriate agency if health or safety is a concern, record the incident, and ensure that the agency investigates the site within one week. Table 2 is a list of the current stormwater program managers and their contact information.
    - **High** - If flow is present and test results indicate follow up is necessary, but it does not appear to be of immediate concern, the stormwater manager will be notified and follow-up will be pursued within 30 days. If flow is again present, field crews will use field test kits to confirm results, and begin conducting dry-weather screening at accessible points upstream of the discharge until a potential source is found.
    - **Low** - If flow is present but test results indicate the discharge is most likely exempt, (groundwater for example), the site will be observed within 3 months to determine if conditions have changed and repeat testing is warranted.
    - **None** - No follow-up is needed.

- A field form will document the results of outfall screening and testing. A copy of the form is included as Figure 3. A separate form will be utilized for each visit.

- Any new or additional stormwater outfalls or discharge points will be reported in the next Progress Report.

- An illicit discharge reporting process (telephone, email, or other method) has been implemented. A system to log reports, assign them for follow-up, and document results of investigations is included in the process. Experience has shown that the most reliable reports come from municipal personnel; however, this reporting process has been coordinated with the Public Education Plan (PEP) in order to encourage the public to observe and notify county or local governmental units when illegal dumping or illicit discharges are suspected. The Community Reporting Forms are included in Appendix 3.

- Each community's schedule for completing the dry-weather screening will be consistent with the screening priority identification of their outfalls and discharge points as identified in Appendix 2.

6.2 FINDING THE SOURCE

The field investigation necessary to find the source of illicit discharges will be completed based on the results of the efforts in *Locating Problem Areas*. The process is illustrated in a flowchart in Figure 2.

Sites identified during the initial investigation that pose a significant and immediate health or environmental problem (immediate priority) will be brought to the attention of the community's stormwater program manager (Table 2), at the time the discharge is detected, and the appropriate agency or department; such as the County Health Departments, an adjacent community, or the MDEQ. That appropriate agency may provide useful information or assistance for the follow-up investigation within one week. Additional sample collection and laboratory analysis for parameters such as, fluoride, copper, phosphorus, ammonia, nitrite, nitrate, and *E. coli* will be considered, depending on the land use and suspected source of the illicit discharge.

The process for tracing illicit discharges that do not pose a significant and immediate health or environmental problem (high priority) to their source will be based on factors such as whether the area is known to have high bacteria problems or vulnerability to bacterial contamination, significant industrial or commercial development, dense housing without sanitary sewer connections, public notification or complaints, and the sensitivity of the receiving stream.

The exact procedure for tracking the illicit discharge will depend on the particular facts of each incident. Generally, if the discharge can be tracked by direct visual observation, the responsible party will be contacted and required to eliminate the discharge. If the source is not obvious, then manhole to manhole observations will be made to identify the source until the responsible party is identified and contacted.

If the source is still not identified through upstream investigations, more sophisticated means will be utilized such as:

- Televising the storm sewers or dye testing premises in the vicinity of a suspected illicit connection.
- Investigation of permissible point sources located upstream of outfalls with documented dry-weather flow.
- Investigation of complaints, reports, or notification of suspected illicit discharges.
- Distribution of letters to residents and businesses alerting them to the problem that is under investigation and soliciting their assistance in finding the source of an illicit discharge.
- A building-by-building evaluation where a potential illicit connection has been isolated to a small area.

If a low priority outfall was found to have similar test results in 3 months, the stormwater program manager will follow the steps outlined above to find the source and determine if the source of flow is exempt or requires the responsible party to be notified and the discharge eliminated.

If the source of an illicit discharge is traced to an MS4 owned by another permittee, the upstream stormwater program manager will be notified within one week of detection unless the severity of the discharge warrants immediate action. The stormwater program managers of all participating communities of the LSJRW that own discharge points that enter another MS4 have agreed to coordinate tracking and eliminating illicit discharges in these situations. The agreement is included as Appendix 4. Notification will

consist of a phone call or email to the upstream MS4 stormwater program manager. The notification will include identifying the date and location where the suspected illicit discharge was detected and any other information about the discharge that will assist with the identification of its source. The notification will be recorded and supplemented by transmittal of the IDEP Dry-Weather Screening Data Sheet. The upstream MS4 stormwater program manager will then process the following steps outlined above.

The continuous communication between the community's stormwater program manager, the field crew, and other agencies during the investigation will ensure appropriate and timely actions are taken to find the source of an illicit discharge.

6.3 REMOVING/CORRECTING ILLICIT DISCHARGES AND CONNECTIONS

Those responsible for illicit connections will be notified to correct the problem. The property owner will be required to implement appropriate best management practices (BMPs) to eliminate the potential for illicit discharges, according to the community's ordinance or regulatory mechanism. A follow-up inspection will be conducted to ensure the correction is satisfactorily completed. Persons responsible for illicit discharges, including spill or dumping incidents, will be investigated and required to pursue reasonable clean-up. Where appropriate, they will be required to demonstrate taking measures to ensure that similar incidents will not occur. All illicit discharges should be eliminated as soon as practical taking into consideration the pollution potential of the discharge, the cost of elimination, and the measures needed to eliminate the discharge. Appropriate fines, penalties, and litigation will be considered.

7.0 MINIMIZING SEEPAGE FROM SEPTIC SYSTEMS AND SANITARY SEWERS

Each community will coordinate its IDEP with the local health department to assist in mitigating problems with failing OSDS. An OSDS found during the implementation of the IDEP to be infiltrating into a MS4 will be referred to the local health department.

A formal complaint is recorded when the local health department is informed that a septic system is in a state of failure. The field sanitarian responsible for that area visits the site to verify the condition of the septic system. The homeowner is ordered to pump the septic tanks, apply for a septic permit, and correct the situation in a timely manner if a public health hazard is determined to exist. Failure to comply with an order from the local health department can result in monetary penalties and/or condemnation of the dwelling as unfit for human habitation. The property owner will be encouraged to connect to the sanitary sewer where feasible. If sanitary sewers are not available, short- and long-term solutions for sewage disposal will be determined.

Each community will continue to conduct a preventative maintenance program on its wastewater collection and stormwater systems according to their SWPPIs. The maintenance may involve routine cleaning and/or television inspections that provide good assessments of pipe conditions and locates sites needing repairs. Each community will correct any sanitary system deficiencies identified in order to minimize exfiltration and seepage of sewage into the groundwater or stormwater drainage system. The potential for seepage from sanitary sewers into the stormwater drainage system will be investigated in the process of *Finding the Source* of illicit discharges. Sanitary sewer overflows (SSOs) or cross connections to a storm sewer will be corrected as soon as possible or in accordance with a state compliance action.

NOTE: Some communities rely on others for sewerage services and have little direct control over their operation and maintenance.

8.0 SPILL RESPONSE PROCEDURES

Reports by the public or municipal personnel of spills or suspicious discharges will be pursued by trained individuals. Persons responsible for illicit discharges, including spill or dumping incidents, will be investigated and compelled to pursue reasonable clean-up. Where appropriate, they will be required to demonstrate taking measures to ensure similar incidents will not occur. Appropriate fines, penalties, and litigation will be considered.

If a spill or suspicious discharge is found or reported, the stormwater program manager will be notified and initial information will be gathered. Records will be maintained regarding the incident from the first report to resolution. The Community Reporting Form is included in Appendix 3. Based on the initial information the stormwater coordinator will assess the severity of the situation. All reports will be considered an emergency until it is determined to be a non-emergency. Therefore, the Emergency Procedure will be implemented until the stormwater program manager determines that the incident is a non-emergency, at which point the Non-Emergency Procedure will be implemented.

The MDEQ supports the appropriate participation of its employees in emergency response activities for the purpose of protecting public health and the environment. In general, the MDEQ employees do not serve as "first responder" personnel. Rather, the MDEQ staff serve as technical consultants to, and coordinate their activity with, an on-scene incident commander, usually the local fire chief and/or a responsible party. Staff may serve as technical consultants either at the site of the emergency or by telephone or other means of communication.

Emergency Procedure

1) Is public safety at immediate risk? If yes, notify law enforcement and report to National Response Center.
2) Notify and solicit aid from other nearby or affected agencies, e.g. County Drain Commissioner. Engage Environmental Response Contractor, if needed.
3) If caused by Municipal Operations, report to the MDEQ District Office or Pollution Emergency Alert System (PEAS) if after hours. If it is a Part 5 Rules material (oil causing visible sheen or >50 pounds of salt or listed pollutants over certain amounts) also report to 9-1-1.
4) If consistent with personnel safety, attempt to track the spill to its source. Gather more detailed and accurate information. Engage the responsible party. Attempt to persuade responsible party to take primary responsibility for preventing further damage and to initiate clean-up.
5) Attempt to stop the discharge through cooperation with responsible party or by utilizing internal resources or environmental response contractor.
6) Attempt to block the flow of pollutants to prevent further damage and to facilitate capture of spilled material.
7) Consider environmental monitoring to measure damage.

8) Clean up spilled material. Dispose as hazardous waste or liquid industrial waste.
9) Prepare written report to the MDEQ District Office within 10 days. Send a copy to the local health department.
10) Consider requiring the responsible party to implement procedures or to install facilities to ensure the incident does not occur again.
11) Consider civil and/or criminal actions.

Important Phone Numbers

MDEQ Kalamazoo District Office – (269) 567-3500
MDEQ PEAS - 1-800-292-4706 (calls from out-of-state - 1-517-373-7660)
National Response Center - 1-800-424-8802 or www.nrc.uscg.mil/nrchp.html
Berrien County Drain Commissioner - (269) 983-7111 Ext 8261
Cass County Water Resources Commissioner - (269) 445-4428

Potential Environmental Response Contractors

(Inclusion here does not imply any approval or any endorsement or qualifications; contacts are provided for convenience in an emergency only. Communities are encouraged to select a contractor before an emergency situation occurs.)

Young's Environmental Cleanup, Inc. Grand Rapids Area Office 4990 West River Drive, NE Comstock Park, MI 49321 Phone: (616) 785-3374 Fax: (616) 785-3401 24 hr: 1-800-4Youngs (496-8647) http://www.youngsenvironmental.com/	Plummer's Environmental Services, Inc. 10075 Sedroc Industrial Drive Byron Center, MI 49315 Toll Free: 1-800-878-3996 Office: 1-616-877-3930 Fax: 1-616-877-3937 www.plummersenvironmental.com/index.aspx
K&D Industrial Services, Inc. Corporate Offices Romulus, MI 48174 (734) 722-8922 Fax: (734) 729-8220 Kalamazoo Office 1309 W. M-89 Plainwell, MI 49080 (269) 694-6739 Fax: (269) 694-6672 http://kdigroup.com/	Valley City Environmental Service Portage Branch 6850 Quality Way Portage, MI 49002 Phone Number: 269-323-8444 Fax: 616-235-9507 Email: info@valleycityes.com 24 hr Emergency Spill Response Numbers Please call 800.678.7035 / 616.235.1500 http://www.valleycityes.com/

Non-Emergency Procedure

1) Determine a level of urgency based on the nature of the spill and likely impact on health, safety, and environment.
2) If consistent with personnel safety, attempt to track the spill to its source. Gather more detailed and accurate information. Engage the responsible party. Attempt to persuade responsible party to take primary responsibility for preventing further damage and to initiate clean-up.
3) Report to the MDEQ District Office, or PEAS if after business hours.
4) Determine if internal resources are sufficient or if an Environmental Response Contractor is needed.
5) Attempt to stop the discharge through cooperation with responsible party or by utilizing internal resources or environmental response contractor.
6) Attempt to block the flow of pollutants to prevent further damage and to facilitate capture.
7) Clean up spilled material. Dispose as hazardous waste or liquid industrial waste.
8) Prepare written report to the MDEQ District Office within 10 days.
9) Consider requiring the responsible party to implement procedures or to install facilities to ensure the incident does not occur again.

9.0 DOCUMENTATION AND REPORTING

Progress Reports will be submitted to the MDEQ on the implementation status of the IDEP. The report will cover all of the decisions, actions, and results performed as part of the IDEP during the previous reporting period. The Progress Report will include:

- Documentation of actions taken to eliminate illicit discharges.
- For significant illicit discharges, a list of pollutants of concern, the estimated volume and load discharged, and the locations of the discharge into both the separate storm sewer system and the receiving water.
- The status of the program to minimize seepage from sanitary sewers and OSDS into the separate storm sewer system.
- Updated outfall mapping.
- A schedule for elimination of illicit connections that have been identified, but have yet to be eliminated.
- An evaluation of the effectiveness of the IDEP program. The evaluation will include:
    - An evaluation of the effectiveness of the detection methods used based on the number of illicit discharges detected.
    - An estimated quantification of the number of discharges prevented or eliminated.
    - An estimated quantification of the volume of illicit flow eliminated.
    - An assessment of the effectiveness of the program overall.

The goal of the program is to have a drainage system with no illicit discharges.

Figures

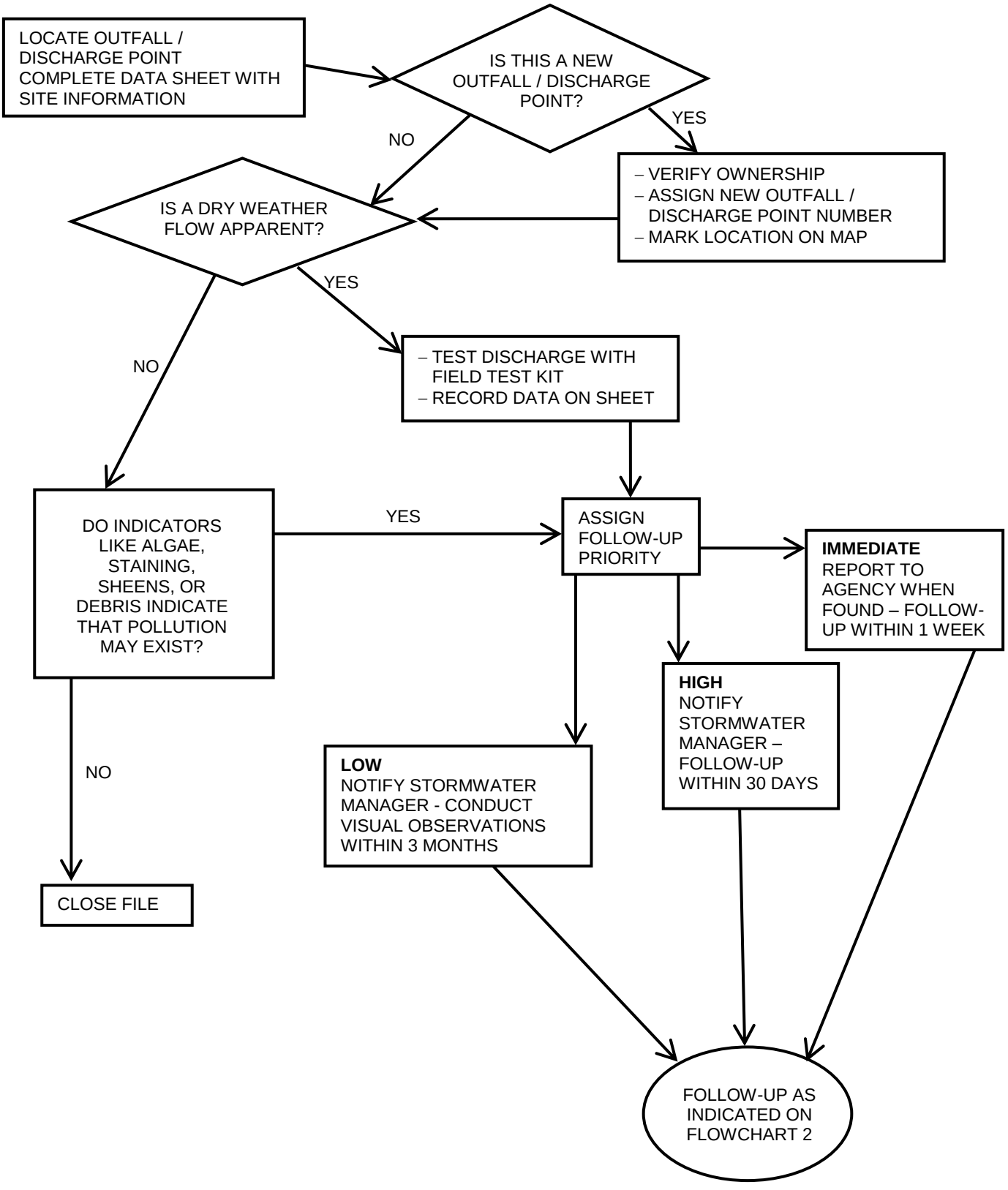

FIGURE 1: LOCATING PROBLEM AREAS

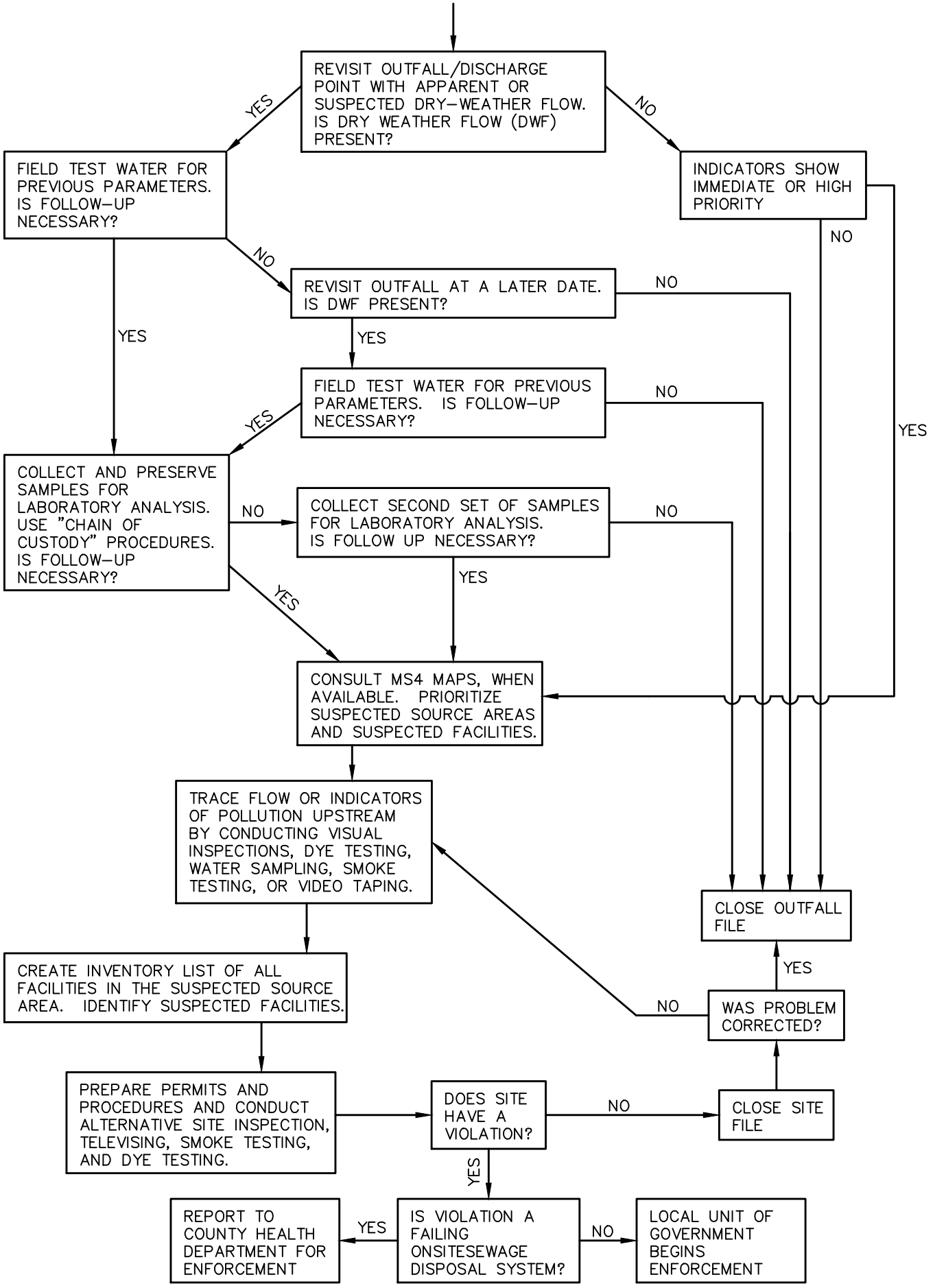

FIGURE 2: FINDING THE SOURCE

IDEP DRY WEATHER SCREENING DATA SHEET

FTC&H

GENERAL **Outfall ID** _____

Date _____ Time _____ Air Temp _____ °F Receiving Water _____

Crew Name _____ Date of Last Rain _____ ___ Clear/Sunny

Photograph # _____ _____ _____ ___ Partly Cloudy

GPS Coordinates _____ °N _____ °W (decimal degrees) ___ Overcast

TYPE OF OUTFALL

Material & Size

___ (in) Concrete ___ (in) PVC
___ (in) RCP ___ (in) Metal
___ (in) CMP ___ (in) Clay
___ (in) CPP ___ (ft) Ditch
___ (in) Other-describe below

Condition

___ Like New
___ Good
___ Broken
___ Impaired

Flow Observations

___ (in) Depth of flow in outfall
___ Standing water in pipe, no flow
___ Trace, insufficient to quantify
___ Dry, no water present

If evidence of Illicit Connection, describe below

FLOW OBSERVATIONS (skip if no water present in outfall)

Odor	___ None	___ Musty	___ Sewage	___ Rotten Egg	___ Gasoline	___ Oil	___ Other**	
Color	___ Clear	___ Light Brown	___ Dark Brown	___ Green	___ Grey	___ Black	___ Other**	
Turbidity	___ Clear	___ Slightly	___ Moderate	___ Highly	___ Opaque		___ Other**	
Floatables	___ None	___ Trash	___ Sewage	___ Foam	___ Oil Sheen		___ Other**	

OUTFALL AREA OBSERVATIONS

Deposits/Stains	___ None	___ Mineral	___ Sediment	___ Oily	___ Grease	___ Other**
Vegetation	___ None	___ Normal	___ Excessive	___ Algae		___ Other**
Debris	___ None	___ Tissue	___ Other**			

**If Other, include comments

OTHER OBSERVATIONS NEAR OUTFALL

Pollution Source	___ Debris/Trash	___ Construction Runoff	___ Road Crossing
	___ Septic System	___ Streambank Erosion	___ Gully Erosion
	___ Upland Source	___ Tile Outlet	___ Other**
Stream Bottom	___ Cobble/Gravel	___ Sand (coarse)	___ Muck/Silt (fine)
	___ Hardpan (solid clay)	___ Artificial	___ Other**

**If Other, include comments

FIELD TEST KIT ANALYSES

Parameter	Value	Units
pH	_____	SU
Surfactants	_____	H, M, L, or None
Ammonia	_____	mg/L
Temperature	_____	°F

OTHER ANALYSES

Parameter	Value	Units	Parameter	Value	Units
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Follow Up ___ None ___ High Priority ___ Other - explain ___ Additional information on attached sheet
___ Low Priority ___ Immediate

Comments _____

☐ Check if more comments are on the back

Figure 3

Z:\2012\120878\WORK\REPT\IDEP\2013_0319_DRAFT\IDEP_FIG2_DATASHEET.DOCX

Tables

Table 1 - Field Testing Results Evaluation Guidelines

Parameter	Test Range	None	Low	High	Immediate
Temperature ºF	32-100	44 - 75	40 - 43 or 76 - 85	32 - 39 or 86 - 99	<32 or >100
pH	0-14	6 - 9.5	5 - 6 or 9.5 - 10.5	4 - 5 or 10.5 - 11	<4 or >11
Surfactants	detect presence	none	low or medium	high	
Ammonia ppm	0-6	0 - 1	1 - 3	3 - 6	>6

Table 2 – Storm Water Program Managers

Permittee	Storm Water Program Manager	Telephone Email
Benton Harbor MS4-Berrien	Stewart Beach Water Plant Superintendent	(269) 927-8471 sbeach@cityofbentonharbormi.gov
Berrien CDC MS4	Ms. Jeannine Totzke Drain Commissioner's Office	(269) 983-7111 ext. 8260 jtotzke@berriencounty.org
Berrien CRC MS4	Mr. Brian Berndt Engineer-Manager	(269) 925-1196 bberndt@bcroad.org
Bridgman MS4-Berrien	Mr. Tim Kading Water/Sewer Superintendent & Asst. City Manager	(269) 465-5407 bridgmanwater@comcast.net
Buchanan MS4-Berrien	Ms. Donna Southwell Special Projects Manager	(269) 695-3844 dsouthwell@cityofbuchanan.com
Cass CRC MS4	Mr. Joe Bellina Engineer	(269) 445-8611 jbellina@casscoroad.com
Edwardsburg MS4-Cass	Mr. John Monaghan Village Streets Department	(269) 663-8484 VOE_streets@comcast.net
Lincoln Twp MS4-Berrien	Mr. Dick Stauffer Supervisor	(269) 429-1589 ext. 14 stauffer@lctberrien.org
Niles MS4-Berrien	Ms. Jamie Moody Public Works Director	(269) 683-4700 jmoody@nilesmi.org
St Joseph MS4-Berrien	Mr. Derek Perry Deputy City Manager/Director of Public Services	(269) 983-6341 perry@sjcity.com
Stevensville MS4-Berrien	Mr. Jae Guetschow Village Manager	(269) 429-1802 manager@villageofstevensville.us

Appendix 1

Appendix 1

Excerpts from
Illicit Discharge Detection and Elimination - A Guidance Manual for Program Development and Technical Assessments
By Edward Brown and Deb Caraco, Center for Watershed Protection, Ellicott City, Maryland 21043
and Robert Pitt, University of Alabama, Tuscaloosa, Alabama 35487
October 2004

Ammonia

Ammonia is a good indicator of sewage, since its concentration is much higher there than in groundwater or tap water. High ammonia concentrations may also indicate liquid wastes from some industrial sites. Ammonia is relatively simple and safe to analyze. Some challenges include the tendency for ammonia to volatilize (i.e., turn into a gas and become non-conservative) and its potential generation from non-human sources, such as pets or wildlife.

Boron

Boron is an element present in the compound borax, which is often found in detergent and soap formulations. Consequently, boron is a good potential indicator for both laundry wash water and sewage. Preliminary research from Alabama supports this contention, particularly when it is combined with other detergent indicators, such as surfactants (Pitt, IDDE Project Support Material). Boron may not be a useful indicator everywhere in the country since it may be found at elevated levels in groundwater in some regions and is a common ingredient in water softeners products. Program managers should collect data on boron concentrations in local tap water and groundwater sources to confirm whether it will be an effective indicator of illicit discharges.

Chlorine

Chlorine is used throughout the country to disinfect tap water, except where private wells provide the water supply. Chlorine concentrations in tap water tend to be significantly higher than most other discharge types. Unfortunately, chlorine is extremely volatile, and even moderate levels of organic materials can cause chlorine levels to drop below detection levels. Because chlorine is non-conservative, it is not a reliable indicator, although if very high chlorine levels are measured, it is a strong indication of a water line break, swimming pool discharge, or industrial discharge from a chlorine bleaching process.

Color

Color is a numeric computation of the color observed in a water quality sample, as measured in cobalt-platinum units (APHA, 1998). Both industrial liquid wastes and sewage tend to have elevated color values. Unfortunately, some “clean” flow types can also have high color values. Field testing by Pitt (IDDE Project Support Material) found high color values associated for all contaminated flows, but also many uncontaminated flows, which yielded numerous false

positives. Overall, color may be a good first screen for problem outfalls, but needs to be supplemented by other indicator parameters.

Conductivity

Conductivity, or specific conductance, is a measure of how easily electricity can flow through a water sample. Conductivity is often strongly correlated with the total amount of dissolved material in water, known as Total Dissolved Solids. The utility of conductivity as an indicator depends on whether concentrations are elevated in "natural" or clean waters. In particular, conductivity is a poor indicator of illicit discharge in estuarine waters or in northern regions where deicing salts are used (both have high conductivity readings). Field testing in Alabama suggests that conductivity has limited value to detect sewage or wash water (Pitt, IDDE Project Support Material). Conductivity has some value in detecting industrial discharges that can exhibit extremely high conductivity readings. Conductivity is extremely easy to measure with field probes, so it has the potential to be a useful supplemental indicator in subwatersheds that are dominated by industrial land uses.

Detergents

Most illicit discharges have elevated concentration of detergents. Sewage and washwater discharges contain detergents used to clean clothes or dishes, whereas liquid wastes contain detergents from industrial or commercial cleansers. The nearly universal presence of detergents in illicit discharges, combined with their absence in natural waters or tap water, makes them an excellent indicator. Research has revealed three indicator parameters that measure the level of detergent or its components-- surfactants, fluorescence, and surface tension (Pitt, IDDE Project Support Material). Surfactants have been the most widely applied and transferable of the three indicators. Fluorescence and surface tension show promise, but only limited field testing has been performed on these more experimental parameters. Methods and laboratory protocols for each of the three detergent indicator parameters are reviewed in Appendix F2.

E. coli, Enterococci and Total Coliform

Each of these bacteria is found at very high concentrations in sewage compared to other flow types, and is a good indicator of sewage or septage discharges, unless pet or wildlife sources exist in the subwatershed. Overall, bacteria are good supplemental indicators and can be used to find "problem" streams or outfalls that exceed public health standards. Relatively simple analytical methods are now available to test for bacteria indicators, although they still suffer from two monitoring constraints. The first is the relatively long analysis time (18-24 hours) to get results, and the second is that the waste produced by the tests may be classified as a biohazard and require special disposal techniques.

Fluorescence

Laundry detergents are highly fluorescent because optical brighteners are added to the formula to produce "brighter whites." Optical brighteners are the reason that white clothes appear to have a bluish color when placed under a fluorescent light. Fluorescence is a very sensitive indicator of the presence of detergents in discharges, using a fluorometer to measure fluorescence at specific wavelengths of light. Since no chemicals are needed for testing, fluorometers have minimal safety and waste disposal concerns. Some technical concerns do limit the utility of fluorescence as an indicator of illicit discharges. The concerns include the presence of fluorescence in non-illicit flow types such as irrigation water, the considerable variation of fluorescence between different detergent brands, and the lack of a readily standard or benchmark concentration for

optical brighteners. For example, Pitt (IDDE Project Support Material) measured fluorescence in mg/L of Tide™ brand detergent, and found the degree of fluorescence varied regionally, temporally, and between specific detergent formulations. Given these current limitations, fluorescence is best combined with other detergent indicators such as surfactants. Appendix F3 should be consulted for more detailed information on analytical methods and experimental field testing using fluorescence as an indicator parameter.

Fluoride

Fluoride is added to drinking water supplies in most communities to improve dental health, and normally found at a concentration of two parts per million in tapwater. Consequently, fluoride is an excellent conservative indicator of tap water discharges or leaks from water supply pipes that end up in the storm drain. Fluoride is obviously not a good indicator in communities that do not fluoridate drinking water, or where individual wells provide drinking water. One key constraint is that the reagent used in the recommended analytical method for fluoride is considered a hazardous waste, and must be disposed of properly.

Hardness

Hardness measures the positive ions dissolved in water and primarily include magnesium and calcium in natural waters, but are sometimes influenced by other metals. Field testing by Pitt (IDDE Project Support Material) suggests that hardness has limited value as an indicator parameter, except when values are extremely high or low (which may signal the presence of some liquid wastes). Hardness may be applicable in communities where hardness levels are elevated in groundwater due to karst or limestone terrain. In these regions, hardness can help distinguish natural groundwater flows present in outfalls from tap water and other flow types.

pH

Most discharge flow types are neutral, having a pH value around 7, although groundwater concentrations can be somewhat variable. pH is a reasonably good indicator for liquid wastes from industries, which can have very high or low pH (ranging from 3 to 12). The pH of residential wash water tends to be rather basic (pH of 8 or 9). The pH of a discharge is very simple to monitor in the field with low cost test strips or probes. Although pH data is often not conclusive by itself, it can identify problem outfalls that merit follow-up investigations using more effective indicators.

Potassium

Potassium is found at relatively high concentrations in sewage, and extremely high concentrations in many industrial process waters. Consequently, potassium can act as a good first screen for industrial wastes, and can also be used in combination with ammonia to distinguish wash waters from sanitary wastes. (See Chapter 12). Simple field probes can detect potassium at relatively high concentrations (5 mg/L), whereas more complex colorimetric tests are needed to detect potassium concentrations lower than 5 mg/L.

Surface Tension

Surfactants remove dirt particles by reducing the surface tension of the bubbles formed in laundry water when it is agitated. Reduced surface tension makes dirt particles less likely to settle on a solid surface (e.g., clothes or dishes) and become suspended instead on the water's surface. The visible manifestation of reduced surface tension is the formation of foam or bubbles on the water surface. Pitt (IDDE Project Support Material) tested a very simple procedure to

measure surface tension that quantifies the formation of foam and bubbles in sample bottles. Initial laboratory tests suggest that surface tension is a good indicator of surfactants, but only when they are present at relatively high concentrations. Section F3 provides a more detailed description of the surface tension measurement procedure.

Surfactants

Surfactants are the active ingredient in most commercial detergents, and are typically measured as Methyl Blue Active Substances (or MBAS). They are a synthetic replacement for soap, which builds up deposits on clothing over time. Since surfactants are not found in nature, but are always present in detergents, they are excellent indicators of sewage and wash waters. The presence of surfactants in cleansers, emulsifiers and lubricants also makes them an excellent indicator of industrial or commercial liquid wastes. In fact, research by Pitt (IDDE Project Support Material) found that detergents were an excellent indicator of "contaminated" discharges in Alabama (i.e., discharges that were not tap water or groundwater). Several analytical methods are available to monitor surfactants. Unfortunately, the reagents used involve toluene, chloroform, or benzene, each of which is considered hazardous waste with a potential human health risk. The most common analysis method uses chloroform as a reagent, and is recommended because it is relatively safer when compared to other reagents.

Turbidity

Turbidity is a quantitative measure of cloudiness in water, and is normally measured with a simple field probe. While turbidity itself cannot always distinguish between contaminated flow types, it is a potentially useful screening indicator to determine if the discharge is contaminated (i.e., not composed of tap water or groundwater).

Table 39: Indicator Parameters Used to Detect Illicit Discharges					
Parameter	Discharge Types It Can Detect				
	Sewage	Washwater	Tap Water	Industrial or Commercial Liquid Wastes	Laboratory/Analytical Challenges
Ammonia	●	◉	○	◉	Can change into other nitrogen forms as the flow travels to the outfall
Boron	◉	◉	○	N/A	
Chlorine	○	○	○	◉	High chlorine demand in natural waters limits utility to flows with very high chlorine concentrations
Color	◉	◉	○	◉	
Conductivity	◉	◉	○	◉	Ineffective in saline waters
Detergents – Surfactants	●	●	○	◉	Reagent is a hazardous waste
E. coli Enterococci Total Coliform	◉	○	○	○	24-hour wait for results Need to modify standard monitoring protocols to measure high bacteria concentrations
Fluoride*	○	○	●	◉	Reagent is a hazardous waste Exception for communities that do not fluoridate their tap water
Hardness	◉	◉	◉	◉	
pH	○	◉	○	◉	
Potassium	◉	○	○	●	May need to use two separate analytical techniques, depending on the concentration
Turbidity	◉	◉	○	◉	

● Can almost always (>80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.
◉ Can sometimes (>50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter
○ Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water
N/A: Data are not available to assess the utility of this parameter for this purpose.
Data sources: Pitt (this study)
*Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and washwater.

Appendix 2

City of Niles - Storm Sewer Outfalls
11-1-13

Facility ID	Lat	Long	Owned By	Receiving Waterbody	Priority
DP1001	41.839342	-86.266591	City of Niles	St. Joseph River	Medium-High
DP1002	41.841686	-86.263493	City of Niles	Niles Township/Unnamed Creek/Dowagiac River	
DP1003	41.843803	-86.25905	City of Niles	Niles Township/Dowagiac River	
DP1004	41.846975	-86.253494	City of Niles	Niles Township/Unnamed Creek/Dowagiac River	
DP1005	41.843784	-86.252541	City of Niles	Niles Township/Unnamed Creek/Dowagiac River	
DP1006	41.841329	-86.253984	City of Niles	Niles Township/Unnamed Creek/Dowagiac River	
DP1007	41.836976	-86.259657	City of Niles	St. Joseph River	
DP1008	41.838509	-86.266868	City of Niles	St. Joseph River	
DP1009	41.83462	-86.28025	City of Niles	Unnamed Creek/St. Joseph River	
DP1010	41.835161	-86.259179	City of Niles	St. Joseph River	
DP1011	41.832948	-86.260407	City of Niles	St. Joseph River	
DP1012	41.830926	-86.260625	City of Niles	St. Joseph River	
DP1013	41.828828	-86.258564	City of Niles	St. Joseph River	
DP1014	41.826162	-86.25728	City of Niles	St. Joseph River	
DP1015	41.82237	-86.255917	City of Niles	St. Joseph River	
DP1016	41.820715	-86.253246	City of Niles	Unnamed Creek/St. Joseph River	
DP1017	41.82046	-86.250018	City of Niles	Unnamed Creek/St. Joseph River	
DP1018	41.821199	-86.245429	City of Niles	Unnamed Creek/St. Joseph River	
DP1019	41.82314	-86.241689	City of Niles	Unnamed Creek/St. Joseph River	
DP1020	41.816878	-86.253245	City of Niles	Wetland	
DP1021	41.829952	-86.261343	City of Niles	St. Joseph River	
DP1022	41.82721	-86.258292	City of Niles	St. Joseph River	
DP1023	41.825215	-86.258327	City of Niles	St. Joseph River	
DP1024	41.824377	-86.258435	City of Niles	St. Joseph River	
DP1025	41.820954	-86.257727	City of Niles	St. Joseph River	
DP1026	41.816047	-86.264717	City of Niles	St. Joseph River	
DP1027	41.816581	-86.26585	City of Niles	Topinabee Drain - Water of the State (WoS)	
DP1028	41.815812	-86.265746	City of Niles	Topinabee Drain - WoS	
DP1029	41.83121	-86.262952	City of Niles	Unnamed Creek/St. Joseph River	
DP1030	41.817287	-86.269252	City of Niles	Topinabee Drain - WoS	
DP1031	41.81843	-86.27197	City of Niles	Unnamed Creek/Topinabee Drain - WoS	
DP1032	41.818447	-86.271937	City of Niles	Unnamed Creek/Topinabee Drain - WoS	
DP1033	41.821204	-86.274905	City of Niles	Topinabee Drain - WoS	
DP1034	41.814835	-86.269585	City of Niles	Unnamed Creek/St. Joseph River	
DP1035	41.820199	-86.278687	City of Niles	Niles Township/Unnamed Creek/Topinabee Drain - WoS	
DP1036	41.821015	-86.270467	City of Niles	Topinabee Drain - WoS	
DP1037	41.827404	-86.258333	City of Niles	St. Joseph River	
DP1038	41.826947	-86.258199	City of Niles	St. Joseph River	
DP1039	41.824542	-86.258413	City of Niles	St. Joseph River	
DP1040	41.823244	-86.25851	City of Niles	St. Joseph River	
DP1041	41.822265	-86.258233	City of Niles	St. Joseph River	
DP1042	41.820829	-86.25769	City of Niles	St. Joseph River	
DP1043	41.821054	-86.256286	City of Niles	St. Joseph River	
DP1044	41.819772	-86.256673	City of Niles	St. Joseph River	
DP1045	41.819654	-86.2567	City of Niles	St. Joseph River	
DP1046	41.81475	-86.2654	Berrien County Drain Commissioner	St. Joseph River	
DP1047	41.833406	-86.262828	City of Niles	Unnamed Creek/St. Joseph River	
DP1048	41.833107	-86.263502	City of Niles	Unnamed Creek/St. Joseph River	
DP1049	41.819853	-86.269698	City of Niles	Topinabee Drain - WoS	
DP1050	41.819697	-86.269471	City of Niles	Topinabee Drain - WoS	
DP1051	41.818599	-86.25074	City of Niles	Pond	
DP1052	41.820479	-86.25178	City of Niles	Unnamed Creek/St. Joseph River	
DP1053	41.826534	-86.231133	Berrien County Drain Commissioner	Franklin Park Drain/Brandywine Creek - WoS	
DP1054	41.812936	-86.254742	City of Niles	Wetland	
DP1055	41.81242	-86.24816	MDOT	City of Niles/Wetland	

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DP1054	41.812936	-86.254742	City of Niles	Wetland
DP1055	41.81242	-86.24816	MDOT	City of Niles/Wetland

Notes:
Storm sewer systems located within MDOT Right of Way are owned and maintained by MDOT.
City owned discharge points to and from MDOT sewer are not identified on this map.

Legend

- Storm Sewer Manhole
- Storm Sewer Catch Basin
- Combined Sewer Catch Basin
- TMDL Sample Site
- City of Niles Discharge Point
- Drain Commissioner Discharge Point
- MDOT Discharge Point
- Culvert
- On Site Sewage Disposal System
- Storm Sewer Pipe
- Open Drains
- Designated County Drain
- MDOT State Highway
- Stormwater Catchment Area

NORTH

STORM SEWER SYSTEM

0 250 500 FEET

Fishbeck, Thompson, Carr & Huber
engineers • scientists • architects • constructors

michigan.gov/recovery

CITY OF NILES

CITY OF NILES

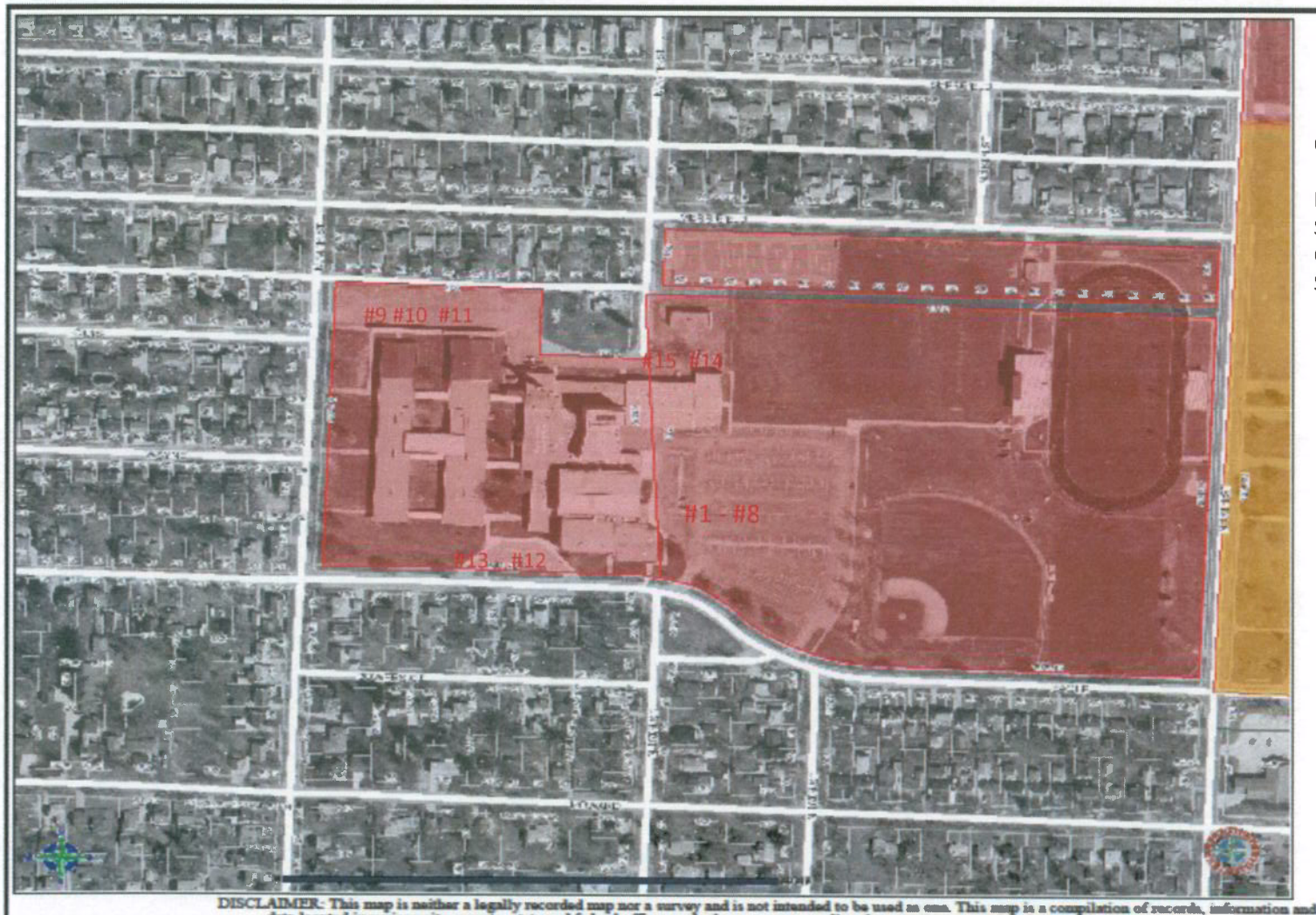
BERRIEN COUNTY, MICHIGAN

ARRA TMDL PLANNING GRANT
CITY OF NILES - TRACKING CODE #8635-0005

PROJECT NO.
G100187
SHEET NO.
1

PLOT INFO: U:\CADD\100187\GIS\MAP_DOCUMENT\NILES_STORMWATER_MAP_AV93.MXD DATE: 09/12/2011 USER: MCL

Niles Community Schools – Senior High School, 1441 Eagle Street, Niles, Michigan
MS4 Discharge Locations



Coordinates –

Refer to High School Coordinates Sheet

DISCLAIMER: This map is neither a legally recorded map nor a survey and is not intended to be used as one. This map is a compilation of records, information and data located in various city, county, state and federal offices and other sources regarding the area shown, and is to be used for reference purposes only.
SOURCES: Berrien County, Planaight LLC;January 2007 for County Data; Aerial Imagery as specified

High School Coordinates Sheet – All points discharge to City of Niles Storm Sewer System.
All points are Low Priority

#1: 41.83583
086.23823

#2: 41.83561
086.23827

#3: 41.83584
086.23861

#4: 41.83556
086.23855

#5: 41.83542
086.23824

#6: 41.83502
086.23862

#7: 41.83496
086.23881

#8: 41.83486
086.23840

#9: 41.83665
086.24096

#10: 41.83665
086.24091

#11: 41.83666
086.24080

#12: 41.83495
086.23931

#13: 41.83494
086.24000

#14: 42.83642
086.23849

#15: 42.83642
086.23838

Villa Environmental Consultants, INC

408 West Main Street • Benton Harbor, MI 49022 • Phone 269.927.2434 • Fax 269.927.2435 • www.villaenv.com

December 14, 2012

Lewis Evans, Director of Operations
Niles Community Schools
1214 Airport Road
Niles, MI 49120

RE: Dye Testing
Transportation Center
1740 Lake Street - Niles, Michigan

Dear Mr. Evans:

The Transportation Center received an audit by Michigan Department of Environmental Quality (MDEQ) in the Summer of 2012. The MDEQ requested the verification of the discharge locations for the exterior catch basins and interior floor drains.

Dye testing was conducted at the Transportation Center on November 8, 2012. The goal of the dye testing was to make sure that the site did not have an illicit discharge into the roadway storm drains owned by the City of Niles. Three interior floor drains were observed in the bus garage. The three drains are connected to an on site oil/water separator. The oil/water separator is located on the exterior south of the bus garage. An exterior clean out for the oil/water separator is located west of the bus garage. A trench outline in the concrete is located around the oil/water separator location. No dye testing water discharge was observed in the road way city storm drains. The city sanitary sewer drains were not located near the bus garage and were not observed. The attached site map and site photographs show the oil/water separator and trench location. The oil/water separator should be maintained on a regular basis.

Ten exterior storm drains (not including the oil separator drains) are located on site. Dye testing was conducted on the exterior storm drains. Five of the storm drains are leeching drains and slowly discharge into the groundwater. Five of the storm drains are connected to the Lake Street roadway storm drain owned by the City of Niles. A lift pump is located in an exterior storm drain north of the bus garage. This lift pump connects to the Lake Street roadway storm drain. A map outlining the findings of the dye testing is attached to this document.

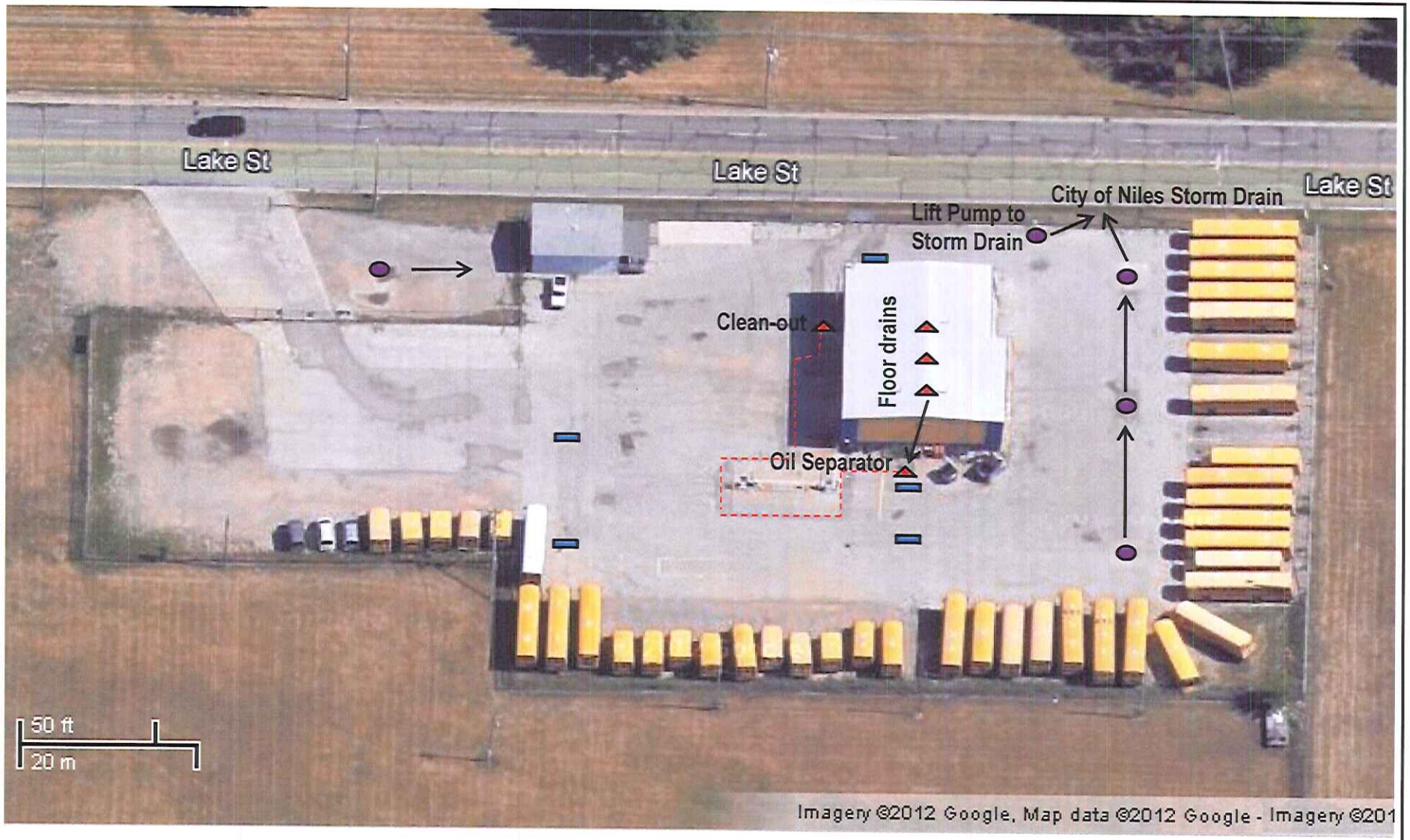
In summary based on the dye testing results the interior floor drains are connected to an oil/water separator and do not discharge into the storm sewer drains. Five of the exterior storm drains leech on site, and five storm drains discharge to the Lake Street roadway storm sewer owned by the City of Niles. If you should have any questions, do not hesitate to contact me at 269-927-2434, at your convenience.

Yours truly,

Jill DePalma

Jill DePalma, Environmental Specialist
jdepalma@villaenv.com

JAD:jad
Enc.



--- Trench that appears to run from the oil separator to the clean-out

▲ Drains / clean-out associated with oil separator

● Drain locations to the City Storm Sewer

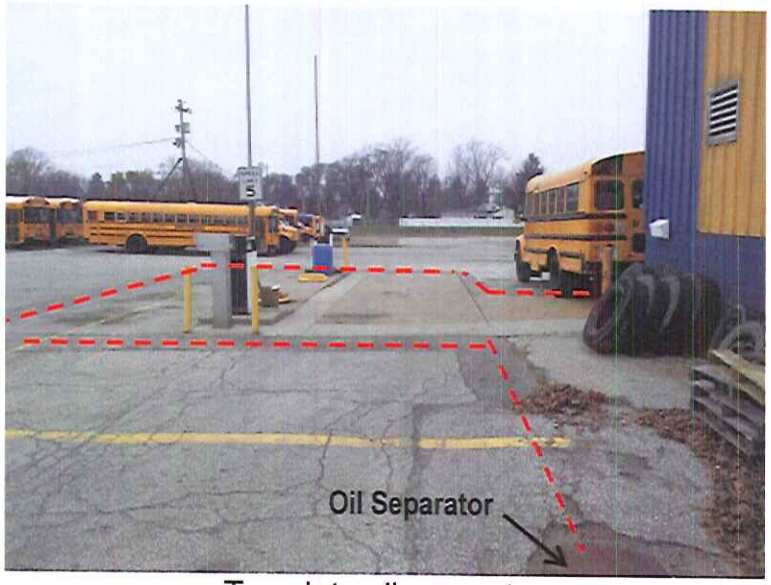
→ Water flow direction

▬ Leeching drain locations

Villa Environmental Consultants, Inc.

Drain Locations and Discharge	Date: 11/8/2012
Project: Niles Community Schools - Transportation Center 1740 Lake Street Niles, Michigan	Scale: See Figure Project No: #11-003 Figure No: 01

View of lift pump



Trench to oil separator

Trench Continuation

- - - Trench Path

Villa Environmental Consultants, Inc.

Site Photographs

Project: Niles Community Schools - Transportation Center
1740 Lake Street
Niles, Michigan

Date: 11/8/2012
Scale: See Figure
Project No: #11-003
Figure No: 02

Appendix 3

WHAT HAPPENS NEXT?

All pollution reports are investigated. Many reports cannot be confirmed due to the intermittent nature of many discharges or for other reasons. Do you want to know what happened as a result of your reporting a pollution issue? If so, then check this box. Be sure you provided contact information on the previous page.

☐ **Check here for a follow-up report.**

Thank you for caring about your (and our) environment and our watershed.

For more information on how you can help protect the Lower St Joseph River Watershed for this and future generations visit these sites online:

www.swmpc.org/partner.asp

www.swmpc.org/water.asp

www.fotsjr.org/

www.michigan.gov/deq

www.raingardens.org

City of Niles
333 N Second Street
Suite 301
Niles, MI 49120

Postage

How to Report WATER POLLUTION

CITIZEN REPORT FORM

keep it BLUE

only rain in the drain

City of Niles

Telephone #: 269-683-4700

If you observed pollution in our local waterways recently, we'd like to hear from you. Pollution can be any type of trash or harmful chemicals that are dangerous to people and the environment. They can enter our waterways through the storm drain system. Dumping anything in the gutter of the street or into a storm drain is illegal and violators can be fined.

Please fill out this report as completely as possible and return it to the City Storm Water Coordinator in one of four ways:

1. Email to City Storm Water Coordinator at jray@nilesmi.org
2. FAX to City Storm Water Coordinator at (269) 684-3930
3. Call (269) 683-4700 ext 3060 (Leave voicemail after hours)
4. Mail it to:

   Storm Water Coordinator

   Attn: Joe Ray

   333 N Second Street

   Suite 301

   Niles, MI 49120

WHAT DID YOU OBSERVE?

Date(s) pollution was observed:

_____

Location pollution was observed:

_____

_____

Name of person(s) or company involved (if known):

_____

_____

_____

Please describe the pollution issue:

_____

_____

_____

_____

_____

(Attach photos if possible.)

WHO ARE YOU?

Please remember that all reports are investigated. Inspectors, however, are limited if a report is submitted anonymously as they cannot contact the submitter for more information. If you would like to remain anonymous, it is highly recommended that you include photographs of the problem with your anonymous report.

Date this report was submitted:

_____

Name of person submitting this report:

_____

Contact information

Phone:_____

E-mail:_____

Address:_____

_____

Important Numbers

EMERGENCIES

Police/Fire	911; 24 hrs
Michigan Department of Environmental Quality Pollution Emergency Alert System	800-292-4706; 24 hrs

NON-EMERGENCIES

City of Niles

Joe Ray Public Works Director jray@nilesmi.org	(269) 683-4700 ext 3060 333 N Second Street Suite 301 Niles, MI 49120
Jamie Moody Executive Assistant jmoody@nilesmi.org	(269) 683-4700 ext 3061 333 N Second Street Suite 301 Niles, MI 49120

Developed by the Southeast Michigan Regional IDEP Work Group — 1/25/2012

Adapted for LSJRW — 8/21/2012

Tip Card

How to Spot Illicit Discharges

An illicit discharge is any discharge containing polluting material, such as sediment, nutrients, oil and bacteria. These discharges can drain to lakes and streams via storm drains. The communities in the Lower St Joseph River Watershed are required to prevent illicit discharges from entering storm water. You can do your part by notifying the appropriate agency when you spot a potential illicit discharge.

What to Report?

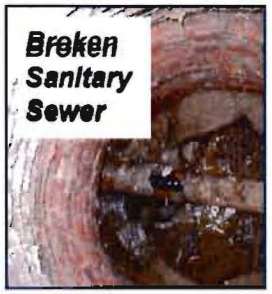
- ☐ Spills and contamination to lakes, rivers and streams
- ☐ Suspicious dumping to catch basins or waterways
- ☐ Unusual discharges from pipes
- ☐ Sewage on the ground or draining to surface water
- ☐ Large number of dead fish in waterways
- ☐ Failing or leaky septic systems
- ☐ Polluted runoff from storage piles or dumpsters to catch basins or waterways
- ☐ Sewage, detergent, chemical, petroleum or rotten egg odors
- ☐ Soil erosion from construction sites

What are the Signs of an Illicit Discharge?

Sanitary Sewer Discharges

Observations:

- ☐ Sanitary debris
- ☐ Staining on pipe
- ☐ Soap suds
- ☐ Gray or discolored water
- ☐ Odors: sewage, rotten eggs or detergents



Industrial and Commercial Discharges

Observations:

- ☐ Discolored water
- ☐ Odor: petroleum, chemical
- ☐ Open or Leaky Dumpsters
- ☐ Foam or Debris

Illegal Dumping, Spills or Floor Drain Connections

Observations:

- ☐ Oil sheen
- ☐ Petroleum or chemical odor
- ☐ Stained sediment, rocks or vegetation
- ☐ Suds

Unusual Discharges

Observations:

- ☐ Colored, Silty, Foamy, or Smelly Water
- ☐ Unauthorized pipes

Construction Site Pollution

Observations:

- ☐ Bare soils or banks with no soil erosion control fencing
- ☐ Construction Debris (sawdust, plaster, paint, concrete, etc.)
- ☐ Muddy discharge from an outfall

Appendix 4

CITY OF NILES

Department of Public Works

IDEP Inter-jurisdictional Cooperation

State and federal law requires regulated Municipal Separate Storm Sewer Systems (MS4s) to have effective programs to find and eliminate illicit discharges to their systems (Illicit Discharge Elimination Plan). In some cases one community's MS4 discharges into another community's MS4.

We, as Storm Water Program Managers for our communities, recognize this requirement. We agree to work cooperatively with other MS4 communities where an illicit discharge is suspected to originate across our jurisdictional boundaries.

By signing this agreement, our community commits to investigating dry-weather discharges that appear at outfalls. We accept responsibility for notifying upstream owners if an illicit discharge is found to enter our MS4, and commit to abating discharges that are found to be leaving our MS4. These activities will be conducted pursuant to the procedures and timelines identified in the IDEP.

NAME

Storm Water Program Manager for City of Niles

Member Michigan Municipal League

333 N Second Street Niles, Michigan 49120

Phone 269.683.4700 www.ci.niles.mi.us Fax 269.684.3930