

City of New Castle
Storm Water Quality Management Plan
Permit #INR040038

December 8, 2014

The City of New Castle is a designated MS4 Community, and as such, is required to develop and implement a Storm Water Quality Management Program. This document represents that plan. It addresses the six minimum control measures in accordance with 327 IAC 15-13.

Six Minimum Control Measures:

- Public Education and Outreach
- Public Participation and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Municipal Operations, Pollution Prevention, and Good Housekeeping

Public Education and Outreach Plan
City of New Castle, IN
Permit # INR040038

This plan contains the City of New Castle's strategy to educate and inform the general public in the importance of effective storm water management in accordance with the City's Storm Water Quality Management Plan (SWQMP) as required by 327 IAC 15-13.

Plan Assessment and Development

As required by 327 IAC 15-13-12 the City of New Castle conducted surveys of public awareness of storm water related issues. As a result, the City has developed a plan to implement a public education program to distribute educational material to the community in an effort to communicate the impacts of storm water discharges on local waterways. The City has identified and applied best management practices, and measurable goals for developing a public education and outreach program.

Partnerships

The City of New Castle has reached out and developed working relationships with local government and environmental groups in an effort to combine resources for the purpose of providing public education and outreach. The City will continue to work with these organizations, and rely upon their reporting to gauge success in our storm water program.

- Three Rivers Solid Waste District
- Friends of the Big Blue River
- Henry County Soil and Water Conservation District
- Henry County Surveyors Office

Educational Materials

- A public notice is to be placed annually in the local newspaper (Courier-Times) informing the community of the availability of educational material.
- Tri-folds containing storm water information are to be placed in the Mayor's Office, Building Commissioner's Office, Utility Office, Three River Solid Waste Management Office, Library, and Visitor's Bureau Office. Each location will be monitored to track distribution of the material.
- A DVD is to be made available for public distribution. It is planned to distribute these DVD's, packaged in a fold over information sheet, from booths and displays at appropriate venues (i.e. Earth Day Celebration).
- An MS4 page is available on the City's web site (www.cityofnewcastle.net). Information and links concerning the storm water management program are to be provided, and updated as needed.
- A newsletter, *Willow Wisdom*, is to be printed and distributed, as well as made available on the City's web site. In it will be articles, and pictures pertinent to our storm water management program.

Public Presentations

- A presentation to City Council is to be conducted at least once per year. It is an opportunity to remind all the elected officials of the need for storm water management and to update them on any progress in the program.
- An educational presentation is to be made annually to City personnel on Municipal Operations, and Illicit Discharges in an ongoing effort to minimize storm water impacts from daily municipal activities.
- It is recommended, as city personnel become available, to make presentations to civic groups on the importance and implementation of the storm water management program.
- It is recommended that a presentation be developed for elementary students. Teaching young people to respect the environment, and to understand the potential of pollution from storm water, will be crucial to change the cultural mindset of the community.

Education on Available Resources

- Promote the availability of Three Rivers SWMD to dispose of hazardous material and electronics throughout the year in their facility, and to promote the annual “Tox Away Day”. They are to be linked to the City’s web site. Removal of Household Hazardous Waste and Electronics from the waste stream is critical to a successful storm water program.
- Promote river clean-ups performed by volunteers associated with The Friends of the Big Blue River. These clean-ups are conducted regularly throughout the year and cover the entire length of the river through the county. Removing solid waste, floatables, and monitoring of the river’s health is a vital service provided by these volunteers.
- Create and maintain a library of educational material at the Municipal Building. The material is to provide more in-depth information on the storm water management program.

**Public Participation and Involvement Plan
City of New Castle, IN
Permit # INR040038**

This plan contains the City of New Castle's strategy to involve the general public in the continued development of the storm water management program, and to invite participation in its implementation, in accordance with the City's Storm Water Quality Management Plan (SWQMP) as required by 327 IAC 15-13-13.

Adopt-A-River Program

The City of New Castle has reached out and developed working relationships with a local environmental group. The Friends of the Big Blue River conduct annual river clean-ups, and members are certified and active in the Hoosier Riverwatch Program. This plan will use data generated from this organization to monitor the river's health. The City will actively support their efforts.

Public Participation

- A survey is to be provided through the City's web site to gauge interest in volunteer work on projects to be determined. This survey will be available early spring of each year, in conjunction with storm water management presentations.

Community Hotlines

- The annual public notice, published in the newspaper and available on the City's website, is to include contact information for the MS4 Coordinator.
- A citizen's complaint form is to be made available on the City's website, routed to the MS4 Coordinator.
- As the system becomes implemented, a mobile app will be available for direct access to the City's Citizen Complaint system. Digital pictures, GPS locations and descriptions will be transmitted in real time to the MS4 Coordinator.

Restoration Program

- Annually, through volunteers, and concerned citizens, areas of stream degradation will be identified and a plan of action implemented to repair and mitigate damaged streams.

Illicit Discharge Detection and Elimination (IDDE) Plan
City of New Castle, IN
Permit # INR040038

This plan contains the City of New Castle's strategy to detect and eliminate illicit discharges to the MS4 conveyance system in accordance with the City's Storm Water Quality Management Plan (SWQMP) as required by 327 IAC 15-13 (Rule 13). This plan includes a storm water mapping plan and schedule, illicit discharge definitions, an outfall screening procedure, a source identification procedure, a list of active industrial facilities that discharge into the City's MS4, and a master implementation schedule.

Storm Sewer Map Development

As required by 327 IAC 15-13-14 and governed by the City's inclusion of all provisions of IC 8-1.5-5-28 in the relevant City ordinance, the City of New Castle must map all known storm water outfall conveyance systems under the MS4 Operator's control with a pipe diameter of twelve (12) inches or larger and open ditches with a two (2) foot or larger bottom. The map must identify all outfalls with an alpha-numeric identifiers, and meet or exceed mapping-grade accuracy for outfall locations.

Outfall is defined as a point source discharge via a conveyance of storm water runoff into a water of the state.

Conveyance is defined as any structural process for transferring storm water between at least two points, including piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, and roadways.

The City of New Castle has currently inventoried all outfalls of all sizes, and identified the receiving waters. The City will begin, in 2014, to re-evaluation the inventory and include any new outfalls, whether City or developer constructed. Alpha-numeric identifiers will be assigned, and an increased accuracy for the locations employed.

Illicit Discharge

The term "illicit discharge" is defined in 327 IAC 15-13-5 (28) as: *... any discharge to an MS4 conveyance that is not composed entirely of storm water, except naturally occurring floatables, such as leaves or tree limbs. Sources of illicit discharges include sanitary wastewater, septic tank effluent, car wash wastewater, oil disposal, radiator flushing disposal, laundry wastewater, roadway accident spillage, and household hazardous wastes.*

Illicit discharges can be categorized as either direct or indirect. Examples of direct illicit discharges include: sanitary wastewater, piping directly connected from home to the storm sewer, materials (e.g. used motor oil) that have been illegally dumped into a storm drain, a shop floor drain directly connected to the storm sewer, or a cross connection between the sanitary sewer and storm sewer. Examples of indirect illicit discharges include: a damaged sanitary sewer that is leaking into a storm sewer, or a failing septic system that is leaking into a storm sewer, or causing surface discharge to enter the storm sewer.

As stated in 327 IAC 15-13-14 (d), the City of New Castle's SWQMP need not address the following categories of non-storm water discharges, or flows unless the MS4 operator identifies them as significant contributors of pollutants to the MS4 conveyance system. Therefore, in the interim, the City will not consider those items listed in **Table 1** as illicit discharges. However, if in the future the City determines any of these activities to be illicit discharges, the City will update its IDDE Plan accordingly.

Table 1
Exempt Non-Storm Water Discharges

Water line flushing or other potable water sources, if de-chlorinated	Springs
Landscape irrigation or lawn watering	Non-commercial washing of vehicles
Diverted stream flows	Natural riparian habitat or wetland flows
Rising ground water	Swimming pools, if de-chlorinated
Uncontaminated ground water infiltration	Firefighting activities
Uncontaminated pumped ground water	Any other water source not containing pollutants
Foundation or footing drains (not including active groundwater dewatering system)	Discharges specified in writing by the authorized enforcement agency as necessary to protect public health and safety
Crawl space pumps	Dye testing
Air conditioning condensation	

Dry Weather Outfall Screening

Rule 13 and IC 8-1.35-5-28, require the City of New Castle to perform dry weather screening of its storm water outfalls with a pipe diameter of 12" or larger and open ditches with a 24" bottom width, or larger. The City will perform the dry weather screening of all mapped outfalls and waterways regardless of size.

Screening activities were initially conducted in 2003-04. Subsequent dry weather screening will be conducted to monitor outfall water quality and to respond to citizen complaints. Particular attention will be paid to the outfalls near industrial facilities, as well as those areas within or near the City that may be utilizing septic systems.

The City will perform screenings only during dry weather. Dry weather is defined as a period in which there has been no rainfall, or no more than one-tenth (0.1) of an inch of rain within a seventy-two (72) hour period.

Field inspectors will conduct and document physical observations at each storm water outfall. For those outfalls preceded by a retention pond, the inspector will conduct and document physical observations of the conveyance system that leads to the pond. In the event an outfall or pond conveyance system is discharging during dry weather and physical observations warrant, the inspector will conduct and document a series of in-field water quality tests utilizing approved field testing equipment and/or sampling for lab analysis.

At a minimum, all in-field water quality testing will screen dry weather discharges for pH, temperature, conductivity, and E. coli. If visual observations and in-field tests suggest water quality problems, the inspector may choose to collect additional samples for further lab analysis. An outfall inspection checklist will be utilized to accurately record all outfall observations. **Table 2** identifies potential water quality parameters that may be monitored by the field inspector.

Table 2
Water Quality Test Parameters, Uses, and Methods

Water Quality Test	Reason for Parameter Test	Method
Conductivity	Used as an indicator of dissolved solids	Oakton Cup Style ECTest 11+ or equivalent
Temperature	Sanitary wastewater and industrial cooling water can substantially influence outfall discharge temperature. This measurement is most useful during cold weather.	Oakton pHtestr30 Dual Display (pH & Temp) or equivalent
pH	Extreme pH values (high or low) may indicate commercial or industrial flows. Not useful in determining the presence of sanitary wastewater	Oakton pHtestr30 Dual Display (pH & Temp) or equivalent
Ammonia-Nitrogen	High Levels can be an indicator of the presence of sanitary wastewater	Field sampling and laboratory analysis if deemed appropriate
Phosphorus	Used to indicate the presence of sanitary wastewater	Field sampling and laboratory analysis if deemed appropriate
E. coli	Used to indicate the presence of sanitary wastewater	Coliscan Easygel and laboratory analysis if deemed appropriate
Oil and Grease	Presence would indicate a definite illicit discharge	Field sampling and laboratory analysis if deemed appropriate
Metals	Dissolved iron exposed to air oxidizes and reduces dissolved oxygen	Field sampling and laboratory analysis if deemed appropriate
Optical Brighteners	Used to indicate the presence of laundry detergents, which often contain fabric whiteners causing substantial fluorescence	Untreated cotton pad surrounded by a mesh bag and placed in a storm drain outlet, manhole, or catch basin. Left for 5-7 days then placed under a UV lamp

Source Identification

The City of New Castle will attempt to determine the source of all dry weather discharges. However, recognizing that most dry weather discharges will not be constant, the City understands that identifying the source of all illicit discharges is unlikely.

For each dry weather discharge suspected of being illicit, the inspector, utilizing a map of the storm sewer system, will follow the drainage ditch or identify the most up-pipe manhole with a junction in an attempt to identify the general location from which the discharge originates. The inspector may opt to collect additional field and laboratory samples as he or she make their way upstream, or up-pipe in order to compare the outfall sample results with the in-line results in hope of identifying similarities between the sites. If, from following the drainage ditch or inspecting the manhole, the inspector can determine the direction from which the discharge originates, he or she will then continue upstream, or to the next up-pipe manhole until he or she can pinpoint the source, or the general vicinity from which the discharge is originating. If the inspector cannot identify the specific source through visual

observation then video inspection, a dye test, or smoke test will be necessary to determine the source of the discharge.

Video Inspection

Video inspection involves filming the storm sewer system and tracking a discharge to its source. The City of New Castle owns and operates its own sewer video equipment. Typically the proper use of the equipment will lead to a source very early on, and therefore, will be the first step after visual observation.

Dye Testing

If an inspector is able to narrow down the likely source of a discharge to a reasonable number of homes or businesses, the City will perform a dye test one building at a time. Non-toxic dye will be flushed down toilets, sinks, or other non-storm water sources. Storm water outfalls will be observed to check for the presence of the dye. Prior to testing, the City will contact building owners and occupants to obtain access to the buildings. Two or more City staff will be equipped with two-way radios with one person inside the building and the others stationed at appropriate manholes and/or outfalls. The inside person will drop dye into a plumbing fixture and run a sufficient amount of water to move the dye into the plumbing system. The inside person will then radio the outside crew members so they can watch for the dye and record the presence or absence of the dye. Dye can also be used in conjunction with video inspection equipment.

Smoke Testing

If dye testing proves unsuccessful, the City may opt to conduct smoke testing. A smoke test involves injecting non-toxic smoke into storm sewer lines and then noting the emergence of smoke from sanitary sewer vents in illegally connected buildings, or from cracks and leaks in the storm sewer lines. The injection will be done by isolating a segment of sewer line through temporary sealing of pipes at the appropriate areas and placing a smoke bomb in the storm sewer manhole below ground and forcing air in after it. City staff will position themselves to observe any smoke escaping through building vents, or cracks/leaks through the ground, and noting where the smoke is observed. Prior to performing tests, the City will inform building owners and occupants in the area, as well as police and fire departments.

Industrial Facilities within the MS4 Area

All industrial facilities located within the City of New Castle's MS4 area discharging to a storm sewer conveyance are listed in **Table 3**. This table will be updated annually by the City to ensure the list is accurate and current. The table will assist City personnel with identifying potential pollutants of concern, as well as the potential source of illicit discharges.

Eliminating Illicit Discharges

The goal of the City of New Castle's IDDE Plan is to address 100% of the illicit discharges identified. The City understands, however, that for a variety of reasons, immediate elimination of 100% of the identified discharges is not likely. The City will attempt to eliminate all identified illicit discharges in accordance with the City's Illicit Discharge and Elimination ordinance.

Illicit Discharge Detection and Elimination Reporting

The inspectors responsible for outfall screening and identifying illicit discharges will maintain a database that documents all activities associated with the City's IDDE Plan ranging from mapping, outfall screening, source identification, and enforcement. All activities associated with this plan will be documented.

IDDE Education and Outreach

The City of New Castle will make a reasonable effort to educate employees, businesses, and the general public within the MS4 area about the hazards associated with illicit discharges and the improper disposal of waste. The City will provide relevant education through brochures, city website, newspaper articles, and public presentations.

Complaints

The City of New Castle has a program in place to field complaints from the public on illegal dumping, illicit discharges, poor erosion control, and other activities that negatively impact storm water quality. Citizens have the opportunity to submit such complaints by using the "Action Line" on the City website, visiting in person the Water Pollution Control Facility, or the Mayor's office. All complaints are documented and the corrective action noted on the same sheet.

IDDE Plan Review and Update

The City of New Castle views this plan as a living document. The Plan will be updated as necessary to administer the plan in an efficient and effective manner, in adherence to current statutes. This Plan will be submitted as a part of the annual SWQMP report.

Construction Site Run-Off Control Plan
City of New Castle, IN
Permit # INR040038

This plan contains the City of New Castle's strategy to educate and inform the general public in the importance of effective construction site run-off control in accordance with the City's Storm Water Quality Management Plan (SWQMP) as required by 327 IAC 15-13-15.

Plan Assessment and Development

As required by 327 IAC 15-13-15 the City of New Castle passed Ordinance #3436 and it was adopted in 2005 to specifically address erosion and sediment control of construction sites. Inspection sheets, and complaint forms are available for site inspections.

Plan Review

- Construction plans submitted to the building commissioner's office that disturb land exceeding 1 acre in size, or are part of a larger development exceeding 1 acre in total shall be submitted to the MS4 Coordinator for review.
- Plan review will comply with the Indiana Storm Water Quality Manual, and any other pertinent regulations.
- After the plans pass the review process, the MS4 Coordinator will issue a Notice to Proceed. This notice is required before earth moving activity begins.

Contractor Education

- The MS4 Coordinator will attend all pre-bid, and/or the pre-construction meeting to inform and educate the contractor on the City's expectations during the construction process. A thorough review of the plan elements for site work will be conducted.
- As personnel become available, the City will conduct periodic workshops for contractors. The intent will be to keep all contractors abreast of construction site erosion and sediment control regulations.

Construction Site Inspections

- All construction sites are to be prioritized with consideration of the nature and extent of the construction activity, as well as the topography, characteristics of the soil, and quality of the receiving waters.
- All sites are to be inspected after BMPs are installed, then periodically during construction, and after each significant rain event. An approved inspection form will be used, and a copy given to the contractor after each inspection. Enforcement action, if necessary, will be initiated by the MS4 Coordinator.
- Public complaint forms are available on the City's web site, or can be obtained in the MS4 Coordinator's office. Phone and/or email complaints are to be recorded on the same form.

MS4 Personnel Training/Certifications

- All MS4 staff are to attend annual training, at a minimum, to keep informed of the latest regulations as it relates to erosion and sediment control.
- All MS4 staff are encouraged to obtain certification in erosion and sediment control.

**Post Construction Storm Water Run-off Plan
City of New Castle, IN
Permit # INR040038**

This plan contains the City of New Castle's strategy to regulate post construction BMPs in new and redeveloped properties, in accordance with the City's Storm Water Quality Management Plan (SWQMP) as required by 327 IAC 15-13.

Plan Assessment and Development

As required by 327 IAC 15-13-16 the City of New Castle has developed a program to inspect and monitor post construction storm water control features to ensure controlled storm water releases, and to ensure storm water quality entering waterways.

Post Construction Inspections

- An inspection file will be maintained for all retention/detention ponds within the MS4 service area. Any enforcement action will be documented to the same file.
- Any underground storage BMP, discharging to a storm sewer or waterway, is to be inspected for compliance with the design characteristics approved in the construction plans.
- Any filter strip, riparian area, buffer strip, or like component are to be inspected for vegetative integrity and erosion.
- Discharge points are to be monitored for stream bank scouring, or erosion.

MS4 Personnel Training/Certifications

- All MS4 staff are to attend annual training, at a minimum, to keep informed of the latest regulations as it relates to post construction inspections and maintenance of installed BMPs.
- All MS4 staff are encouraged to obtain certification in erosion and sediment control.

Municipal Operations, Pollution Prevention, and Good Housekeeping Plan
City of New Castle, IN
Permit # INR040038

This plan contains the City of New Castle's strategy to educate City personnel in the importance of effective storm water management as it relates to Municipal Operations, in accordance with the City's Storm Water Quality Management Plan (SWQMP) as required by 327 IAC 15-13-17.

Facility Maintenance

- Each facility is to have a Storm Water Pollution Prevention Plan (SWPPP).
- Each facility is to have Standard Operating Procedures (SOP) for maintenance activities.
 - A copy is to be displayed prominently in the maintenance area.
- Maintenance activities are to be documented, to include:
 - Periodic litter pick-up
 - Roadside ditch and shoulder stabilization
 - Planting and proper care of roadside vegetation
 - Remediation of outfall scouring conditions
- In-field inspection sheets are to be utilized for maintenance inspections.
- Each facility is to maintain an inventory of concentrated solutions, acids, alkalis, oils, or other polluting material. All such material is to be properly stored with spill containment in place.

Storm Water Infrastructure Operation and Maintenance

- A map of the complete MS4 system with characterization is to be kept up to date, and complete.
- Each facility is to have a map showing all current storm water conveyances and outfalls.
 - A copy is to be displayed prominently in the maintenance area.
- Catch Basin Cleaning is to be documented, to include:
 - Scheduled maintenance
 - Quantity of material removed
 - Disposal of removed material
- Storm water structure maintenance is to be documented, to include:
 - Scheduled maintenance
 - Quantity of material removed
 - Disposal of removed material

Public Streets Operation and Maintenance

- Street sweeping activity is to be documented, to include:
 - Scheduled routes
 - Quantity of material collected
 - Disposal of material collected
- Roadside Maintenance activity is to be documented, to include:
 - Shoulder stabilization
 - Ditch stabilization
 - Road side vegetation
- Street de-icing operations are to be documented, to include:
 - Streets where material was applied
 - Quantity of material applied
- Deicing material is to be stored under cover and properly contained.

Vehicle Operations, Maintenance, and Fueling

- Vehicle maintenance is to be performed in designated areas
- All maintenance activity is to be documented
- Spill kits are to be available at all maintenance locations, and fueling locations.
 - Personnel are to be properly trained in their use
 - Spills are to be documented
- Storm drains near fueling areas are to be prominently labeled

Pesticides, Herbicides, and Fertilizer Application and Management

- All usage of pesticides, herbicides, or other applied chemicals must be applied by personnel trained in their use.
- All personnel are to be trained in the proper storage, dispensing, and spill clean-up of hazardous chemicals

Employee Training

- All personnel are to be trained in the SOPs for their facility, and in storm water pollution prevention on an annual basis
- Seasonal, Part-time, and newly hired full time employees are to receive training in storm water pollution prevention

Kimberly Radliff
Title VI/ADA Specialist
INDOT

RE: **2016 ADA Sub-recipient Compliance Review File Checklist**

April 20, 2016

This letter is to provide a response to the **2016 ADA Sub-recipient Compliance Review File Checklist**. I will attempt to answer your concerns as listed below by Item number.

- 4) The assurance statement is incorporated in our policy manual and employee handbook. It will be incorporated in contracts and agreements. A copy is attached.
- 5) A Title VI training program exists in the Transportation Department. It is conducted annually, and for new employees. A copy of the training material and training attendance is attached.
- 7) The LPA has not conducted a formal self-evaluation. We are aware of needs in our public buildings and sidewalks, but have not at this time collected the data. Beginning this year the City budget will set aside annually a minimum of \$70,000 toward implementation of an ADA plan. The formal plan is forthcoming.
- 8) The Environmental Justice requirement is adhered to by insuring all City projects (Road, sewer, etc.), regardless of the funding source, incorporates citizen involvement in the process. Meetings are conducted in the affected neighborhoods prior to construction, outlining the scope of the work, and inconveniences that may be expected. The citizen's concerns are listened to, and incorporated as much as possible in the schedule. Provisions are made for people with mobility issues, and contractors are made aware. Emergency personnel are included in the discussion to prepare for contingencies in the event they are needed during construction. There is continual communication with affected residents during the progress of construction.

If there are any questions or concerns, please don't hesitate to contact me.

Best Regards,
Ed Hill

GIS/MS4/ADA Coordinator
City of New Castle
227 N. Main Street
New Castle, IN 47362
765-529-7605
Ed-hill@cityofnewcastle.net