

COUNCIL PENDING ORDINANCE
CPO 2006-57
ORDINANCE NO. 79-31
AS AMENDED _____
CERTIFICATION DATE _____
CERTIFIED BY _____
FAVORABLY _____
UNFAVORABLY _____

**AN ORDINANCE OF THE COMMON COUNCIL
OF THE CITY OF GARY, INDIANA
AMENDING GARY STORM WATER MANAGEMENT ORDINANCE NO. 7309
AND ESTABLISHING A STORM WATER QUALITY AND QUANTITY
MANAGEMENT POLICY, STORM WATER POLLUTION PREVENTION
POLICY AND WETLANDS DISTURBANCE PREVENTION POLICY
FOR THE CITY OF GARY**

WHEREAS, the Gary Common Council adopted Ordinance No. 7309, "An Ordinance Establishing A Storm Water Management and Sediment Control Policy for the City of Gary, Indiana," commonly known as the "City of Gary Storm Water Management Ordinance," on February 19, 2002; and

WHEREAS, under new Federal and State regulations, the Gary Storm Water Management District is required to establish a regulatory mechanism for regulating storm water quality as well as storm water quantity within its jurisdiction, in accordance with Indiana Department of Environmental Management enacted Rule 13 (327 IAC 15-13) and revised Rule 5 (327 IAC 15-5), and

WHEREAS, it is necessary for the City of Gary to amend its regulatory rules, regulations, requirements and procedures to establish a storm water quality and quantity management policy for the city to comply with State and Federal regulations managing storm water runoff, and

WHEREAS, the adoption of this Ordinance is necessary for the preservation of the public health, safety and welfare, for the conservation of our natural resources, and for compliance with State and Federal regulations,

NOW, THEREFORE, BE IT ORDAINED by the Common Council of the City of Gary, Indiana as follows:

Section 1. The City of Gary Storm Water Management Ordinance No. 7309 is amended in its entirety, by substitution, to read as follows:

See Proposed Ordinance
(Attached Exhibit A).

Section 2. This Ordinance does not affect prosecutions for ordinance violations committed prior to the effective date of this Ordinance, does not waive any fee or penalty due and unpaid on the effective date of this Ordinance, and does not affect the validity of any bond or cash deposit posted, filed or deposited pursuant to the requirements of any ordinance.

Section 3. This Ordinance shall be in full force and effect from and after the date of its passage and publication according to law.

Passed and adopted by the Common Council of the City of Gary, Indiana, on the 3rd day of July, 2006.

THE COMMON COUNCIL OF THE
CITY OF GARY, INDIANA


PRESIDING OFFICER

ATTEST:

Suzette Kragg
CITY CLERK

Presented by me to the Mayor for his approval and signature this

5th day of *July*, 2006.

Suzette Kragg
CITY CLERK

APPROVED and SIGNED by me this *10th* day of *July*, 2006.

Rudolph Clay
MAYOR, CITY OF GARY, INDIANA

Sponsored by: THE HONORABLE RUDOLPH CLAY, MAYOR

Prepared by: LAW DEPARTMENT (HLC)

COMMITTEE ASSIGNMENT

1 st Reading/Date _____	Reported-Out/Date _____
2 nd Reading/Date _____	Committee Hearing Date _____
3 rd Reading/Date _____	Public Hearing/Date _____
Passed/Date _____	Final Hearing/Date _____
Tabled/Date _____	Deferred/Date _____
Publication/Date _____	Adopted/Date _____
Veto _____	Community Hearing/Date _____
Pocket Veto _____	Adopted _____



ABBREVIATED TABLE OF CONTENTS

<i>Chapter</i>	<i>Title</i>	<i>Page</i>
I	GENERAL INFORMATION	1
II	PROHIBITED DISCHARGES AND CONNECTIONS	5
III	STORM WATER QUANTITY MANAGEMENT	8
IV	STORM WATER POLLUTION PREVENTION FOR CONSTRUCTION SITES	14
V	STORM WATER QUALITY MANAGEMENT FOR POST-CONSTRUCTION	18
VI	DEVELOPMENT IN WETLANDS REGULATIONS	22
VII	PERMIT REQUIREMENTS AND PROCEDURES	23
VIII	ENFORCEMENT	28
<i>Appendices</i>		
A	ABBREVIATIONS AND DEFINITIONS	A1



EXPANDED TABLE OF CONTENTS

CHAPTER ONE		Page
GENERAL INFORMATION		1
	Sections	
1.	AUTHORITY AND TITLE	1
2.	APPLICABILITY AND EXEMPTIONS	1
3.	BACKGROUND	2
4.	FINDINGS	2
5.	PURPOSE	3
6.	ABBREVIATIONS AND DEFINITIONS	3
7.	RESPONSIBILITY FOR ADMINISTRATION	3
8.	CONFLICTING ORDINANCES	3
9.	INTERPRETATION	3
10.	SEVERABILITY	4
11.	EFFECTIVE DATE	4
12.	DISCLAIMER OF LIABILITY	4
CHAPTER TWO		Page
PROHIBITED DISCHARGES AND CONNECTIONS		5
	Sections	
1.	APPLICABILITY AND EXEMPTIONS	5
2.	PROHIBITED DISCHARGES AND CONNECTIONS	5
3.	EXEMPTED DISCHARGES AND CONNECTIONS	5
4.	STORAGE OF HAZARDOUS OR TOXIC MATERIAL	6
5.	PRIVATE PROPERTY MAINTENANCE DUTIES	6
6.	SPILL REPORTING	6
7.	INSPECTION AND MONITORING	6
CHAPTER THREE		Page
STORM WATER QUANTITY MANAGEMENT		8
	Sections	
1.	APPLICABILITY AND EXEMPTIONS	8
2.	POLICY ON STORM WATER QUANTITY MANAGEMENT	8
3.	CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS	10
4.	DRAINAGE EASEMENT REQUIREMENTS	10
5.	PLACEMENT OF UTILITIES	12
6.	STRUCTURES NEAR COUNTY REGULATED DRAINS	12
7.	INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING	12

<hr/>	
CHAPTER FOUR	Page
STORM WATER POLLUTION PREVENTION FOR CONSTRUCTION SITES	14
Sections	
1. APPLICABILITY AND EXEMPTIONS	14
2. POLICY ON STORM WATER POLLUTION PREVENTION	14
3. CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS	16
4. INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING	16
<hr/>	
CHAPTER FIVE	Page
STORM WATER QUALITY MANAGEMENT FOR POST-CONSTRUCTION	18
Sections	
1. APPLICABILITY AND EXEMPTIONS	18
2. POLICY ON STORM WATER QUALITY MANAGEMENT	18
3. CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS	18
4. EASEMENT REQUIREMENTS	18
5. INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING	18
<hr/>	
CHAPTER SIX	Page
DEVELOPMENT IN WETLANDS REGULATIONS	22
Sections	
1. APPLICABILITY AND EXEMPTIONS	22
2. POLICY ON WETLANDS DISTURBANCE PREVENTION	22
3. WETLANDS IDENTIFICATION	22
<hr/>	
CHAPTER SEVEN	Page
PERMIT REQUIREMENTS AND PROCEDURES	23
Sections	
1. PRELIMINARY DRAINAGE PLAN APPROVAL	23
2. PERMIT PROCEDURES	23
3. SECONDARY (FINAL) STORM WATER APPROVAL REQUIREMENTS	24
4. REVIEW OF INDIVIDUAL LOTS WITHIN A PERMITTED PROJECT	24
5. CHANGES TO PLANS	25
6. FEE STRUCTURE	25
7. REQUIRED ASSURANCES	25
8. TERMS AND CONDITIONS OF PERMITS	26
9. CERTIFICATION OF AS-BUILT PLANS	26

CHAPTER EIGHT		Page
ENFORCEMENT		28
	Sections	
1. COMPLIANCE WITH THIS ORDINANCE		28
2. PENALTIES FOR VIOLATIONS		28
3. STOP WORK ORDER		28
4. FAILURE TO COMPLY OR COMPLETE		28
5. SUSPENSION OF ACCESS TO THE STORM DRAIN SYSTEM		29
6. CORRECTIVE ACTION		29
7. APPEALS		29



**CHAPTER ONE
GENERAL INFORMATION**

1. AUTHORITY AND TITLE

This Ordinance is adopted in accordance with statutory authority granted to the Common Council of the City of Gary, and, further, is required to be enacted by Phase II of the National Pollution Discharge Elimination System storm water program (FR Doc. 99–29181) as authorized by the 1972 amendments to the Clean Water Act, the Indiana Department of Environmental Management’s Rule 13 (327 IAC 15-13), and the Indiana Department of Environmental Management’s Rule 5 (327 IAC 15-5). Based on this authority and these requirements, this Ordinance regulates:

- A. Discharges of prohibited non-storm water flows into the storm water drainage system.
- B. Storm water drainage improvements related to development of lands located within the City of Gary, Indiana.
- C. Drainage control systems installed during new construction and grading of lots and other parcels of land.
- D. Erosion and sediment control systems installed during new construction and grading of lots and other parcels of land.
- E. The design, construction, and maintenance of storm water drainage facilities and systems.
- F. The design, construction, and maintenance of storm water quality facilities and systems.

This Ordinance shall be known and may be cited as the City of Gary Storm Water Management Ordinance.

2. APPLICABILITY AND EXEMPTIONS

This Ordinance shall regulate all development and redevelopment occurring within the City of Gary, Indiana and any significant discharge into the City’s storm water conveyance facilities. No building permit shall be issued and no land disturbance started for any construction for any development or re-development, until the plans required by this Ordinance for such construction have been approved in writing by the Gary Storm Water Management District (GSWMD). With the exception of the requirements of Chapter Two and Chapter Seven – Section 4 of this Ordinance, single-family dwelling houses in accepted subdivisions, new buildings (or cumulative building additions) with less than 500 square feet of area, and land-disturbing activities affecting less than 10,000 square feet of area shall be exempt from the requirements of this Ordinance, unless these activities significantly adversely affect the City’s storm water conveyance facilities or water quality of the receiving bodies of water.

The City of Gary municipal projects shall be exempt from fees associated with obtaining a storm water permit, however, a storm water permit application must be filed that meets all applicable technical requirements of this Ordinance and the latest edition of the City of Gary “Sanitary/Storm Sewer and City Infrastructure Standards and Specifications Manual” (hereafter referred to as “the City of Gary Design Standards Manual”).

Any construction project which has had its final drainage plan accepted by the GSWMD within a 2-year period prior to the effective date of this Ordinance shall be exempt from all requirements of this Ordinance that are in excess of the requirements of ordinances in effect at the time of acceptance. Such an exemption is not applicable to the requirements detailed in Chapter 2 of this Ordinance.

The GSWMD has the authority, to the extent permitted by law, to modify, grant exemptions, and/or waive any and all the requirements of this Ordinance. A pre-submittal meeting with the GSWMD may be requested by a permit applicant to discuss the applicability of various provisions of the Ordinance and the City of Gary Design Standards Manual regarding unique or unusual circumstances relating to a project. However, any initial determination of such applicability shall not be binding on future determinations of the GSWMD that may be based on the review of additional and/or more detailed information and plans. The GSWMD has the

authority to enact rules it deems advisable to implement the provisions of this Ordinance. Compliance with these rules is a requirement of this Ordinance.

3. BACKGROUND

The Common Council of The City of Gary, State of Indiana, adopted Ordinance No. 7309 on February 19, 2002, which established “An Ordinance Establishing a Storm Water Management and Sediment Control Policy for the City of Gary, Indiana”, commonly known as the “The City of Gary Storm Water Management Ordinance”, in order to govern the control of runoff of storm water and to protect, conserve, and promote the orderly development of land in the City of Gary and protect its water resources. This Ordinance was primarily targeted at storm water discharge quantity and erosion and sediment control.

On December 8, 1999, Phase II of the National Pollutant Discharge Elimination System (NPDES) permit program, was published in the Federal Register. The NPDES program, as authorized by the 1972 amendments to the Clean Water Act, controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Phase II of NPDES requires permit coverage for storm water discharges from regulated small municipal separate storm sewer systems (MS4s) and for small-site construction activity that results in the disturbance of one acre or more of land. This Federal regulation went into affect March 10, 2003. In response to Phase II of NPDES, the Indiana Department of Environmental Management enacted Rule 13 (327 IAC 15-13) and revised Rule 5 (327 IAC 15-5).

Under these new State and Federal regulations, the City of Gary is required to establish a regulatory mechanism for regulating storm water quality as well as storm water quantity within its jurisdiction. Therefore, the "The City of Gary Storm Water Management Ordinance No. 7309" has been amended, (by substitution) with this "The City of Gary Storm Water Management Ordinance No. 79-31".

4. FINDINGS

The Common Council of the City of Gary finds that:

- A. Water bodies, roadways, streets, structures, and other property within, and downstream of the City of Gary are at times subjected to flooding;
- B. Flooding is a danger to the lives and property of the public and is also a danger to the natural resources of the region;
- C. Land development alters the hydrologic response of watersheds, resulting in increased storm water runoff rates and volumes, increased flooding, increased stream channel erosion, increased stream pollution, and increased sediment transport and deposition;
- D. Soil erosion resulting from land-disturbing activities causes a significant amount of sediment and other pollutants to be transported off-site and deposited in ditches, streams, wetlands, lakes, and reservoirs;
- E. Increased storm water runoff rates and volumes, and the sediments and pollutants associated with storm water runoff from future development projects within the City of Gary will, absent reasonable regulation and control, adversely affect the City of Gary's water bodies and water resources;
- F. Pollutant contributions from illicit discharges within the City of Gary will, absent reasonable regulation, monitoring, and enforcement, adversely affect the City of Gary's water bodies and water resources;
- G. Storm water Runoff frequently contains pollutants that cause or contribute to violation of water quality standards;
- H. Storm water runoff, soil erosion, non-point source pollution, and illicit sources of pollution can be controlled and minimized by the regulation of storm water management;
- I. Adopting the standards, criteria, and procedures contained and referenced in this Ordinance and implementing the same will address many of the harmful effects of storm water runoff and illicit discharges;
- J. Adopting this Ordinance is necessary for the preservation of the public health, safety, and welfare, for the conservation of our natural resources, and for compliance with State and Federal regulations.

5. PURPOSE

The purpose of this Ordinance is to provide for the health, safety, and general welfare of the citizens of the City of Gary through the regulation of storm water and non-storm water discharges to the storm drainage system and to protect, conserve and promote the coordinated development of land and water resources within the City of Gary. This Ordinance establishes methods for managing the quantity and quality of storm water entering into the storm water drainage system in order to comply with State and Federal requirements. The objectives of this Ordinance are:

- A. To reduce the hazard to public health and safety and water quality caused by excessive storm water runoff.
- B. To regulate the contribution of pollutants to the storm water drainage system from construction site runoff.
- C. To regulate the contribution of pollutants to the storm water drainage system and public waters from runoff, including but not limited to, from new development and re-development.
- D. To prohibit illicit discharges into the storm water drainage system.
- E. To establish legal authority to carry out all permitting, inspection, monitoring, and enforcement procedures necessary to ensure compliance with this Ordinance.
- F. To manage and improve the quality of storm water runoff for a given set of conditions that minimizes the impact of storm water runoff in the most cost-effective manner to the maximum extent practicable using the best available technology to capture and reduce the concentration of pollutants such as, but not limited to, BOD (Biochemical Oxygen Demand), TSS (Total Suspended Solids), Bacteria and other pathogens, toxics, and Oil and Grease.

6. ABBREVIATIONS AND DEFINITIONS

For the purpose of this Ordinance, the abbreviations and definitions provided in Appendix A shall apply.

7. RESPONSIBILITY FOR ADMINISTRATION

The City of Gary Storm Water Management District (GSWMD) through its Board and employees, shall administer, implement, and enforce the provisions of this Ordinance. Any powers granted or duties imposed upon the GSWMD may be delegated, in writing, by GSWMD to qualified persons or entities.

8. CONFLICTING ORDINANCES

The provisions of this Ordinance shall be deemed as additional requirements to minimum standards required by other City of Gary ordinances, and as supplemental requirements to Indiana's Rule 5 regarding Storm water Discharge Associated with Construction Activity, (327 IAC 15-5), Indiana's Rule 13 regarding Storm water Runoff Associated with Municipal Separate Storm Sewer System Conveyances (327 IAC 15-13), Indiana's Rule 6 regarding Storm water Runoff Associated with Industrial Sites (327 IAC 15-6), U.S. EPA Underground Injection control Program Call V Well Requirements (40 CFR Part 144), the City of Gary Ordinance No. 7641 "Management of Potentially Polluting Substances", and other City of Gary rules, regulations, and guidelines. In case of conflicting requirements, the most restrictive shall apply.

9. INTERPRETATION

Words and phrases in this Ordinance shall be construed according to their common and accepted meanings, except that words and phrases defined in Appendix A shall be construed according to the respective definitions given therein. Technical words and technical phrases that are not

defined in this Ordinance but which have acquired particular meanings in law or in technical usage shall be construed according to such meanings.

10. SEVERABILITY

The provisions of this Ordinance are hereby declared severable, and if any court of competent jurisdiction should declare any part or provision of this Ordinance invalid or unenforceable, such invalidity or unenforceability shall not affect any other part or provision of the ordinance.

11. EFFECTIVE DATE

This Ordinance shall become effective after its final passage, approval, and publication as required by law.

12. DISCLAIMER OF LIABILITY

The degree of protection required by this Ordinance is considered reasonable for regulatory purposes and is based on historical records, engineering, and scientific methods of study. Larger storms may occur or storm water runoff amounts may be increased by man-made or natural causes. This Ordinance does not imply that land uses permitted will be free from storm water damage. This Ordinance shall not create liability on the part of the Common Council of the City of Gary or any other agency or department of the City, or any of their officials, employees, consultants, contractors, or agents for any damage which may result from reliance on this Ordinance or on any administrative decision lawfully made here under.



**CHAPTER TWO
PROHIBITED DISCHARGES AND CONNECTIONS**

1. APPLICABILITY AND EXEMPTIONS

This Chapter shall apply to all discharges, liquid or solid, including illegal dumping, entering the storm water drainage system under the control of the City of Gary, regardless of whether the discharge originates from developed, re-developed, or undeveloped lands, and regardless of whether the discharge is generated from an active construction site or a stabilized site. These discharges include flows from direct connections to the storm water drainage system, illegal dumping, and contaminated runoff.

Any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the United States Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written acceptance has been granted by GSWMD for the subject discharge to the storm water drainage system, is also exempted from this chapter.

2. PROHIBITED DISCHARGES AND CONNECTIONS

No person shall discharge to a MS4 conveyance, watercourse, or water body, directly or indirectly, any substance other than storm water or an exempted discharge. Any person discharging storm water shall effectively minimize, to the maximum extent practicable, pollutants from also being discharged with the storm water, through the use of, among other things, best management practices (BMPs).

The GSWMD is authorized to require dischargers to implement pollution prevention measures, utilizing BMPs, necessary to prevent or reduce the discharge of pollutants into the City of Gary's storm water drainage system to the maximum extent practicable.

3. EXEMPTED DISCHARGES AND CONNECTIONS

Notwithstanding other requirements in this Ordinance, the following categories of non-storm water discharges or flows are exempted from the requirements of this chapter:

- A. Water line flushing;
- B. Landscape irrigation;
- C. Diverted streamflows;
- D. Rising ground waters;
- E. Uncontaminated groundwater infiltration;
- F. Uncontaminated pumped ground water;
- G. Discharges from potable water sources;
- H. Foundation drains;
- I. Air conditioning condensation;
- J. Springs;
- K. Water from crawl space pumps;
- L. Footing drains;
- M. Lawn watering;
- N. Individual residential car washing;
- O. Flows from riparian habitats and wetlands;
- P. Dechlorinated swimming pool discharges;
- Q. Street wash water;
- R. Discharges from firefighting activities;

4. STORAGE OF HAZARDOUS OR TOXIC MATERIAL

Storage or stockpiling of hazardous or toxic material within any watercourse, or in its associated floodway or floodplain, is strictly prohibited. Storage or stockpiling of hazardous or toxic material on active construction sites must include adequate protection and/or containment so as to prevent any such materials from entering any temporary or permanent storm water conveyance or watercourse. Compliance with any City of Gary ordinances associated with surface contaminations is also required.

5. PRIVATE PROPERTY MAINTENANCE DUTIES

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse located within their property boundaries, free of trash, debris, excessive vegetation, and any other obstacles and/or items that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

6. SPILL REPORTING

Any discharger who accidentally discharges into a water body any substance other than storm water or an exempted discharge shall immediately inform HAZMAT, the City of Gary Department of Environmental Affairs, Health Department, GSWMD, and any other entity required by state or federal law, of the details of the discharge. A written report concerning the discharge shall be filed with the GSWMD's Office and IDEM, by the dischargers, within five (5) days. The written report shall specify:

- A. The composition of the discharge and the cause thereof;
- B. The date, time, and estimated volume of the discharge;
- C. All measures taken to clean up the accidental discharge and all measures proposed to be taken to prevent any recurrence;
- D. The name and telephone number of the person making the report, and the name and telephone number of a person who may be contacted for additional information on the matter.

A properly reported accidental discharge shall be a mitigating factor in a civil infraction proceeding brought under this Ordinance against a discharger for such discharge. It shall not, however, be a defense to a legal action brought to obtain an injunction, to obtain recovery of costs or to obtain other relief because of, or arising out of, the discharge. A discharge shall be considered properly reported only if the discharger complies with all the requirements of this section. This requirement does not relieve a discharger from notifying other entities as required by State or Federal regulations.

7. INSPECTIONS AND MONITORING

A. Storm Drainage System

The GSWMD has the authority to periodically inspect the portion of the storm drainage system within the City of Gary's jurisdiction in an effort to detect and eliminate illicit connections and discharges into the system. This inspection may include an assessment (preliminary screening) of discharges from outfalls connected to the system in order to determine if prohibited flows are being conveyed into the storm drainage system. It may also include spot testing of waters contained in the storm drainage system itself to detect the introduction of pollutants into the system by means other than a defined outfall, such as dumping or contaminated sheet runoff.

B. Potential Polluters

If, as a result of a storm drainage system inspection or other relevant evidence, there is reason to believe that a discharger has caused or contributed to an illicit discharge, the

GSWMD may inspect and/or obtain storm water samples from storm water runoff and facilities of the subject discharger, to determine compliance with the requirements of this Ordinance. Upon request, the discharger shall allow the GSWMD's properly identified representative to enter upon the premises of the discharger at any hour necessary for the purposes of such inspection or sampling. The GSWMD or its properly identified representative may place on the discharger's property the equipment or devices used for such sampling or inspection. Tampering with any equipment placed on the discharger's property for sampling, monitoring, and/or inspection purposes is punishable by a fine of up to \$2,500 per violation. Identified illicit connections or discharges shall be subject to enforcement action as described in Chapter 8 of this Ordinance.

C. New Development and Re-Development

Following the final completion of construction and the receipt of record drawings by the GSWMD's Office, the GSWMD has the authority to inspect new development and re-development sites to verify that all on-site storm water conveyances, installed BMP systems, and connections to the storm water drainage system are in compliance with this Ordinance.



**CHAPTER THREE
STORM WATER QUANTITY MANAGEMENT**

1. APPLICABILITY AND EXEMPTIONS

The storage and controlled release rate of excess storm water runoff shall be required for all new business, commercial and industrial developments, residential subdivisions, planned development, rural estate subdivisions, and any redevelopment or other new construction located within the City of Gary. The GSWMD, after thorough investigation and evaluation, may waive the requirement of controlled runoff for minor projects.

2. POLICY ON STORM WATER QUANTITY MANAGEMENT

A. Detention Policy

It is recognized that most streams and drainage channels serving the City of Gary do not have sufficient capacity to receive and convey increased storm water runoff resulting from continued urbanization. Accordingly, the storage and controlled release of excess storm water runoff shall be required for all developments and redevelopments located within the City of Gary's jurisdictional area.

i. General Release Rates

In general, the post-development release rates for developments up to and including the 100-year return period storm may not exceed 0.2 cfs per acre of development. For sites where the pre-developed area has more than one (1) outlet, the release rate should be computed based on pre-developed discharge to each outlet point. The computed release rate for each outlet point shall not be exceeded at the respective outlet point even if the post developed conditions would involve a different arrangement of outlet points. For sites with existing significant depressional storage, the general release rates may have to be reduced to reflect a significantly smaller runoff to the outlet point in existing conditions.

ii. Release Rates for Sites Using Below Grade Exfiltration Methods:

For sites using below grade exfiltration methods, the post-development release rates for developments up to and including the 100-year return period storm shall not exceed the 10-year pre-developed peak runoff rate as determined assuming the pre-developed site conditions are virgin soil. Site-specific release rates must be calculated according to a methodology described in The City of Gary Design Standards Manual. In no case shall the calculated site-specific release rates be larger than the general release rates provided above.

iii. Management of Off-Site Runoff

Runoff from all off-site upstream tributary areas may be bypassed around a detention/retention facility without attenuation. Such runoff may also be bypassed through the detention/retention facility without attenuation, provided that a separate outlet system or channel is incorporated for the safe passage of such flows, i.e., not through the primary outlet of a detention facility. Unless the pond is being designed as a regional detention facility, the primary outlet structure shall be sized and the invert elevation of the emergency overflow weir determined according to the on-site runoff only. Once the size and location of primary outlet structure and the invert elevation of the emergency overflow weir are determined by considering on-site runoff, the 100-year pond elevation is determined by routing the entire inflow, on-site and off-site, through the pond.

Note that the efficiency of the detention/retention facility in controlling the on-site runoff may be severely affected if the off-site area is considerably larger than the on-site area. As a general guidance, on-line detention may not be effective in controlling on-site runoff where the ratio of off-site area to on-site area is larger than 5:1. Additional detention (above and beyond that required for on-site area) may be required by the GSWMD when the ratio of off-site area to on-site area is larger than 5:1.

iv. Downstream Restrictions

In the event the downstream receiving channel or storm sewer system is inadequate to accommodate the post-developed release rate provided above without adverse consequences, then the allowable release rate shall be reduced to that rate permitted by the capacity of the receiving downstream channel or storm sewer system. Additional detention, as determined by the GSWMD, shall be required to store that portion of the runoff exceeding the capacity of the receiving sewers or watercourses. When such downstream restrictions are suspected, the GSWMD may require additional analysis to determine the receiving system's limiting downstream capacity.

If the proposed development makes up only a portion of the undeveloped watershed upstream of the limiting restriction, the allowable release rate for the development shall be in direct proportion to the ratio of its drainage area to the drainage area of the entire watershed upstream of the restriction.

B. Grading and Building Pad Elevations

The 100-year flow paths throughout a development, whether shown on FEMA maps or not, must be shown as hatched area on the plans and 30 feet along the centerline of the flow path contained within permanent drainage easements. A statement shall be added to the plat that would refer the viewer to the construction plans to see the entire extent of overflow path as hatched areas. No fences or landscaping can be constructed within the easement areas that may impede the free flow of storm water. These areas are to be maintained by the property owners or be designated as common areas that are to be maintained by the homeowners association. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings shall be set a minimum of 1 foot above the noted overflow path/ponding elevation.

It shall be the property owners' responsibility to maintain the natural features on their lots and to take preventive measures against any and all erosion and/or deterioration of natural or manmade features on their lots.

C. Acceptable Outlet and Adjoining Property Impacts Policies

Design and construction of the storm water facility shall provide for the discharge of the storm water runoff from off-site land areas as well as the storm water from the area being developed (on-site land areas) to an acceptable outlet(s) (as determined by the GSWMD) having capacity to receive upstream (off-site) and on-site drainage. The flow path from the development outfall(s) to a regulated drain or natural watercourse (as determined by the GSWMD) shall be demonstrated on an exhibit that includes topographic information. Any existing field tile encountered during the construction shall also be incorporated into the proposed storm water drainage system or tied to an acceptable outlet.

Where the outfall from the storm water drainage system of any development flows through real estate owned by others prior to reaching a publicly regulated drain or watercourse, no approval shall be granted for such drainage system until all owners of real estate and/or tenants crossed by the outfall consent in writing to the use of their real estate through a recorded easement. In addition, no activities conducted as part of the development shall be allowed to obstruct the free flow of flood waters from an upstream property.

If an adequate outlet is not located on site, then off-site drainage improvements may be required. Those improvements may include, but are not limited to, extending storm sewers, clearing, dredging and/or removal of obstructions to open drains or natural water courses, and the removal or replacement of undersized culvert pipes; whatever is required by the GSWMD.

D. No Net Loss Floodplain Storage Policy

Floodplains exist adjacent to all natural and man-made streams, regardless of contributing drainage area or whether they have been previously identified or mapped. Due to

potential impacts of floodplain loss on peak flows in streams and on the environment, disturbance to floodplains should be avoided. When the avoidance of floodplain disturbance is not practical, the natural functions of floodplain should be preserved to the extent possible. Streambank stabilization projects are exempt from the requirements of this subsection.

In an attempt to strike a balance between the legitimate need for economic development within the City of Gary and the need to preserve the natural functions of floodplains to the extent possible, compensatory excavation 1.5 times the floodplain storage lost shall be required for all activities within floodplain of streams located in the City of Gary where the drainage area of the stream is equal or larger than one half (1/2) square mile. This requirement shall be considered to be above and beyond the minimum requirements provided in the applicable flood hazard areas ordinance currently in effect in the City of Gary. The GSWMD may alter the compensation ratio, based on extenuating circumstances, for a specific project. Any floodplain modification must also be approved by the Indiana Department of Natural Resources (IDNR).

Note that, by definition, compensatory storage is the replacement of the existing floodplain and, in rare exceptions, the floodway storage lost due to fill. Compensatory storage is required when a portion of the floodplain is filled, occupied by a structure, or when as a result of a project a change in the channel hydraulics occurs that reduces the existing available floodplain storage. The compensatory storage should be located as near as reasonably possible to the placement of the fill and an unimpeded connection to an adjoining floodplain area must be maintained.

Computations must show 1.5 times the provision of compensatory floodplain storage for 10-year, 50-year, and 100-year storm events. That is, the post-development 10-year floodplain storage along a stream shall be 1.5 times the 10-year pre-development floodplain storage along the stream within the property limits, the post-development 50-year floodplain storage along a stream shall be 1.5 times the 50-year pre-development floodplain storage along the stream within the property limits, and the post-development 100-year floodplain storage along a stream shall be 1.5 times the 100-year pre-development floodplain storage along the stream within the property limits.

Calculations for floodplain volume shall be submitted in tabular form showing calculations by cross-section. The volume of floodplain storage under the without-project conditions and the with-project conditions should be determined using the average-end-area method with plotted cross-sections at a horizontal to vertical ratio of between 5:1 and 10:1, with 10- through 100-year flood elevations noted on each cross section. The scale chosen should be large enough to show the intent of proposed grading. Cross-sections should reflect both the existing and proposed conditions on the same plot. The location and extent of the compensatory storage area as well as the location and orientation of cross-sections should be shown on the grading plan.

3. CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

The calculation methods as well as the type, sizing, and placement of all storm water facilities shall meet the design criteria, standards, and specifications outlined in The City of Gary Design Standards Manual. The methods and procedures in the Manual are consistent with the policy stated above.

4. DRAINAGE EASEMENT REQUIREMENTS

There shall be no trees or shrubs planted, nor any structures or fences constructed, in any drainage easement, unless approved in writing by the GSWMD. All storm water systems, including detention or retention basins, conveyance systems, structures and appurtenances, located outside of the right-of-way may be incorporated into the City of Gary's system at the sole discretion of the GSWMD. The developer shall petition to incorporate the storm system into the

City of Gary's system. The storm water management permit shall not be approved until such petition is submitted in a form acceptable to the GSWMD.

The following specific areas may be included in a petition:

A. Subdivisions

- i. All new channels, drain tiles equal to or greater than 12 inches in diameter, inlet and outlet structures of detention and retention ponds, and appurtenances thereto as required by this chapter, that are installed in subdivisions requiring a storm water management permit from the GSWMD may be petitioned to become incorporated into the City of Gary's system upon completion, proper inspection, and acceptance by the GSWMD. New drain tiles refer to all sub-surface storm water piping, tubing, tiles, manholes, inlets, catch basins, risers, etc.
- ii. New drain tile or sewers shall be placed in a 30-foot easement (15 feet from centerline on each side) and shall be designated on the record plat as 30-foot drainage easement. Wider easements may be required by the GSWMD when the depth of pipe is greater than 6 feet, depending on the pipe size. The GSWMD, at its sole discretion, may allow a smaller easement for short distances in order to avoid extreme hardship to the applicant.
- iii. A minimum of 25 feet from top of the bank on each side of a new channel shall be designated on the record plat as a drainage easement.
- iv. Rear-yard swales and emergency overflow paths associated with detention ponds shall not be included in a petition for incorporation. However, a minimum of 30 feet width (15 feet from centerline on each side) needs to be designated as a drainage easement.
- v. A minimum of 30 feet beyond the actual footprint (top of the bank) of storm water detention facilities shall be designated as a drainage easement. A minimum 30-foot width easement shall also be required as access easement, unless the pond is immediately next to a public right-of-way.
- vi. The statutory 75-foot (each side) drainage easement for County regulated drains already within the City of Gary's system may be reduced if the drain is re-classified by the Lake County Surveyor as an Urban Drain.
- vii. An annual maintenance assessment shall be set up on each new publicly regulated drain established in a new subdivision. The amount of the assessment will be determined by the GSWMD and so certified.
- viii. If the GSWMD accepts the petition for incorporation into their system, the following statement shall become part of the Restrictive Covenants of every platted subdivision and shown on recorded plat: *“channels, tile drains 12-inch or larger, inlets and outlets of detention and retention ponds, and appurtenances thereto within designated drain easements are extensions of the City of Gary's storm water drainage system and are the responsibility of the GSWMD. Drainage swales and tile drains less than 12-inches in inside diameter shall be the responsibility of the owner or homeowner association.”*
- ix. The following statement shall be put on each subdivision plat: *“A petition addressed to the GSWMD has been filed in duplicate with the City, requesting that the subdivision's storm drainage system and its easements be accepted into the City's regulated drainage system. The storm drainage system and its easements that are accepted into the City's regulated drainage system are delineated on the plat as drainage easements. Drainage easements are storm water easements and drainage rights of way that are hereby dedicated to the public and to the City of Gary, Indiana for the sole and exclusive purpose of controlling and managing surface water and/or for the installation, operation, and maintenance of storm sewers, tile drains, and other storm water conveyance and treatment facilities. All other storm drainage easements have not been accepted into the City's system. All drainage improvements performed relative to the conveyance of storm water runoff and the perpetual maintenance thereof, within the latter easements, shall be the responsibility of the owner or homeowner association.*

The GSWMD assumes no responsibility relative to said improvements or the maintenance thereof. This subdivision contains _____ linear feet of open ditches and _____ linear feet of subsurface drains that will be included in the City's Regulated Drainage System.” The noted drainage facilities' lengths, broken down by the length of open and subsurface drainageways, shall also be shown in tabular form in a prominent position on the plat.

- x. Any crossing of and/or encroachment upon a Drainage Easement requires application to and approval by the GSWMD, and the Lake County Surveyor's office if it is regulated by the County.

B. Non-Subdivisions

Where the GSWMD is responsible for maintenance of the drainage system, drainage easements of 25 feet from the top of bank on each side of the channel or each side of the tile centerline must be dedicated to the City of Gary. In addition, a minimum of 25-foot width of vegetative filter strip must be provided, and maintained by the applicant, along top-of-bank, on each side, within these easements.

C. State, County, School Properties

All new channels, swales, drain tiles, inlet and outlet structures of detention and retention ponds, and appurtenances thereto as required by this chapter, that are installed on the State, County, or school property will be maintained, repaired, and constructed by the entity and will not become the GSWMD's maintenance responsibility unless contracted for with GSWMD for reasonable compensation. The design must meet all the appropriate permitting requirements and the standards of this Ordinance for permitting, sizing and installation. Any off-site portion of the drainage system must be within easements and have clearly defined maintenance agreements.

5. PLACEMENT OF UTILITIES

No utility company may disturb existing storm drainage facilities without the consent of the GSWMD Director, whose decision may be appealed to the Board of Directors of the GSWMD. All existing drainage facilities shall have senior rights and damage to said facilities shall result in penalties as prescribed in Chapter 8 of this Ordinance.

6. STRUCTURES NEAR COUNTY REGULATED DRAINS

For regulated drains not located in platted subdivisions, unless otherwise accepted by the Lake County Surveyor, no permanent structure (including fences) shall be erected within seventy-five feet measured at right angles from a) the existing top edge of each bank of a County Regulated open Drain, as determined by the Lake County Surveyor; or b) the center line of a tiled County Regulated Drain. The Indiana Drainage Code may be consulted for further details.

7. INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING

After the approval of the storm water management permit by the GSWMD and the commencement of construction activities, the GSWMD has the authority to conduct inspections of the work being done to insure full compliance with the provisions of this Ordinance, the City of Gary Design Standards Manual, and the terms and conditions of the approved permit.

The GSWMD also has the authority to perform long-term, post-construction inspection of all public or privately-owned storm water quantity and quality facilities within its jurisdiction. The inspection will cover physical conditions, available storage capacity, and the operational condition of key facility elements. Storm water facilities shall be maintained in good condition, in accordance with the terms and conditions of the approved storm water management permit, and shall not be subsequently altered, revised or replaced except in accordance with the approved storm water permit, or in accordance with approved amendments or revisions to the permit. If

The City of Gary Storm Water Management Ordinance

deficiencies are found during an inspection, the owner of the facility will be notified by GSWMD and will be required to take all necessary measures to correct such deficiencies. If the owner fails to correct the deficiencies within the allowed time period, as specified in a written notice, the GSWMD may undertake the work and collect from the owner the cost of performing the work and, if necessary, using lien rights and all other legal methods for recovery of such cost.

Assignment of responsibility for maintaining facilities serving more than one lot or holding shall be documented by appropriate covenants to property deeds, unless responsibility is formally accepted by a public body, and determined before the final storm water permit is approved. Storm water detention/retention basins may be donated to the GSWMD or other unit of government designated by the Board of Directors of the GSWMD by written agreement, for ownership and permanent maintenance providing the GSWMD or other governmental unit is willing to accept responsibility.



**CHAPTER FOUR
STORM WATER POLLUTION PREVENTION FOR CONSTRUCTION SITES**

1. APPLICABILITY AND EXEMPTIONS

The GSWMD will require a detailed Storm Water Pollution Prevention Plan (SWPPP), which includes erosion and sediment control measures and materials handling procedures, to be submitted as part of the construction plans and specifications. Any project located within the City of Gary that includes clearing, grading, excavation, and other land disturbing activities, resulting in the disturbance of 1 acre or more of total land area, is subject to the requirements of this chapter. This includes both new development and re-development. This chapter also applies, at the discretion of the GSWMD, to disturbances of less than 1 acre of land that are a part of a larger development plan if the larger plan will ultimately disturb one (1) or more acres of land. Section 3 of this chapter provides guidelines for calculating land disturbance. Projects meeting the coverage requirements of 327 IAC 15-5 (Rule 5) shall also be in compliance with 327 IAC 15-5. The design and construction plans for all land-disturbing activities, for which a detailed SWPPP is not required under this chapter, would still need to include an erosion and sediment control plan sheet.

The requirements under this chapter do not apply to the following activities:

- a. agricultural land disturbing activities; or
- b. forest harvesting activities.

The requirements under this chapter do not apply to the following activities, provided other applicable State permits contain provisions requiring immediate implementation of soil erosion control measures:

- a. Landfills that have been issued a certification of closure under 329 IAC 10.
- b. Municipal solid waste landfills that are accepting waste pursuant to a permit issued by the Indiana Department of Environmental Management under 329 IAC 10 that contains equivalent storm water requirements, including the expansion of landfill boundaries and construction of new cells either within or outside the original solid waste permit boundary.

For an individual lot where land disturbance is expected to be one (1) acre or more, the individual lot owner must complete their own NOI (Notice of Intent) letter, obtain and complete a storm water permit application from the GSWMD, and ensure that a sufficient construction and storm water pollution prevention plan is completed and submitted in accordance with Chapter 7 of this Ordinance; regardless of whether the individual lot is part of a larger permitted project site.

An individual lot with land disturbance less than one (1) acre, located within a larger permitted project site, is considered part of the larger permitted project site, and the individual lot operator must comply with the terms and conditions of the storm water permit approved for the larger project site. The storm water permit application for the larger project site must include detailed erosion and sediment control measures for individual lots. In addition, these individual lots are required to submit Individual Lot Plot Plan Permit applications prior to receiving a building permit. Details of the permitting process are contained in Chapter 7.

It will be the responsibility of the project site owner to complete a storm water permit application and ensure that a sufficient construction plan is completed and submitted to GSWMD in accordance with Chapter 7 of this Ordinance. It will be the responsibility of the project site owner to ensure compliance with this Ordinance during the construction activity and implementation of the construction plan, and in following and implementing all best management practices, and to notify the GSWMD with a sufficient Notice of Termination letter (NOT) upon completion of the project and stabilization of the site. However, all persons engaging in construction and land disturbing activities on a permitted project site meeting the applicability requirements must comply with the requirements of this Chapter, this Ordinance and applicable IDEM regulations.

2. POLICY ON STORM WATER POLLUTION PREVENTION

Effective Storm Water Pollution Prevention on construction sites is dependent on a combination of preventing movement of soil from its original position (erosion control), intercepting displaced soil prior to entering a water body (sediment control), and proper on-site materials handling. The developer must submit to the GSWMD, a SWPPP with detailed erosion and sediment control plans as well as a narrative describing materials handling and storage, and construction sequencing. The following principles apply to all land-disturbing activities and should be considered in the preparation of a SWPPP within the City of Gary.

- A. Minimize the potential for soil erosion by designing a development that fits the topography and soils of the site. Deep cuts and fills in areas with steep slopes should be avoided wherever possible, and natural contours should be followed as closely as possible.
- B. Existing natural vegetation should be retained and protected wherever possible. Areas immediately adjacent (within 35 feet of top of bank) to watercourses and lakes also should be left undisturbed wherever possible. Unvegetated or vegetated areas with less than 70% cover that are scheduled or likely to be left inactive for 15 days or more must be temporarily or permanently stabilized with measures appropriate for the season and the site to reduce erosion potential. Alternative measures to site stabilization may be acceptable if the project site owner or their representative can demonstrate they have implemented and maintained erosion and sediment control measures adequate to prevent sediment discharge from the inactive area.
- C. All activities on a site should be conducted in a logical sequence so that the smallest practical area of land will be exposed for the shortest practical period of time during development.
- D. The length and steepness of designed slopes should be minimized to reduce erosion potential. Drainage channels and swales must be designed and adequately protected so that their final gradients and resultant velocities will not cause erosion in the receiving channel or at the outlet.
- E. Sediment-laden water which otherwise would flow from the project site shall be treated by erosion and sediment control measures appropriate to minimize sedimentation. A stable construction site access shall be provided at all points of construction traffic ingress and egress to the project site.
- F. Appropriate measures shall be implemented to prevent wastes or unused building materials, including, garbage, debris, packaging material, fuels and petroleum products, hazardous materials or wastes, cleaning wastes, wastewater, concrete truck washout, and other substances from being carried from a project site by runoff or wind. Identification of areas where concrete truck washout is permissible must be clearly posted at appropriate areas of the site. Wastes and unused building materials shall be managed and disposed of in accordance with all applicable State statutes and regulations. Proper storage and handling of materials such as fuels or hazardous wastes, and spill prevention and cleanup measures shall be implemented to minimize the potential for pollutants to contaminate surface or ground water or degrade soil quality.
- G. Public or private roadways shall be kept cleared of accumulated sediment that is a result of runoff or tracking. Bulk clearing of accumulated sediment shall not include flushing the area with water. Cleared sediment shall be redistributed or disposed of in a manner that is in accordance with all applicable statutes and regulations.
- H. Collected runoff leaving a project site must be either discharged directly into a well-defined, stable receiving channel, or diffused and released to adjacent property without causing an erosion or pollutant problem to the adjacent property owner.
- I. Natural features, including wetlands, shall be protected from pollutants associated with storm water runoff.

3. CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

In calculating the total area of land disturbance, for the purposes of determining applicability of this Chapter to the project, the following guidelines should be used:

- A. Off-site construction activities that provide services (for example, road extensions, sewer, water, and other utilities) to a land disturbing project site, must be considered as a part of the total land disturbance calculation for the project site, when the activity is under the control of the project site owner.
- B. Strip developments will be considered as one (1) project site and must comply with this chapter unless the total combined disturbance on all individual lots is less than one (1) acre and is not part of a larger common plan of development or sale.
- C. To determine if multi-lot project sites are regulated by this rule, the area of land disturbance shall be calculated by adding the total area of land disturbance for improvements, such as, roads, utilities, or common areas, and the expected total disturbance on each individual lot, as determined by the following:
 - i. For a single-family residential project site where the lots are one-half (0.5) acre or more, one-half (0.5) acre of land disturbance must be used as the expected lot disturbance.
 - ii. For a single-family residential project site where the lots are less than one half (0.5) acre in size, the total lot must be calculated as being disturbed.
 - iii. To calculate lot disturbance on all other types of projects sites, such as industrial and commercial projects project sites, a minimum of one (1) acre of land disturbance must be used as the expected lot disturbance, unless the lots are less than one (1) acre in size, in which case the total lot must be calculated as being disturbed.

The calculation methods as well as the type, sizing, and placement of all storm water pollution prevention measures for construction sites shall meet the design criteria, standards, and specifications outlined in the Indiana Storm Water Quality Manual, and the City of Gary Design Standards Manual. The methods and procedures included in these two references are in keeping with the above stated policy and meet the requirements of IDEM's Rule 5.

4. INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING

Following approval of the storm water management permit by the GSWMD and commencement of construction activities, the GSWMD has the authority to conduct inspections of the site to ensure full compliance with the provisions of this chapter, the Indiana Storm Water Quality Manual, the City of Gary Design Standards Manual, and the terms and conditions of the approved permit.

A self-monitoring program must be implemented by the project site owner to ensure the storm water pollution prevention plan works effectively. A trained individual, acceptable to GSWMD, shall perform a written evaluation of the project site by the end of the next business day following each measurable storm event. If there are no measurable storm events within a given week, the site should be monitored at least once in that week. Weekly inspections by the trained individual shall continue until the entire site has been stabilized and a NOT has been issued. The trained individual should look at the maintenance of existing storm water pollution prevention measures, including erosion and sediment control measures, drainage structures, and construction materials storage/containment facilities, to ensure they are functioning properly. The trained individual should also identify additional measures, beyond those originally identified in the storm water pollution prevention plan, necessary to remain in compliance with all applicable statutes and regulations.

The resulting evaluation reports must include the name of the individual performing the evaluation, the date of the evaluation, problems identified at the project site, and details of maintenance, additional measures, and corrective actions recommended and completed.

The City of Gary Storm Water Management Ordinance

The SWPPP shall serve as a guideline for storm water quality, but should not be interpreted to be the only basis for implementation of storm water quality measures for a project site. The project site owner is responsible for implementing, in accordance with this Chapter, all measures necessary to adequately prevent polluted storm water runoff. Recommendations by the trained individual for modified storm water quality measures should be implemented.

The GSWMD has the right to request complete records of maintenance and monitoring activities involving storm water pollution prevention measures. All evaluation reports for the project site must be made available to GSWMD, in an organized fashion, within forty-eight (48) hours upon request.



**CHAPTER FIVE
STORM WATER QUALITY MANAGEMENT FOR POST-CONSTRUCTION**

1. APPLICABILITY AND EXEMPTIONS

In addition to the requirements of Chapter 4, the SWPPP, which is to be submitted to the GSWMD as part of the storm water management permit application, must also include post-construction storm water quality measures. These measures are incorporated as a permanent feature into the site plan and are left in place following completion of construction activities to continuously treat storm water runoff from the stabilized site. Any project located within the City of Gary that includes clearing, grading, excavation, and other land disturbing activities, resulting in the disturbance of 1 acre or more of total land area, is subject to the requirements of this chapter. This includes both new development and re-development, and disturbances of less than one (1) acre of land that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one (1) or more acres of land, within the MS4 area. The requirements also apply to any development or redevelopment that the GSWMD determines will cause more than a de minimis adverse affect on public waters.

The requirements under this chapter do not apply to the following activities:

- A. agricultural land disturbing activities; or
- B. forest harvesting activities; or
- C. construction activities associated with a single family residential dwelling disturbing less than 0.5 acres, when the dwelling is not part of a larger common plan of development or sale; or
- D. a single family residential project; or
- E. a single-family residential strip development where the developer offers for sale or lease without land improvements and the project is not part of a larger common plan of development of sale; or
- F. individual building lots within a larger permitted project.

The requirements under this chapter do not apply to the following activities, provided other applicable regulatory permits contain provisions requiring immediate implementation of soil erosion control measures:

- A. Landfills that have been issued a certification of closure under 329 IAC 10.
- B. Municipal solid waste landfills that are accepting waste pursuant to a permit issued by the Indiana Department of Environmental Management under 329 IAC 10 that contains equivalent storm water requirements, including the expansion of landfill boundaries and construction of new cells either within or outside the original solid waste permit boundary.

It will be the responsibility of the project site owner to complete a storm water permit application and ensure that a sufficient construction plan is completed and submitted to the GSWMD in accordance with Chapter 7 of this Ordinance. It will be the responsibility of the project site owner to ensure proper construction, installation, and maintenance of all storm water BMPs in compliance with this Ordinance and with the approved storm water management permit, and to notify the GSWMD with a sufficient NOT letter upon completion of the project and stabilization of the site. However, all eventual property owners of storm water quality facilities meeting the applicability requirements must comply with the requirements of this Ordinance.

2. POLICY ON STORM WATER QUALITY MANAGEMENT

It is recognized that developed areas, as compared to undeveloped areas, generally have increased imperviousness, decreased infiltration rates, increased runoff rates, and increased concentrations of pollutants, including, but not limited to, fertilizers, herbicides, greases, oil, salts and metals. There are four major sources of pollutants for a stabilized construction site:

- a. Deposition of atmospheric material (including wind-eroded material and

- dust)
- b. General urban pollution (thermal pollution, litter)
- c. Pollutants associated with specific land uses
- d. Suspended solids

It should be noted that some pollutants accumulate on impervious surfaces. This accumulated material is then subject to being washed into watercourses during storm events. It is for this reason that fish kills often occur during a rain event with a substantial prior rainless period. This is also the reason that the most hazardous driving conditions are realized after the initial onset of a storm event, when deposited oil has not yet washed into adjacent conveyance systems. Post-construction pollutants of concern include:

- a. Toxic chemicals from illegal dumping and poor storage and handling of materials. Industrial sites pose the most highly variable source of this pollution due to the dependency of the specific process to the resulting pollution amounts and constituents. As during construction, these chemicals can pose acute (short-term) or chronic (long-term) risk to aquatic life, wildlife and the general public.
- b. Pathogens from illicit sanitary connections to storm sewer systems, combined sewers, leaking septic systems, and wildlife and domestic animal waste. Pathogens may pose a direct health risk to humans and animals.
- c. Nutrients can be released from leaking septic systems, Canine Parks or applied in the form of fertilizers. Golf courses, manicured landscapes and agricultural sources are the primary land uses associated with excess fertilization. Excessive nutrients in the local ecosystem are the source of algal blooms in ponds and lakes. These excessive nutrients also lead to acceleration of the eutrofication process, reducing the usable lifespan of these water bodies. Nitrogen and phosphorous are the primary nutrients of concern.
- d. Oxygen demand can be impacted by chemicals transported on sediment, by nutrients, and other pollutants (such as toxic chemicals). Reduced levels of oxygen impair or destroy aquatic life.
- e. Oils and hydrocarbons accumulate in streets from vehicles. They can also be associated with fueling stations and illicit dumping activities. Oils and hydrocarbons pose health risk to both aquatic and human health.
- f. Litter can result in a threat to aquatic life. The aesthetic impact can also reduce the quality of recreational use.
- g. Metals can be associated with vehicular activity (including certain brake dusts), buildings, construction material storage, and industrial activities. Metals are often toxic to aquatic life and threaten human health.
- h. Chlorides (salts) are historically associated with deicing activities. Chlorides are toxic to native aquatic life (verses saltwater aquatic life). Communities should consider a combination of cinders or sand to replace or supplement their deicing activities with chlorides. In addition, chloride should always be stored in enclosed structures.
- i. Thermal effects can be introduced by the removal of shade provided by riparian trees, as well as impervious channel linings, such as concrete, which release stored heat to water passing over them. Other sources of elevated temperature include effluent from power plant and industrial activities. Thermal pollution can threaten aquatic habitat, including fish species and beneficial water insects. Of particular concern are salmonoid streams, due to the effect of thermal pollution on spawning for this particular species.

As new development and re-development continues in the City of Gary, measures must be taken to intercept and filter pollutants from storm water runoff prior to reaching creeks, streams, rivers,

lakes, and other public water bodies. Through the use of Best Management Practices (BMP), storm water runoff will be filtered and harmful amounts of sediment, nutrients, and contaminants will be removed, to the maximum extent practicable. The City of Gary has adopted a policy that the control of storm water quality will be based on the management of Total Suspended Solids (TSS), with additional quantification of BOD, P, N, and heavy metal impacts.

The project site owner must submit to the GSWMD, a SWPPP that would show placement of appropriate BMP(s) from a pre-approved list of BMPs specified in the City of Gary Design Standards Manual. The noted BMPs must be designed, constructed, and maintained according to guidelines provided or referenced in the City of Gary Design Standards Manual. In addition to 80% TSS removal, BMPs should be selected based on their ability to address, to the extent possible, the specific pollutants of concern for the development, as identified above, that may affect the site. Each development should quantify the proposed loading effects of the development for BOD, TSS, P, N, and metals. GSWMD reserves the right to require additional measures and testing if any of the proposed pollutant loadings are expected to increase significantly due to the proposed development, if there are known water quality problems in the receiving water, or for discharges to pristine wetlands or other sensitive receiving waters.

Practices other than those specified in the pre-approved list may be utilized. However, the burden of proof as to whether the performance minimum eighty percent (80%) TSS removal and addressing the impacts on other pollutants of concern and ease of maintenance of such practices will be according to guidelines provided in the City of Gary Design Standards Manual is with the applicant. Details regarding the procedures and criteria for consideration of acceptance of such BMPs are provided in the City of Gary Design Standards Manual.

Gasoline outlets and refueling areas must install appropriate practices to prevent lead, copper, zinc, and hydrocarbons from being in storm water runoff from these areas. These requirements will apply to all new facilities and existing facilities.

3. CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

Calculation of land disturbance should follow the guidelines discussed in Chapter 4, Section 3.

The calculation methods as well as the type, sizing, and placement of all storm water quality management measures, or BMPs shall meet the design criteria, standards, and specifications outlined in the Indiana Storm Water Quality Manual or The City of Gary Design Standards Manual. The methods and procedures included in these two references are in keeping with the above stated policy and meet the requirements of IDEM's Rule 13. All above ground fuel and chemical tanks must have a secondary containment method with the capacity of at least the volume of the tank (s).

4. EASEMENT REQUIREMENTS

All storm water quality management systems, including detention or retention basins, filter strips, pocket wetlands, in-line filters, infiltration systems, conveyance systems, structures and appurtenances located outside of the right-of-way shall be incorporated into permanent easements. For developments occurring within the City and at the discretion of the GSWMD, the developer may petition to establish the noted system as a portion of the City of Gary's drainage system but the drainage plan shall not be accepted until such petition is submitted in a form acceptable to the GSWMD. For the purposes of monitoring, inspection, and general maintenance activities, the petition should include a drainage easement with a minimum width determined through the application process.

5. INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING

After the approval of the storm water management permit by the GSWMD and the commencement of construction activities, the GSWMD has the authority to conduct inspections of the work being done to ensure full compliance with the provisions of this Chapter, the City of Gary Design Standards Manual, and the terms and conditions of the approved permit.

The City of Gary Storm Water Management Ordinance

Storm water quality facilities shall be maintained in good condition, in accordance with the Operation and Maintenance procedures and schedules listed in the Indiana Storm Water Quality Manual and the City of Gary Design Standards Manual, and the terms and conditions of the approved storm water permit, and shall not be subsequently altered, revised, or replaced except in accordance with the approved storm water permit, or in accordance with approved amendments or revisions in the permit. Following construction completion, inspection and maintenance of storm water quality facilities shall be the long-term responsibility of the owner. Storm water detention / retention basins may be donated to the City of Gary or other unit of government approved by the GSWMD, for ownership and permanent maintenance providing the GSWMD or other governmental unit is willing to accept such responsibility.

The GSWMD also has the authority to perform long-term, post-construction inspection of all public or privately owned storm water quality facilities. The inspections will follow the Operation and Maintenance procedures included in the City of Gary Design Standards Manual and / or the permit application for each specific BMP. The inspection will cover physical conditions, available water quality storage capacity and the operational condition of key facility elements. Noted deficiencies and recommended corrective action will be included in an inspection report.



**CHAPTER SIX
DEVELOPMENT IN WETLANDS REGULATIONS**

1. APPLICABILITY AND EXEMPTIONS

This chapter shall apply to all land-disturbing activities regulated by this Ordinance. No building permit shall be issued and no land disturbance started for any construction in a development, as defined in Appendix A, identified as containing wetlands until the owner thereof has obtained all required state and federal permits or releases related to the dredging or filling of wetlands. As a pre-condition to receiving a building or land disturbance permit for a development identified as containing wetlands where the applicant for the permit does not intend to fill a wetland, such unaffected wetland must be identified in one of the methods enumerated in Section 3 of this Chapter, shown on the proposed development plans, and submitted to the GSWMD along with plans to protect and avoid any disturbance to such unaffected wetland.

The requirements under this chapter do not apply to the following:

- A. For the purpose of City’s regulations, artificially-constructed ponds, drainage ditches, storm water retention/detention basins, gravel pits, stone quarries, and treatment lagoons that exist at the site and that may appear to display wetland-like properties. However, the applicant would need to independently contact IDEM or the U.S. Army Corps of Engineers for appropriate Federal and State requirements;
- B. Wetlands or portions thereof for which federal or state permits for fill were issued prior to the enactment of this Chapter; or to
- C. Any area or use excluded from local planning and zoning jurisdiction by federal or state law.

It will be the responsibility of the project site owner to complete a storm water permit application and ensure that all wetlands identified to be present at the project site are sufficiently protected and preserved as set forth in this Chapter.

2. POLICY ON WETLANDS DISTURBANCE PREVENTION

It is the public policy of the City of Gary to preserve, protect, and conserve freshwater wetlands, and the benefits derived wherefrom, to prevent the despoliation and destruction of freshwater wetlands, and to regulate use and development of such wetlands to secure the natural benefits of freshwater wetlands, consistent with the general welfare and beneficial to the economic and social development of the City of Gary.

3. WETLANDS IDENTIFICATION

In implementing the terms of this Chapter, any of the following materials shall be prima facie evidence which may be relied upon by the GSWMD for the identification, delineation, and existence of a wetland:

- A. National Wetlands inventory maps produced or maintained by the United States Fish and Wildlife Service.
- B. Maps produced, or maintained and utilized, by the United States Corps of Engineers for identification and/or delineation of wetlands.
- C. Maps produced, or maintained and utilized, by the United States Natural Resources Conservation Service for the identification and/or delineation of wetlands.
- D. Field investigations performed by the United States Army Corps of Engineers or private consultants using the latest U.S. Corps of Engineers methodology.



**CHAPTER SEVEN
PERMIT REQUIREMENTS AND PROCEDURES**

1. PRELIMINARY DRAINAGE PLAN APPROVAL

In order to establish that an adequate drainage outlet(s) exists for a proposed subdivision seeking a Primary Plat approval from the Plan Commission, or for certain commercial developments as determined by the GSWMD, a developer must first apply for a Preliminary Drainage Approval from the GSWMD. As part of the noted Preliminary Drainage Approval application, a developer shall submit conceptual drainage plans for review by the GSWMD prior to the Plan Commission hearing. Note that any preliminary drainage approval by the GSWMD as a result of such a review is based on preliminary data and shall not be construed as a final drainage approval or considered binding on either party. The following is a general listing of minimum data requirements for the review of conceptual drainage plans:

- A. Two (2) complete sets of conceptual plans showing general project layout, including existing and proposed drainage systems and proposed outlets (provide both ½ size and full size drawings).
- B. General description of the existing and proposed drainage systems in narrative form.
- C. Watershed Boundaries with USGS Contours or best information possible.
- D. Existing watercourse or regulated drains.
- E. Letter of Intent for obtaining any needed consents, off-site easements, or right-of-way.

2. PERMIT PROCEDURES

This section applies to all development, or re-development of land, that results in land disturbance of 10,000 square feet or more. Individual lots with land disturbance less than 10,000 square feet that are developed within a larger permitted project site should refer to Section 4 for plan review requirements and procedures.

The City of Gary storm water management permitting procedures are detailed in the City of Gary Design Standards Manual. These procedures must be followed by the applicant in order to successfully obtain a permit to comply with Rule 5 and Rule 13 storm water regulations.

Once a permit has been issued, the project site owner must file a NOI a minimum of 48 hours prior to the commencement of construction activities. Notification shall be in the form of an updated NOI form. The submittal of the NOI must be provided to the GSWMD and, for projects where one (1) acre or more is disturbed, the IDEM. The IDEM submittal must include a proof of publication, verification that GSWMD approved the plan, and a \$100.00 fee. For GSWMD, copies of the final, approved construction plans, storm water drainage technical report, storm water pollution prevention plan for construction sites, and post-construction storm water pollution prevention plan shall also accompany the above-noted written notification and proof of publication. The number of required copies varies from case to case and should be determined by contacting the GSWMD. A pre-construction meeting is required to be held with the participation of the GSWMD and other entities involved prior to any grading activity to ensure that appropriate perimeter control measures have been implemented on the site and the location of any existing subsurface drains has been properly marked.

Once construction starts, the project owner shall monitor construction activities and inspect all storm water pollution prevention measures in compliance with this Ordinance and the terms and conditions of the approved permit. Upon completion of construction activities, record plans must be submitted to the GSWMD. An NOT shall be sent to the GSWMD once the construction site has been stabilized and all temporary erosion and sediment control measures have been removed. The GSWMD, or representative, shall inspect the construction site to verify the requirements for an NOT have been met. Once the applicant receives a “verified” copy of the NOT, he/she must forward a copy to IDEM. Permits issued under this scenario will expire 5 years from the date of issuance. If construction is

not completed within 5 years, the NOI must be resubmitted at least 90 days prior to expiration.

3. SECONDARY (FINAL) STORM WATER APPROVAL REQUIREMENTS

Specific projects or activities may be exempt from all or part of the informational requirements listed below. Exemptions are detailed in the “Applicability and Exemptions” Sections of Chapters 2 through 5. If a project or activity is exempt from any or all requirements of this Ordinance, an application should be filed listing the exemption criteria met, in lieu of the information requirements listed below. This level of detailed information is not required from individual lots, disturbing less than 1 acre of land, developed within a larger permitted project site. Review and acceptance of such lots is covered under Section 4 of this Chapter.

The different elements of a permit submittal for a Secondary (final) Storm Water Plan approval include the following:

- A. Initial Notice of Intent
- B. Construction Plans
- C. Storm Water Drainage Technical Report
- D. Storm Water Pollution Prevention Plan for Construction Sites
- E. Post-Construction Storm Water Pollution Prevention Plan

Details regarding the above components are provided in the City of Gary Design Standards Manual.

4. REVIEW OF INDIVIDUAL LOTS WITHIN A PERMITTED PROJECT

For individual lots disturbing less than 10,000 square feet, developed within a larger permitted project, a formal review and issuance of an Individual Lot Plot Plan Permit will be required before a building permit can be issued. All storm water management measures necessary to comply with this Ordinance must be implemented in accordance with permitted plan for the larger project.

The following information must be submitted to the GSWMD, for review and acceptance, by the individual lot operator, whether owning the property or acting as the agent of the property owner, as part of a request for review and issuance of an Individual Lot Plot Plan Permit that must be obtained prior to the issuance of a building permit.

- A. A certified site layout for the subject lot and all adjacent lots showing building pad location, dimensions, and elevations, and the drainage patterns and swales.
- B. Erosion and sediment control plan that, at a minimum, includes the following measures:
 - i. Installation and maintenance of a stable construction site access.
 - ii. Installation and maintenance of appropriate perimeter erosion and sediment control measures prior to land disturbance.
 - iii. Minimization of sediment discharge and tracking from the lot.
 - iv. Clean-up of sediment that is either tracked or washed onto roads. Bulk clearing of sediment shall not include flushing the area with water. Cleared sediment must be redistributed or disposed of in a manner that is in compliance with all applicable statutes and rules.
 - v. Adjacent lots disturbed by an individual lot operator must be repaired and stabilized with temporary or permanent surface stabilization.
 - vi. Self-monitoring program including plan and procedures.
- C. Name, address, telephone number, and list of qualifications of the trained individual in charge of the mandatory storm water pollution prevention self-monitoring program for the project site.

The individual lot operator is responsible for installation and maintenance of all erosion and sediment control measures until the site is stabilized.

5. CHANGES TO PLANS

Any changes or deviations in the detailed plans and specifications after approval of the applicable storm water management permit shall be filed with, and approved in writing by, the GSWMD prior to the land development involving the change. Copies of the changes, if accepted, shall be attached to the original plans and specifications.

6. FEE STRUCTURE

A. FEE AMOUNT

As a condition of the submittal and the review of an application and associated documents by the GSWMD, the applicant shall agree to pay the GSWMD the applicable fee for the review of all applications, drainage submittals, preliminary plans, final plans, construction plans and accompanying information and data, as well as pre-paid inspection fees, which shall be not more than the amount that is determined by the GSWMD to be sufficient to pay for all of the reasonable costs, direct and indirect, to the GSWMD for the performance of those activities. GSWMD shall adopt, publish and disseminate a schedule of said fees.

B. TIME OF PAYMENT

Applicant shall submit the specified fee at the time that the applicant submits its application to the GSWMD.

The GSWMD shall have the right to not approve the drainage improvements or to not approve a permit or the advancement of any project for which the applicable fees have not been paid.

C. METHOD OF PAYMENT

Fees shall be paid by one of the following methods:

- i. Certified Check
- ii. Cashier's Check
- iii. Money Order
- iv. Such other methods as may be agreed in writing by the GSWMD

All checks shall be made payable to the: Gary Storm Water Management District
3600 West 3rd Avenue
Gary, IN 46404

D. REFUND OF PAYMENT

Fees are refundable **only** if the GSWMD determines that compliance by the development with this Ordinance is not necessary.

7. REQUIRED ASSURANCES

As a condition of approval and issuance of the permit, except for a single family residence, the GSWMD shall require the applicant to provide assurance in form of an irrevocable letter of credit, a bond, or such other instrument or method of security acceptable in writing by the GSWMD when the storm water management plan has been accepted, all applicable fees paid, and before construction begins. Said assurance will guarantee a good faith execution of the storm water drainage plan, the storm water pollution prevention plan, the storm water quality management plan, and any permit conditions. The assurance shall be for an amount equal to one hundred ten percent (110%) of the total costs of all storm water management measures for the entire project. The above mentioned costs shall be based on an estimate as prepared by a registered engineer or registered land surveyor. Said costs shall be for the installation and ongoing monitoring and maintenance of erosion control measures and the construction and ongoing monitoring and maintenance of storm drainage infrastructure, detention/retention facilities, and storm water quality BMPs, as regulated under this Ordinance, until the construction is completed, site is stabilized, and as-built plans are accepted by the GSWMD. Assurances shall be for a minimum of \$5,000. The intent of this assurance is not only to complete the installation of storm drain infrastructure for the project, but also to assure that adequate storm water pollution prevention measures are properly installed and maintained. If

adequate assurances are set aside by the project site owner for the overall project, proof of total assurance can be submitted in place of an individual storm water assurance.

8. TERMS AND CONDITIONS OF PERMITS

In granting a storm water management permit, the GSWMD may impose such terms and conditions as are reasonably necessary to meet the purposes of this Ordinance and all applicable federal and state laws, rules, and regulations. The project site owner shall ensure compliance with such terms and conditions. Non-compliance with the terms and conditions of permits will be subject to enforcement as described in Chapter 8.

The project site owner shall inform all general contractors, construction management firms, grading or excavating contractors, utility contractors, and the contractors that have primary oversight on individual building lots of the terms and conditions of the storm water management permit and the schedule for proposed implementation. The project site owner is responsible for ensuring compliance with all terms of the permit by anyone working on the project site and may not assign that responsibility without the written consent of the GSWMD.

In the event that a project site is determined to impact or discharge to a Sensitive Area or is located in an Impact Drainage Area, the GSWMD may require more stringent storm water quantity and quality measures than detailed in this Ordinance, in the Indiana Storm Water Quality Manual, or in the City of Gary Design Standards Manual.

A. Determination of Sensitive Areas

Sensitive Areas include highly erodible soils, wetlands, threatened or endangered species habitat, outstanding waters, impaired waters, recreational waters, and surface drinking water sources. A listing of highly erodible soils, outstanding water, impaired water, recreation water, and surface drinking water sources can be found in the City of Gary Storm Water Quality Management Plan (SWQMP) - Part B, dated April 26, 2004 Draft and its updates. If wetlands are suspected on a site, wetland delineation should be completed in accordance with the methodology established by the U.S. Army Corps of Engineers and the wetland addressed in accordance to the requirements of Chapter 6 of this Ordinance. Special terms and conditions for development determined to impact or discharge to any Sensitive Area shall be included in the storm water management permit.

B. Determination of Impact Drainage Areas

The following areas shall be designated as Impact Drainage Areas, unless good reason for not including them is found to exist by the Board of Directors of the GSWMD.

- i. A floodway or floodplain as designated by the most updated City of Gary Code dealing with floodplain regulation.
- ii. Land within 25 feet of each bank of any ditch within the City of Gary's system.
- iii. Land within 15 feet of the centerline of any drain tile or enclosed conduit within the City of Gary's system.

The Board of Directors of the GSWMD is authorized, but is not required, to classify certain additional geographical areas as Impact Drainage Areas. In determining Impact Drainage Areas, the Board of Directors of the GSWMD shall consider such factors as topography, soil type, capacity of existing drains, and distance from adequate drainage facility.

Land that does not have an adequate outlet, taking into consideration the capacity and depth of the outlet, may be designated as an Impact Drainage Area by the Board of Directors of the GSWMD. Special terms and conditions for development within any Impact Drainage Area shall be included in the storm water management permit.

9. CERTIFICATION OF RECORD PLANS

After completion of construction of the project and before final acceptance of the storm water management plan, a professionally prepared and certified (by a licensed professional engineer or land surveyor) 'Record' set of plans shall be submitted to the GSWMD for review. Additionally, a digital copy of the 'Record' plans is required in a form and format acceptable to the GSWMD. These plans shall include all pertinent data relevant to the completed storm drainage system and storm water management facilities per GSWMD requirements.

In addition to the digital copy of the Record plans, digital copies of all reports and plans noted in Sections 3 and 4 of this Chapter shall be submitted in their final approved forms to the GSWMD in a format consistent with the City of Gary Design Standards Manual so that they can be electronically filed for any future reference.

The property owner, developer, or contractor shall be required to file a three-year maintenance bond or other acceptable guarantee with the GSWMD, prior to acceptance, in an amount not to exceed ten percent (10%) of the cost of the storm water drainage system located outside the public road right-of-ways, and in a form satisfactory to the GSWMD attorney in order to assure that such storm water system installation was done according to standards of good workmanship, that the materials used in the construction and installation were of good quality and construction, and that such project was done in accordance with the accepted plans, and this Ordinance. The bond or other acceptable guarantee shall be in effect for a period of three years after the date of the final project acceptance by the GSWMD.



**CHAPTER EIGHT
ENFORCEMENT**

1. COMPLIANCE WITH THIS ORDINANCE

In addition to the requirements of this Ordinance, compliance with the requirements set forth in the local Zoning Ordinances is also necessary. Compliance with all applicable ordinances of the City of Gary as well as with applicable State of Indiana and federal statutes and regulations shall also be required. Unless otherwise stated, all other specifications referred to in this Ordinance shall be the most recent edition available. Violations of the requirements of this Ordinance are subject to the penalties listed below. No building permit shall be issued for the construction, extension, remodeling, alteration or repair of any proposed or existing building in the City of Gary (see page 1 section 3 of this Ordinance) unless all of the applicable provisions of this Ordinance have been complied with.

2. PENALTIES FOR VIOLATIONS

Any person found in violation of any provision of this Ordinance shall be responsible for a civil infraction and subject to a maximum fine of \$2,500 for a first offense, and a maximum of \$2,500 for a subsequent offense, plus costs, damages, and expenses. Each day such violation occurs or continues shall be deemed a separate offense and shall make the violator liable for the imposition of a fine for each day. The rights and remedies provided for in this section are cumulative and in addition to any other remedies provided by law. An admission or determination of responsibility shall not exempt the offender from compliance with the requirements of this Ordinance.

Any person who aids or abets a person in a violation of this Ordinance shall be subject to the penalties provided in this section.

For purposes of this section, "subsequent offense" means a violation of the provisions of this Ordinance committed by the same person within 12 months of a previous violation of the same provision of this Ordinance for which said person admitted responsibility or was adjudicated to be responsible.

3. STOP WORK ORDER

In addition to the penalties listed above, if land disturbance activities are conducted contrary to the provisions of this Ordinance or approved final storm water management plans, the GSWMD may order the work stopped by notice in writing served on any person engaged in the doing or causing of such work to be done, and any such persons shall forthwith stop such work until authorized by the GSWMD to proceed with the work. The GSWMD may also undertake or cause to be undertaken, any necessary or advisable protective measures to prevent violations of this Ordinance or to avoid or reduce the effects of noncompliance herewith. The cost of any such protective measures shall be the responsibility of the owner of the property upon which the work is being done and the responsibility of any person carrying out or participating in the work.

Any person who neglects or fails to comply with a stop work order shall, upon conviction, be guilty of an infraction, punishable by a fine of not more than \$5,000 per violation. A permit reinstatement fee may be assessed by the GSWMD as well.

4. FAILURE TO COMPLY OR COMPLETE

In addition to any other remedies, should any owner fail to comply with the provisions of this Ordinance, the GSWMD may, after giving notice and reasonable opportunity for compliance, have the necessary work performed and the owner shall be required to promptly reimburse the GSWMD for all costs of such work.

5. SUSPENSION OF ACCESS TO THE STORM DRAIN SYSTEM

A. Suspension due to Emergency Situations

The GSWMD may, without prior notice, suspend storm water drainage system discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, property of another, or to the health or welfare of persons or aquatic life, or to the storm water drainage system of the City of Gary or public waters. If the violator fails to comply with a suspension order issued in an emergency, the GSWMD may take such steps as deemed necessary to prevent or minimize damage to the storm water drainage system or public waters, or to minimize danger to persons, aquatic life, or property.

B. Suspension due to the Detection of Illicit Discharge

Any person discharging to the storm water drainage system in violation of this Ordinance may have their storm water drainage system access terminated if such termination would abate or reduce an illicit discharge. The GSWMD will notify a violator of the proposed termination of its MS4 access. The violator may petition the GSWMD for a reconsideration and hearing.

6. CORRECTIVE ACTION

Nothing herein contained shall prevent the GSWMD from taking such other lawful action as may be necessary to prevent or remedy any violation. All costs connected therewith shall accrue to the person or persons responsible. Costs include, but are not limited to, repairs to the storm water drainage system made necessary by the violation as well as those penalties levied by the EPA or IDEM or for violation of the City of Gary's NPDES permit, attorney fees, and other costs and expenses of cure and/or prosecution.

7. APPEALS

Any person to whom any provision of this Ordinance has been applied may appeal in writing, not later than 30 days after the action or decision being appealed from, to the Board of Directors of GSWMD the action or decision whereby any such provision was so applied. Such appeal shall identify the matter being appealed, and the basis for the appeal. The Board of Directors of GSWMD shall consider the appeal and make a decision whereby it affirms, rejects or modifies the action being appealed. In considering any such appeal, the Board of Directors of GSWMD may consider the recommendations of GSWMD staff, representatives and consultants and the comments of other persons having knowledge of the matter. In considering any such appeal, the Board of Directors of GSWMD may grant a variance from the terms of this Ordinance to provide relief, in whole or in part, from the action being appealed, but only upon finding that the following requirements are satisfied:

- A. The application of the Ordinance provisions being appealed will present or cause substantial and unreasonable practical difficulties for a development or development site; provided, however, that "practical difficulties" shall not include the need for the owner or developer to incur additional reasonable expenses in order to comply with the Ordinance; and
- B. The granting of the relief requested will not substantially prevent the attainment of the goals and purposes of this Ordinance, nor result in less effective management of storm water runoff.



APPENDIX A ABBREVIATIONS AND DEFINITIONS

ABBREVIATIONS

BMP	Best Management Practice
USACE	United States Army Corps of Engineers
CWA	Clean Water Act
EPA	Environmental Protection Agency
GIS	Geographical Information System
GSWMD	Gary Storm Water Management District
IDNR	Indiana Department of Natural Resources
IDEM	Indiana Department of Environmental Management
MS4	Municipal Separate Storm Sewer System
NRCS	Natural Resources Conservation Service
NPDES	National Pollution Discharge Elimination System
POTW	Publicly Owned Treatment Works
SWCD	Soil and Water Conservation District
SWPPP	Storm Water Pollution Prevention Plan
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

DEFINITIONS

1. **Agricultural land disturbing activity.** Tillage, planting, cultivation, or harvesting operations for the production of agricultural or nursery vegetative crops. The term also includes pasture renovation and establishment, the construction of agricultural conservation practices, and the installation and maintenance of agricultural drainage tile. For purposes of this rule, the term does not include land disturbing activities for the construction of agricultural related facilities, such as barns, buildings to house livestock, roads associated with infrastructure, agricultural waste lagoons and facilities, lakes and ponds, wetlands; and other infrastructure.
2. **Base Flow.** Stream discharge derived from groundwater sources as differentiated from surface runoff. Sometimes considered to include flows from regulated lakes or reservoirs.
3. **Best Management Practices.** Design, construction, and maintenance practices and criteria for storm water facilities that minimize the impact of storm water runoff rates and volumes, prevent erosion, and capture pollutants.
4. **Board.** The Board of Directors of the City's Department of Storm Water Management and any subordinate employee, agent or representative to whom they shall specifically delegate a responsibility authorized by this Ordinance.

5. **Buffer Strip.** An existing, variable width strip of vegetated land intended to protect water quality and habitat.
6. **Capacity (of a Storm Drainage Facility).** The maximum flow that can be conveyed or stored by a storm drainage facility without causing damage to public or private property.
7. **Catch Basin.** A chamber usually built at the curb line of a street for the admission of surface water to a storm drain or subdrain, having at its base a sediment sump designed to retain grit and detritus below the point of overflow.
8. **Channel.** A portion of a natural or artificial watercourse which periodically or continuously contains moving water, or which forms a connecting link between two bodies of water. It has a defined bed and banks which serve to confine the water.
9. **Compensatory Storage.** An artificial volume of storage within a floodplain used to balance the loss of natural flood storage capacity when artificial fill or substructures are placed within the floodplain.
10. **Comprehensive Storm water Management.** A comprehensive storm water program for effective management of storm water quantity and quality throughout the community.
11. **Constructed Wetland.** A manmade shallow pool that creates growing conditions suitable for wetland vegetation and is designed to maximize pollutant removal.
12. **Construction activity.** Land disturbing activities, and land disturbing activities associated with the construction of infrastructure and structures. This term does not include routine ditch or road maintenance or minor landscaping projects.
13. **Construction site access.** A stabilized stone surface at all points of ingress or egress to a project site, for the purpose of capturing and detaining sediment carried by tires of vehicles or other equipment entering or exiting the project site.
14. **Contiguous.** Adjoining or in actual contact with.
15. **Contour.** An imaginary line on the surface of the earth connecting points of the same elevation.
16. **Contour Line.** Line on a map which represents a contour or points of equal elevation.
17. **Contractor or subcontractor.** An individual or company hired by the project site or individual lot owner, their agent, or the individual lot operator to perform services on the project site.
18. **Conveyance.** Any structural method for transferring storm water between at least two points. The term includes piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, and roadways.
19. **Cross Section.** A graph or plot of ground elevation across a stream valley or a portion of it, usually along a line perpendicular to the stream or direction of flow.
20. **Culvert.** A closed conduit used for the conveyance of surface drainage water under a roadway, railroad, canal or other impediment.
21. **Dechlorinated swimming pool discharge.** Chlorinated water that has either sat idle for seven (7) days following chlorination prior to discharge to the MS4 conveyance, or, by analysis, does not contain detectable concentrations (less than five-hundredths (0.05) milligram per liter) of chlorinated residual.
22. **Design Storm.** A selected storm event, described in terms of the probability of occurring once within a given number of years, for which drainage or flood control improvements are designed and built.

23. **Detention.** Managing storm water runoff by temporary holding and controlled release.
24. **Detention Basin.** A facility constructed or modified to restrict the flow of storm water to a prescribed maximum rate, and to detain concurrently the excess waters that accumulate behind the outlet.
25. **Detention Storage.** The temporary detaining of storage of storm water in storage facilities, on rooftops, in streets, parking lots, school yards, parks, open spaces or other areas under predetermined and controlled conditions, with the rate of release regulated by appropriately installed devices.
26. **Detention Time.** The theoretical time required to displace the contents of a tank or unit at a given rate of discharge (volume divided by rate of discharge).
27. **Detritus.** Dead or decaying organic matter; generally contributed to storm water as fallen leaves and sticks or as dead aquatic organisms.
28. **Developer.** Any person financially responsible for construction activity, or an owner of property who sells or leases, or offers for sale or lease, any lots in a subdivision.
29. **Development.** Alterations of a property from its virgin un-developed state that change its storm water run-off characteristics.
30. **Discharge.** Usually the rate of water flow. A volume of fluid passing a point per unit time commonly expressed as cubic feet per second, cubic meters per second, gallons per minute, or millions of gallons per day.
31. **Disposal.** The discharge, deposit, injection, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that the solid waste or hazardous waste, or any constituent of the waste, may enter the environment, be emitted into the air, or be discharged into any waters, including ground waters.
32. **Ditch.** A man-made, open watercourse in or into which excess surface water or groundwater drained from land, storm water runoff, or floodwaters flow either continuously or intermittently.
33. **Drain.** A buried slotted or perforated pipe or other conduit (subsurface drain) or a ditch (open drain) for carrying off surplus groundwater or surface water.
34. **Drainage.** The removal of excess surface water or groundwater from land by means of ditches or subsurface drains. Also see Natural drainage.
35. **Drainage Area.** The area draining into a stream at a given point. It may be of different sizes for surface runoff, subsurface flow and base flow, but generally the surface runoff area is considered as the drainage area.
36. **Dry Well.** A type of infiltration practice that allows storm water runoff to flow directly into the ground via a bored or otherwise excavated opening in the ground surface.
37. **Duration.** The time period of a rainfall event.
38. **Environment.** The sum total of all the external conditions that may act upon a living organism or community to influence its development or existence.
39. **Erodibility Index (EI).** The soil erodibility index (EI) provides a numerical expression of the potential for a soil to erode considering the physical and chemical properties of the soil and the climatic conditions where it is located. The higher the index, the greater the investment needed to maintain the sustainability of the soil resource base if intensively cropped. It is defined to be the maximum of $(R \times K \times LS) / T$ (from the Universal Soil Loss Equation) and $(C \times I) / T$ (from the Wind Erosion Equation), where R is a measure of rainfall and runoff, K is a factor of the susceptibility of the soil to water erosion, LS is a

measure of the combined effects of slope length and steepness, C is a climatic characterization of wind speed and surface soil moisture and I is a measure of the susceptibility of the soil to wind erosion. Erodibility Index scores equal to or greater than 8 are considered highly erodible land.

40. **Erosion.** The wearing away of the land surface by water, wind, ice, gravity, or other geological agents. The following terms are used to describe different types of water erosion:

Accelerated erosion--Erosion much more rapid than normal or geologic erosion, primarily as a result of the activities of man.

Channel erosion --An erosion process whereby the volume and velocity of flow wears away the bed and/or banks of a well-defined channel.

Gully erosion --An erosion process whereby runoff water accumulates in narrow channels and, over relatively short periods, removes the soil to considerable depths, ranging from 1-2 ft. to as much as 75-100 ft.

Rill erosion--An erosion process in which numerous small channels only several inches deep are formed; occurs mainly on recently disturbed and exposed soils (see Rill).

Splash erosion--The spattering of small soil particles caused by the impact of raindrops on wet soils; the loosened and spattered particles may or may not be subsequently removed by surface runoff.

Sheet erosion--The gradual removal of a fairly uniform layer of soil from the land surface by runoff water.

41. **Erosion and sediment control.** A practice, or a combination of practices, to minimize sedimentation by first reducing or eliminating erosion at the source and then as necessary, trapping sediment to prevent it from being discharged from or within a project site.
42. **Fill Material.** Any material used for primary purpose of replacing a wetland area with dry land or of changing the bottom elevation of a wetland or a water body. This definition shall be considered to be automatically amended to conform with the definition of fill material established from time to time by the United States of America or United States Army Corps of Engineers.
43. **Filter Strip.** Usually a long, relatively narrow area (usually, 20-75 feet wide) of undisturbed or planted vegetation used near disturbed or impervious surfaces to filter storm water pollutants for the protection of watercourses, reservoirs, or adjacent properties.
44. **Floatable.** Any solid waste that will float on the surface of the water.
45. **Flood (or Flood Waters).** A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow, the unusual and rapid accumulation, or the runoff of surface waters from any source.
46. **Flood Elevation.** The elevation at all locations delineating the maximum level high waters for a flood of a given return period.
47. **Flood Hazard Area.** Any floodplain, floodway, floodway fringe or any combination thereof which is subject to inundation by the regulatory flood; or any floodplain as delineated by Zone A on a Flood Insurance Rate Map or a Flood Hazard Boundary map.
48. **Floodplain.** The channel proper and the areas adjoining the channel which have been or hereafter may be covered by the regulatory or 100-year flood. Any normally dry land area that is susceptible to being inundated by water from any natural source. The floodplain includes both the floodway and the floodway fringe districts.

49. **Flood Protection Grade.** The elevation of the lowest floor of a building, including the basement, which shall be two feet above the elevation of the regulatory flood.
50. **Floodway.** The channel of a river or stream and those portions of the floodplains adjoining the channel which are reasonably required to efficiently carry and discharge the peak flow of the regulatory flood of any river or stream.
51. **Floodway Fringe.** That portion of the flood plain lying outside the floodway, which is inundated by the regulatory flood.
52. **Footing Drain.** A drain pipe installed around the exterior of a basement wall foundation to relieve water pressure caused by high groundwater elevation.
53. **Garbage.** All putrescible animal solid, vegetable solid, and semisolid wastes resulting from the processing, handling, preparation, cooking, serving, or consumption of food or food materials.
54. **Gary Storm Water Management District.** The executive department and special taxing district of the City of Gary which has full responsibility for the ownership, operation, and management of the City of Gary's storm water collection, conveyance, treatment, and control facilities and for the implementation of this Ordinance.
55. **Gasoline outlet.** An operating gasoline or diesel fueling facility whose primary function is the resale of fuels. The term applies to facilities that create five thousand (5,000) or more square feet of impervious surfaces, or generate an average daily traffic count of one hundred (100) vehicles per one thousand (1,000) square feet of land area.
56. **Geographical Information System.** A computer system capable of assembling, storing, manipulating, and displaying geographically referenced information. This technology can be used for resource management and development planning.
57. **Grade.** (1) The inclination or slope of a channel, canal, conduit, etc., or natural ground surface usually expressed in terms of the percentage the vertical rise (or fall) bears to the corresponding horizontal distance. (2) The finished surface of a canal bed, roadbed, top of embankment, or bottom of excavation; any surface prepared to a design elevation for the support of construction, such as paving or the laying of a conduit. (3) To finish the surface of a canal bed, roadbed, top of embankment, or bottom of excavation, or other land area to a smooth, even condition.
58. **Grading.** The cutting and filling of the land surface to a desired slope or elevation.
59. **Grass.** A member of the botanical family Graminae, characterized by blade-like leaves that originate as a sheath wrapped around the stem.
60. **Groundwater.** Accumulation of underground water, natural or artificial. The term does not include manmade underground storage or conveyance structures.
61. **Habitat.** The environment in which the life needs of a plant or animal are supplied.
62. **Highly Erodible Land (HEL).** Land that has an erodibility index of eight or more.
63. **Hydrologic Unit Code.** A numeric United States Geologic Survey code that corresponds to a watershed area. Each area also has a text description associated with the numeric code.
64. **Hydrology.** The science of the behavior of water in the atmosphere, on the surface of the earth, and underground. A typical hydrologic study is undertaken to compute flow rates associated with specified flood events.
65. **Illicit Discharge.** Any discharge to a conveyance that is not composed entirely of storm water except naturally occurring floatables, such as leaves or tree limbs.

66. **Impact Areas.** Areas defined and/or mapped by the City Engineer which are unlikely to be easily drained because of one or more factors including, but not limited to, any of the following: soil type, topography, land where there is not adequate outlet, a floodway or floodplain.
67. **Impaired Waters.** Waters that do not or are not expected to meet applicable water quality standards, as included on IDEM's CWA Section 303(d) List of Impaired Waters.
68. **Impervious surface.** Surfaces, such as pavement and rooftops, which retard the movement of storm water into the soil.
69. **Individual building lot.** A single parcel of land within a multi-parcel development.
70. **Individual lot operator.** A contractor or subcontractor working on an individual lot.
71. **Individual lot owner.** A person who has financial control of construction activities for an individual lot.
72. **Infiltration.** Passage or movement of water into the soil. Infiltration practices include any structural BMP designed to facilitate the percolation of run-off through the soil to groundwater. Examples include infiltration basins or trenches, dry wells, and porous pavement.
73. **Inlet.** An opening into a storm water drainage system for the entrance of surface storm water runoff, more completely described as a storm drain inlet.
74. **Land-disturbing Activity.** Any man-made change of the land surface, including removing vegetative cover that exposes the underlying soil, excavating, filling, transporting and grading.
75. **Land Surveyor.** A person licensed under the laws of the State of Indiana to practice land surveying.
76. **Larger common plan of development or sale.** A plan, undertaken by a single project site owner or a group of project site owners acting in concert, to offer lots for sale or lease; where such land is contiguous, or is known, designated, purchased or advertised as a common unit or by a common name, such land shall be presumed as being offered for sale or lease as part of a larger common plan. The term also includes phased or other construction activity by a single entity for its own use.
77. **Lowest Adjacent Grade.** The elevation of the lowest grade adjacent (abutting) to a structure, where the soil meets the foundation around the outside of the structure (including structural members such as basement walkout, patios, decks, porches, support posts or piers, and rim of the window well).
78. **Lowest Floor.** Refers to the lowest of the following:
- The top of the basement floor;
 - The top of the garage floor, if the garage is the lowest level of the building;
 - The top of the first floor of buildings constructed on a slab or of buildings elevated on pilings or constructed on a crawl space with permanent openings; or
 - The top of the floor level of any enclosure below an elevated building where the walls of the enclosure provide any resistance to the flow of flood waters unless:
 - a] The walls are designed to automatically equalize the hydrostatic flood forces on the walls by allowing for the entry and exit of flood waters, by providing a minimum of two opening (in addition to doorways and windows) having a total area of one (1) square foot for every two (2) square feet of enclosed area subject to flooding. The bottom of all such openings shall be no higher than one (1) foot above grade.

b] Such enclosed space shall be usable only for the parking of vehicles or building access.

79. **Major Drainage System.** Drainage system carrying runoff from an area of one or more square miles.
80. **Manhole.** Storm drain structure through which a person may enter to gain access to an underground storm drain or enclosed structure.
81. **Measurable storm event.** A precipitation event that results in a total measured precipitation accumulation equal to, or greater than, one-half (0.5) inch of rainfall.
82. **Minor Drainage System.** Drainage system having an area of less than one square mile.
83. **Mulch.** A natural or artificial layer of plant residue or other materials covering the land surface which conserves moisture, holds soil in place, aids in establishing plant cover, and minimizes temperature fluctuations.
84. **Municipal Separate Storm Sewer System.** An MS4 meets all the following criteria: (1) is a conveyance or system of conveyances owned by the state, county, city, town, or other public entity; (2) discharges to waters of the U.S.; (3) is designed or used for collecting or conveying storm water; (4) is not a combined sewer; and, (5) is not part of a Publicly Owned Treatment Works (POTW).
85. **Refueling area.** An operating gasoline or diesel fueling area whose primary function is to provide fuel to equipment or vehicles.
86. **National Pollution Discharge Elimination System.** A permit developed by the U.S. EPA through the Clean Water Act. In Indiana, the permitting process has been delegated to IDEM. This permit covers aspects of municipal storm water quality.
87. **Natural Drainage.** The flow patterns of storm water run-off over the land in its pre-development state.
88. **Nutrient(s).** (1) A substance necessary for the growth and reproduction of organisms. (2) In water, those substances (chiefly nitrates and phosphates) that promote growth of algae and bacteria.
89. **Off-Site.** Everything not on-site.
90. **On-Site.** Located within the controlled or urbanized areas where runoff originates.
91. **Open Drain.** A natural watercourse or constructed open channel that conveys drainage water.
92. **Open Space.** Any land area devoid of any disturbed or impervious surfaces created by industrial, commercial, residential, agricultural, or other manmade activities.
93. **Outfall.** The point, location, or structure where a pipe or open drain discharges to a receiving body of water.
94. **Outlet.** The point of water disposal from a stream, river, lake, tidewater, or artificial drain.
95. **Peak Discharge (or Peak Flow).** The maximum instantaneous flow from a given storm condition at a specific location.
96. **Percolation.** The movement of water through soil.
97. **Permanent stabilization.** The establishment, at a uniform density of seventy percent (70%) across the disturbed area, of vegetative cover or permanent non-erosive material that will ensure the resistance of the soil to erosion, sliding, or other movement.

98. **Pervious surface.** Surfaces such as sand, grass, or wooded, that allow movement of water into the soil.
99. **Point Source.** Any discernible, confined, and discrete conveyance including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, or container from which pollutants are or maybe discharged (P.L. 92-500, Section 502[14]).
100. **Porous pavement.** A type of infiltration practice to improve the quality and reduce the quantity of storm water run-off via the use of manmade, pervious pavement which allows run-off to percolate through the pavement and into underlying soils
101. **Professional Engineer.** A person licensed under the laws of the State of Indiana to practice professional engineering.
102. **Project site.** The entire area on which construction activity is to be performed.
103. **Project site owner.** The person required to submit a storm water permit application, and required to comply with the terms of this ordinance, including a developer or a person who has financial and operational control of construction activities, and project plans and specifications, including the ability to make modifications to those plans and specifications.
104. **Rain garden.** A vegetative practice used to alter impervious surfaces, such as roofs, into pervious surfaces for absorption and treatment of rainfall.
105. **Rainfall Intensity.** The cumulative depth of rainfall occurring over a given duration, normally expressed in inches per hour.
106. **Reach.** Any length of river, channel or storm sewer.
107. **Receiving Stream, Receiving Channel, or Receiving Water.** The body of water into which runoff or effluent is discharged. The term does not include private drains, unnamed conveyances, retention and detention basins, or constructed wetlands used as treatment.
108. **Recharge.** Replenishment of groundwater reservoirs by infiltration and transmission from the outcrop of an aquifer or from permeable soils.
109. **Redevelopment.** Alterations of a property that change a site or building in such a way that there is change in the ratio of pervious to impervious surfaces. The term does not include such activities as exterior remodeling.
110. **Regulated Areas.** All area within the City's boundaries.
111. **Regulated Drain.** A drain subject to the provisions of the Indiana Drainage Code I.C. 36-27_-1 et al.
112. **Regulatory Flood.** The discharge or elevation associated with the 100-year flood as calculated by a method and procedure which is acceptable to and accepted by the Indiana Department of Natural Resources and the Federal Emergency Management Agency. The "regulatory flood" is also known as the "base flood".
113. **Regulatory Floodway.** See Floodway.
114. **Release Rate** - The amount of storm water release from a storm water control facility per unit of time.
115. **Reservoir.** A natural or artificially created pond, lake or other space used for storage, regulation or control of water. May be either permanent or temporary. The term is also used in the hydrologic modeling of storage facilities.

116. **Retention.** The storage of storm water to prevent it from leaving the development site. May be temporary or permanent.
117. **Retention basin.** A type of storage practice that has no positive outlet, used to retain storm water run-off for an indefinite amount of time. Runoff from this type of basin is removed only by infiltration through a porous bottom or by evaporation.
118. **Return Period** - The average interval of time within which a given rainfall event will be equaled or exceeded once. A flood having a return period of 100 years has a one percent probability of being equaled or exceeded in any one year.
119. **Riparian zone.** Of, on, or pertaining to the banks of a stream, river, or pond.
120. **Riparian habitat.** A land area adjacent to a waterbody that supports animal and plant life associated with that waterbody.
121. **Runoff.** That portion of precipitation that flows from a drainage area on the land surface, in open channels, or in storm water conveyance systems.
122. **Runoff Coefficient** - A decimal fraction relating the amount of rain which appears as runoff and reaches the storm water drainage system to the total amount of rain falling. A coefficient of 0.5 implies that 50 percent of the rain falling on a given surface appears as storm water runoff.
123. **Sediment.** Solid material (both mineral and organic) that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.
124. **Sedimentation.** The process that deposits soils, debris and other unconsolidated materials either on the ground surfaces or in bodies of water or watercourses.
125. **Sensitive Water.** A waterbody in need of priority protection or remediation based on its providing habitat for threatened or endangered species, usage as a public water supply intake, relevant community value, usage for full body contact recreation, or exceptional use classification as found in 327 IAC 2-1-11(b), outstanding State resource water classification as found in 327 IAC 2-1-2(3) and 327 IAC 2-1.5-19(b).
126. **Site.** The entire area included in the legal description of the land on which land disturbing activity is to be performed.
127. **Slope.** Degree of deviation of a surface from the horizontal, measured as a numerical ratio or percent. Expressed as a ratio, the first number is commonly the horizontal distance (run) and the second is the vertical distance (rise)--e.g., 2:1. However, the preferred method for designation of slopes is to clearly identify the horizontal (H) and vertical (V) components (length (L) and Width (W) components for horizontal angles). Also note that according to international standards (Metric), the slopes are presented as the vertical or width component shown on the numerator--e.g., 1V:2H. Slope expressions in this Ordinance follow the common presentation of slopes--e.g., 2:1 with the metric presentation shown in parenthesis--e.g., (1V:2H). Slopes can also be expressed in "percents". Slopes given in percents are always expressed as $(100 \cdot V/H)$ --e.g., a 2:1 (1V:2H) slope is a 50% slope.
128. **Soil.** The unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.
129. **Soil and Water Conservation District.** A public organization created under State law as a special-purpose district to develop and carry out a program of soil, water, and related resource conservation, use, and development within its boundaries. A subdivision of State government with a local governing body, established under IC 14-32.
130. **Solid Waste.** Any garbage, refuse, debris, or other discarded material.

131. **Spill.** The unexpected, unintended, abnormal, or unapproved dumping, leakage, drainage, seepage, discharge, or other loss of petroleum, hazardous substances, extremely hazardous substances, or objectionable substances. The term does not include releases to impervious surfaces when the substance does not migrate off the surface or penetrate the surface and enter the soil.
132. **Spillway.** A waterway in or about a hydraulic structure, for the escape of excess water.
133. **Storm Duration.** The length of time that water may be stored in any storm water control facility, computed from the time water first begins to be stored.
134. **Storm Event.** An estimate of the expected amount of precipitation within a given period of time. For example, a 10-yr. frequency, 24-hr. duration storm event is a storm that has a 10% probability of occurring in any one year. Precipitation is measured over a 24-hr. period.
135. **Storm Sewer.** A closed conduit for conveying collected storm water, while excluding sewage and industrial wastes. Also called a storm drain.
136. **Storm water.** Water resulting from rain, melting or melted snow, hail, or sleet.
137. **Storm water Pollution Prevention Plan.** A plan developed to minimize the impact of storm water pollutants resulting from construction activities.
138. **Storm water Runoff.** The water derived from rains falling within a tributary basin, flowing over the surface of the ground or collected in channels or conduits.
139. **Storm water Quality Management Plan.** A comprehensive written document that addresses storm water runoff quality.
140. **Storm water Quality Measure.** A practice, or a combination of practices, to control or minimize pollutants associated with storm water runoff.
141. **Storm water Drainage System** - All means, natural or man-made, used for conducting storm water to, through or from a drainage area to any of the following: conduits and appurtenant features, canals, channels, ditches, storage facilities, swales, streams, culverts, streets and pumping stations.
142. **Strip development.** A multi-lot project where building lots front on an existing road.
143. **Subdivision.** Any land that is divided or proposed to be divided into lots, whether contiguous or subject to zoning requirements, for the purpose of sale or lease as part of a larger common plan of development or sale.
144. **Subsurface Drain.** A pervious backfield trench, usually containing stone and perforated pipe, for intercepting groundwater or seepage.
145. **Surface Runoff.** Precipitation that flows onto the surfaces of roofs, streets, the ground, etc., and is not absorbed or retained by that surface but collects and runs off.
146. **Swale.** An elongated depression in the land surface that is at least seasonally wet, is usually heavily vegetated, and is normally without flowing water. Swales conduct storm water into primary drainage channels and may provide some groundwater recharge.
147. **Temporary Stabilization.** The covering of soil to ensure its resistance to erosion, sliding, or other movement. The term includes vegetative cover, anchored mulch, or other non-erosive material applied at a uniform density of seventy percent (70%) across the disturbed area.
148. **Tile Drain.** Pipe made of perforated plastic, burned clay, concrete, or similar material, laid to a designed grade and depth, to collect and carry excess water from the soil.

149. **Topographic Map.** Graphical portrayal of the topographic features of a land area, showing both the horizontal distances between the features and their elevations above a given datum.
150. **Topography.** The representation of a portion of the earth's surface showing natural and man-made features of a given locality such as rivers, streams, ditches, lakes, roads, buildings and most importantly, variations in ground elevations for the terrain of the area.
151. **Trained individual.** An individual who is trained and experienced in the principles of storm water quality, including erosion and sediment control as may be demonstrated by state registration, professional certification, experience, or completion of coursework that enable the individual to make judgments regarding storm water control or treatment and monitoring.
152. **Tributary.** Contributing storm water from upstream land areas.
153. **Urban Drain.** A drain defined as “Urban Drain” in Indiana Drainage Code.
154. **Urbanization** The development, change or improvement of any parcel of land consisting of one or more lots for residential, commercial, industrial, institutional, recreational or public utility purposes.
155. **Vegetated swale.** A type of vegetative practice used to filter storm water runoff via a vegetated, shallow-channel conveyance.
156. **Water Quality.** A term used to describe the chemical, physical, and biological characteristics of water, usually in respect to its suitability for a particular purpose.
157. **Water Resources.** The supply of groundwater and surface water in a given area.
158. **Waterbody.** Any accumulation of water, surface, or underground, natural or artificial, excluding water features designed and designated as water pollution control facilities.
159. **Watercourse.** Any river, stream, creek, brook, branch, natural or man-made drainageway in or into which storm water runoff or floodwaters flow either continuously or intermittently.
160. **Watershed.** The area drained by or contributing water to a specific point that could be along a stream, pond, lake or storm water facility. Watersheds are often broken down into subareas for the purpose of hydrologic modeling.
161. **Watershed Area.** All land and water within the confines of a drainage divide. See also Watershed.
162. **Wetlands.** Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. This definition shall be considered to be automatically amended to conform with the definition of a wetlands established from time to time by the United States of America or United States Army Corps of Engineers.