CHAPTER 761
MONROE COUNTY STORMWATER MANAGEMENT ORDINANCE

CHAPTER ONE

GENERAL INFORMATION

1-1 AUTHORITY AND TITLE *(Cite as: MCSMO Chapter 1, Section 1; or MCSMO 1-1)*

This ordinance is adopted in accordance with statutory authority granted to Monroe County, including without limitation, under IC 36-1-3 and IC 36-9-28.5-3, and further as required by Phase II of the National Pollution Discharge Elimination System program (FR Doc. 99–29181) authorized by the 1972 amendments to the Clean Water Act, the Indiana Department of Environmental Management's Municipal Separate Storm Sewer System (MS4) General Permit (MS4 GP), and the Indiana Department of Environmental Management's Construction Stormwater General Permit (CSGP).

This ordinance shall be known and may be generally cited as the Monroe County Stormwater Management Ordinance ("MCSMO"), may be internally referred to as "this Ordinance," and shall be incorporated into the Monroe County Code ("MCC") as Chapter 761.

1-2 BACKGROUND

The Board of Commissioners of Monroe County, State of Indiana, originally adopted an ordinance in 1997, which established the "Storm Drainage, Erosion, and Sediment Control Ordinance of Monroe County," commonly known as the "Monroe County Drainage Code," in order to govern the control of stormwater runoff and to protect, conserve and promote the orderly development of the land in Monroe County and its water resources. The 1997 ordinance was codified as Monroe County Code Chapter 761, and was primarily targeted at stormwater discharge quantity, and erosion and sediment control. Two years later, in 1999, the Indiana General Assembly, through the adoption of IC 36-9-28.5-3, required all Indiana counties to establish policies for the management of stormwater runoff from property developed within the county.

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 stormwater discharges from regulated small municipal separate storm sewer systems (MS4s) and for small construction activity that results in the disturbance of equal to or greater than one acre. This Federal regulation went into effect on 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, Monroe County was required to establish a regulatory mechanism for regulating stormwater quality management. Therefore, the "Monroe County Drainage Code" was replaced in 2011 with a document that included new requirements for management of stormwater quality in addition to quantity.

In December 2021, IDEM finalized two new permits, Municipal Separate Storm Sewer System (MS4) General Permit (MS4 GP) and Construction Stormwater General Permit (CSGP), which replaced the previous IDEM's Rule 13 and Rule 5. These new permits require the County to update its Stormwater Management Ordinance to incorporate new requirements contained in the 2021 permits. The 2022 Monroe County Stormwater Management Ordinance and its companion document, the 2022 Monroe County Stormwater Technical Standards Manual, incorporate the IDEM-required changes and other necessary periodic updates.

1-3 FINDINGS

The Board of Commissioners of the County of Monroe, Indiana ("Board of Commissioners" or "Commissioners") legislatively finds that:

(A) Water bodies, roadways, structures, and other property within and downstream of Monroe County are at times subjected to flooding *(Cite as: MCSMO Chapter 1, Section 3, Part A; or MCSMO 1-3(A))*;

(B) Flooding is a danger to the lives and property of the public, is a danger to the natural resources of the region, and is increasing in frequency and severity due to climate change;

(C) Land development alters the hydrologic response of watersheds, resulting in increased stormwater runoff rates and volumes, increased flooding, increased stream channel erosion, 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 stormwater runoff rates and volumes, and the sediment and pollutants associated with stormwater runoff from future development projects within Monroe County will, absent reasonable regulation and control, adversely affect Monroe County's water bodies and water resources;

(F) Pollutant contributions from illicit discharges within Monroe County will, absent reasonable regulation, monitoring, and enforcement, adversely affect Monroe County's water bodies and water resources;

(G) Stormwater runoff, soil erosion, non-point source pollution, and illicit sources of pollution can be controlled and minimized by the adoption and enforcement of stormwater management and erosion control regulations;

(H) Preventing further encroachment into the Fluvial Erosion Hazard (FEH) corridors will minimize fluvial erosion hazards and property loss from flooding, enhance public safety, maximize channel stability, and maintain or improve water quality and habitat function;

(I) Adopting, implementing, and enforcing the standards, criteria, and procedures contained and referenced in this Ordinance will address many of the deleterious

effects of stormwater runoff, erosion, illicit discharges, and fluvial erosion hazards by, for example:

(1) Minimizing water damage to land and structures, including foundations and crawl spaces;

(2) Extending pavement life;

(3) Diminishing ditch, yard, and field ponding and, thus, mosquito breeding habitat;

(3) Preserving septic system functionality; and,

(4) Mitigating the stormwater quantity and quality impacts of development on neighboring properties, uses, residents, and on water resources;

(J) Adopting the Monroe County Stormwater Management Ordinance is necessary for the protection of property, preservation of the public health, safety, and welfare, for the conservation of our natural resources, and for compliance with State and Federal regulations.

A partial listing of studies and authorities that support the foregoing findings is set forth in Appendix ___, of Exhibit 1.

1-4 PURPOSE, POLICIES, and INTENT

(A) Purpose

The purpose of this Ordinance is to promote the health, safety, and general welfare of the citizens of Monroe County by establishing: the review and permitting procedures; the use limitations and practices; the minimum design, performance, and maintenance standards; and, the inspection, monitoring, and enforcement procedures deemed necessary to promote the orderly development of land and water resources, and to otherwise further the policies and objectives (i.e., intent) herein expressed.

(B) Policies

The following policies are foundational to this Ordinance and shall guide all actions and decisions made pursuant to this Ordinance:

(1) Developments shall be designed, constructed, and maintained to ensure that no significant detrimental impacts on stormwater drainage, on water quality, on buildings and other structures, on transportation facilities, on stormwater drainage of up-stream and down-stream lands, on flood prevention, and from erosion, result from the development *(Cite as: MCSMO Chapter 1, Section 4, Part B, Subpart 1; or MCSMO 1-4(B)(1))*.

(2) Stormwater drainage systems shall be designed, constructed, and maintained to drain every part of the development site, unless expressly

permitted by this Ordinance, or unless it is demonstrated to the Monroe County Drainage Board's ("Drainage Board" or "Board") satisfaction that on-site storage would be consistent with the intent of these regulations and would better promote stormwater drainage and water quality than would off-site discharge or storage.

(3) Potential stormwater drainage, water quality, and erosion problems must be identified, assessed, and addressed through written studies and plans, prepared by a registered professional land surveyor or civil engineer, at the earliest stage of the development process, including for example, the logging or clearing of a site to prepare it for future development or use, or the clearing of a site to prepare it for, or as part of, agricultural or forestry/timber land disturbing activities.

(4) The extent and sophistication of any study, summary, or plan required under this Ordinance should directly reflect the nature and complexity of the proposed development and the development site (e.g., the more complex the geology of the site, the more extensive and sophisticated the study, summary, or plan).

(5) The Drainage Board and the Monroe County MS4 Coordinator ("MS4 Coordinator") shall work in concert with federal, state, city, town, and county officials, agencies and departments to promote efficiency in the development approval process and to promote public health, safety, and welfare.

Additional policies are set forth in the Stormwater Technical Standards Manual (See Exhibit 1).

(C) Intent (or Objective)

The intent (or objective) of this Ordinance is to promote the public benefits associated with well-designed and well-maintained stormwater drainage systems and erosion and sediment control systems; to minimize the external costs and impacts that may arise from substandard stormwater drainage systems and erosion and sediment control systems and maintenance practices; and to achieve and maintain compliance with federal, state, and local water quantity and quality, erosion control, and flood damage prevention regulations, by:

(1) Reducing the hazard to public health and safety caused by excessive stormwater runoff and soil erosion;

(2) Regulating the contribution of pollutants to stormwater drainage systems from construction site runoff;

(3) Regulating the contribution of pollutants to stormwater drainage systems from runoff from new development and re-development;

(4) Prohibiting illicit discharges into stormwater drainage systems; and,

(5) Establishing legal authority to carry out all inspection, monitoring, and

enforcement procedures necessary to ensure compliance with this Ordinance.

1-5 COVERED ACTIVITIES and EXEMPTIONS (collectively, SCOPE)

(A) Unless specifically exempted from this Ordinance, in whole or in part, this Ordinance applies to the following activities and matters ("covered activities") occurring within unincorporated Monroe County, Indiana:

(1) Land disturbing activity including, without limitation, agricultural land disturbing activity, forestry/timber land disturbing activity, and mining land disturbing activity;

(2) Construction activity;

(3) Development;

(4) Redevelopment;

(5) Subdivision;

(6) Any activity which has the potential to adversely impact (permanently or temporarily) stormwater runoff, surface water or groundwater quality, the stormwater drainage system, waters of the State, or Waters of the US;

(7) All discharges, including illegal dumping, entering any watercourse or waterbody (as defined in Appendix A) within unincorporated Monroe County, regardless of whether the discharge originates from 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 or indirect connections to the stormwater drainage system, illegal dumping, and contaminated runoff.

(B) The following matters are exempt from this Ordinance:

(1) Any non-stormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal 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 for the subject discharge to the storm drain system.

(2) Any construction project which had its final stormwater plan approved by Monroe County and issued an Improvement Location Permit (ILP) by the Planning Director within the 2-year period prior to (_____), shall be subject to the procedures and standards that were applied in granting approval to the final plan (i.e., the then current version of this Ordinance). Any amendments to the approved final plan shall be subject to the

procedures, practices, and standards of this Ordinance (post _____), unless waived in accordance with this Ordinance.

(3) Agricultural production activities and forestry/timber production activities (as defined in Appendix A of Exhibit 1) and stormwater runoff from those activities, are exempt from the provisions of the MCSMO, as long as the activities are performed and maintained in accordance with the relevant best management practices ("BMPs") identified and incorporated herein as Appendix D1 of Exhibit 1 (see Section 7 below), and as long as the stormwater runoff from those activities does not contain pollutants that are not associated with such activities or that are in excess of standard practices.

The foregoing exceptions are conditioned on the land or site owner's (or on those controlling the development or maintenance of the land or site) consent to inspection by the MS4 Coordinator, or by a County Stormwater Program inspector, for the purpose of determining whether all relevant size limitations, plot plans, BMPs, laws, regulations, standards, etc., applicable to the specific exemption, have been satisfied. The times, durations, and nature of the inspection shall be determined by the MS4 Coordinator or the County Stormwater Program inspector.

(4) Municipal corporation projects are exempt from Stormwater Permit ("SW Permit") fees but must meet all other applicable requirements of this Ordinance, including those contained in the incorporated Monroe County Stormwater Technical Standards Manual.

1-6 STORMWATER PERMIT REQUIREMENT

No Monroe County permit shall be issued, and no covered activities may be started, continued, or resumed, until the plans required by this Ordinance for such activities, including any waiver requests, have been accepted and approved in writing by the Drainage Board or the MS4 Coordinator, all other applicable federal, State, and local permits have been obtained, and a Stormwater Permit ("SW Permit") has been issued by the MS4 Coordinator. The SW Permit application materials are set forth in Appendix B of Exhibit 1.

1-7 STORMWATER TECHNICAL STANDARDS MANUAL

The Stormwater Technical Standards Manual of Monroe County, Indiana ("STSM") is incorporated into this Ordinance as "Exhibit 1," and sets forth the minimum standards, methodologies, practices, forms, and additional policies that shall be used and enforced to achieve compliance with this Ordinance.

1-8 WAIVERS and APPEALS

(A) Based on engineering summaries and on other information provided, the Drainage Board may waive, or approve modifications of, the requirements of this Ordinance upon finding that:

(1) Granting the requested waivers or modifications will not contravene the intent and policies of this Ordinance; and,

(2) The requested waivers or modifications are necessary to ensure that substantial justice is done and that the requested waivers represent the minimum actions or changes necessary to ensure that substantial justice is done, consistent with the intent and policies of this Ordinance.

(B) In approving waivers or modifications, the Board may impose such conditions as it finds necessary to substantially secure the objectives of these regulations.

(C) With respect to each requested waiver or modification, or imposed condition, the Board shall prepare and approve written findings of fact. Such findings shall address the relevant findings set forth in subsections (A) and (B) above, and shall cite the specific facts that support each of the findings.

(D) The Board's decision to grant or deny a waiver or modification, or to impose a condition is discretionary.

(E) Applications for waivers or modifications shall be submitted to the Board in writing. On the application, the Applicant shall describe the requested waivers or modifications and shall submit proposed findings of fact (see Part C above) in support of each request. The Applicant bears the burden (expense and persuasion) of establishing a sufficient factual basis and justification for each request.

(F) The Applicant shall provide notice of the request to the following downstream property owners: the owners of the first two parcels downstream from the development site; or, the owners of all downstream parcels within 500 feet of the development site, whichever requires notice to the greatest number of property owners. Notice must be sent to each property owner by certified mail, return receipt requested, or by other form of accountable mail, at least ten days prior to the meeting at which the Board will consider the waiver, using the property owner's address that appears in the Monroe County Auditor's property transfer books. The notice must state or describe: the address of the development site; the nature of the requested waivers or modifications; the date, time, and place of the first Board meeting at which the requests will be considered; the property owner's right to appear before the Board on that date and be heard on the requests; and the right to appeal the decision to the County Commissioners within 15 days of the Board's decision. The Applicant must provide the Board with proof of compliance with the foregoing notice requirements before the requests may be heard by the Board.

(G) Any person adversely affected by the Board's decision may appeal the decision to the Board of Commissioners. Such appeal must be presented in writing to the Commissioners within 15 days of the Board's decision. The County Commissioners will schedule a hearing on the appeal within 30 days of receipt of

the written appeal. The Commissioners may affirm, overrule, or modify the Board's decision. The hearing may be continued from time to time. See Chapter 8, Section 3 of this Ordinance.

1-9 PROHIBITED ACTS

The failure to obtain the approvals and permits required by this Ordinance, and the failure to comply with the procedures, requirements, and minimum standards of this Ordinance shall constitute a Class A violation of this Ordinance and, thus, of the Monroe County Code. The remedies and civil penalties set forth in Monroe County Code Chapter 115 shall apply to violations of this Ordinance in addition to, or as an alternative to, those set forth in Chapter 8 of this Ordinance.

1-10 ABBREVIATIONS AND DEFINITIONS

For the purpose of this Ordinance, the abbreviations and definitions provided in Appendix A of Exhibit 1 shall apply.

1-11 RESPONSIBILITY FOR ADMINISTRATION

The Drainage Board and the MS4 Coordinator shall administer, implement, and enforce the provisions of this Ordinance, as herein specified. Any powers granted or duties imposed upon the authorized enforcement agency may be delegated in writing by the Board of Commissioners to qualified persons or entities acting on behalf of Monroe County.

1-12 RELATIONSHIP TO OTHER COUNTY ORDINANCES AND AUTHORITIES

(A) The provisions of this Ordinance shall be deemed as additional and supplemental to the requirements and minimum standards required by:

(1) Other Monroe County codes and ordinances; and

(2) Indiana's CSGP regarding Stormwater Discharge Associated with Construction Activity, and Indiana's MS4 GP regarding Stormwater Runoff Associated with Municipal Separate Storm Sewer System Conveyances.

(B) In case of conflicting requirements, best management practices, or standards, the most restrictive shall apply.

1-13 INTERPRETATION

In their interpretation and application, these regulations shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare, and shall be interpreted in accordance with Monroe County Code Section 102-1, and, unless

expressly stated otherwise or contrary to context, with the purposes, policies, and objectives of this Ordinance.

1-14 DISCLAIMER OF LIABILITY

(A) 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 (for example, NOAA data and local watershed studies). Larger storms may occur or stormwater runoff amounts may be increased by man-made or natural causes. Compliance with this Ordinance does not guarantee that land uses and developments will not result in stormwater damage or problems. This Ordinance shall not create liability on the part of any Monroe County agency or any officer, representative, or employee thereof, for any damage or problems which may result from reliance on this Ordinance or on any administrative decision made there under.

(B) The words “approve” and “accept,” and their common derivations as used in this Ordinance in relation to plans, reports, calculations, and permits shall mean that Monroe County has reviewed the material produced and submitted by the applicant or his/her agents for general compliance with this Ordinance, including the Monroe County Stormwater Technical Standards Manual, and that such a compliance would qualify the applicant to receive a Stormwater Permit. Such “approval” or “acceptance” is based on the assumption that the project engineer has followed all appropriate engineering methods in the design. Any stormwater quality or stormwater quantity (drainage) problems associated with the project caused by poor construction by the contractor and/or poor engineering design or judgment, either on-site or off-site, are the responsibility of the developer, owner, and/or the project engineer.

1-15 SEVERABILITY

The provisions of this Ordinance are hereby declared severable. If any court of competent jurisdiction should declare any part or provision of this Ordinance invalid or unenforceable or the application of any part or provision to any person or circumstances invalid, such invalidity or unenforceability shall not affect any other part, provision, or application of this Ordinance. The Board of Commissioners hereby declares that it would have enacted the remainder of these regulations even without any such invalid or unenforceable part, provision, or application.

1-16 EFFECTIVE DATE

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

CHAPTER TWO

PROHIBITED DISCHARGES AND CONNECTIONS

2-1 PROHIBITED DISCHARGES AND CONNECTIONS

(A) No person shall discharge or cause to be discharged to a stormwater drainage system (including without limitation, watercourses, or waterbodies), directly or indirectly, any substance other than stormwater or an exempted discharge, or that causes or contributes to a violation of applicable water quality standards.

(B) Any person discharging stormwater or an exempted discharge shall effectively prevent pollutants from also being discharged with the stormwater through the use of best management practices (BMPs).

(C) Monroe County is authorized to require dischargers to implement the pollution prevention measures necessary to prevent the discharge of pollutants into Monroe County's stormwater drainage system.

(D) The construction, use, maintenance or continued existence of illicit connections to the stormwater drainage system is prohibited, including without limitation, illicit connections made in the past, regardless of whether the connection was permissible at the time of connection.

(E) Illicit discharges or connections shall be subject to enforcement action as described in Chapter 8 of this Ordinance.

2-2 EXEMPTED DISCHARGES AND CONNECTIONS

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

(A) Discharges from potable water sources, including water line flushing;

(B) Irrigation water;

(C) Lawn watering;

(D) Diverted streamflows;

(E) Flows from riparian habitats and wetlands;

(F) Rising ground waters;

(G) Natural groundwater springs;

(H) Uncontaminated groundwater infiltration;

(I) Uncontaminated pumped ground water;

(J) Foundation drains;

(K) Footing drains;

(L) Air conditioning condensation;

(M) Uncontaminated groundwater from crawl space or basement sump pumps;

(N) Dechlorinated swimming pool discharges;

(O) Discharges from firefighting activities;

(P) Naturally introduced detritus (e.g. leaves and twigs);

(Q) Dye-testing authorized by Monroe County; and

(R) Any other water source not containing pollutants.

2-3 STORAGE OF HAZARDOUS OR TOXIC MATERIAL

(A) Storage or stockpiling of hazardous or toxic material within any stormwater drainage system, or in its associated floodway, floodplain, riparian zone, or fluvial erosion hazard corridor, is strictly prohibited.

(B) Temporary storage or stockpiling of hazardous material, wastes, or toxic substances on active construction sites must include adequate protection and containment to prevent any such materials from entering any temporary or permanent stormwater drainage system.

2-4 PRIVATE PROPERTY MAINTENANCE DUTIES

Every person owning property through which a stormwater drainage system passes, or such person's lessee, shall:

(A) Keep and maintain that part of the stormwater drainage system located within their property boundaries free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the stormwater drainage system.

(B) Maintain existing privately owned structures or stockpiled materials within or adjacent to a stormwater drainage system, and/or drainage easements, so that such structures or stockpiled materials will not become a hazard to the use, function, or physical integrity of the stormwater drainage system or to the quality of stormwater passing over, across, or under the site.

2-5 REPORTING OF SPILLS AND ILLICIT DISCHARGES

(A) Any discharger who discharges or causes to be discharged into a stormwater drainage system any substance other than stormwater or an exempted discharge shall:

(1) Immediately inform the MS4 Coordinator, the Monroe County Health Department, and the Monroe County Emergency Management Agency concerning the discharge.

(2) Within five (5) calendar days of the discharge, submit a written report concerning the discharge to the MS4 Coordinator. The written report shall specify:

(a) The composition of the discharge and the cause thereof; *(Cite as: MCSMO Chapter 2, Section 5, Part A, Subpart 2, Item a; or MCSMO 2-5(A)(2)(a));*

(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 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.

(B) A properly and timely reported accidental discharge shall be an affirmative defense to a claim for fines 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.

(C) A discharge shall be considered properly reported only if the discharger complies with all the requirements of this Section and of the STSM.

(D) The provisions of this Section do not relieve the discharger from notifying other entities as required by State or Federal regulations or from any civil or criminal penalties imposed by State or Federal laws or regulations.

2-6 INSPECTIONS AND MONITORING

(A) Monroe County has the authority to inspect those portions of the stormwater drainage system under Monroe County's jurisdiction in order to detect and eliminate illicit connections and discharges into the system. These inspections may include:

(1) A screening of discharges from outfalls connected to the system in order to determine if prohibited flows are being conveyed into the stormwater drainage system;

(2) Testing of waters contained in the stormwater 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) If a discharger is suspected of an illicit discharge:

(1) Monroe County may inspect and/or obtain water samples from stormwater drainage systems owned by the subject discharger to determine compliance with this Ordinance.

(2) Upon request, the discharger shall allow Monroe County's properly identified representative to enter upon the premises of the discharger at all hours necessary for the purposes of such inspection or sampling.

(3) Monroe County or its properly identified representative may place on the discharger's property any sampling and monitoring equipment or devices used for such sampling or inspection.

(4) Monroe County has the right to require the discharger to install sampling and monitoring equipment as necessary, at the discharger's expense.

(a) The discharger's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense.

(b) All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

CHAPTER THREE

STORMWATER QUANTITY MANAGEMENT

3-1 POLICY ON STORMWATER QUANTITY MANAGEMENT

The storage and controlled release of all of the excess stormwater runoff (i.e., for each outlet) as well as compensation for loss of floodplain storage shall be required for all developments and redevelopments (as defined in Appendix A) located within Monroe County. Release rate requirements, downstream restriction considerations, acceptable outlet, adjoining property impact considerations, fluvial erosion hazards considerations, policy on dams and levees, and compensatory floodplain storage rates, are detailed in the Monroe County Stormwater Technical Standards Manual.

3-2 DIRECT RELEASE PROHIBITION

Direct release of runoff from a new development or redevelopment without providing detention is prohibited, unless approved by the MS4 Coordinator or the Drainage Board as a practice consistent with the standards, policies, and objectives of this Ordinance.

3-3 CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

The calculation methods as well as the type, sizing, and placement of all stormwater drainage systems relevant to the foregoing requirement and prohibition, shall meet the design criteria, standards, and specifications outlined in the Stormwater Technical Standards Manual. The methods and procedures in the Stormwater Technical Standards Manual are consistent with the above-stated policy.

3-4 DRAINAGE EASEMENT REQUIREMENTS

(A) Stormwater drainage systems that are outside the public right-of-way and incorporated in drainage plans shall be located within dedicated drainage easements. The easements shall be:

(1) Directly accessible from a public right-of-way;

(2) Designed to encompass the stormwater drainage systems to comply with the width and location requirements of this section, and to provide ready and sufficient access for inspection and maintenance purposes;

(3) Dedicated and granted to the persons or entities authorized to maintain the stormwater drainage systems; and

(4) Kept free of obstructions.

(B) No fencing, mini-barns, swimming pools, landscaping appurtenances, or other potential obstructions shall be placed within a Drainage Easement.

(C) The establishment and dedication of a drainage easement does not obligate Monroe County or the Drainage Board to maintain the drainage features and facilities located within the easement area.

(D) Detention and retention basins shall be located within platted or legally described and recorded perpetual Drainage Easements that are a minimum width of twenty (20) feet horizontally outside of the design 100-year flood elevation of the basin.

(E) All detention and retention basins shall be maintained according to their original design.

(F) Swales shall be located within a drainage easement with a minimum width of thirty (30) feet (15 feet from centerline on each side).

(G) Ditches and natural waterways shall be located within a drainage easement with a minimum width of twenty (20) feet on each side from top of bank unless the width of the 100-year floodplain is greater than 20 feet, in which case the width shall encompass the 100-year floodplain. No filling or other obstructions shall occur within these easements.

(H) Stormwater drainage infrastructure shall be constructed within Drainage Easements or public rights-of-way as described below:

Depth of Pipe from Finish Grade to Crown	Pipe Diameter	Minimum Easement Width
> 3 feet	≤15"	20 feet
< 3 feet	>15"	20 feet
> 3 feet	>15"	25 feet

(G) Sinkholes shall have sinkhole conservancy areas in accordance with Chapter 6 of this Ordinance.

(H) Additional easement requirements along stormwater drainage systems and stormwater BMPs are contained in the Monroe County Stormwater Technical Standards Manual.

3-5 CONSTRUCTION SEQUENCE

(A) If a detention or retention pond is proposed for a development, the pond must be constructed prior to other earth disturbing activities.

(B) If more than one pond is proposed, each pond must be completed before other upstream earth disturbing activity may occur, unless a different sequence has been expressly approved by the Drainage Board or the MS4 Coordinator.

(C) The spillway system, including the emergency overflow, must be constructed at the same time as the pond. If a berm is used to form the pond, a spillway system that is capable of preventing flow over a non-stabilized portion of the berm during the spillway design flood (as noted in the Stormwater Technical Standards Manual) must be completed within 24 hours of berm completion.

(D) The foregoing requirements shall be noted on the construction plans.

3-6 PLACEMENT OF UTILITIES

(A) No utility company may disturb existing stormwater drainage systems without the consent of the Monroe County MS4 Coordinator, whose decision may be appealed to the Monroe County Board of Commissioners. The consent of the MS4 Coordinator or of the Board of Commissioners may be granted subject to conditions. For example, the consent may be conditioned on the requirement that all disturbed stormwater drainage systems be promptly redesigned (if necessary) and restored by the utility at the utility's expense.

(B) All existing stormwater drainage systems shall have senior rights and damage to said systems shall result in penalties as prescribed in Chapter 8 of this Ordinance.

3-7 WAIVERS

(A) The Monroe County Drainage Board, after thorough investigation and evaluation, may waive the requirement of controlled runoff for:

(1) Non-major residential subdivisions; and

(2) Developments with less than 4,000 square feet of proposed impervious surface, such as parking lots and buildings.

(B) In rare circumstances, where a comprehensive watershed-wide hydrologic study or watershed plan of a major stream adopted by the Monroe County Drainage Board and/or the MS4 Coordinator, Monroe County Highway Department (not a "beat the peak" analysis), substantiates the benefits of (or allows for) direct release for a proposed development located adjacent to a major stream, the detention requirements set in this Ordinance may be waived.

(C) Other special circumstances when such a waiver may be considered by Monroe County include situations where the design of a regional pond has already taken into account the provision of direct release in certain areas in the watershed.

(D) In addition to the above, the provisions of MCSMO Chapter 1, Section 8 apply to all waiver requests.

CHAPTER FOUR

STORMWATER POLLUTION PREVENTION FOR CONSTRUCTION SITES

4-1 POLICY ON STORMWATER POLLUTION PREVENTION

(A) For land disturbance one (1) acre or more, the developer shall submit to Monroe County a Stormwater Pollution Prevention Plan (SWPPP) with detailed erosion and sediment control plans as well as a narrative describing materials handling and storage, and construction sequencing. This SWPPP shall be site and project specific.

(B) For land disturbances totaling one-quarter of an acre (0.25 acres) or more but less than one (1) acre, appropriate erosion and sediment controls that are consistent with the Stormwater Technical Standards Manual must be designed and shown on the plans.

(C) Detailed requirements that apply to all land-disturbing activities and shall be considered in the preparation of a SWPPP within Monroe County are contained in the Monroe County Stormwater Technical Standards Manual.

4-2 APPLICABILITY AND EXEMPTIONS

(A) A Stormwater Pollution Prevention Plan (SWPPP), which includes erosion and sediment control measures and materials handling procedures, shall be submitted as part of the Stormwater Permit application. Details of the permitting process are contained in Chapter 7 and are diagrammed in Figure 1.

(B) Any project located within Monroe County which falls under the jurisdictional authority of this Ordinance and includes clearing, grading, excavation, and other land disturbing activities resulting in the disturbance of one-quarter of an acre (0.25 acres) or more of total land area is subject to the requirements of this Chapter.

(C) This chapter also applies to disturbances of less than one-quarter of an acre (0.25 acres) of land that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one-quarter of an acre (0.25 acres) of land, within the area under the jurisdictional authority of this Ordinance.

(D) 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:

(1) Landfills that have been issued a certification of closure under 329 IAC 10.

(2) Coal mining activities permitted under IC 14-34.

(3) 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 stormwater requirements, including the expansion of landfill boundaries and construction of new cells either within or outside the original solid waste permit boundary.

(E) For an individual lot where land disturbance is expected to be one (1) acre or more, the individual lot owner must complete their own notice of intent letter, apply for approval from the Drainage Board and MS4 Coordinator as appropriate, and ensure that a sufficient construction plan and SWPPP are 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.

(F) 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 stormwater approval for the larger project site. The SWPPP for the larger project site must include typical 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.

(G) For the purposes of determining this Chapter's applicability to a project, the following guidelines should be used to determine the total area of land disturbance:

(1) 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, or is intended for the benefit of, the project site owner.

(2) 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.

(3) 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:

(a) 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 shall be used as the expected lot disturbance.

(b) For a single-family residential project site where the lots are less than one half (0.5) acre in size, the total lot shall be calculated as being disturbed.

(c) To calculate lot disturbance on all other types of projects sites, such as industrial and commercial project sites, a minimum of one (1) acre of land disturbance shall be used as the expected lot disturbance, unless the lots are less than one (1) acre in size, in which case the total lot shall be calculated as being disturbed.

(H) It will be the responsibility of the project site owner to complete a Stormwater Permit application or Individual Lot Plot Plan Permit Application and ensure that a sufficient construction plan is completed and submitted to Monroe County in accordance with Chapter 7 of this Ordinance.

(I) It will be the responsibility of the project site owner to ensure compliance with this Ordinance and the Stormwater Technical Standards Manual requirements during the construction activity and implementation of the construction plan, and to notify Monroe County with a sufficient notice of termination letter upon completion of the project and stabilization of the site.

(J) All persons engaging in construction and land disturbing activities on a permitted project site must comply with the requirements of this Chapter and this Ordinance as well as the Stormwater Technical Standards Manual requirements.

4-3 CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

The calculation methods as well as the type, sizing, and placement of all stormwater pollution prevention measures for construction sites shall meet the design criteria, standards, and specifications outlined in the Indiana Stormwater Quality Manual (2007 or later addition) and the Monroe County Stormwater Technical Standards Manual. The methods and procedures included in these two references are consistent with the above stated policy and meet the requirements of IDEM's CSGP.

4-4 MAINTENANCE, RECORD KEEPING, AND REPORTING

(A) A Self-Monitoring Program must be implemented and a Project Management Log maintained by the project site owner to ensure the Stormwater Pollution Prevention Plan is working effectively.

(1) A trained individual, acceptable to Monroe County, shall monitor and manage project construction and stormwater management.

(2) Details regarding the required monitoring activities are contained in the Stormwater Technical Standards Manual.

(3) The SWPPP and the project management log must be retained for at least three (3) ears from the date the project permit is terminated.

(B) The Stormwater Pollution Prevention Plan shall serve as a guideline for stormwater management but should not be interpreted to be the only basis for implementation of stormwater management measures for a project site. The project site owner is responsible for implementing, in accordance with this

Section, all measures necessary to adequately prevent polluted stormwater runoff. Recommendations by the trained individual for modified stormwater management measures should be implemented.

CHAPTER FIVE

STORMWATER QUALITY MANAGEMENT FOR POST-CONSTRUCTION

5-1 POLICY ON STORMWATER QUALITY MANAGEMENT

(A) As new development and re-development continues in Monroe County, measures must be taken to intercept and filter pollutants from stormwater runoff prior to reaching regional creeks, streams, and rivers. Through the use of Best Management Practices (BMPs), stormwater runoff can be filtered and harmful amounts of sediment, nutrients, and contaminants can be removed. Monroe County has adopted a policy that the control of stormwater quality will be based on the management of Total Suspended Solids (TSS) through the treatment of Water Quality Volume (WQv) or Water Quality Discharge Rate (Qwq).

(B) It is also recognized that another major source of pollution in many Indiana streams, including those within the corporate boundaries of Monroe County, is the streambank erosion associated with urbanizing watersheds. Stream channels develop their shape in response to the volume and rate of runoff that they receive from their contributing watersheds. Research has shown that in hydrologically stable watersheds, the stream flow responsible for most of the shaping of the channel (called the bankfull flow) occurs between every one to two years. When land is developed, the volume and rate of runoff from that land increases for these comparatively small flooding events that are not normally addressed by the detention practices and the stream channel will adapt by changing its shape. As the stream channel works to reach a new stable shape, excess erosion occurs. As new development and re-development continues within the corporate boundaries of Monroe County, measures must be taken, through the retention/extended detention of Channel Protection Volume (CPv) to minimize the impact of such development or re-development on streambank erosion. Using appropriate Best Management Practices (BMPs), the volume and rate of runoff for channel forming flows will be reduced in an attempt to minimize increased streambank erosion in the receiving streams and channels.

(C) The project site owner must submit to the MS4 Coordinator a Stormwater Pollution Prevention Plan (SWPPP) that would show placement of appropriate BMP(s) from a pre-approved list of BMPs specified in the Monroe County Stormwater Technical Standards Manual (STSM). The SWPPP submittal shall include an Operation and Maintenance Manual for all post-construction BMP(s) included in the project and a notarized Maintenance Agreement, consistent with the sample agreement provided in the STSM, providing for the long-term maintenance of those BMPs, both of which shall be recorded with the deed for the property on which the project is located. The noted BMPs must be designed, constructed, and maintained according to guidelines provided or referenced in the STSM. Practices other than those specified in the pre-approved list may be utilized. However, the burden of proof as to whether the performance and ease of maintenance of such practices will be in accord with the guidelines provided in the STSM is placed on the applicant. Details regarding the procedures and criteria for consideration of acceptance of such BMPs are provided in the STSM.

(D) Requirements of this Ordinance and the Technical Standards with regard to post-construction stormwater quality management can be satisfied through a variety of methods broadly categorized under two general approaches: Conventional Approach; and Low Impact Development (LID) Approach. The site developer and designer are encouraged to review the LID discussion in the Technical Standards prior to site design.

(E) Gasoline outlets and refueling areas must install appropriate practices to reduce lead, copper, zinc, and hydrocarbons in stormwater runoff as specified in the STSM. These requirements will apply to all new facilities and existing facilities that replace their tanks.

(F) Compliance with the SWPPP and the stormwater quality requirements and objectives of this ordinance shall be confirmed by site inspections conducted by the MS4 Coordinator and/or Monroe County Stormwater Program Inspectors.

5-2 POST-CONSTRUCTION PLAN REQUIREMENT AND EXEMPTIONS

(A) In addition to the requirements of Chapter 4, the Stormwater Pollution Prevention Plan (SWPPP), which is to be submitted to Monroe County as part of the Stormwater Permit application, must also include a post-construction stormwater quality plan demonstrating compliance with Chapter 8 of the STSM.

(B) The measures set forth in the plan shall be incorporated as permanent features into the site plan and are left in place following completion of construction activities to continuously treat stormwater runoff from the stabilized site.

(C) Any project located within the jurisdictional authority of this Ordinance 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 disturbance of less than one (1) acre of land that is 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 area under the jurisdictional authority of the Monroe County MS4. Calculation of land disturbance shall follow the guidelines discussed in Chapter 4, Section 4.2. In addition, regardless of the amount of disturbance, Monroe County reserves the right to require pre-treatment BMPs for proposed hot spot developments in accordance with provisions contained in the STSM.

(D) The requirements of this chapter do not apply to the activities exempted by Chapter 4 Section 4.2.

5-3 CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

(A) The calculation methods as well as the type, sizing, and placement of all stormwater quality management measures, or BMPs shall meet the design criteria, standards, and specifications outlined in the Indiana Stormwater Quality Manual (2007 or later edition) and the Monroe County STSM. The methods and

procedures included in these two references are in keeping with the above stated policy and meet the requirements of IDEM's MS4 GP.

5-4 EASEMENT REQUIREMENTS

(A) All stormwater drainage 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.

(B) The required width of the easement varies based on the selected BMP. The minimum required easement widths for various BMPs are provided in the Monroe County STSM. See also Chapter 3, Section 3-3 of this Ordinance.

CHAPTER SIX

KARST AND SINKHOLE DEVELOPMENT

6-1 PURPOSE AND INTENT

(A) The purpose of this chapter is to establish review procedures, design standards and performance standards applicable to site developments or improvements that encompass or affect sinkholes or other karst features.

(B) The intent of this chapter is to protect the public health, safety and welfare by requiring the development and improvement of environmentally constrained areas to proceed in a manner that promotes safe and appropriate stormwater management and groundwater quality.

6-2 GENERAL PROVISIONS

(A) Any report, study, plan, calculation or proposal required by this chapter shall be provided by the applicant at the applicant's expense.

(B) Development in areas that encompass or affect sinkholes or other karst features (i.e., in "sinkhole areas") is prohibited unless expressly permitted by this chapter or until it is demonstrated to the MS4 Coordinator's satisfaction that the development would have no significant detrimental impact on stormwater management or groundwater quality.

(C) Potential impacts on stormwater management and groundwater quality shall be identified, assessed and addressed through written studies at the earliest stages of the development process (e.g., during the preliminary plat, development plan or site plan approval stages) and, in any event, prior to land disturbing activities or any other the alteration of the site.

(D) The extent and sophistication of any required study shall directly reflect the nature and complexity of the proposed development and of the development site (e.g., the more complex the karst features, the more extensive and sophisticated the study).

6-3 STORMWATER PERMIT REQUIREMENT

No person or persons shall engage in land disturbing activities or sinkhole modification within the Sinkhole Conservancy Area (SCA) or the area that would be covered by a SCA without first securing a Stormwater Permit (SW Permit). Filling, plugging, or altering of sinkholes without a SW Permit constitutes a violation of this Ordinance.

6-4 SINKHOLE EVALUATION REQUIREMENT

A Sinkhole Evaluations shall be performed for each site subject to this chapter based upon a determination of need by the MS4 Coordinator. All Sinkhole Evaluations shall be certified by a Professional Engineer or Professional Geologist licensed in the State of Indiana. A list of required information and documentation for a Sinkhole Evaluation can be found in the STSM.

6-5 DEVELOPMENT REQUIREMENTS

(A) Sinkhole Conservancy Areas (SCAs) shall be established to the following minimum standards in all sinkhole areas subject to the Sinkhole Evaluation requirement of Section 4 of this Chapter and to the MS4 Coordinator's review and approval:

(1) For all sinkholes and compound sinkholes, the SCA shall, at a minimum, encompass the entire sinkhole and all of the area within fifty (50) feet of the largest adjoining closed contour to the sinkhole utilizing best available data.

(2) If a SCA is required to be established on a parcel that was not, or will not be created by recorded plat, a legal description of the SCA shall be included on the recorded deed of the parcel.

(3) Development stormwater runoff beyond limits of the SCA shall be diverted from the sinkhole. Maximum allowed stormwater runoff shall be limited to the undisturbed SCA area.

(4) All SCAs shall be provided with a Drainage Easement to an approved stormwater outfall for emergency overflow, should the sinkhole stop draining. The easement shall accommodate flow from the SCA for 1% AEP of a 24 hour Type 2 storm event.

(5) The minimum floor elevation of any existing structure is at least two (2) feet higher than the estimated flooding elevation from the 1% AEP 48-hour storm.

(6) The increase in volume of runoff from the site does not cause the flooding depth on any existing public road to exceed the maximum depth as specified in the STSM.

(B) No post-construction impervious surfaces shall drain to a sinkhole without detention, water quality treatment, and dissipation of flow using practices approved by the MS4 Coordinator.

(C) The MS4 Coordinator may, based upon the topography, geology, soils, history of a sinkhole (such as past filling) and the developer's engineer's stormwater analysis and plan, establish sinkhole-related non-buildable areas.

(1) No buildings, parking areas, grading or other structures shall be permitted within the sinkhole-related non-buildable area unless otherwise authorized by the MS4 Coordinator; and

(2) No private drives, streets, and highways shall be permitted within the sinkhole-related non-buildable area unless the County Highway Engineer and the MS4 Coordinator jointly conclude that traffic safety outweigh stormwater and water quality considerations.

(D) The above notwithstanding, no land disturbing activity may occur within a SCA if that development, construction, or use is determined by the MS4 Coordinator to violate the intent of this chapter.

6-6 FLOODING CONSIDERATIONS

(A) The flooding and water quality considerations set forth in this section are designed and are intended to ensure that inflow rates to the sinkhole are maintained at or below pre-development values; and that sediment and erosion control and water quality considerations set forth in this chapter can be satisfied.

(B) All developments with sinkholes are required to meet the post-development peak discharge rates and water quality treatment requirements defined in the STSM.

(1) Sinkhole Flooding Area:

(a) Except in cases in which the sinkhole flooding area from the 1% AEP storm has been determined in a published flood insurance study, the sinkhole flooding area shall be determined for each sinkhole for both pre-development and post-development conditions, assuming no subsurface outflow from the sinkhole.

(b) Where the estimated volume of runoff exceeds the volume of the sinkhole depression, the depth, spread and path of overflow shall be estimated using methods defined in the STSM.

(c) The overflow volume shall be included in determining the maximum estimated flooding elevations in the next downstream sinkhole. This analysis shall continue downstream until the lowest sinkhole of the sinkhole cluster is reached or overflow reaches a surface watercourse.

(d) The volume of runoff considered shall be that which results from a rainstorm with a 1% AEP and a duration of forty-eight (48) hours. All discharge rates shall conform to the standards established in the STSM.

(2) Detailed Flooding Analysis:

(a) In cases where the conditions set forth above cannot be met, a detailed flooding analysis will be required if any increase in runoff volume is proposed or expected.

(b) As part of the detailed flooding analysis, a runoff model must be made and a reservoir routing analysis performed for the sinkhole watershed using hydrograph techniques as specified in the STSM.

6-7 POLICY FOR THE EMERGENCE OF NEW SINKHOLES

(A) All newly emerging sinkholes are subject to the provisions of this Chapter.

(B) All new sinkholes emerging on existing sites shall not be disturbed. Filling, plugging, or altering of sinkholes without a SW Permit constitutes a violation of this Ordinance. New sinkholes must comply with SCA requirements identified in Section 3 of this Chapter.

(C) The above sections notwithstanding, if sinkholes emerge as a direct result of otherwise approved land disturbing activities or construction, it may be filled so long as all the following criteria are met:

(1) Notify the Highway Department MS4 Coordinator within 24 hours of discovery, (812) 349-2555.

(2) Protect the sinkhole with erosion and sediment control measures to minimize the discharge of sediment and pollutants into the sinkhole, within 24 hours of discovery.

(3) Submit plans certified by a Professional Engineer or Professional Geologist licensed in the State of Indiana, showing the extent of the sinkhole and plans for filling. Filling of the sinkhole must not pose increased risk for surface flooding or groundwater contamination. Filling plans shall be subject to a Sinkhole Evaluation and plan requirements of this Chapter, to determine if the filling of the sinkhole constitutes an increased risk of surface flooding or groundwater contamination.

(4) A pre-construction meeting with the MS4 Coordinator must occur.

(5) The MS4 Coordinator or their designee must be present on the site when the sinkhole filling work occurs.

CHAPTER SEVEN

STORMWATER MANAGEMENT PERMITTING REQUIREMENTS AND PROCEDURES

7-1 GENERAL PROCEDURE

The general procedure for obtaining Board approval for a proposed development and the issuance of a Stormwater Permit consists of the following steps:

(A) Review this Chapter (Stormwater Management) and copy the Project Check-In Checklist provided in Appendix B of the STSM. Note that Drainage Board approval is required for some matters and developments that do not require other County approvals, such as Monroe County Plan Commission approval.

(B) Discuss applicability of this Chapter to the particular development with the MS4 Coordinator if necessary.

(C) Determine whether the development site is affected by the floodplain of a waterway with a watershed area in excess of one square mile. The FEMA floodplain maps do not include all floodplains regulated by the Indiana Department of Natural Resources (DNR). Obtain and submit the best available flood plain elevation information from the DNR portal.

(D) Determine whether the proposed work would affect a wetland or any Waters of US. The MS4 Coordinator may require a delineation report. If jurisdictional waters are present and/or affected, additional permits from IDEM and/or the US Army Corps of Engineers may be necessary.

(E) Determine the presence of sinkholes, karst springs, or other features on or near the project site. The MS4 Coordinator may require a karst study or geotechnical investigation.

(F) Determine whether the site is in a Critical Watershed (see list in the Stormwater Technical Standards Manual Appendix B4).

(G) Determine whether the site includes flood prone soils, or highly erodible soils, or is located in a fluvial area (see definitions of flood prone soils, highly erodible soils, and fluvial hazard areas in Appendix A).

(H) Apply for permit and develop a preliminary plan and report that can be easily understood by someone who is not familiar with the project. Pay particular attention to flood prone and highly erodible soils, to off-site drainage onto the site, to the presence of sinkholes, to presence of slopes that are steeper than 15%, and to the adequacy of the outlet (downstream flooding problems, erosion potential, inadequate/restrictive culverts, sinkholes, etc.).

(I) Attend the Drainage Board meeting at which the project will be discussed. Obtain Board meeting information from the MS4 Coordinator or from the County Surveyor.

(J) Respond to Drainage Board comments and questions, and if the preliminary plan is approved, develop a final construction plan and submit it to the MS4 Coordinator.

(K) Prior to commencing construction, schedule a pre-construction meeting with the MS4 Coordinator to discuss the SWPPP, the construction schedule, and the stormwater drainage system.

(L) Schedule inspections of the stormwater drainage infrastructure with the Monroe County Stormwater Inspector. Perform required tests, such as lamping of storm sewers.

(M) Develop a set of as-built plans and submit to the MS4 Coordinator for review and plan approval.

7-2 PRELIMINARY STORMWATER MANAGEMENT PLAN APPROVAL

In order to establish that an adequate drainage outlet(s) exists for a proposed subdivision or for commercial developments that will involve land disturbing activities and/or the erection or placement of structures or buildings, a developer must apply for a preliminary drainage approval from Monroe County before seeking other permits or approvals relating to the subdivision or development and before commencing or otherwise bringing the subdivision or development into being. As part of the noted Preliminary Stormwater Management Plan Approval, a developer shall submit conceptual drainage plans for review by the Drainage Board. Note that any preliminary drainage approval by Monroe County 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. Once a development receives Preliminary Drainage Approval from the Monroe County Drainage Board, all subsequent processing for the necessary stormwater approvals will remain with the Monroe County Drainage Board, including all individual sections or phases of the development, unless otherwise required or permitted by this Ordinance. The following is a general listing of minimum data requirements for the review of conceptual drainage plans, all of which must be on a CD, thumb drive, or other media acceptable to Monroe County:

(A) Documentation for obtaining any needed consents, off-site easements, or right-of-way.

(B) **Project Narrative and Supporting Documents**:

(1) Description of the nature and purpose of the project.

(2) General description of the existing and proposed drainage systems in narrative form.

(3) General description of streams, farm drains or other floodwater runoff channels (with watersheds that exceeds 2 acres), inlets and outfalls in narrative form, if any of record.

(4) General description of all existing storm, sanitary, and septic tank systems and outfalls in narrative form.

(5) Drainage calculations showing existing and proposed discharges for various storm events.

(6) Vicinity map depicting the project site location in relation to recognizable local landmarks, towns, and major roads, such as a USGS topographic quadrangle map or county or municipal road map.

(7) A map showing watershed boundaries with USGS contours or best information possible.

(8) A soils map of the site, indicating soils names and their hydrologic classification, shall be included in the application materials. Flood prone soils shall be highlighted. Copies of maps with highlighted flood prone soils are available through SWCD and/or the Monroe County GIS.

(9) A topographic map of the land to be developed (at the contour interval required by the County Zoning Ordinance) and such adjoining land whose topography may affect the layout or drainage of the development must be provided. The source of the topographic map shall be noted on the plans. The following information shall be shown on the topographic map:

(a) The location of streams and other floodwater runoff channels (with watersheds that exceed two acres), the extent of the flood plains at the established 100-year flood elevation as shown on published FEMA or DNR maps, and the limits of the floodway, all properly identified (e.g., intermittent stream, floodway, floodway fringe, flood plain, etc.).

(b) The normal shoreline of the lakes, ponds, swamps and detention basins, their flood plains, and lines of inflow and outflow, if any.

(c) Existing storm and sanitary sewers.

(d) Septic tank systems and outlets, if any of record.

(e) Seeps, springs, flowing and other wells, sinkhole rims, caves, and quarries that are visible or of record.

(f) Within the Monroe Lake and Griffy Lake watersheds, a delineation of areas subject to slope restrictions (see M.C.C. 825)

(C) Conceptual Plans:

(1) Conceptual plans showing general project layout, including existing and proposed drainage systems and proposed outlets.

(2) Schedule of Phases or installation of core facilities.

All the required information must be submitted in electronic format compatible with Monroe County GIS. All mapping and survey data must be in State Plane Coordinates with the following metadata requirements: Indiana west; US Survey feet; GNS 80 Ellipsoid; NAVD 88; GEOID 09; NAD 83; CORS 96; and, EPOCH 2002 or later.

7-3 PERMITTING PROCEDURES

For projects located within unincorporated areas of Monroe County, the project site owner must submit an application for a Stormwater Permit to the Monroe County MS4 Coordinator. The application will include a completed application checklist, construction plan sheets, stormwater drainage technical report, a stormwater pollution prevention plan, and any other necessary support information. Specific information to be included in the application is set forth in this Ordinance and in the STSM.

If the project must go through a scheduled meeting, all information must be submitted at least thirty (30) days prior to the regularly scheduled meeting. Within 15 days after its meeting, the Monroe County Drainage Board will furnish the applicant with a written list of objections, if any, to the plans and supporting data submitted by the applicant. A resubmittal from the applicant addressing the list of objections shall be provided to the Monroe County Drainage Board at least ten (10) days prior to the scheduled meeting during which the resubmittal will be considered. Plans in substantial compliance with the requirements of this Ordinance and the Technical Standards that need to go through a scheduled meeting shall be placed on the agenda with a recommendation for Conditional Approval or Construction Approval. If the Monroe County Drainage Board approves the project, the plans will be signed by the MS4 Coordinator after Construction Approval has been granted.

If the project does not require Drainage Board approval at a scheduled meeting, the MS4 Coordinator will provide comments and sign the plans after Construction Approval has been granted. Once the plans have been approved, and after a pre-construction meeting has been held, construction may commence.

The project site owner must notify the Monroe County Drainage Board, the MS4 Coordinator, and IDEM, before beginning construction. Notification to the Monroe County Drainage Board shall be in the form of an email while notification to IDEM shall be in the form of an online IDEM NOI submittal. Once construction starts, the project owner shall monitor construction activities and inspect all stormwater pollution prevention measures in compliance with this ordinance and the terms and conditions of the stormwater management approval. Upon completion of construction activities, a Certification of Completion and Compliance and as-built plans must be submitted to the Monroe County Drainage Board in hardcopy and in an electronic format compatible with the Monroe County Geographic Information System (GIS). Once the construction site has been stabilized and all temporary erosion and sediment control measures have been removed, a notification shall be sent to the Monroe County Drainage Board, requesting a termination inspection. The Monroe County Drainage Board, or representative, shall inspect the construction site to verify that the completed project is fully stabilized and meets the requirements of Monroe County stormwater Ordinance and its technical standards as well as the terms and conditions of the approval. Once the applicant receives a signed copy of the Termination Inspection Checklist confirming

compliance, they must forward a copy to IDEM along with the required IDEM NOT form. Permits issued under this scenario will expire 5 years from the date of issuance. If construction is not completed within 5 years, an updated permit application must be submitted to Monroe County Drainage Board and an updated NOI must be resubmitted to IDEM at least 90 days prior to expiration. The Permitting process is summarized in Figure 1 at the end of this Chapter.

7-4 SWPPP REVIEW TIME LIMITS

Pursuant to IC 13-18-27, an MS4-designated entity or other review authority such as SWCD must make a preliminary determination as to whether the construction plan associated with SWPPP is substantially complete before the end of the tenth (10th) working day after the day on which the construction plan associated with SWPPP is submitted to the review authority, in the case of a less than 5 acres construction activity site or the fourteenth (14th) working day after the day on which the construction plan associated with SWPPP is submitted to the review authority, in the case of a 5 acres or larger construction activity site. Depending on the outcome of the SWPPP review, the following scenarios may play out:

(A) No SWPPP review notification received: If the review authority does not notify the applicant of its preliminary determination as to whether the construction plan is substantially complete within either 10 or 14 days as noted above, the project site owner may submit a notice of intent letter to IDEM including the information required by IDEM, or this Ordinance and the Monroe County Stormwater Technical Standards Manual, and after submission of the notice of intent letter to IDEM, may begin the construction project, including the land disturbing activities of the construction project.

(B) SWPPP not substantially complete: If the review authority notifies the applicant that the construction plan is not substantially complete, the project site owner may not submit a notice of intent letter to IDEM until the review authority makes a conclusive favorable determination concerning the construction plan under the IDEM permit, or this Ordinance and the Monroe County Stormwater Technical Standards Manual.

(C) Unfavorable SWPPP: If the review authority notifies the applicant that the construction plan is substantially complete; and makes a conclusive unfavorable determination concerning the construction plan under IDEM rule/permit, or this Ordinance and Monroe County Stormwater Technical Standards Manual; the land disturbing activities of the construction project must stop when the review authority notifies the project site owner of the review authority's conclusive unfavorable determination concerning the construction plan.

Note that the above time limits only apply to the SWPPP portion of the overall stormwater approval submittal and does not affect any official or non-official approval review timelines set by the Monroe County Drainage Board for other aspects of the stormwater approval application.

7-5 FINAL STORMWATER APPROVAL REQUIREMENTS

Specific projects or activities may be exempt from all or part of the informational requirements listed below. 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 6 of this Chapter.

The different elements of a permit/approval submittal for a Final Stormwater Plan approval include a completed application checklist, construction plans, a stormwater drainage technical report, a stormwater pollution prevention plan for active construction sites, a post-construction stormwater pollution prevention plan, and any other necessary supporting information. All plans, reports, calculations, and narratives shall be signed and sealed by a professional engineer or a licensed surveyor, registered in the State of Indiana.

(A) Application Checklist

As part of the Monroe County Stormwater Management Permit application package, the application checklist provided in the Technical Standards Manual must be completed by the applicant and provided along with other required supporting material.

(B) Construction Plans

Construction plan sheets and an accompanying narrative report shall describe and depict the existing and proposed conditions. Note that in order to gain an understanding of and to evaluate the relationship between the proposed improvements for a specific project section/phase and the proposed improvements for an overall multi-section (phased) project, the detailed information requested herein for the first section/phase being permitted must be accompanied by an overall project plan that includes the location, dimensions, and supporting analyses of all detention/retention facilities, primary conveyance facilities, and outlet conditions. Construction plans must include the items listed in the application checklist provided in the Monroe County Stormwater Technical Standards Manual.

(C) Stormwater Drainage Technical Report

A written stormwater drainage technical report must contain a discussion of the steps taken in the design of the stormwater drainage system. Note that in order to gain an understanding of and to evaluate the relationship between the proposed improvements for a specific project section/phase and the proposed improvements for an overall multi-section (phased) project, the detailed information requested herein for the first section/phase being permitted must be accompanied by an overall project plan that includes the location, dimensions, and supporting analyses of all detention/retention facilities, primary conveyance facilities, and outlet conditions. The technical report needs to include items listed in the application checklist provided in the Monroe County Stormwater Technical Standards Manual.

(D) Stormwater Pollution Prevention Plan for Construction Sites

For sites with total disturbance of land in an amount that would be governed by this Ordinance, a stormwater pollution prevention plan associated with construction activities must be designed to, at least, meet the requirements of this Ordinance. For land disturbances totaling less than 1 acre but greater than an amount that would be governed by this Ordinance, appropriate erosion and sediment control measures that are consistent with the Monroe County Technical Standards must be designed and shown on the plans. The SWPPP must include items listed in the application checklist provided in the Monroe County Stormwater Technical Standards Manual.

(E) Post-Construction Stormwater Pollution Prevention Plan

For sites with total disturbance of land in an amount that would be governed by this Ordinance, a post-construction stormwater pollution prevention plan must be designed to, at least, meet the requirements of this Ordinance and must include the information provided in the Monroe County Stormwater Technical Standards Manual. The post-construction stormwater pollution prevention plan must include items listed in the application checklist provided in the Monroe County Stormwater Technical Standards Manual, and must identify the party or parties responsible for satisfying the on-going maintenance requirements of this Ordinance.

(F) Pre-construction Meeting and Initial Erosion Control Inspection

Schedule a pre-construction conference with the MS4 Coordinator.

(G) Operation and Maintenance Manual

An operations and maintenance (O&M) manual for all private infrastructure, including but not limited to pipes, ponds, ditches, and BMPs (when required), shall be submitted for the final plan approval and permit process. The detailed requirements for O&M manual are provided in the Monroe County Stormwater Technical Standards Manual.

(H) Maintenance Agreement

A formal BMP maintenance agreement will need to be prepared and notarized consistent with the sample agreement provided in the Monroe County Stormwater Technical Standards Manual, providing for the long-term maintenance of those BMPs. This maintenance agreement shall be recorded with the deed for the property on which the project is located.

7-6 REVIEW OF INDIVIDUAL LOTS AND PARCELS

For individual lots disturbing less than 1 acre, developed within a larger permitted project, or larger than 1-acre individual parcels that are not part of 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. If part of a larger permitted project, all stormwater management measures necessary to comply with this Ordinance must be implemented in accordance with permitted plan for the larger project. All Individual Lot Plot Plans must also receive the MS4 Coordinator approval.

The following information must be submitted to the Monroe County 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) The individual lot operator must complete an Individual Lot Permit Request and pay the applicable fee.

(B) Certified site layout for the subject lot and all adjacent lots showing elevation contours and its source, building pad location, dimensions, elevations, proposed sump pump connections (not to road sub-drains), and the drainage patterns and swales (including side yard swales).

(C) Erosion and sediment control plan that, at a minimum, includes the following measures:

(1) Installation and maintenance of a stable construction site access.

(2) Installation and maintenance of appropriate perimeter erosion and sediment control measures prior to land disturbance.

(3) Minimization of sediment discharge and tracking from the lot.

(4) 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.

(5) Adjacent lots disturbed by an individual lot operator must be repaired and stabilized with temporary or permanent surface stabilization.

(6) Self-monitoring program including plan and procedures.

(D) Name, address, telephone number, and list of qualifications of the trained individual in charge of the mandatory stormwater 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 permanently stabilized. The project site owner is responsible for submitting a Notice of Termination to the MS4 Coordinator when the project is completed, all temporary erosion and sediment controls have been removed, and the site is permanently stabilized with at least 70% cover with no large bare areas.

7-7 CHANGES TO PLANS

Any changes or deviations in the detailed plans and specifications made after a SW Permit or approval is granted shall be submitted to the Drainage Board or MS4 Coordinator as a request to amend the permit or approval. If approved by the Board or Coordinator, copies of the changes or deviations shall be attached to the original plans and specifications. The changes or deviations may not be implemented unless and until Board or Coordinator approval is granted.

7-8 FEE STRUCTURE

(A) Fee Amount

As a condition of the submittal and the review of development plans by Monroe County, the applicant shall agree to pay Monroe County the applicable fee, as set by resolution of the Monroe County Board of Commissioners, with respect to the review of all drainage submittals, preliminary plans, final plans, construction plans and accompanying information and data, as well as pre-paid inspection fees.

(B) Time of Payment

After the meeting at which the Drainage Board is scheduled to consider acceptance of the applicant's final stormwater management plan, Monroe County will furnish a written statement to the applicant specifying the total amount due Monroe County in connection with the review of the applicant's submittals, plans and accompanying information and data, including the amount required to be paid by applicant for review and pre-paid inspection fees.

As a condition of acceptance of final drainage plans by Monroe County, applicant shall pay to Monroe County the sum set forth in said statement. Monroe County may issue a billing statement before the project advances to the final acceptance stage, and such payment is due by applicant upon receipt of said billing statement regardless of whether the project is advanced to the final acceptance stage.

Monroe County shall have the right to not accept the drainage improvements or to not accept the advancement of any project for which the applicable fees have not been paid.

(C) Refund of Payment

Stormwater Permit fees are refundable **only** if Monroe County determines that compliance by the development to this Ordinance is not necessary.

7-9 REQUIRED ASSURANCES

As a condition of approval and issuance of the SW Permit or approval, Monroe County shall require the applicant to provide assurance in form of an irrevocable Letter of Credit when the stormwater management plan has been accepted, all applicable fees paid, and before construction begins. Said assurance will guarantee a good faith execution of the stormwater drainage plan, the stormwater pollution prevention plan, the stormwater quality management plan, and any approval/permit conditions. The assurance shall be for an amount equal to 110 percent of the total costs for all stormwater management measures for the entire project until it is completed. The above-mentioned costs shall be based on an estimate prepared by a Professional Engineer or Professional Land Surveyor licensed in the State of Indiana. 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 stormwater drainage infrastructure, detention and retention facilities, and stormwater quality BMPs, as regulated under this Ordinance, until the construction is completed, site is permanently stabilized, and as-built plans are accepted by the Monroe County Highway Department. Assurances shall be for a minimum of $5,000. The intent of this assurance is not only to complete the installation of stormwater drainage infrastructure for the project, but also to assure that adequate stormwater 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 stormwater assurance.

7-10 TERMS AND CONDITIONS OF APPROVALS OR PERMITS

In granting a SW Permit, Monroe County may impose such terms and conditions as are reasonably necessary to meet the purposes of this Ordinance. The project site owner shall insure compliance with such terms and conditions. Non-compliance with the terms and conditions of SW Permits will be subject to enforcement as described in Chapter 8.

The project site owner shall inform all general contractor, 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 SW Permit and the schedule for proposed implementation.

In the event that a project site is determined to impact or discharge to a Sensitive Area or is located in a Critical Watershed, Monroe County may require more stringent stormwater quantity and quality measures than detailed in this Ordinance, STSM, or in the Indiana Stormwater Quality Manual (2007 or later edition).

(A) Determination of Sensitive Areas

Sensitive Areas include highly erodible soils, wetlands, threatened or endangered species habitat, outstanding waters, impaired waters, recreational waters, steep slopes (steeper than 15%), karst areas, floodplains, fluvial erosion corridors, 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 Monroe County Stormwater Quality Management Plan (SWQMP) - Part B. 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 (COE) and the wetland addressed in accordance

to the requirements of this Ordinance. The presence of threatened or endangered species habitat will be evaluated by the MS4 Coordinator during the SW Permit review process. Special terms and conditions for development determined to impact or discharge to any Sensitive Area shall be included in the SW Permit approval.

(B) Determination of Critical Watersheds

The Monroe County Drainage Board is authorized, but is not required, to classify certain geographical areas as Critical Watersheds. In determining Critical Watersheds, the Monroe County Drainage Board 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 a Critical Watershed by the Monroe County Drainage Board. A list of currently-designated Critical Watersheds and specific requirements for development within Critical Watersheds are contained in Monroe County Stormwater Technical Standards Manual. Additional special terms and conditions for development within any Critical Watershed shall be included in the SW Permit approval.

7-11 CERTIFICATION OF AS-BUILT PLANS

After completion of construction of the project and before final project acceptance, a professionally prepared and certified 'as-built' set of plans shall be submitted to Monroe County for review. Additionally, a digital copy of the 'as-built' plans is required in a format accepted by Monroe County that must meet metadata requirements for as-built plans.

(A) As-Built plans shall include all pertinent data relevant to the completed stormwater drainage system, including without limitation:

(1) Pipe size and pipe material;

(2) Invert elevations;

(3) Top rim elevations;

(4) Ditch flow line elevations at approximately 200 foot intervals;

(5) Elevation of the emergency overflow (spillway) for ponds;

(6) Pipe structure lengths;

(7) BMP types, dimensions, and boundaries/easements;

(8) "As-planted" plans for BMPs, as applicable;

(9) Data and calculations showing detention basin storage volume, if different from calculations submitted with approved plans;

(10) Data and calculations showing BMP treatment capacity, if different than calculations submitted with approved plans;

(11) Proof that all required easements have been recorded;

(12) Proof that the BMP maintenance agreement has been recorded; and,

(13) Certified statement on plans stating the completed storm drainage system substantially complies with construction plans and the stormwater management approval by the Monroe County Drainage Board (See certificate in Stormwater Technical Standards Manual).

(B) In addition to the digital copy of as-built plans, digital copies of all reports and plans noted in Sections 3 and 4 of this Chapter shall be submitted in their final accepted forms to the MS4 Coordinator so that they can be electronically filed for any future reference.

(C) The property owner, developer, or contractor shall be required to file a five-year maintenance bond or other acceptable guarantee with Monroe County, prior to final project acceptance, in an amount not to exceed twenty five percent (25%) of the cost of the stormwater drainage system located outside the public road right-of-ways, and in a form satisfactory to the Monroe County Drainage Board's attorney in order to assure that such stormwater drainage 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, that such project was done in accordance with the accepted plans and this Ordinance, and that any off-site drainage problems that may arise, whether upstream or downstream of such project, will be corrected if such drainage problems are determined by Monroe County to have been caused by the development of such project. The bond or other acceptable guarantee shall be in effect for a period of five years after the date of the final project acceptance by Monroe County.

(D) Storm sewer pipes that do not exceed 42 inches diameter and that are located within a public right-of-way or drainage easement, shall be visually inspected by lamping no sooner than 30 days after backfilling. If the lamping inspection demonstrates or indicates that the pipes are defective, or were improperly installed, the Board may require the pipes to be inspected by closed circuit television, at the developer's expense, subject to the following provisions:

(1) A camera equipped with remote control devices to adjust the light intensity and one thousand (1,000) feet of cable shall be used to conduct the inspection. The camera must be able to transmit a continuous image to the television monitor as the camera is pulled through the pipe. The image must be clear enough to enable the County to easily evaluate the interior condition of the pipe. The camera shall have a digital display for footage along the route and project number and an audio voice-over shall be made during the inspection identifying any problems.

(2) If necessary to properly evaluate the condition of the pipe, the pipe shall be thoroughly cleaned before the camera is installed and the inspection is commenced. Cleaning of the pipe shall be the responsibility of the Owner.

(3) The recording on a media acceptable to the County of the entire storm sewer line and a reproduction map indicating the pipe segment numbers of all portions of the pipe that were inspected shall be submitted to the MS4 Coordinator within ten days of the inspection, for review and shall be maintained by the Coordinator as a County record.

(4) Any portion of pipe found to be defective or to have been improperly installed shall be repaired or replaced to the satisfaction of the County. A closed-circuit television re-inspection of the repaired or replaced storm sewer pipe shall be made. Within ten days of the completion of the repair or replacement, a recording of the re-inspection shall be provided to the MS4 Coordinator and maintained as a County record.

(E) Inspections are required in order to identify defects and problems, including without limitation: excessive sedimentation, joint failures, excessive deflections (CMP), sags, or other system defects which have the potential of affecting the hydraulic performance, durability, or structural integrity of the line segment. Excessive deflection of CMPs shall be considered to exist under the following conditions: variations from a straight centerline; elliptical shape in a pipe intended to be round; dents or bends in the metal. Metallic or bituminous coatings which have been scratched, scraped, bruised, or otherwise broken may result in rejection of the installed system.

7-12 VARIANCE POLICY AND PROCEDURE

(A) Policy

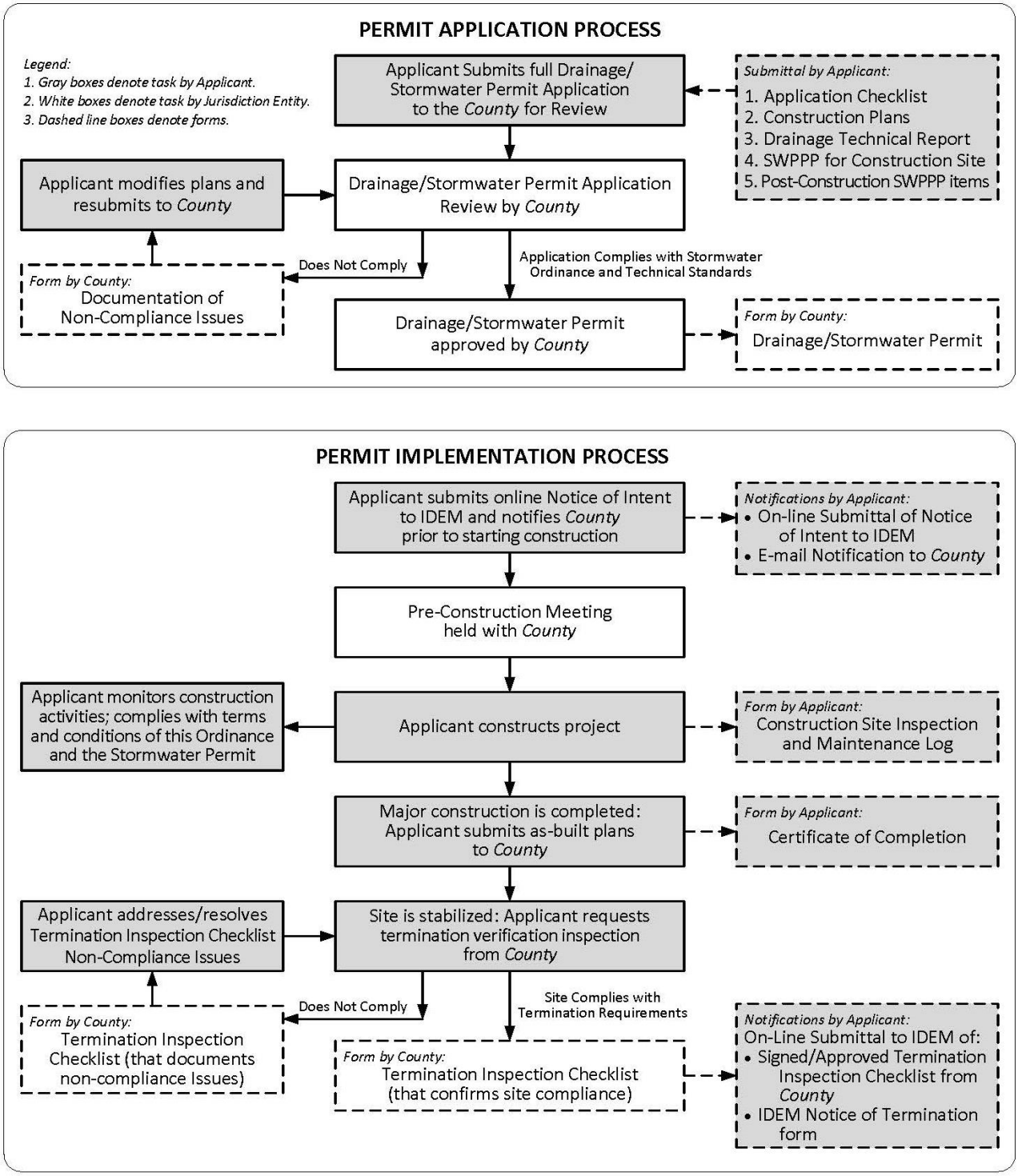
It is recognized that, from time to time, stormwater management design professionals may need to deviate from the relevant stormwater policies, procedures, technical standards, and design criteria. This Variance Policy is provided to give the stormwater design professionals guidance on what deviations from policies, procedures, technical standards, and design criteria will necessitate a formal variance request. In general, proposed deviations from policies and procedures set forth in this Ordinance (Chapter 761) will be processed as variances, whereas, proposed deviations from the STSM (including Appendix D of those Standards) will require review and may be approved by the MS4 Coordinator. The MS4 Coordinator may direct a person to seek a variance from a STSM provision if the Coordinator deems it advisable.

(B) Procedure

A person seeking a variance from the provisions of this Ordinance, as part of a permit application or in connection with remedial action, shall request such variance from the Drainage Board in writing. The person seeking the variance shall bear the cost and burden of providing the Drainage Board with the information necessary to persuade the Board that the requested variance is

necessary, is limited in scope to the minimum variation necessary, is not based on a desire to simply avoid the cost of complying with the Ordinance, and will not subvert the purposes and intent of the Ordinance, but rather, will satisfy the purposes and intent of the Ordinance. A decision on a variance request may be appealed to the Board of Commissioners (see Chapter 8 Section 3 of this Ordinance). However, the MS4 Coordinator's decision to require Drainage Board consideration of a deviation from the STSM is not appealable. The Board of Commissions may grant a variance as part of an appeal from a Drainage Board or MS4 Coordinator decision or action.

Figure 1 - Permit Approval Process



CHAPTER EIGHT
COMPLIANCE AND ENFORCEMENT

8-1 COMPLIANCE WITH THIS ORDINANCE

Compliance with the requirements of this Ordinance is required. Unless otherwise stated, all other specifications referenced in this Ordinance shall be deemed to mean the most recent edition or version of the specifications available. Violations of the requirements of this Ordinance are subject to the penalties listed below.

8-2 VIOLATONS AND ENFORCEMENT

(A) Violations

Any action or inaction which violates the provisions of this Ordinance, the requirements of an approved stormwater plan or permit, the conditions or requirements of any permit or approval that are used to support an exemption to a requirement of this Ordinance, and/or the requirements of a recorded stormwater maintenance agreement (each of which shall be deemed an "enforceable violation for purposes of this chapter"), may be subject to the enforcement actions outlined in this Section. Any such action or inaction is deemed to be a public nuisance and may be abated by injunctive or other equitable relief. The imposition of any of the penalties described below shall not prevent such equitable relief, i.e., the remedies are alternative and/or cumulative.

(B) Notice of Violation

When Monroe County finds that any person has committed, or continues to commit, an enforceable violation for purposes of this chapter, or any order issued pursuant to this Ordinance, Monroe County may serve upon that person a written Notice of Violation, specifying the particular violation believed to have occurred and requesting the discharger to immediately investigate the matter and to seek a resolution whereby any offending discharge will cease. The Notice of Violation may contain detailed inspection findings, citations to authorities, suggested remedial actions, reasonable deadlines for those remedial actions, the date of re-inspection, and remedies that may be sought pursuant to this Ordinance. Investigation and/or resolution of the matter in response to the Notice of Violation in no way relieves the alleged violator of liability for any violations occurring before or after receipt of the Notice of Violation. Nothing in this subsection shall limit the authority of Monroe County to take any action, including emergency action or any other enforcement action, without first issuing a Notice of Violation.

(C) Cooperation and Compensatory Action

In lieu of enforcement proceedings, penalties, and remedies, authorized by this ordinance, Monroe County may work with violators to informally resolve issues arising under this chapter and may impose upon a violator alternative compensatory

actions, such as storm drain stenciling, attendance at compliance workshops, creek cleanup, etc.

(D) Civil Penalties and Remedies for Violations

Any person found to have committed an enforceable violation for purposes of this Chapter shall be responsible for a Class A Ordinance Violation and shall be subject to the fines, penalties, procedures, and actions, authorized by law, including those set forth in Monroe County Code Chapter 115. Each day such violation occurs or continues shall be deemed a separate offense and shall make the violator liable for the imposition of fines and remedies for each day of violation. Emergency court orders mandating the termination of utility services, authorizing the termination of access to the stormwater drainage system, halting operations, terminating discharges, and other necessary orders may be sought. The rights and remedies provided for in this section are alternative and/or 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 committing an enforceable violation for purposes of this Chapter shall be deemed to be, or have been, in violation of this Ordinance and shall be subject to the penalties stated or incorporated into this chapter.

(E) Stop Work Order

In addition to the remedies listed above, if covered activities are conducted in a manner that constitutes an enforceable violation for purposes of this Chapter, the MS4 Coordinator or other County inspector or enforcement official, may order the work stopped by serving a written Stop Work Order, by mail, personal delivery, email, facsimile, text, or other commonly used delivery method, on any person engaged in the doing or causing of such work to be done, or responsible for the site or work, if known, and any such persons shall forthwith stop such work until authorized by the MS4 Coordinator, or the issuing department of Monroe County government, to proceed with the work. A Stop Work Order will cite the nature of the alleged violation and will be posted on the site by the issuer and it is a violation of this Ordinance for any person to remove the Order or to continue any work on the site without permission from the MS4 Coordinator or the issuing department of Monroe County government. The Stop Work Order shall cite the MS4 Coordinator's contact information and shall note that the Order may be appealed to the Board of Commissioners. Monroe County 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.

(F) Withhold Certificate of Occupancy and Land Use Certificate

Monroe County may refuse to issue a certificate of occupancy for the building or other improvements constructed or being constructed on the site, and may refuse to issue a land use certificate for the site, until the applicant or other responsible person

has taken the remedial measures set forth in the Notice of Violation, or has otherwise cured relevant enforceable violations for purposes of this Chapter.

(G) Suspension, Revocation, of Modification of Approvals/Permits

The MS4 Coordinator or Drainage Board may suspend, revoke, or modify any existing permit/approval that may have been granted under this Ordinance as necessary to ensure compliance with this Ordinance. A suspended, revoked, or modified permit/approval may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the Notice of Violation or has otherwise cured the violations described therein, provided such permit/approval may be reinstated upon such conditions as Monroe County may deem necessary to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations. No person may continue to use or develop a site under a suspended or revoked permit or approval until the permit is reinstated. A site may be used or developed under a modified permit or approval in accordance with the modifications.

(1) If the MS4 Coordinator or the Drainage Board finds that sufficient grounds exist for the suspension, revocation, or modification of a permit, or approval, the Coordinator or the Board shall send the permit or approval recipient ten (10) days written notice of the intent to suspend, revoke, or modify, the permit or approval, which shall inform the recipient of the specific basis found to justify the action, and shall specify the measures necessary to avoid such action The written notice may be sent by mail, email, facsimile, text, or any other commonly used means of sending written materials.

(2) Within five (5) days of giving written notice, the MS4 Coordinator shall, upon request, review the basis of the intended revocation with the recipient.

(3) The recipient shall implement the actions specified by the MS4 Coordinator or the Drainage Board within ten (10) days of the date of notice or within such other reasonable time as may be determined by the Coordinator or the Board.

(4) If the MS4 Coordinator or the Drainage Board suspends, revokes, or modifies, a permit or approval, the Coordinator or the Board shall send the recipient with a written notice of revocation, in the manner set forth above in (A), which specifies the specific basis of the revocation and which informs the recipient of his right to appeal the action.

The above notwithstanding, the MS4 Coordinator may, without prior notice, suspend stormwater 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, to property, or to the health or welfare of persons, or to the stormwater drainage system or waters of the state. If the violator fails to comply with a suspension order issued in an emergency, Monroe County may take such steps as deemed necessary to prevent or minimize damage to the stormwater drainage system or waters of the state, or to minimize danger to persons, property, or the environment. The utilization of the foregoing procedure does not prevent the MS4 Coordinator or the Drainage Board from issuing a Stop

Work Order relating to the matters that are the subject of the suspension, revocation, or modification notice.

(H) Costs and Abatement of Violations

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

Nothing herein contained shall prevent Monroe County 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 stormwater drainage system made necessary by the violation, as well as those penalties levied by the EPA or IDEM for violation of Monroe County's NPDES permit, administrative costs, attorney fees, court costs, and other costs and expenses associated with the enforcement of this Ordinance, including sampling and monitoring expenses, to the extent permitted by law.

If the amount due for abatement of the violation is not paid within the timeframe determined by the decision of Monroe County or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment pursuant to I.C. 36-1-6-2, or to any other applicable authority.

8-3 APPEALS

Any person who has been adversely affected by a decision or action of the MS4 Coordinator or the Drainage Board made pursuant to this decision may appeal the decision or action, in writing, not later than 15 days after the decision or action being appealed from has been made or taken, to the Monroe County Board of Commissioners. This right to appeal does not apply to decision or actions taken with respect to the initiation of litigation or requests for emergency orders. Such appeal shall identify the matter being appealed, and the basis for the appeal. Notice of the hearing on the appeal will be published at least ten (10) days prior to the hearing as required by law. The Monroe County Board of Commissioners shall consider the appeal de novo and may make a decision whereby it affirms, rejects or modifies the action being appealed. In considering any such appeal, the Monroe County Board of Commissioners may consider the recommendations of the Monroe County Staff and the comments of other persons having knowledge of the matter. In considering any such appeal, the Monroe County Board of Commissioners 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 practical difficulties for a development or development site; provided, however, that practical difficulties shall not include the need for the 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 goals and purposes of this Ordinance, nor result in less effective management of stormwater runoff.

The decision of the Board Commissioners with respect to the appeal shall be the final administrative decision on the subject. Any further appeal would be to the courts.

8-4 INSPECTION, WRITTEN REPORTS, AND MAINTENANCE

(A) Inspections and Written Reports.

As part of the permitting process, and after the Stormwater Permit is granted (see MCSMO Chapter 7) and the construction activities have commenced, Monroe County may conduct inspections of the site and of the work being done to verify the accuracy of the application materials and to insure full compliance with the provisions of this chapter, the Stormwater Technical Standards Manual, and the terms and conditions of the approval. All stormwater drainage systems shall be inspected, and written inspection reports prepared ("written reports"), by or on behalf of the project site owner, until the project is complete and a Notice of Termination has been approved. Inspection frequency shall follow specifications included in the Operation and Maintenance Manual submitted as part of the Stormwater Permit application. Optional inspection checklists for some of the more common BMPs can be found in the STSM. Within forty-eight (48) hours of the MS4 Coordinator's request, the project site owner shall provide copies of the above-required written reports to the MS4 Coordinator.

Monroe County also has the authority to perform long-term, post-construction inspection of all public or privately owned stormwater drainage systems. The inspection will cover physical conditions, available storage capacity, and the operational condition of key system elements. If deficiencies are found during the inspection, the owner of the facility will be notified by Monroe County 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 the Monroe County notification, Monroe County may undertake the work and collect from the owner its expenses, pursuant to I.C. 36-1-6-2, or to any other applicable authority.

If a landowner or person controlling a site denies access for the inspection and sampling authorized by this Ordinance, the County may seek an administrative search warrant or other Court order as necessary to conduct the inspections and sampling.

(B) Maintenance

Stormwater drainage systems shall be maintained in good condition, in accordance with the terms and conditions of the stormwater permit and the recorded BMP maintenance agreement, and shall not be subsequently altered, revised or replaced except in accordance with approved amendments or revisions to the original stormwater permit.

APPENDIX A
ABBREVIATIONS AND DEFINITIONS

ABBREVIATIONS

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

DEFINITIONS

Agricultural land disturbing activity. Land disturbing activities that are associated with, or that are used to support, agricultural production activities, but that do not directly involve the tillage, planting, cultivating, or harvesting operations necessary for the production of agricultural or nursery vegetative crops (e.g., activities related to the construction of access roads, barns, livestock buildings, agricultural waste lagoons and facilities, lakes, ponds, wetlands, and other buildings and infrastructure, etc.).

Agricultural production activities. The tillage, planting, cultivating, or harvesting operations directly necessary for the production of agricultural or nursery vegetative crops (i.e., activities that are not agricultural land disturbing activities).

Base Flow. Stream discharge derived from groundwater sources as differentiated from surface runoff. Sometimes considered to include flows from regulated lakes or reservoirs.

Best Management Practices (BMPs). Design, construction, and maintenance practices and criteria for stormwater drainage systems that minimize the impact of stormwater runoff rates and volumes, prevent erosion, and capture pollutants.

Buffer Strip. An existing, variable width strip of vegetated land intended to protect water quality and habitat.

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.

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.

Certified Professionals. Individuals who are trained and experienced in the principles of stormwater management, including erosion and sediment control as is demonstrated by completion of state registration, or professional certification that enable the individual to make judgments regarding stormwater management, treatment, and design.

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. Water is confined by a defined bed and banks.

Comprehensive Stormwater Management. A comprehensive stormwater program for effective management of stormwater quantity and quality throughout the community.

Constructed Wetland. A manmade shallow pool that creates growing conditions suitable for wetland vegetation and is designed to maximize pollutant removal.

Construction. The on-site erection, fabrication, installation, alteration, demolition or removal of any structure, facility, or addition thereto, including all related activities, but not restricted to, clearing of land, earth moving, blasting, landscaping, and other land disturbing activities.

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.

Contiguous. Adjoining or in actual contact with.

Contour. An imaginary line on the surface of the earth connecting points of the same elevation.

Contour Line. Line on a map representing a contour or points of equal elevation.

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.

Conveyance. Any structural method for transferring stormwater between at least two points. The term includes piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, and roadways.

Critical Watershed. An area that is drained by limited natural features or in which flooding problems exist. The known critical areas in Monroe County are identified in the Monroe County Stormwater Technical Standards Manual. Special regulations may apply to critical areas.

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.

Culvert. A closed conduit used for the conveyance of surface drainage water under a roadway, railroad, canal or other impediment.

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, or 0.05 ppm) of chlorinated residual.

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.

Detention. Managing stormwater runoff by temporary holding and controlled release.

Detention Basin. A facility constructed or modified to restrict the flow of stormwater to a prescribed maximum rate, and to detain concurrently the excess waters that accumulate behind the outlet.

Detention Storage. The temporary detaining of stormwater 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.

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).

Detritus. Dead or decaying organic matter; generally contributed to stormwater as fallen leaves and sticks or as dead aquatic organisms.

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.

Development. Any man-made change to improved or unimproved real estate including but not limited to:

1. Construction, reconstruction, or placement of a building or any addition to a building;
2. Construction of flood control structures such as levees, dikes, dams or channel improvements;
3. Construction or reconstruction of bridges or culverts;
4. Installing a manufactured home on a site, preparing a site for a manufactured home, or installing a recreational vehicle on a site for more than hundred eight (180) days;

5. Installing utilities, erection of walls, construction of roads, or similar projects;

6. Mining, dredging, filling, grading, excavation, or drilling operations;

7. Storage of materials; or

8. Any other activity that might change the direction, height, or velocity of flood or surface waters.

"Development" does not include activities such as the maintenance of existing buildings and facilities such as painting, re-roofing, resurfacing roads, or gardening, plowing and similar agricultural practices that do not involve filling, grading, excavation, or the construction of permanent buildings.

Discharge. In the context of water quantity provisions, usually the rate of water flow, i.e., 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. In the context of water quality provisions, the discharge means any addition of liquids or solids to a water body or a flow conveyance facility.

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.

Ditch. A man-made, open watercourse in or into which excess surface water or groundwater drained from land, stormwater runoff, or floodwaters flow either continuously or intermittently.

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.

Drainage. The removal of excess surface water or groundwater from land by means of ditches or subsurface drains. Also see Natural drainage.

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.

Dry Well. A type of infiltration practice that allows stormwater runoff to flow directly into the ground via a bored or otherwise excavated opening in the ground surface.

Duration. The time period of a rainfall event.

Environment. The sum total of all the external conditions that may act upon a living organism or community to influence its development or existence.

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*K*LS)/T (from the Universal Soil Loss Equation) and (C*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 windspeed 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.

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.

- *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.

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 minimize its discharge from or within a project site.

Filter Strip. Usually a long, relatively narrow area (usually, 20-100 feet wide) of undisturbed or planted vegetation used near disturbed or impervious surfaces to filter stormwater pollutants for the protection of watercourses, reservoirs, or adjacent properties.

Floatable. Any solid waste that will float on the surface of the water.

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.

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.

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.

Floodway Fringe. That portion of the flood plain lying outside the floodway, which is inundated by the regulatory flood.

Flood Prone Soils. The soils listed in the latest edition of the Soil Survey of Monroe County, Indiana, which are limited for use as construction sites because of periodic flooding. These soils include Bonnie, Burnside, Cuba, Elkinsville, Haymond, Pekin, Steff, Stendall, Stonelick, Wakeland, Wilbur, Zipp, and Zipp Variant.

Footing Drain. A drain pipe installed around the exterior of a basement wall foundation to relieve water pressure caused by high groundwater elevation.

Forestry/Timber Land Disturbing Activity. Land disturbing activities that are associated with, or that are used to support, forestry production activities, but that do not directly involve the planting of new

trees, the harvesting of marketable timber, or the removal of dead or diseased trees (e.g., activities related to the construction, improvement, or enlargement of access roads, fire roads or trails, skid trails, haul roads, log landings or yards, equipment storage buildings; removing root balls, grading, stripping, excavation, and landscaping, etc.).

Forestry/Timber Production Activities. The planting of new trees, the harvesting of marketable timber, or the removal of dead or diseased trees (i.e., activities that are not forestry/timber land disturbing activities) in accordance with forestry/timber standard improvement practices.

Fluvial Erosion Hazard (FEH) Corridor. Fluvial (riverine) Erosion Hazard corridors represent the areas along the streams (including the channel and immediate overbanks areas) that are believed to be subject to stream movement or streambank erosion. These corridors have been delineated for most actively migrating and relatively stationary streams in Indiana through an Indiana Silver Jackets initiative. The corridor maps associated with the Monroe County streams are available on the Monroe County GIS website. More detailed mapping than that used as part of the Indiana Silver Jackets erosion hazard mapping program may be provided by the applicant if it is based on detailed field assessment acceptable to the MS4 Coordinator, Monroe County Highway Department.

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.

Gasoline Outlet. An operating gasoline or diesel ing 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.

Geographic Information System (GIS). A computer system capable of assembling, storing, manipulating, and displaying geographically referenced information. This technology can be used for resource management and development planning.

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) 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.

Grading. The cutting and filling of the land surface to a desired slope or elevation.

Grass. A member of the botanical family Graminae, characterized by blade-like leaves that originate as a sheath wrapped around the stem.

Groundwater. Accumulation of underground water, natural or artificial. The term does not include manmade underground storage or conveyance structures.

Habitat. The environment in which the life needs of a plant or animal are supplied.

Highly Erodible Land (HEL). Land that has an erodibility index of eight or more.

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.

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.

Illicit Discharge. Any discharge to a conveyance that is not composed entirely of stormwater.

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.

Impervious Surface. Surfaces, such as pavement and rooftops, which prevent the infiltration of stormwater into the soil.

Individual Building Lot. A single parcel of land within a multi-parcel development.

Individual Lot Operator. A contractor or subcontractor working on an individual lot.

Individual Lot Owner. A person who has financial control of construction activities for an individual lot.

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.

Inlet. An opening into a storm drain system for the entrance of surface stormwater runoff, more completely described as a storm drain inlet.

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.

Land Surveyor. A person licensed under the laws of the State of Indiana to practice land surveying.

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.

Lowest Adjacent Grade. The elevation of the lowest grade adjacent 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.

Lowest Floor. Refers to the lowest of the following:

1. The top of the basement floor;

2. The top of the garage floor, if the garage is the lowest level of the building;

3. 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

4. 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.

Manhole. Storm drain structure through which a person may enter to gain access to an underground storm drain or enclosed structure.

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.

Mining Land Disturbing Activity. Land disturbing activities that are associated with, or used to support, the extraction of mineral resources from the ground (e.g., activities related to the removal of overburden, the construction of equipment and materials storage areas, buildings, roads, drives, retention/detention ponds, etc.).

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.

Municipal Separate Storm Sewer System (MS4). 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 stormwater; (4) is not a combined sewer; and, (5) is not part of a Publicly Owned Treatment Works (POTW).

National Pollution Discharge Elimination System (NPDES). 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 stormwater quality.

Natural Drainage. The flow patterns of stormwater run-off over the land in its pre-development state.

Nutrient(s). (1) A compound necessary for the growth and reproduction of organisms. (2) In water, those substances (chiefly nitrates and phosphates) that promote growth of algae and bacteria.

One Hundred Year Flood or 100-year flood. A flood of a magnitude that has a one percent (1%) chance of happening in a year.

Open Drain. A natural watercourse or constructed open channel that conveys drainage water.

Open Space. Any land area devoid of any disturbed or impervious surfaces created by industrial, commercial, residential, agricultural, or other manmade activities.

Outfall. The point, location, or structure where a pipe or open drain discharges to a receiving body of water.

Outlet. The point of water disposal from a stream, river, lake, tidewater, or artificial drain.

Peak Discharge (or Peak Flow). The maximum instantaneous flow from a given storm condition at a specific location.

Percolation. The movement of water through soil.

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.

Pervious. Allowing movement of water.

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]).

Porous Pavement. A type of infiltration practice to improve the quality and reduce the quantity of stormwater run-off via the use of manmade, pervious pavement, which allows run-off to percolate through the pavement and into underlying soils.

Professional Engineer. A person licensed under the laws of the State of Indiana to practice professional engineering.

Project Site. The entire area on which construction activity is to be performed.

Project Site Owner. The person required to submit a stormwater permit/approval 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.

Rain Garden. A vegetative practice used to alter impervious surfaces, such as roofs, into pervious surfaces for absorption and treatment of rainfall.

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.

Recharge. Replenishment of groundwater reservoirs by infiltration and transmission from the outcrop of an aquifer or from permeable soils.

Redevelopment. Alterations of a property that change a site or building in such a way that there is disturbances of three-quarters of an acre or more of land. The term does not include such activities as exterior remodeling.

Refueling Area. An operating gasoline or diesel fueling area whose primary function is to provide fuel to equipment or vehicles.

Regulatory Flood. The discharge or elevation associated with the 100-year flood as calculated by a method and procedure 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."

Regulatory Floodway. See Floodway.

Release Rate. The amount of stormwater release from a stormwater control facility per unit of time.

Reservoir. A natural or artificially created pond, lake or other space used for storage, regulation or control of water. May be temporary or permanent. The term is also used in the hydrologic modeling of storage facilities.

Retention. The storage of stormwater to prevent it from leaving a site. May be temporary or permanent.

Retention Basin. A type of storage practice, that has no positive outlet, used to retain stormwater 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.

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.

Riparian Zone. Of, on, or pertaining to the banks of a stream, river, or pond.

Riparian Habitat. A land area adjacent to a waterbody that supports animal and plant life associated with that waterbody.

Runoff. That portion of precipitation that flows from a drainage area on the land surface, in open channels, or in stormwater conveyance systems.

Runoff Coefficient. A decimal fraction relating the amount of rain appearing as runoff that reaches the storm drain 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 stormwater runoff.

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.

Sedimentation. The process that deposits soils, debris and other unconsolidated materials either on the ground or in waterbodies or watercourses.

Sensitive Water. A waterbody in need of priority protection or remediation base 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; and
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).

Sinkhole. Any depression in a karst area formed by the subsurface removal of soil or rock by erosion, dissolution, or mass wasting (collapse, in part).

Site. The entire area included in the legal description of the land on which land disturbing activity is to be performed.

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 "percent." Slopes given in percent are always expressed as (100*V/H), e.g., a 2:1 (1V:2H) slope is a 50% slope.

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.

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.

Solid Waste. Any garbage, refuse, debris, or other discarded material.

Spill. The unexpected, unintended, 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.

Storm Duration. The length of time that water may be stored in any stormwater control facility, computed from the time water first begins to be stored.

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.

Storm Sewer. A closed conduit for conveying collected stormwater, while excluding sewage and industrial wastes. Also called a storm drain.

Stormwater. Water resulting from rain, melting or melted snow, hail, or sleet.

Stormwater Pollution Prevention Plan. A plan developed to minimize the impact of stormwater pollutants resulting from construction activities.

Stormwater Runoff. The water derived from rains falling within a tributary basin, flowing over the surface of the ground or collected in channels or conduits.

Stormwater Quality Management Plan. A comprehensive written document that addresses stormwater runoff quality.

Stormwater Quality Measure. A practice, or a combination of practices, to control or minimize pollutants associated with stormwater runoff.

Stormwater Drainage System. All means, natural or man-made, used for conducting stormwater to, through or from a drainage area to any of the following: conduits and appurtenant features, canals, channels, pipes, ditches, storage facilities, swales, streams, culverts, streets and pumping stations.

Strip development. A multi-lot project where building lots front on an existing road.

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.

Subsurface Drain. A pervious backfilled trench, usually containing stone and perforated pipe, for intercepting groundwater or seepage.

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.

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 stormwater into primary drainage channels and may provide some groundwater recharge.

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.

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.

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.

Topography. The representation of a portion of the earth's surface showing natural and man-made features of a give locality such as rivers, streams, ditches, lakes, roads, buildings and most importantly, variations in ground elevations for the terrain of the area.

Trained Individual. An individual who is trained and experienced in the principles of stormwater 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 stormwater control or treatment and monitoring.

Urban Drain. A drain defined as “Urban Drain” in Indiana Drainage Code.

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.

Vegetated swale. A type of vegetative practice used to filter stormwater runoff via a vegetated, shallow-channel conveyance.

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.

Water Resources. The supply of groundwater and surface water in a given area.

Waterbody. Any accumulation of water, surface, or underground, natural or artificial, excluding water features designed and designated as water pollution control facilities.

Watercourse. Any river, stream, creek, brook, branch, natural or man-made drainageway in or into which stormwater runoff or floodwaters flow either continuously or intermittently.

Watershed. The region drained by or contributing water to a specific point that could be along a stream, lake or other stormwater drainage system. Watersheds are often broken down into sub-basins for the purpose of hydrologic modeling.

Watershed Area. All land and water within the confines of a drainage divide. See also Watershed.

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.