

ORDINANCE NO. 1919

**AN ORDINANCE ADOPTING A STORMWATER MANAGEMENT ORDINANCE
FOR THE TOWN OF MUNSTER**

WHEREAS, the Town Council of the Town of Munster is the municipal legislative body of the unit;
and,

WHEREAS, with the passage of time various ordinances, codes, procedures of the Town of Munster must be amended; and,

WHEREAS, with the passage of time various practices, policies and procedures must be updated;
and,

WHEREAS, the Town of Munster is operates a Municipal Separate Storm Sewer System permitted through the Indiana Department of Environmental Management (IDEM); and,

WHEREAS, on December 18, 2021 IDEM issued a Municipal Separate Storm Sewer General Permit (MS4GP) replacing 327 IAC 15-13 that had previously been the Administrative Code that established the permitting requirements for all designated MS4s in Indiana; and,

WHEREAS, the Munster Town Council desires meet the requirements of IDEM's new MS4 General Permit by establishing methods to control the introduction of pollutants into the municipal separate storm sewer system; and,

WHEREAS, the Munster Town Council deems it to be in the best interest of the general health, safety, and welfare of the citizens of the Town of Munster to repeal Chapter 58, Article III, Subdivisions VI and VII of the Munster Municipal Code and adopt a replacement Stormwater Management Ordinance, including the accompanying Stormwater Technical Standards Manual;

Now, therefore, be it **ORDAINED**, by the Town Council of the Town of Munster, Lake County, Indiana that the Munster Municipal Code be amended as follows:

Article 1. Subdivisions VI and VII of Chapter 58, Article III, Division 2 of the Munster Municipal Code are repealed in its entirety and are replaced with the Stormwater Management Ordinance attached hereto as Exhibit "A".

Article 2. Statement of Purpose.

It is the purpose of this Ordinance to repeal and replace the Munster Stormwater Ordinance and promote the public health, safety, aesthetics and general welfare of the Town of Munster.

Article 3. Severability.

If any section, clause, sentence, or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, then said holding shall in no way affect the validity of the remaining portions of this Ordinance.

Article 4. Effective Date.

This Ordinance shall be in full force and effect from and after its passage and signing by the members of the Munster Town Council.

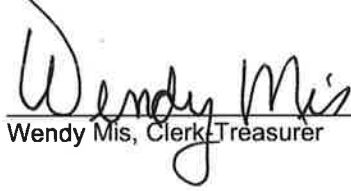
ORDAINED AND ADOPTED by the Town Council of the Town of Munster, Lake County, Indiana
this 16 day of October, 2023 by a vote of 3 in favor and 0 opposed.

Town Council of the Town of Munster,
Lake County, Indiana



Chuck Gardiner, President

ATTEST:



Wendy Mis, Clerk-Treasurer



Exhibit A

Ordinance 1919 Stormwater Management

October 2023

Table of Contents

Section	Title
1	General Information
2	Prohibited Discharges and Connections
3	Stormwater Quantity Management
4	Stormwater Pollution Prevention for Construction Sites
5	Post-Construction Stormwater Quality Management
6	Permit Requirements and Procedures
7	Compliance and Enforcement
8	Abbreviations and Definitions

SECTION 1 – GENERAL INFORMATION

(A) AUTHORITY AND TITLE

This Ordinance is adopted in accordance with statutory authority granted to the Town of Munster under "Home Rule" and further is required by Phase II of the National Pollutant Discharge Elimination System Stormwater program (40 CFR Parts 9, 122, 123, and 124; December 8, 1999) authorized by the 1987 amendments to the Clean Water Act, the Indiana Department of Environmental Management's (IDEM) Municipal Separate Storm Sewer System (MS4) draft General Permit (MS4 GP), and the Indiana Department of Environmental Management's draft Construction Stormwater General Permit (CSGP). Based on this authority and these requirements, this Ordinance regulates:

1. Discharges of prohibited non-stormwater flows into the storm drain system.
2. Stormwater drainage improvements related to development of lands located within the corporate boundaries of the Town of Munster.
3. Drainage control systems installed during new construction and grading of lots and other parcels of land.
4. Stormwater, including stormwater runoff, snowmelt runoff, and surface runoff and drainage, associated with construction activity.
5. Stormwater discharges from construction support activities directly related to construction sites subject to this ordinance.
6. Erosion and sediment control systems installed during new construction and grading of lots and other parcels of land.
7. The design, construction, and maintenance of stormwater drainage facilities and systems.
8. The design, construction, and maintenance of stormwater quality facilities and systems.

This Ordinance shall be known and may be cited as the Town of Munster Stormwater Management Ordinance. Once adopted, this Ordinance will supersede any conflicting ordinances previously adopted by the Town of Munster.

(B) APPLICABILITY AND EXEMPTIONS

This Ordinance shall regulate all development and redevelopment occurring within the Town of Munster. No building permit shall be issued and no land disturbance started for any construction in a development, as defined in Section 8, until the plans required by this Ordinance for such construction have been accepted in writing by the Town of Munster. With the exception of the requirements of Section 2 and Section 6(d) of this Ordinance, single-family dwelling houses and duplexes in accepted subdivisions, and land-disturbing activities affecting less than 10,000 square feet of area shall be exempt from the requirements of this Ordinance. Also exempt from this Ordinance shall be agricultural land-disturbing activities.

In addition to the requirements of this Ordinance and its companion Stormwater Technical Standards Manual, compliance with all applicable ordinances of the Town of Munster as well as with applicable Federal, State of Indiana, and other Local statutes and regulations shall also be required. Unless otherwise stated, all other specifications referred to in this Ordinance shall be the most recent edition available. Town of Munster capital improvement projects shall be exempt from obtaining a permit, but are expected to meet all applicable technical requirements of this Ordinance and the Town of Munster Stormwater Technical Standards Manual. If the project site is located within a Lake County Regulated Drain Watershed, the applicant will need to check with the Lake County Surveyor's Office to learn if additional Surveyor's Office requirements specific to that regulated drain would apply to the site. In case there are conflicts between the requirements contained in this Ordinance and applicable requirements contained in other regulatory documents referenced above, the most restrictive shall prevail.

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

The Town of Munster has the authority to modify, grant exemptions, and/or waive any and all the requirements of this Ordinance and its associated technical standards document. A pre-submittal meeting with the Town of Munster may be requested by the applicant to discuss the applicability of various provisions of the Ordinance and its associated technical standards document with regards to unique or unusual circumstances relating to a project. However, any initial determination of such applicability shall not be binding on future determinations of the Town of Munster that may be based on the review of more detailed information and plans.

(C) FINDINGS

The Town of Munster finds that:

1. Water bodies, roadways, structures, and other property within the Town of Munster or its planning jurisdiction boundary are at times subjected to flooding;
2. Flooding is a danger to the lives and property of the public and is also a danger to the natural resources of the region;
3. 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;
4. 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;
5. Increased stormwater runoff rates and volumes, and the sediments and pollutants associated with stormwater runoff from future development projects within the Town of Munster will, absent reasonable regulation and control, adversely affect the Town of Munster's water bodies and water resources;
6. Pollutant contributions from illicit discharges within the Town of Munster will, absent reasonable regulation, monitoring, and enforcement, adversely affect the Town of Munster's water bodies and water resources;
7. Stormwater runoff, soil erosion, non-point source pollution, and illicit sources of pollution can be controlled and minimized by the regulation of stormwater management;
8. Adopting the standards, criteria, and procedures contained and referenced in this Ordinance and implementing the same will address many of the deleterious effects of stormwater runoff and illicit discharges;
9. Adopting this Ordinance is necessary for the preservation of the public health, safety, and welfare, for the conservation of natural resources, and for compliance with State and Federal regulations.

(D) PURPOSE

The purpose of this Ordinance is to provide for the health, safety, and general welfare of the citizens of the Town of Munster through the regulation of stormwater and non-stormwater discharges to the storm drainage system and to protect, conserve and promote the orderly development of land and water resources within the Town of Munster. This Ordinance establishes methods for managing the quantity and quality of stormwater entering into the storm drain system. The objectives of this Ordinance are:

1. To reduce the hazard to public health and safety caused by excessive stormwater runoff.
2. To regulate the contribution of pollutants to the storm drain system from construction site runoff.
3. To regulate the contribution of pollutants to the storm drain system from runoff from new development and re-development.
4. To prohibit illicit discharges into the storm drain system.
5. To establish legal authority to carry out all inspection, monitoring, and enforcement procedures necessary to ensure compliance with this ordinance.

(E) ABBREVIATIONS AND DEFINITIONS

For the purpose of this Ordinance, the abbreviations and definitions provided in Section 8 shall apply.

(F) RESPONSIBILITY FOR ADMINISTRATION

The Town of Munster shall administer, implement, and enforce the provisions of this Ordinance. Any powers granted or duties imposed upon the authorized enforcement agency may be delegated in writing by the Town of Munster to qualified persons or entities acting in the beneficial interest of or in the employ of the Town of Munster.

(G) INTERPRETATION

Words and phrases in this Ordinance shall be construed according to their common and accepted meanings, except that words and phrases defined in Section 8 shall be construed according to the respective definitions given in that section. Technical words and technical phrases that are not defined in this Ordinance, but which have acquired particular meanings in law or in technical usage shall be construed according to such meanings.

(H) SEVERABILITY

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

(I) DISCLAIMER OF LIABILITY

The degree of protection required by this Ordinance is considered reasonable for regulatory purposes and is based on historical records, engineering, and scientific methods of study. Larger storms may occur or stormwater runoff amounts may be increased by man-made or natural causes. This Ordinance does not imply that land uses permitted will be free from stormwater damage. This Ordinance shall not create liability on the part of the Town of Munster or any officer, representative, or employee thereof, for any damage that may result from reliance on this Ordinance or on any administrative decision lawfully made there under.

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 Town of Munster has reviewed the material produced and submitted by the applicant or his/her agents for general compliance with this Ordinance and the Town of Munster Stormwater Technical Standards Manual, and that such compliance would qualify the applicant to receive a stormwater management approval or permit. Such an "approval" or "acceptance" is based on the assumption that the project engineer has followed all appropriate engineering methods in the design. Any stormwater quantity (drainage) or water quality 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 and the project engineer.

Consideration, design, construction, and maintenance of safety measures for proposed or existing stormwater facilities shall be the responsibility of the developer, applicant, and/or the property owner. Town of Munster and its officials and representatives shall not be responsible for maintenance nor liability for any accidents.

SECTION 2 – PROHIBITED DISCHARGES AND CONNECTIONS

(A) APPLICABILITY AND EXEMPTIONS

This section shall apply to all discharges, including illegal dumping, entering the storm drain system under the control of the Town of Munster, 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 connections to the storm drain system, illegal dumping, and contaminated runoff.

Stormwater runoff from agricultural, timber harvesting, and mining activities is exempted from the requirements of this section unless determined to contain pollutants not associated with such activities or in excess of standard practices. Farm residences are *not* included in this exemption.

Any non-stormwater discharge permitted under an NPDES permit, waiver (unless the waiver is solely based on point source considerations, still allowing non-point source discharge of a pollutant), 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 approval has been granted for the subject discharge to the storm drain system, is also exempted from this section.

(B) PROHIBITED DISCHARGES AND CONNECTIONS

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

Concrete washout material must be properly contained within an appropriate practice and any waste material properly disposed of.

The Town of Munster is authorized to require dischargers to implement pollution prevention measures, utilizing BMPs necessary to prevent or reduce the discharge of pollutants into the Town of Munster's stormwater drainage system.

(C) 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 section:

1. Water line flushing;
2. Landscape irrigation;
3. Diverted streamflows;
4. Rising ground waters;
5. Uncontaminated groundwater infiltration;
6. Uncontaminated pumped ground water;
7. Discharges from potable water sources;
8. Foundation drains;
9. Air conditioning condensation;
10. Irrigation water;
11. Springs;
12. Water from crawl space pumps;
13. Footing drains;
14. Lawn watering;
15. Individual residential car washing;

16. Flows from riparian habitats and wetlands;
17. Dechlorinated swimming pool discharges;
18. Street wash water;
19. Discharges from firefighting activities;
20. Naturally introduced detritus (e.g. leaves and twigs).

(D) STORAGE OF HAZARDOUS OR TOXIC MATERIAL

Storage or stockpiling of hazardous or toxic material within any watercourse, or in its associated floodway or floodplain, is strictly prohibited. Storage or stockpiling of hazardous or toxic material, including sewage treatment plant stockpiles, on active construction sites must include adequate protection and/or containment so as to prevent any such materials from entering any temporary or permanent stormwater conveyance or watercourse.

(E) PRIVATE PROPERTY MAINTENANCE DUTIES

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

(F) SPILL REPORTING

Any discharger who accidentally discharges into a waterbody any substance other than stormwater or an exempted discharge shall immediately inform the Town of Munster concerning the discharge. A written report concerning the discharge shall be filed with the Town of Munster and IDEM, by the dischargers, within five (5) days. The written report shall specify:

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

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

(G) INSPECTIONS AND MONITORING

1. Storm Drainage System

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

2. Potential Polluters

If, as a result of the storm drainage system inspection, a discharger is suspected of an illicit discharge, the Town of Munster may inspect and/or obtain stormwater samples from stormwater runoff facilities of the subject discharger, to determine compliance with the requirements of this Ordinance. Upon request, the discharger shall allow the Town of Munster's properly identified representative to enter upon the premises of the discharger at all hours necessary for the purposes of such inspection or sampling. The Town of Munster or its properly identified representative may place on the discharger's property the equipment or devices used for such sampling or inspection. Identified illicit connections or discharges shall be subject to enforcement action as described in Section 7 of this Ordinance.

3. New Development and Re-Development

Following the final completion of construction and the receipt of as-built drawings by the Town of Munster, the Town of Munster has the authority to inspect new development and re-development sites to verify that all on-site stormwater conveyances and connections to the storm drainage system are in compliance with this section.

SECTION 3 – STORMWATER QUANTITY MANAGEMENT

(A) APPLICABILITY AND EXEMPTIONS

The storage and controlled release of excess stormwater runoff shall be required for all new business, institutional developments, commercial and industrial developments, residential subdivisions, planned development, rural estate subdivisions, and any redevelopment or other new construction located within the Town of Munster. The Town of Munster, after thorough investigation and evaluation, may waive the requirement of controlled runoff for minor subdivisions and parcelization. Additional potential exemptions regarding the detention requirements are provided under Sub-section (b).

(B) POLICY ON STORMWATER QUANTITY MANAGEMENT

It is recognized that most streams and drainage channels serving the Town of Munster do not have sufficient capacity to receive and convey stormwater runoff resulting from continued urbanization. Accordingly, the storage and controlled release of excess stormwater runoff as well as compensation for loss of floodplain storage shall be required for all developments and redevelopments (as defined in Section 8) located within the Town of Munster. Release rate requirements, downstream restriction considerations, acceptable outlet, and adjoining property impact considerations are detailed in the Town of Munster Stormwater Technical Standards.

Due to unknowns regarding the future development patterns and the associated proposed stormwater quantity management systems within a watershed, it is the policy of the Town of Munster to discourage direct release of runoff from a new development or redevelopment without providing detention. However, in rare circumstances, where a comprehensive watershed-wide hydrologic study or watershed plan of a major stream (not a "beat the peak" analysis) adopted by the Town of Munster 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. Other special circumstances when such a waiver may be considered by Town of Munster 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.

(C) CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

The calculation methods as well as the type, sizing, and placement of all stormwater facilities shall meet the design criteria, standards, and specifications outlined in the Town of Munster Stormwater Technical Standards Manual. The methods and procedures in the Stormwater Technical Standards Manual are consistent with the policy stated above.

(D) DRAINAGE EASEMENT REQUIREMENTS

All stormwater systems, including detention or retention basins, conveyance systems, structures and appurtenances, located outside of the right-of-way shall be placed within a drainage easement. There shall be no trees or shrubs planted, nor any structures or fences erected in any drainage easement, unless otherwise accepted by Town of Munster. Additional easement requirements along stormwater conveyance systems are contained in the Town of Munster Stormwater Technical Standards Manual. All drainage improvements performed relative to the conveyance of stormwater runoff and the perpetual maintenance thereof, within the latter easements, shall be the responsibility of the owner or homeowner association.

Any outlet to, crossing, and/or encroachment of a county Regulated Drainage Easement requires application and acceptance from the County Drainage Board in accordance with the Indiana Drainage Code.

(E) PLACEMENT OF UTILITIES

No utility company may disturb existing storm drainage facilities without the consent of the Town of Munster staff, whose decision may be appealed to the Town Manager of the Town of Munster. All existing drainage facilities shall have senior rights and damage to said facilities shall result in penalties as prescribed in Section 7 of this ordinance.

(F) STRUCTURES NEAR COUNTY REGULATED DRAINS

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

(G) INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING

After the approval of the Site Work and Right-of-Way Permit by the Town of Munster and the commencement of construction activities, the Town of Munster has the authority to conduct inspections of the work being done to insure full compliance with the provisions of this section, the Stormwater Technical Standards Manual, Design and Construction Standards, and the terms and conditions of the approved permit.

The Town of Munster also has the authority to perform long-term, post-construction inspection of all public or privately owned stormwater quantity facilities. The inspection will cover physical conditions, available storage capacity, and the operational condition of key facility elements. Stormwater quantity facilities shall be maintained in good condition, in accordance with the designed and approved performance specifications for the facilities, in addition to any prescribed Operation & Maintenance procedures, and shall not be subsequently altered, revised or replaced except as approved by the Town of Munster. If deficiencies are found during the inspection, the owner of the facility will be notified by the Town of Munster 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 notification letter, the Town of Munster will undertake the work and collect from the owner using lien rights if necessary.

Assignment of responsibility for maintaining facilities serving more than one lot or holding shall be documented by appropriate covenants to property deeds, unless responsibility is formally accepted by a public body, and determined before the final stormwater permit is approved.

Stormwater conveyance facilities may be donated to the Town of Munster or other unit of government designated by the Town of Munster, for ownership and permanent maintenance providing the Town of Munster or other governmental unit is willing to accept responsibility.

SECTION 4 – STORMWATER POLLUTION PREVENTION FOR CONSTRUCTION SITES

(A) APPLICABILITY AND EXEMPTIONS

The Town of Munster will require a Stormwater Pollution Prevention Plan (SWPPP), which includes erosion and sediment control measures and materials handling procedures, to be submitted as part of a project's construction plans and specifications. Any project located within the corporate boundaries of the Town of Munster that includes clearing, grading, excavation or other land disturbing activities resulting in the disturbance of 10,000 square feet or more of total land area is subject to the requirements of this section. This includes both new development and re-development. This section also applies to disturbances of land that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb 10,000 square feet or more of total land area. Section 4 (c) provides guidelines for calculating land disturbance. Projects meeting the coverage requirements of IDEM's draft CSGP shall also be in compliance with the requirements contained in that permit.

The requirements under this section do not apply to the following activities, provided other applicable state permits contain provisions requiring immediate implementation of soil erosion and sediment 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.

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 a site work permit from the Town of Munster, and ensure that a sufficient construction and stormwater pollution prevention plan is completed and submitted in accordance with Section 6 of this Ordinance, regardless of whether the individual lot is part of a larger permitted project site. For an individual lot where land disturbance is 10,000 square feet or more but less than one (1) acre, an erosion control plan must be submitted required prior to receiving a building permit. Details of the permitting process are contained in Section 6.

An individual lot with land disturbance less than 10,000 square feet, 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 permit approved for the larger project site. The stormwater permit application for the larger project site must include detailed erosion and sediment control measures for individual lots. In addition, these individual lots are required to submit an erosion control plan prior to receiving a building permit. Details of the permitting process are contained in Section 6 and additional requirements for individual lots may be found in the Town of Munster Stormwater Technical Standards Manual.

It will be the responsibility of the project site owner to complete a stormwater permit application and ensure that a sufficient construction plan is completed and submitted to the Town of Munster in accordance with Section 6 of this Ordinance. It will be the responsibility of the project site owner to ensure compliance with this Ordinance during the construction activity and implementation of the construction plan, and to notify the Town of Munster upon completion of the project and stabilization of the site, requesting a termination inspection to be performed by the Town of Munster. However, all persons engaging in construction and land disturbing activities on a permitted project site meeting the applicability requirements must comply with the requirements of this section and this Ordinance.

(B) POLICY ON STORMWATER POLLUTION PREVENTION

Effective stormwater pollution prevention on construction sites is dependent on a combination of preventing movement of soil from its original position (erosion control), intercepting displaced soil prior to entering a waterbody (sediment control), and proper on-site materials handling.

For land disturbance of one (1) acre or more, the developer must submit to the Town of Munster, a SWPPP with detailed erosion and sediment control plans as well as a narrative describing materials handling and storage, and construction sequencing. The SWPPP and the project management log must be retained for at least three (3) years from the date the project permit is terminated. For land disturbances totaling 10,000 square feet or more but less than one (1) acre, appropriate erosion and sediment control measures that are consistent with the Town of Munster Stormwater Technical Standards Manual must be designed and shown on the plans.

The required IDEM general and implementation requirements that apply to all land-disturbing activities are contained in the Town of Munster Stormwater Technical Standards Manual.

(C) CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

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

1. Off-site construction activities that provide services (for example, road extensions, sewer, water, offsite stockpiles, and other utilities) to a land disturbing project site, must be considered as a part of the total land disturbance calculation for the project site, when the activity is under the control of the project site owner.
2. To determine if multi-lot project sites are regulated by this section, the area of land disturbance shall be calculated by adding the total area of land disturbance for improvements, such as, roads, utilities, or common areas, and the expected total disturbance on each individual lot, as determined by the following:
 - i. For a single-family residential project site where the lots are one-half (0.5) acre or more, a minimum of one-half (0.5) acre of land disturbance must be used as the expected lot disturbance.
 - ii. For a single-family residential project site where the lots are less than one half (0.5) acre in size, the total lot must be calculated as being disturbed.
 - iii. To calculate lot disturbance on all other types of project sites, such as industrial and commercial projects project sites, a minimum of one (1) acre of land disturbance must be used as the expected lot disturbance, unless the lots are less than one (1) acre in size, in which case the total lot must be calculated as being disturbed.

The calculation methods as well as the type, sizing, and placement of all stormwater pollution prevention measures for construction sites shall meet the design criteria, standards, and specifications outlined in the Indiana Stormwater Quality Manual, the Town of Munster Stormwater Technical Standards Manual, and the product guidance/specifications of the manufacturer. The methods and procedures included in these two references are in keeping with the above stated policy and meet the requirements of the draft IDEM's CSGP. A Copy of the Indiana Stormwater Quality Manual may be obtained online through IDEM.

The design requirements that would apply to all land-disturbing activities and shall be considered in the selection, design, and implementation of all stormwater quality and management measures contained in the SWPPP are contained in the Town of Munster Stormwater Technical Standards Manual.

(D) INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING

Following approval of the Site Work and Right-of-Way Permit and/or Building Permit by the Town of Munster and commencement of construction activities, the Town of Munster has the authority to conduct inspections of the site to ensure full compliance with the provisions of this section, the approved Stormwater Pollution Prevention Plan, the Indiana Stormwater Quality Manual, and the terms and conditions of the approved permit.

A self-monitoring program (SMP) must be implemented by the project site owner to ensure the stormwater pollution prevention plan is working effectively. A trained individual, acceptable to the Town of Munster, shall monitor and manage project construction and stormwater activities. Details regarding the required monitoring activities are contained in the Town of Munster Stormwater Technical Standards Manual.

The stormwater pollution prevention plan shall serve as a guideline for stormwater quality but should not be interpreted to be the only basis for implementation of stormwater quality 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 quality measures should be implemented.

SECTION 5 – POST-CONSTRUCTION STORMWATER QUALITY MANAGEMENT

(A) APPLICABILITY AND EXEMPTIONS

In addition to the requirements of Section 4, the stormwater pollution prevention plan, which is to be submitted to the Town of Munster as part of the Site Work and Right-of-Way Permit application, must also include post-construction stormwater quality measures. These measures are incorporated as a permanent feature into the site plan and are left in place following completion of construction activities to continuously treat stormwater runoff from the stabilized site. Any project located within the corporate boundaries of the Town of Munster that includes clearing, grading, excavation, and other land disturbing activities, resulting in the disturbance of 10,000 square feet or more of total land area is subject to the requirements of this section. This includes both new development and re-development, and disturbances of land less than 10,000 square feet of total land area that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb 10,000 square feet or more of total land area. In addition, regardless of the amount of disturbance, the Town of Munster reserves the right to require pre-treatment BMPs for proposed hot spot developments in accordance with provisions contained in the Town of Munster Stormwater Technical Standards Manual.

1. The requirements under this section do not apply to the following activities:
 - i. construction activities associated with a single-family residential dwelling disturbing less than one (1) acre, when the dwelling is not part of a larger common plan of development or sale; or individual building lots within a larger permitted project.
2. The requirements under this section do not apply to the following activities, provided other applicable state permits contain provisions requiring immediate implementation of soil erosion control measures:
 - i. Landfills that have been issued a certification of closure under 329 IAC 10.
 - ii. Coal mining activities permitted under IC 14-34.
 - iii. 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.

It will be the responsibility of the project site owner to complete the appropriate permit application and ensure that a sufficient construction plan is completed and submitted to the Town of Munster in accordance with Section 6 of this Ordinance. It will be the responsibility of the project site owner to ensure proper construction and installation of all stormwater BMPs (especially, the protection of post-stormwater BMPs during construction phase) in compliance with this Ordinance and with the approved permit, and to notify the Town of Munster upon completion of the project and stabilization of the site, requesting a termination inspection to be performed by the Town of Munster. However, all eventual property owners of stormwater quality facilities meeting the applicability requirements must comply with the requirements of this section and this Ordinance.

(B) POLICY ON STORMWATER QUALITY MANAGEMENT

It is recognized that developed areas, as compared to undeveloped areas, generally have increased imperviousness, decreased infiltration rates, increased runoff rates, and increased concentrations of pollutants such as fertilizers, herbicides, greases, oil, salts and other pollutants. As new development and re-development continues within the corporate boundaries of the Town of Munster, measures must be taken to intercept and filter pollutants from stormwater runoff prior to reaching regional creeks, streams, and rivers. Through the use of appropriate Best Management Practices (BMPs), stormwater runoff will be filtered and harmful amounts of sediment, nutrients, and contaminants will be removed.

It is also recognized that another major source of pollution in many Indiana streams, including those within the corporate boundaries of the Town of Munster, 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 the *Town of Munster*, measures must be taken to minimize the impact of such development or re-development on streambank erosion. Through the use of 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.

The project site owner must submit to the Town of Munster a Stormwater Pollution Prevention Plan (SWPPP) that shows placement of appropriate BMP(s) from a pre-approved list of BMPs specified in the Town of Munster Stormwater Technical Standards Manual. 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 Town of Munster Stormwater Technical Standards Manual, 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 BMP(s) must be designed, constructed, and maintained according to guidelines provided or referenced in the Town of Munster Stormwater Technical Standards Manual. 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 according to guidelines provided in the Town of Munster Stormwater Technical Standards Manual, would be placed with the applicant. Details regarding the procedures and criteria for consideration of acceptance of such BMPs are provided in the Town of Munster Stormwater Technical Standards Manual.

Gasoline outlets and refueling areas must install appropriate practices to reduce lead, copper, zinc, and polyaromatic hydrocarbons in stormwater runoff. These requirements will apply to all new facilities and existing facilities that replace their tanks, regardless of the size of the facility.

Discharges from new development and redevelopment sites will not be allowed directly into karst features without pre-treatment.

(C) CALCULATIONS AND DESIGN STANDARDS AND SPECIFICATIONS

Calculation of land disturbance should follow the guidelines discussed in Section 3(c).

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 Town of Munster Stormwater Technical Standards Manual. The methods and procedures included in the referenced Standards is in keeping with the above stated policy and meet or exceed the requirements of IDEM's MS4 GP.

(D) EASEMENT REQUIREMENTS

All stormwater quality management systems, including detention or retention basins, filter strips, pocket wetlands, in-line filters, infiltration systems, conveyance systems, structures and appurtenances located outside of the right-of-way shall be incorporated into permanent easements. For the purposes of monitoring, inspection, and general maintenance activities, adequate easement width, as detailed in the Town of Munster Stormwater Technical Standards Manual, beyond the actual footprint of the stormwater quality management facility as well as a 20-foot wide access easement from a public right-of-way to each BMP shall be provided.

(E) INSPECTION, MAINTENANCE, RECORD KEEPING, AND REPORTING

After the approval of the appropriate permit by the Town of Munster and the commencement of construction activities, the Town of Munster has the authority to conduct inspections of the work being done to ensure full compliance with the provisions of this section, the approved Stormwater Pollution Prevention Plan, the Town of Munster Stormwater Technical Standards Manual, and the terms and conditions of the approved permit.

Stormwater quality facilities shall be maintained in good condition, in accordance with the Operation and Maintenance procedures and schedules listed in the Town of Munster Stormwater Technical Standards Manual, in addition to the designed and approved performance specifications for the facilities and shall not be subsequently altered, revised, or replaced except as approved by the Town of Munster.

Details regarding the required of stormwater BMP Maintenance Agreement, O&M Maintenance Manual, and a Maintenance Escrow account and their transfer to other parties or subsequent owners prior to release of the maintenance bond discussed in Section 6 of this Ordinance is provided in the Town of Munster Stormwater Technical Standards Manual.

The Town of Munster also has the authority to perform long-term, post-construction inspection of all public or privately owned stormwater quality facilities. The inspection will cover physical conditions, available water quality storage capacity and the operational condition of key facility elements. Noted deficiencies and recommended corrective action will be included in an inspection report.

SECTION 6 – PERMIT REQUIREMENTS AND PROCEDURES

(A) CONCEPTUAL DRAINAGE PLAN REVIEW

In order to gain an understanding of the drainage requirements for a specific project, a developer may submit conceptual drainage plans and calculations for review by the Town of Munster. The direction provided by the Town of Munster during such a review is based on preliminary data and shall not be construed as an acceptance or binding on either party. The following is a general listing of minimum data requirements for the review of conceptual drainage plans:

1. Two (2) complete sets of conceptual plans showing general project layout, including existing and proposed drainage systems (plan sheets must be larger than 11" by 17", but not to exceed 24" by 36").
2. General description of the existing and proposed drainage systems in narrative form.
3. Map showing on-site 100-year floodplain and floodway (please note if none exists).
4. Map showing all wetlands, lakes, and ponds on or adjacent to the site.
5. Watershed Boundaries with USGS Contours or best information possible.
6. Two (2) copies of drainage calculations detailing existing and proposed discharges from the site
7. Existing watercourse or regulated drains.

(B) PERMIT PROCEDURES

This section applies to all development, or re-development of land, that results in land disturbance of one (1) acre or more. Individual lots with land disturbance less than one (1) acre shall refer to Sections 4 and 5 and subsection (d) below for plan review requirements and procedures.

1. General Procedures

The project site owner shall submit an application for a Site Work Permit to the Town of Munster. The application will include construction plan sheets, a stormwater drainage technical report, a stormwater pollution prevention plan, and any other necessary support information. Specific information to be included in the application can be found in Subsection (c) below. One paper copy and one digital copy of each application must be submitted to the Town of Munster. The Town of Munster may, at its discretion, require one or more copies be submitted to the Lake County Surveyor, or other entity deemed appropriate by the Town of Munster.

After the Town of Munster's receipt of the application, the applicant will be notified as to whether their application was complete or insufficient. The applicant will be asked for additional information if the application is insufficient. If the application is complete, it will be reviewed in detail by the Town of Munster and/or its plan review consultant(s). Once all comments have been received and review completed, the Town of Munster will either approve the project, request modifications or deny the project.

The project site owner must notify the Town of Munster and IDEM before beginning construction. Notification to the Town of Munster shall be in the form of an email. Notification to IDEM shall be in the form of an online IDEM NOI submittal.

Once a permit has been issued and the pending construction notifications submitted to the Town of Munster and IDEM before the beginning of construction, construction may commence.

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 approved permit.

Upon completion of construction activities, a Certification of Completion and Compliance and as-built plans must be submitted to the Town of Munster.

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 Town of Munster, requesting a termination inspection. The Town of Munster, or its representative, shall inspect the construction site to verify that the completed project is fully stabilized and meets the requirements of Town of Munster's stormwater Ordinance and its technical standards and that the terms and conditions of the permit.

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 by the Town of Munster 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 the Town of Munster and an updated NOI must be resubmitted to IDEM at least 90 days prior to expiration.

2. SWPPP Review Time Limits

Review time limits will be in accordance with and pursuant to IC 13-18-27

(C) INFORMATION REQUIREMENTS

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

The different elements of a permit submittal include 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 who also meets the definition of a certified professional found in Section 8.

1. 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 items listed in the application checklist provided in the Town of Munster Stormwater Technical Standards Manual.

2. 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 Town of Munster Stormwater Technical Standards Manual.

3. Stormwater Pollution Prevention Plan for Construction Sites

For sites with total disturbance of one (1) acre or more, a stormwater pollution prevention plan associated with construction activities must be designed to, at least, meet the requirements of this Ordinance. The SWPPP and construction plans must include the items listed in the application checklist provided in the Town of Munster Stormwater Technical Standards Manual. For land disturbances totaling 10,000 square feet or more of land area but less than one (1) acre, appropriate erosion and sediment control measures that are consistent with the Town of Munster Technical Standards must be designed and shown on the plans.

4. Post-Construction Stormwater Pollution Prevention Plan

For sites with total land disturbance of 10,000 square feet or more of total land area, 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 Town of Munster Stormwater Technical Standards Manual. The post-construction stormwater pollution prevention plan must include items listed in the application checklist provided in the Town of Munster Stormwater Technical Standards Manual.

(D) REVIEW OF INDIVIDUAL LOTS

For all individual lots disturbing 10,000 square feet or more but less than one (1) acre, a formal review and issuance of an Individual Lot Plot Plan Permit will be required before a building permit can be issued. Similarly, for individual lots disturbing less than 10,000 square feet of total land area, developed within a larger permitted project, a formal review and issuance of an Individual Lot Plot Plan Permit will be required before a building permit can be issued. All stormwater management measures necessary to comply with this Ordinance must be implemented in accordance with permitted plan for the larger project.

The following information must be submitted to the Town of Munster, 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.

1. A site layout for the subject lot and all adjacent lots showing building pad location, dimensions, and elevations, and the drainage patterns and swales.
2. Erosion and sediment control plan that, at a minimum, includes the following measures:
 - i. Installation and maintenance of a stable construction site access.
 - ii. Installation and maintenance of appropriate perimeter erosion and sediment control measures prior to land disturbance.
 - iii. Minimization of sediment discharge and tracking from the lot.
 - iv. Clean-up of sediment that is either tracked or washed onto roads. Bulk clearing of sediment shall not include flushing the area with water. Cleared sediment must be redistributed or disposed of in a manner that is in compliance with all applicable statutes and rules.
 - v. Implementation of concrete washout practices that securely contain and allow for the proper disposal of washout waste.
 - vi. Adjacent lots disturbed by an individual lot operator must be repaired and stabilized with temporary or permanent surface stabilization.
 - vii. Self-monitoring program including plan and procedures.
3. Certification of Compliance stating that the individual lot plan is consistent with the permit, as approved by the Town of Munster, for the larger project (if the individual lot is part of a larger permitted project).
4. 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 stabilized.

(E) CHANGES TO PLANS

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

(F) FEE STRUCTURE

1. Fee Amount

As a condition of the submittal and the review of development plans by the Town of Munster, the applicant shall agree to pay the Town of Munster the applicable fee, as set by the Town of Munster with respect to the review of all drainage submittals, preliminary plans, final plans, construction plans and accompanying information and data, as well as prepaid inspection fees.

2. Time of Payment

After the meeting at which the Town of Munster is scheduled to consider acceptance of the applicant's final stormwater management plan, the Town of Munster will furnish a written statement to the applicant specifying the total amount due the Town of Munster 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 the Town of Munster, applicant shall pay to the Town of Munster the sum set forth in said statement. The Town of Munster may issue such 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.

The Town of Munster shall have the right to not accept the drainage improvements or to not approve the advancement of any project for which the applicable fees have not been paid.

3. Method of Payment

Fees shall be paid by one of the following methods:

- Check
- Certified Check
- Cashier's Check
- Money Order

All checks shall be made payable to the: Town of Munster

4. Refund of Payment

Fees are refundable **only** if the Town of Munster determines that compliance by the development or project to this Ordinance is not necessary.

5. Fee Schedule

Stormwater Permit Application and Inspection Fees will be in accordance with the fee schedule set by Town of Munster as a separate resolution.

(G) REQUIRED ASSURANCES

This section shall apply to all projects whether the stormwater management system or portions thereof will be dedicated to the Town of Munster or retained privately. As a condition of approval and issuance of the permit, the Town of Munster shall require the applicant to provide assurance in form of an irrevocable letter of credit or a bond when the stormwater management plan has been accepted 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 permit conditions. The assurance shall be for an amount equal to 125 percent of the total costs of all stormwater management measures for the entire project. The above-mentioned costs shall be based on an estimate as prepared by a registered engineer or land surveyor. Said costs shall be for the installation and ongoing monitoring and maintenance of erosion control measures and the construction and ongoing monitoring and maintenance of storm drainage infrastructure, detention/retention facilities, and stormwater quality BMPs, as regulated under this Ordinance, until the construction is completed, the site is stabilized, and as-built plans are accepted by the Town of Munster. Assurances shall be for a minimum of \$5,000. All other performance bonds, maintenance bonds or other assurances required by the Town of Munster in accordance with any and all other ordinances shall also apply and so be required. Local governmental jurisdictions may require additional performance and/or maintenance assurances. The intent of this assurance is not only to complete the installation of storm drain infrastructure for the project, but also to assure that adequate 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.

(H) TERMS AND CONDITIONS OF PERMITS

In granting a site work or building permit, the Town of Munster 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 permits will be subject to enforcement as described in Section 7.

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 site work or building 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 an Impact Drainage Area, the Town of Munster may require more stringent stormwater quantity and quality measures than detailed in this Ordinance or in the *Indiana Stormwater Quality Manual*.

1. Determination of Sensitive Areas

Sensitive Areas include highly erodible soils, wetlands, karst areas, threatened or endangered species habitat, outstanding waters, impaired waters, recreational waters, and surface drinking water sources. Any discharge from a stormwater practice that is a Class V injection well shall meet the Indiana groundwater quality standards and registered with US EPA as required by the IDEM. If wetlands are suspected on a site, a wetland delineation should be completed in accordance with the methodology established by the U.S. Army Corps of Engineers (COE). The need for the applicant to check for the presence of threatened or endangered species habitat will be determined on a case-by-case basis. Special terms and conditions for development determined to impact or discharge to any Sensitive Area shall be included in the permit.

2. Determination of Impact Drainage Areas

The following areas shall be designated as Impact Drainage Areas, unless good reason for not including them is presented to the Town of Munster.

- i. A floodway or floodplain as designated by the most updated FEMA Code dealing with floodplain regulation and/or by the Best Available Data through IDNR.
- ii. Land within 25 feet of each bank of any ditch within the Town of Munster's system.
- iii. Land within 15 feet of the centerline of any stormwater infrastructure or enclosed conduit within the Town of Munster's system.
- iv. Land within 75 feet of each bank of a county open regulated drain.
- v. Land within 50 feet of a natural drainageway.
- vi. Land within 75 feet of the centerline of any tiled regulated drain.
- vii. Land within the Fluvial Erosion Hazard (FEH) corridor.

- viii. Land within the expected breach inundation zone of an existing or proposed new dam, and areas protected from flooding by a levee.

The Town of Munster or Town of Munster Engineer is authorized, but is not required, to classify certain geographical areas as Impact Drainage Areas. In determining Impact Drainage Areas, the Town of Munster may consider such factors as topography, soil type, capacity of existing drains, and distance from adequate drainage facility.

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

3. Determination of Designated Drainage Areas Served by Regional Facilities

The Town of Munster is authorized, but is not required, to classify certain geographical areas as Designated Drainage Areas that are or will be served by regional facilities, such as a regional pond. In such cases, an Infrastructure Development Fee (IDF) rate may be established for the Designated Drainage Area. The basis for determining such a fee for a proposed development or re-development within a Designated Drainage Area will be as detailed in the Town of Munster Stormwater Technical Standards Manual.

(I) CERTIFICATION OF AS-BUILT PLANS

This section shall apply to all projects whether the stormwater management system or portions thereof will be dedicated to the Town of Munster or retained privately. After completion of construction of the project and before the release of required performance assurances referenced in Section (g) above, a professionally prepared and certified 'as-built' set of plans (record drawings) shall be submitted to the Town of Munster for review. These as-built plans/record drawings must be prepared and certified by the Engineer of Record, i.e., the company/engineer who originally prepared the construction plans. Additionally, a digital copy of the 'as-built' plans (record drawings) as well as finalized digital versions of all analyses, models, manuals, and reports that are consistent with the as-built conditions is required in a format acceptable to the Town of Munster. These plans shall include all pertinent data relevant to the completed storm drainage system and stormwater management facilities, and shall include:

1. Pipe size and pipe material
2. Invert elevations
3. Top rim elevations
4. Elevation of the emergency overflow (spillway) for ponds
5. Grades along the emergency flood routing path(s)
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
10. Data and calculations showing BMP treatment capacity
11. Certified statement on plans stating the completed storm drainage system and stormwater management facilities substantially comply with construction plans and the permit as approved by the Town of Munster. (See certificate in the Stormwater Technical Standards Manual.)

(J) POST-PROJECT MAINTENANCE BOND AND VERIFICATIONS

In addition to as-built plans and the certification of completion and compliance, following the release of performance assurances, the property owner, developer, or contractor shall be required to file a two-year maintenance bond or other acceptable guarantee with the Town of Munster in an amount not to exceed twenty five percent (25%) of the cost of the stormwater management system located outside the public road rights-of-way, and in a form satisfactory to the Town of Munster in order to assure that such stormwater system installation was done according to standards of good workmanship, that the materials used in the

construction and installation were of good quality and construction, and that such project was done in accordance with the accepted plans, and this Ordinance 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 Town of Munster to have been caused by the development of such project. The bond or other acceptable guarantee shall be in effect for a period of two years after the date of the release of required performance assurances referenced in Section (g) above. The beneficiary of all maintenance bonds shall be the Town of Munster Council of the Town of Munster.

To verify that all stormwater infrastructure is functioning properly, visual recordings (via closed circuit television) of such infrastructure, including all subsurface drains, shall be required twice, once following the completion of installation of the stormwater management system and submittal of as-builts, and the second time before release of maintenance bonds. These visual recordings will be scheduled by the Town of Munster and paid for by the developer. Notices shall be provided to the Town of Munster within 72 hours following the completion of installation and again at least 60 days prior to the expiration date of the maintenance bond so that the noted recordings may be scheduled. Reports summarizing the results of the noted visual recordings shall be reviewed and accepted by the Town of Munster before the plat is recommended for recording and again before the maintenance bond shall be recommended to be released.

Additional requirements for transfer of any applicable stormwater BMP Maintenance Agreement, O&M Maintenance Manual, and Maintenance Escrow accounts to subsequent owners prior to release of the maintenance bond is discussed in Section 5 of this ordinance.

SECTION 7 – COMPLIANCE AND ENFORCEMENT

(A) COMPLIANCE WITH THIS ORDINANCE

In addition to the requirements of this Ordinance, compliance with the requirements set forth in the local Zoning Ordinances is also necessary. Compliance with all applicable ordinances of the Town of Munster as well as with applicable State of Indiana statutes and regulations shall also be required. Unless otherwise stated, all other specifications referred to in this Ordinance shall be the most recent edition available. Violations of the requirements of this Ordinance are subject to the penalties listed below.

1. Violations

Any action or inaction which violates the provisions of this Ordinance, the requirements of an approved stormwater management design plan or permit, and/or the requirements of a recorded stormwater maintenance agreement 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.

2. Warning Notice

When the Town of Munster finds that any person has violated, or continues to violate, any provision of this ordinance, or any order issued hereunder, the Town of Munster may serve upon that person a written Warning Notice, 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. Investigation and/or resolution of the matter in response to the Warning Notice in no way relieves the alleged violator of liability for any violations occurring before or after receipt of the Warning Notice. Nothing in this subsection shall limit the authority of the Town of Munster to take any action, including emergency action or any other enforcement action, without first issuing a Warning Notice.

(B) ENFORCEMENT OF THIS ORDINANCE

1. Notice of Violation/Citation

If the Town of Munster determines that an applicant or other responsible person has failed to comply with the terms and conditions of a permit, an approved stormwater management design plan, a recorded stormwater management maintenance agreement, or the provisions of this ordinance, it shall issue a written Notice of Violation to such applicant or other responsible person and the owner of the property. Where a person is engaged in activity covered by this ordinance without having first secured a permit therefore, the notice of violation shall be served on the owner or the responsible person in charge of the activity being conducted on the site.

The notice of violation can be in the form of a citation ticket and/or a written letter that would contain detailed inspection findings, conclusions of law, disposition of warning or fines assessed, stipulated remedial actions as discussed with the responsible party representative, reasonable deadlines for those remedial actions, and the date of re-inspection.

2. Compensatory Action

In lieu of enforcement proceedings, penalties, and remedies authorized by this ordinance, the Town of Munster may impose upon a violator alternative compensatory actions, such as storm drain stenciling, attendance at compliance workshops, creek cleanup, public education, etc.

3. Civil Penalties for Violations

- i. Any person found in violation of any provision of this Ordinance shall be subject to a maximum fine of \$2,500 for each offense, plus costs, damages, and expenses. Each day such violation occurs or continues shall be deemed a separate offense and shall make the violator liable for the imposition of a fine for each day. The rights and remedies provided for in this section are cumulative and in

addition to any other remedies provided by law. An admission or determination of responsibility shall not exempt the offender from compliance with the requirements of this Ordinance.

- ii. Any person who aids or abets a person in a violation of this Ordinance shall be subject to the penalties provided in this section.
- iii. For purposes of this section, "subsequent offense" means a violation of the provisions of this Ordinance committed by the same person within 12 months of a previous violation of this Ordinance for which said person admitted responsibility or was adjudicated to be responsible.
- iv. The Town of Munster has established an Enforcement Response Schedule that standardizes the approach the Town of Munster may take in dealing with stormwater regulations offenses subject to this Ordinance and the associated Technical Standards document. The enforcement response schedule is as noted in the following table:

Step	Type of Response Anticipated
1	Verbal Telephone Notice, Letter of Violation or Written Warning; and Administrative Penalty
2	Agreed or Administrative Order, Compliance Schedule, Administrative Penalty, Site Visit; and/or litigation and civil penalties
3	Litigation and Civil Penalties

- v. The Administrative Penalties shall be assessed on a per violation, per offense basis. The schedule of Administrative Penalties is summarized in the following table:

Offense #	Administrative Penalty
1 st offense	\$250.00
2 nd offense	\$500.00
3 rd offense	\$1,000.00
4 th (& subsequent) offense	\$2,500.00

The Town of Munster reserves the right to issue a maximum fine for any violation deemed sufficiently egregious or otherwise determined by the Town of Munster to warrant a maximum penalty.

4. **Stop Work Order**

- i. In addition to the penalties listed herein, if land disturbance activities are conducted contrary to the provisions of this Ordinance or accepted final stormwater management plans, the Town of Munster may order the work stopped by notice in writing served on any person engaged in the doing or causing of such work to be done, and any such persons shall forthwith stop such work until authorized by the Town of Munster to proceed with the work. A Stop Work Order will be posted on the site by the Town of Munster and it is unlawful for any person to remove the notice or continue any work on the site without permission from the Town of Munster. The Town of Munster 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.
- ii. Any person who neglects or fails to comply with a stop work order shall, upon conviction of a violation of this section, shall be subject to a fine of not less than \$1,000, and such person shall also pay such costs as may be imposed in the discretion of the court. A permit reinstatement fee may also be assessed by the Town of Munster.

- iii. For construction projects that are operating under a SWPPP approved by the Town of Munster, if a Stop Work Order is issued on the grounds that the erosion and sediment control measures included in the construction plan are not adequate, the project site owner must be notified in writing of the inadequacies in the erosion and sediment control measures and the project site owner has seventy-two (72) hours after receiving written notice to resolve the identified inadequacies before the Stop Work Order can take effect.

The seventy-two (72) hour period to resolve identified inadequacies on a construction project does not apply if the Stop Work Order is issued to a construction project where the project site owner is creating a public health hazard or safety hazard.

5. Withhold Certificate of Occupancy

The Town of Munster may refuse to issue a certificate of occupancy for the building or other improvements constructed or being constructed on the site until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise satisfied the requirements of this ordinance as determined by the Town of Munster.

6. Suspension, Revocation, or Modification of Permits

The Town of Munster may suspend, revoke, or modify any existing permit that the violator may also have been previously granted. A suspended, revoked, or modified permit 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 may be reinstated upon such conditions as the Town of Munster may deem necessary to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.

7. Suspension of Access to the Stormwater Drainage System

i. Emergency Cease and Desist Orders

When the Town of Munster finds that any person has violated, or continues to violate, any provision of this ordinance, or any order issued hereunder, or that the person's past violations are likely to recur, and that the person's violation(s) has (have) caused or contributed to an actual or threatened discharge to the MS4 or waters of the United States which reasonably appears to present an imminent or substantial endangerment to the health or welfare of persons or to the environment, the Town of Munster may issue an order to the violator directing it immediately to cease and desist all such violations and directing the violator to immediately comply with all ordinance requirements and take such appropriate preventive action as may be needed to properly address a continuing or threatened violation, including immediately halting operations and/or terminating the discharge.

Any person notified of an emergency order directed to it under this Subsection shall immediately comply and stop or eliminate its endangering discharge. In the event of a discharger's failure to immediately comply voluntarily with the emergency order, the Town of Munster may take such steps as deemed necessary to prevent or minimize harm to the stormwater drainage system or waters of the United States, and/or endangerment to persons or to the environment, including immediate termination of a facility's water supply, sewer connection, or other municipal utility services.

The Town of Munster may allow the person to recommence its discharge when it has demonstrated to the satisfaction of the Town of Munster that the period of endangerment has passed, unless further termination proceedings are initiated against the discharger under this ordinance. A person that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful discharge and the measures taken to prevent any future occurrence, to the Town of Munster within 5 days of receipt of the emergency order. Issuance of an emergency cease and desist order shall not be a bar against, or a prerequisite for, taking any other action against the violator.

ii. Suspension Due to Illicit Discharges in Emergency Situations

The Town of Munster 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, 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, the Town of Munster 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.

iii. Suspension Due to the Detection of Illicit Discharge

Any person discharging to the stormwater drainage system in violation of this ordinance may have their stormwater drainage system access terminated if such termination would abate or reduce an illicit discharge. The Town of Munster will notify a violator of the proposed termination of its stormwater drainage system access. The violator may petition the Town of Munster for a reconsideration and hearing. A person commits an offense if the person reinstates stormwater drainage system access to premises terminated pursuant to this Section, without the prior approval of the Town of Munster.

8. Other Enforcement

Upon the failure, neglect, or refusal of the applicant, other responsible person, or the owner of the property, to timely remedy the violation that exists on the real property within the prescribed period of time shall be deemed a violation of this Ordinance, and the Town attorney may institute enforcement actions, concurrently and in addition to other enforcement actions set forth in this Ordinance, and shall require such person to appear in the Circuit or Superior Court of Lake County to answer charges for violations of this Ordinance. Each violation shall be punished by a fine up to \$2,500.00, plus costs, damages, expenses, and attorney fees. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense. The rights and remedies provided for in this section are cumulative and in addition to any other remedies provided by law.

(C) COST OF ABATEMENT OF THE VIOLATION

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

Nothing herein contained shall prevent the Town of Munster 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 the Town of Munster'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.

If the amount due for abatement of the violation is not paid within a timely manner as determined by the decision of the Town of Munster 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.

(D) APPEALS

1. Appeal of Notice of Violation

Any person to whom any provision of this Ordinance has been applied may appeal in writing, not later than 30 days after the action or decision being appealed from, to the Town Manager of the Town of Munster the action or decision whereby any such provision was so applied. Such appeal shall identify the matter being appealed, and the basis for the appeal. The Town Manager of the Town of Munster shall consider the appeal and make a decision whereby it affirms, rejects or modifies the action being

appealed. In considering any such appeal, the Town Manager of the Town of Munster may consider the recommendations of the Town of Munster Staff and the comments of other persons having knowledge of the matter. In considering any such appeal, the Town Manager 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:

- i. 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
- ii. 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.

2. Enforcement Measures After Appeal

If the violation has not been corrected pursuant to the requirements set forth in the Notice of Violation, or, in the event of an appeal, within 5 days of the decision of the Town Manager upholding the decision of the Town of Munster, then representatives of the Town of Munster shall enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the Town of Munster or its designated contractor to enter upon the premises for the purposes set forth above.

SECTION 8 – ABBREVIATIONS AND DEFINITIONS

The following abbreviations and definitions shall apply throughout this section:

(A) ABBREVIATIONS

BMP	Best Management Practice
CWA	Clean Water Act
EPA	Environmental Protection Agency
IDEM	Indiana Department of Environmental Management
MS4	Municipal Separate Storm Sewers
NPDES	National Pollution Discharge Elimination System
SWPPP	Stormwater Pollution Prevention Plan

(B) DEFINITIONS

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

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. It has a defined bed and banks which serve to confine the water.

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

Construction activity. Land disturbing activities, and land disturbing activities associated with the construction of infrastructure and structures. This term does not include routine ditch or road maintenance or minor landscaping projects.

Construction Support Activities. Include but are not limited to the following: concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas. Such activities must not support multiple, unrelated projects, be a commercial/industrial operation, or continue to operate beyond the completion of the construction activity for the project it supports.

Contiguous. Adjoining or in actual contact with.

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

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) 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 storage 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.

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. Usually the rate of water flow. A volume of fluid passing a point per unit time commonly expressed as cubic feet per second, cubic meters per second, gallons per minute, or millions of gallons per day.

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.

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 $(R \times K \times LS)/T$ (from the Universal Soil Loss Equation) and $(C \times I)/T$ (from the Wind Erosion Equation), where R is a measure of rainfall and runoff, K is a factor of the susceptibility of the soil to water erosion, LS is a measure of the combined effects of slope length and steepness, C is a climatic characterization of 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 (see Rill).
- *Splash erosion*--The spattering of small soil particles caused by the impact of raindrops on wet soils; the loosened and spattered particles may or may not be subsequently removed by surface runoff.
- *Sheet erosion*--The gradual removal of a fairly uniform layer of soil from the land surface by runoff water.

Erosion and sediment control. A practice, or a combination of practices, to minimize sedimentation by first reducing or eliminating erosion at the source and then as necessary, trapping sediment to prevent it from being discharged from or within a project site.

Filter Strip. Usually a long, relatively narrow area (usually, 20-75 feet wide) of undisturbed or planted vegetation used near disturbed or impervious surfaces to filter 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.

Fluvial Erosion Hazard (FEH) Corridor. Fluvial 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.

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

Gasoline outlet. An operating gasoline or diesel fueling facility whose primary function is the resale of fuels. The term applies to facilities that create five thousand (5,000) or more square feet of impervious surface, or generate an average daily traffic count of one hundred (100) vehicles per one thousand (1,000) square feet of land area.

Grade. (1) The inclination or slope of a channel, canal, conduit, etc., or natural ground surface usually expressed in terms of the percentage the vertical rise (or fall) bears to the corresponding horizontal distance. (2) The finished surface of a canal bed, roadbed, top of embankment, or bottom of excavation; any surface prepared to a design elevation for the support of construction, such as paving or the laying of a conduit. (3) To finish the surface of a canal bed, roadbed, top of embankment, or bottom of excavation, or other land area to a smooth, even condition.

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

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.

Hot Spot Development. Projects involving land uses considered to be high pollutant producers such as vehicle service and maintenance facilities, vehicle salvage yards and recycling facilities, vehicle and equipment cleaning facilities, fleet storage areas for buses, trucks, etc., industrial/commercial or any hazardous waste storage areas or areas that generate such wastes, industrial sites, restaurants and

convenience stores, any activity involving chemical mixing or loading/unloading, outdoor liquid container storage, public works storage areas, commercial container nurseries, and some high traffic retail uses characterized by frequent vehicle turnover.

Illicit Discharge. Any discharge to a conveyance that is not composed entirely of stormwater except naturally occurring floatables, such as leaves or tree limbs.

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 runoff through the soil to groundwater. Examples include infiltration basins or trenches, dry wells, and porous pavement.

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.

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.

Municipal Separate Storm Sewers. 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 Pollutant Discharge Elimination System. A permit developed by the U.S. EPA through the Clean Water Act. In Indiana, the permitting process has been delegated to IDEM. This permit covers aspects of municipal stormwater quality.

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

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

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

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.

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]).

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 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.

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. Development occurring on a previously developed site.

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

Regional Pond. A detention/retention basin sized to detain/retain the runoff from the entire watershed, on-site and off-site, tributary to the pond's outlet.

Regulatory Flood. The discharge or elevation associated with the 100-year flood as calculated by a method and procedure which is acceptable to and approved by the Indiana Department of Natural Resources and the Federal Emergency Management Agency. The "regulatory flood" is also known as the "base flood".

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 either permanent or temporary. The term is also used in the hydrologic modeling of storage facilities.

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

Retention basin. A type of storage practice, that has no positive outlet, used to retain stormwater runoff for an indefinite amount of time. Runoff from this type of basin is removed only by infiltration through a porous bottom or by evaporation.

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

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

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 surfaces or in bodies of water or watercourses.

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 parentheses--e.g., (1V:2H). Slopes can also be expressed in "percent". Slopes given in percent are always expressed as $(100 \times V/H)$ --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.

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

Spill. The unexpected, unintended, abnormal, or unapproved dumping, leakage, drainage, seepage, discharge, or other loss of petroleum, hazardous substances, extremely hazardous substances, or objectionable substances. The term does not include releases to impervious surfaces when the substance does not migrate off the surface or penetrate the surface and enter the soil.

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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 Management System. A collection of structural and non-structural practices and infrastructure designed to manage stormwater on a site. This system may include but is not limited to erosion control measures, storm drainage infrastructure, detention/retention facilities, and stormwater quality BMPs.

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, ditches, storage facilities, swales, streams, culverts, streets and pumping stations.

Subdivision, Major. Any land that is divided or proposed to be divided into four (4) or more 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.

Subdivision, Minor. Any land that is divided or proposed to be divided into less than four (4) 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 backfield 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.

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

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 (such as CESSWI and/or CPESC certification), or other documented and applicable experience or coursework as deemed sufficient by the Town of Munster that enable the individual to make judgments regarding stormwater control or treatment and monitoring.

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.

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 facility. Watersheds are often broken down into subareas 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.

