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SECTION 101 ABBREVIATIONS AND DEFINITIONS

ABBREVIATIONS

BMP Best Management Practice

COE United States Army Corps of Engineers

CWA Clean Water Act

EPA Environmental Protection Agency

Geographical Information System

IDEM Indiana Department of Environmental Management

MS4 Municipal Separate Storm Sewer System

NRCS USDA-Natural Resources Conservation Service

NPDES National Pollution Discharge Elimination System

POTW Publicly Owned Treatment Works

SWCD Soil and Water Conservation District

SWPPP Stormwater Pollution Prevention Plan

USDA United States Department of Agriculture

USFWS United States Fish and Wildlife Service

DEFINITIONS

Agricultural land disturbing activity. Tillage, planting, cultivation, or harvesting operations to produce agricultural or nursery vegetative crops. The term also includes pasture renovation and establishment, the construction of agricultural conservation practices, and the installation and maintenance of agricultural drainage tile. For purposes of this ordinance, the term does not include land disturbing activities for the construction of agricultural related facilities, such as barns, buildings to house livestock, roads associated with infrastructure, agricultural waste lagoons and facilities, lakes and ponds, wetlands; and other infrastructure.

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

Best Management Practices. 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.

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

Capacity (of a Storm Drainage Facility). The maximum flow that can be conveyed or stored by a storm drainage facility without causing damage to public or private property.

Catch Basin. A chamber usually built at the curb line of a street for the admission of surface water to a storm drain or subdrain, having at its base a sediment sump designed to retain grit and detritus below the point of overflow.

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.

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

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

Construction activity. 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 site access. A stabilized stone surface at all points of vehicular access to a project site; designed to capture and detain sediment from tires of vehicles and equipment exiting the project site.

Contiguous. Adjoining or in actual contact with.

Contour or Contour Line. A line representing connection of points at 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 transporting stormwater. The term includes piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, and roadways.

Cross Section. A graph or plot of ground elevation across a stream valley or a portion of it, usually along a line perpendicular to the stream or direction of flow.

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

Design Storm. A selected storm event, described in terms of the probability of occurring once within a given number of years, for which drainage or flood control improvements are designed and built.

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

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

Detention Storage. The temporary detaining of stormwater in storage facilities, on rooftops, in streets, parking lots, school yards, parks, open spaces or other areas under predetermined and controlled conditions, with the rate of release regulated by appropriately installed devices.

Detention Time. The theoretical time required to displace the contents of a tank or unit at a given rate of discharge (volume divided by rate of discharge).

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

Developer. A person financially responsible for construction activity, or an owner of property who sells, 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.

Maintenance activities like painting, re-roofing, road/pavement resurfacing, or gardening, plowing and other agricultural practices that do not involve filling, grading, excavation, or construction of permanent buildings are not considered development.

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.

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

Drain. A buried slotted or perforated pipe or other conduit (subsurface drain) or a ditch (open drain) for carrying off surplus groundwater or surface water.

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

Drainage Area. The area draining into a stream at a given point. It may be of different sizes for surface runoff, subsurface flow and base flow, but generally the surface runoff area is considered as the drainage area.

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

Duration. The time-period of a rainfall event.

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

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

- Accelerated erosion Erosion much more rapid than normal or geologic erosion, primarily because 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 combination of practices intended to minimize sedimentation by first reducing or eliminating erosion at the source and then, as necessary, trapping sediment to prevent it from being discharged.

Filter Strip. A linear, relatively narrow area (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.

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 inundation 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 floodplain adjoining the channel which are reasonably required to efficiently carry and discharge the peak flow of the regulatory flood.

Floodway Fringe. That portion of the floodplain lying outside the floodway.

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

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

Grade. (1) The inclination or slope of a channel, canal, conduit, etc., or natural ground surface usually expressed in terms of the percentage the vertical rise (or fall) 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.

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

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

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

Hydrologic Unit Code. A numeric United States Geologic Survey code that corresponds to a watershed area. Each area also has a text description associated with the numeric code.

Hydrology. The science of the behavior of water in the atmosphere, on the surface of the earth, and underground. A typical hydrologic study is undertaken to compute flow rates associated with specified flood events.

Illicit Discharge. Any discharge to a conveyance that is not composed entirely of stormwater 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 that prevent infiltration of stormwater into the soil.

Individual building lot. A single parcel of land within a multi-parcel development.

Individual lot operator. A contractor or subcontractor working on an individual lot.

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

Infiltration. Passage or movement of water into the soil. Infiltration practices include any structural BMP designed to facilitate the percolation of run-off through the soil to groundwater. Examples include infiltration basins or trenches, dry wells, and porous pavement.

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

Land-disturbing Activity. Any man-made change of the land surface, including removing vegetative cover that exposes the underlying soil, excavating, filling, transporting and grading.

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

Larger common plan of development or sale. A plan, undertaken by a single project site owner or a group of project site owners acting in concert, to offer lots for sale or lease; where such land is contiguous, or is known, designated, purchased or advertised as a common unit or by a common name, such land shall be presumed as being offered for sale or lease as part of a larger common plan. The term also includes phased or other construction activity by a single entity for its own use.

Lowest Adjacent Grade. The elevation of the lowest grade adjacent to a structure, where the soil meets the foundation around the outside of the structure (including structural members such as basement walkout, patios, decks, porches, support posts or piers, and rim of a window well.

Lowest Floor. Refers to the lowest of the following:

- 1. Basement floor surface;
- 2. Garage floor surface, if the garage is the lowest level of the building;
- 3. First floor surface of buildings constructed on a slab, elevated on pilings, or constructed on a crawl space with permanent openings; or
- 4. Floor surface of any enclosure below an elevated building where the walls of the enclosure provide any resistance to flow of flood waters unless:
 - a) The walls are designed to automatically equalize hydrostatic flood forces by allowing for entry and exit of flood waters, by providing a minimum of two openings (in addition to doorways and windows) having a total area of one square foot for every two square feet of enclosed area

subject to flooding. The bottom of all such openings shall be no higher than one foot above grade.

b) Such enclosed space shall be usable only for vehicle parking or building access.

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

Measurable storm event. A precipitation event with a total measured precipitation accumulation of at least one-half inch.

Mulch. A natural or artificial layer of plant residue or other materials covering the land surface which conserves moisture, holds soil in place, aids in establishing plant cover, and minimizes temperature fluctuations.

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

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

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

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

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

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

Percolation. The movement of water through soil.

Permanent stabilization. The establishment, at a uniform density of seventy percent (70%) across the disturbed area, of vegetative cover or permanent non-erosive material that will ensure the resistance of the soil to erosion, sliding, or other movement.

Pervious. Allowing movement of water.

Professional Engineer. A person licensed to practice engineering in Indiana.

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

Project site owner. The person who must submit a stormwater application and comply with this ordinance. This may include the developer or the person with financial and operational control of design and construction activities.

Receiving Stream, Receiving Channel, or Receiving Water. The body of water into which runoff is discharged. The term does not include private drains, unnamed conveyances, retention and detention basins, or constructed wetlands used as treatment.

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

Redevelopment. Alterations of a property that change a site or building and disturb one or more acres.

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

Regulatory Floodway. See Floodway.

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

Reservoir. A natural or artificially created pond, lake or other space used for storage, regulation or control of water. May be 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 run-off for an indefinite amount of time. Runoff from this type of basin is removed only by infiltration through a porous bottom or by evaporation.

Return Period. The average interval of time within which a given rainfall event will be equaled or exceeded once. A flood having a return period of 100 years has a one percent probability of being equaled or exceeded in any one year.

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

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

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

Runoff Coefficient - A decimal fraction relating the amount of rain which appears as runoff and reaches the storm drain system to the total amount of rain falling. A coefficient of 0.5 implies that 50 percent of the rain falling on a given surface appears as stormwater runoff.

Sediment. Solid material (both mineral and organic) that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

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

Sensitive Water. A waterbody in need of priority protection or remediation base on its providing habitat for threatened or endangered species, usage as a public water supply intake, relevant community value, usage for full body contact recreation, exceptional use classification as found in 327 IAC 2-1-11(b), or outstanding state resource water classification as found in 327 IAC 2-1-2(3) and 327 IAC 2-1.5-19(b).

Site. The entire area included in the legal description of 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 the horizontal distance and the second is the vertical distance – e.g., 2:1. Slopes may also be shown as a percent. Slopes given in percent are always expressed as (100*V/H) – e.g., a 2:1 slope is a 50% slope.

Soil. Unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

Soil and Water Conservation District. A public organization created under state law as a special-purpose district to develop and carry out a program of soil, water, and related resource conservation, use, and development within its boundaries. A subdivision of state government with a local governing body, established under IC 14-32.

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

Storm Event. An estimate of the expected amount of precipitation within a given period of time. For example, a 10-yr. frequency, 24-hr. duration storm event is a storm that has a 10% probability of occurring in any one year. Precipitation is measured over a 24-hr. period.

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

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

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

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

Stormwater 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.

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

Subdivision. Any land that is divided or proposed to be divided into lots, whether contiguous or subject to zoning requirements, for 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 off roof surfaces, streets, ground and other surfaces rather than being absorbed or retained.

Swale. An elongated depression in the land surface that is at least seasonally wet, is usually vegetated, and is normally without flowing water. Swales convey stormwater into primary drainage channels and may provide some groundwater recharge.

Temporary Stabilization. The covering of soil to ensure its resistance to erosion, sliding, or other movement. The term includes vegetative cover, anchored mulch, or other non-erosive material applied at a uniform density of seventy percent (70%) across the disturbed area.

Tile Drain. Pipe made of perforated plastic, burned clay, concrete, or similar material, laid to a designed grade and depth, to collect and carry excess water from the soil.

Topographic Map. Graphical portrayal of the topographic features of a land area, showing both the horizontal distances between the features and their elevations above a given datum.

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

Urban Drain. A drain defined as "Urban Drain" in Indiana Drainage Code.

Urbanization. The development (change or improvement) of any parcel of land consisting of one or more lots for residential, commercial, industrial, institutional, recreational or public purposes.

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

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 hydrologic modeling.

Wetlands. Areas that are inundated or saturated by surface water or groundwater at a frequency and duration needed to support (and that under normal circumstances do support) a prevalence of vegetation typically adapted for life in saturated soil conditions.

SECTION 102 AUTHORITY AND TITLE

This ordinance is adopted in accordance with statutory authority granted to Blackford County under "Home Rule." This ordinance regulates:

- A. Stormwater drainage improvements related to land development in Blackford County
- B. Drainage systems installed with new construction
- C. Design, construction and maintenance of stormwater drainage facilities and systems
- D. Design, construction, and maintenance of new dams
- E. Development downstream of existing dams
- F. Development in floodways and fluvial erosion hazard corridors

SECTION 103 APPLICABILITY AND EXEMPTIONS

This ordinance shall regulate development and redevelopment in Blackford County, Indiana. No building permit shall be issued, and no land disturbance started for any construction in a development, as defined in Chapter 100, until the plans required by this ordinance for such construction have been accepted in writing by Blackford County Drainage Board or Blackford County Surveyor. Single-family homes in accepted subdivisions, new buildings (or cumulative building additions) with less than 500 square feet of area, and land-disturbing activities affecting less than one acre of area shall be exempt from the requirements of this ordinance. Agricultural activities are also exempt from this ordinance.

Blackford County government projects are expected to meet applicable technical requirements of this ordinance and shall be exempt from obtaining a stormwater permit.

Any construction project which had its final drainage plan approved by Blackford County within a twoyear period prior to the effective date of this ordinance shall be required to abide by those provisions that were in effect at the time of approval.

Blackford County has the authority to modify, grant exemptions, or waive requirements of this ordinance. Applicant may request a pre-submittal meeting with county staff to discuss applicability of various provisions of the ordinance and technical standards due to unique or unusual circumstances.

SECTION 104 FINDINGS

The Blackford County Board of Commissioners finds that:

- A. Water bodies, roadways, structures, and other property within and downstream of Blackford County are at times subjected to flooding.
- B. Flooding is a danger to the lives and property of the public and is also a danger to the natural resources of the region.

- C. Land development alters the hydrologic response of watersheds and may result in increased stormwater runoff rates and volumes, increased flooding, increased stream channel erosion, and changes in sediment transport and deposition.
- D. Increased stormwater runoff rates and volumes will, absent reasonable regulation and control, adversely affect Blackford County's water bodies and water resources.
- E. Stormwater runoff can be controlled by regulation of stormwater management.
- F. Benefits of Fluvial Erosion Hazard (FEH) Corridor maps: An FEH Corridor map shows the area a river needs to accommodate equilibrium conditions, specifically the meanders (stream length) and slope requirement of a stable stream channel. It also shows land most vulnerable to erosion from flooding. Preventing further encroachment into FEH corridors will minimize fluvial erosion hazards and property loss from flooding, enhance public safety and maintain or improve water quality and habitat function.
- G. Adopting and enforcing use of standards, criteria, and procedures contained and referenced in this ordinance will address many deleterious effects of stormwater runoff and fluvial erosion hazards.
- H. Adopting this ordinance is necessary for protection of private property and mutual and private drains.

SECTION 105 PURPOSE

The purpose of this ordinance is to provide for the health, safety, and general welfare of citizens of Blackford County through regulation of stormwater discharges and to protect, conserve and promote orderly development of land and water resources within Blackford County. This ordinance establishes methods for managing quantity of stormwater runoff. The objectives of this ordinance are to reduce public hazard caused by excessive stormwater runoff, and to establish legal authority to inspect, monitor, and implement enforcement procedures to confirm compliance with this ordinance.

SECTION 106 RESPONSIBILITY FOR ADMINISTRATION

Blackford County Drainage Board and Blackford County Surveyor shall administer, implement, and enforce this ordinance. Powers granted, or duties imposed upon the authorized enforcement agency may be delegated in writing by Blackford County to qualified persons or entities acting in the beneficial interest of or in the employ of Blackford County.

SECTION 107 CONFLICTING ORDINANCES

The provisions of this ordinance shall be deemed as additional requirements to minimum standards required by other Blackford County ordinances. In case of conflicting requirements, the most restrictive shall apply.

SECTION 108 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 101 shall be construed according to the respective definitions given in that section. Technical words and 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.

SECTION 109 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.

SECTION 110 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 increase due to 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 any Blackford County agency or any officer, representative, or employee thereof, for any damage which 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 Blackford County has reviewed material produced and submitted by the applicant or agent for general compliance with this ordinance, and that such compliance would qualify the applicant to receive a stormwater management permit. Such "approval" or "acceptance" assumes that the project engineer has followed appropriate engineering methods in the design. Any drainage problems associated with the project caused by poor construction or improper 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. Blackford County and its officials and representatives shall not be responsible for maintenance nor liability for any accidents.

SECTION 201 APPLICABILITY AND EXEMPTIONS

Storage and controlled release of excess stormwater runoff shall be required for all new business, commercial, and industrial developments; residential subdivisions; planned developments; rural estate subdivisions; and any redevelopment or other new construction in Blackford County. The drainage board and county surveyor may modify or waive controlled release requirements for minor subdivisions and parcelization based on thorough investigation and evaluation.

SECTION 202 POLICY ON STORMWATER QUANTITY MANAGEMENT

Most streams and drainage channels in Blackford County do not have enough capacity to 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 developments and redevelopments (as defined in Section 100) in Blackford County.

In general, stormwater detention shall be designed to limit release rates for events up to and including the 10-year return period storm to the pre-developed peak 2-year return period runoff rate, and for the 11 to 100-year return period storms to the pre-developed peak 10-year return period rate.

The county surveyor may require lower release rates for Impact Drainage Areas and for certain watersheds if more detailed data becomes available because of approved watershed studies. Additional details regarding release rate requirements, basin-specific release rates, and other consideration are provided in the Blackford County Stormwater Technical Standards Manual.

SECTION 203 CALCULATIONS, DESIGN STANDARDS AND SPECIFICATIONS

Calculation methods; and type, sizing, and placement of stormwater facilities shall meet requirements detailed in the Blackford County Stormwater Technical Standards Manual.

SECTION 204 DRAINAGE EASEMENT REQUIREMENTS

Regulated Drainage Easements (RDEs) are stormwater easements and drainage rights of way that are dedicated to the public and trusted to Blackford County Drainage Board for the sole and exclusive purpose of controlling surface water and/or for the installation, operation, and maintenance of storm sewers. RDE's are established under authority of the Indiana Drainage Code. No other storm drainage easements have been accepted into the county's system.

No trees or shrubs may be planted, nor any structures or fences erected in any drainage easement unless specifically accepted by Blackford County Drainage Board. Stormwater systems, including detention or retention basins, conveyance systems, structures and appurtenances located outside of the right-of-way may be incorporated into the county system at the discretion of the drainage board. The developer shall petition to incorporate the stormwater system into the Blackford County system. The stormwater management application may not be approved until such petition is submitted in a form accepted by the drainage board.

If the drainage board accepts the petition for incorporation into their system, the following statement shall become part of the restrictive covenants of every platted subdivision and shown on recorded plat: "channels,

storm sewers, inlets and outlets of detention and retention ponds, and appurtenances thereto within designated Regulated Drainage Easements (RDEs) are extensions of the Blackford County stormwater drainage system and are the responsibility of Blackford County Drainage Board. Specific definitions and requirements associated with these RDEs and noted storm drainage systems are contained in Section 204 of the Blackford County Stormwater Management Ordinance and in the Blackford County Stormwater Technical Standards Manual. Drainage swales shall be the responsibility of owner or homeowner association."

For petition to the County, the following statement shall be put on each subdivision plat:

"A petition requesting that the subdivision's storm drainage system and easements be accepted into the county regulated drain system has been filed with the Blackford County Drainage Board. The storm drainage system and its easements that are accepted into the county regulated drain system are delineated on the plat as Regulated Drainage Easements (RDEs). No other drainage easements have been accepted into the county system. 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. Within the latter easements, the Blackford County Drainage Board assumes no responsibility relative to said improvements or the maintenance thereof. Specific definitions and requirements associated with these RDEs and noted storm drainage systems are contained in Blackford County Stormwater Management ordinance and Stormwater Technical Standards Manual. This subdivision contains _____ linear feet of open ditches and _____ linear feet of subsurface drains that will be included in the County's Regulated Drainage System."

The noted Regulated Drain lengths, broken down by the length of open and tile drains, shall also be shown in tabular form in a prominent position on the plat.

Any outlet to, crossing, or encroachment of a Regulated Drainage Easement requires application to and approval of the Blackford County Drainage Board.

All new channels, swales, drain tiles, inlet and outlet structures of detention and retention ponds, and appurtenances thereto that are installed on municipal or school property will be maintained, repaired, and constructed by the entity and will not become county regulated drains. The design must meet the standards of the Blackford County Stormwater Management ordinance for sizing and installation. Any off-site portion of the drainage system must be within easements and have clearly defined maintenance agreements.

Additional easement requirements along stormwater conveyance systems are contained in the Blackford County Stormwater Technical Standards Manual.

SECTION 205 PLACEMENT OF UTILITIES

No utility company may disturb existing storm drainage facilities without the consent of Blackford County, whose decision may be appealed to the Blackford County Drainage Board. All existing drainage facilities shall have senior rights and damage to said facilities shall result in penalties as prescribed in Chapter 400 of this ordinance.

SECTION 206 STRUCTURES NEAR COUNTY REGULATED DRAINS

For regulated drains not located in platted subdivisions, 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; or b) the center line of a tiled regulated drain, unless otherwise accepted by the

drainage board. The Indiana drainage code may be consulted for further details.

SECTION 207 INSPECTION, RECORD KEEPING, AND REPORTING

Blackford County has the authority to inspect work being done to check for compliance with provisions of this chapter, the Stormwater Technical Standards Manual, and terms and conditions of the approval. After construction is complete, the Blackford County Surveyor will inspect the site and provide written comments on items that need corrected, if any. After items have been corrected, the Surveyor's office will re-inspect at no charge. However, if there are ongoing inspections, there will be a charge of \$250 per inspection for up to 2 hours and each additional hour will be \$125 per hour.

Blackford County also has authority to perform long-term, post-construction inspection of public and privately-owned stormwater facilities. Inspections may cover physical conditions, available storage capacity, and operational condition of critical facility elements. Stormwater quantity facilities shall be maintained in good condition, in accordance with terms and conditions of the stormwater management approval, and shall not be altered, revised or replaced except in accordance with the stormwater approval, or in accordance with approved amendments or revisions to the original stormwater management approval. Blackford County will notify the owner of deficiencies and the requirement to correct such deficiencies. If the owner fails to correct deficiencies within the time specified in the notification, Blackford County may complete the work and collect from the owner using bonds and/or lien rights.

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



PERMIT REQUIREMENTS AND PROCEDURES

SECTION 301 PERMIT PROCEDURES

This section applies to development and re-development that results in disturbance of one acre or more of land that is under jurisdictional authority of the Blackford County Drainage Board. Individual lots with land disturbance less than one acre that are developed within a larger permitted project site should refer to Section 304 for plan review requirements and procedures.

There are two permit application and processing scenarios, one for projects in unincorporated areas of Blackford County, and the other for projects in jurisdictional areas of Hartford City, Montpelier, or Town of Shamrock Lakes that would impact Blackford County regulated drains.

A. Projects in unincorporated areas of Blackford County

The project site owner shall apply to the Blackford County Surveyor for stormwater management approval. The application package must include everything listed in Section 302. Two copies of each application package must be submitted along with one digital (PDF) copy.

The project site owner must notify Blackford County Surveyor at least 48 hours before beginning construction. Upon completion of construction, one hard copy and one digital (PDF) copy of as-built plans must be submitted to Blackford County Surveyor. Permits issued under this scenario will expire 5 years from the date of issuance.

B. Projects in other jurisdictional areas

For projects located in other jurisdictional areas and impacting Blackford County regulated drains, the project site owner must submit two hard copies and one digital (PDF) copy of construction plans, and two hard copies of stormwater technical report to Blackford County Surveyor. If the project needs drainage board approval, all information must be submitted at least 30 days prior to the regularly scheduled meeting. Blackford County Surveyor will review submittal and provide applicant with a written list of comments, if any, regarding project impact on Blackford County regulated drains. Applicant must provide a written response addressing each comment to Blackford County Surveyor at least ten 10 days prior to drainage board meeting. Plans that are in substantial compliance with requirements of this ordinance will be placed on the agenda. Project approval does *not* alleviate applicant's responsibility to comply with ordinance, policy, or resolution requirements of the local jurisdictional entity.

SECTION 302 STORMWATER APPLICATION 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" section of chapters 100 and 200. If applicant believes a project or activity is exempt from any or all requirements of this ordinance, application should list and explain the exemption criteria.

Stormwater permit applications must include copies of construction plans, stormwater drainage technical report, and other necessary supporting information. Plans, reports, calculations, and narratives shall be signed and sealed by a professional engineer or licensed surveyor.

A. Construction Plans

Application shall include three complete sets of construction plans that include the following items:

- i. Project narrative and supporting documents, including the following:
 - a. Index showing location of each item required by this subsection.
 - b. Legal description of project site to nearest quarter section, township, and range, and including the civil township.
 - c. A plat or project site map showing lot numbers, lot boundaries, and road layouts and names.
 - d. Identification of any state or federal permits that are required for proposed construction activities.
- ii. Vicinity map (USGS quadrangle map, or county or municipal road map) with project site location shown along with recognizable landmarks, towns, and major roads.
- iii. Existing conditions plan sheet that includes the following:
 - a. Location, name and normal water level of wetlands, lakes, ponds, and water courses that are on or adjacent to project site.
 - b. Location of existing structures on the project site.
 - c. 100-year floodplains, floodway fringes, and floodways; note if none exist.
 - d. Soil map (including legend) of predominant soil types, as determined by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Soil Survey, or as determined by a soil scientist. Hydrologic classification for soils should be shown when needed for hydrologic analysis.
 - e. Identification and delineation of vegetative cover like grass, weeds, brush and trees.
 - f. Location of storm, sanitary, combined sewer, and septic tank systems and outfalls.
 - g. Land use of adjacent properties.
 - h. Identification and delineation of sensitive areas.
 - i. Existing topography at a contour interval appropriate to indicate drainage patterns.
 - j. Location of regulated drains, farm drains, inlets and outfalls.
- iv. Site plan that includes the following:
 - a. Location of proposed site improvements including roads, utilities, lots, proposed structures, and common areas.
 - b. 100-year floodplains, floodway fringes, and floodways; note if none exist.
 - c. Proposed topography at a contour interval appropriate to indicate drainage patterns.
- v. Grading plan that includes the following:
 - a. Delineation of proposed land disturbing activities.
 - b. Location of soil stockpiles and borrow areas.
 - c. Existing and proposed topographic information.
- vi. Drainage plan sheet that includes the following:
 - a. Location, size and dimensions of existing and new drainage systems such as culverts, bridges, storm sewers, and ditches, along with associated easements.
 - b. Locations where stormwater may be directly discharged into groundwater, such as abandoned wells or sinkholes; note if none exist.
 - c. Locations of specific points where stormwater discharge will leave project site.
 - d. Location, size, and dimensions of existing and new detention basins, and natural or constructed wetlands used for stormwater management.
 - e. Estimated depth and storage volume required by design of the new ponds or basins.

f. One or more typical cross sections of existing and proposed ditches showing existing and proposed elevations, 100-year flood elevations, and relationship of structures, streets, and other facilities.

B. Stormwater Technical Report

A written technical report must contain a presentation of the process used to design the stormwater system. The report should include a description of project, general description of the existing and proposed drainage systems and outfalls, and a general description of regulated drains, farm drains, inlets and outfalls. Report should also include drainage calculations showing existing and proposed discharges for various storm events. Calculations must be consistent with technical standards and include the following:

- i. Comprehensive hydraulic report presenting details of the process used and showing existing and proposed drainage patterns, description of current and proposed land use, and how off-site drainage entering the site will be accommodated.
- ii. Hydrologic and hydraulic computations including runoff curve numbers and coefficients, runoff calculations, stage-discharge relationships, times-of-concentration, and storage volumes.
- iii. Digital and hard copies of computer model input and the output files.
- iv. Exhibits showing total watershed and drainage sub-areas, and computer model schematics.
- v. Conclusion that shows the proposed design meets ordinance requirements.

SECTION 303 CHANGES TO PLANS

Changes to or deviations from previously permitted plans must be reviewed and approved by Blackford County Surveyor before such work is done. Copies of approved changes must be attached to original plans and specifications.

SECTION 304 FEE STRUCTURE

A. Amount

As a condition of acceptance and review of development plans, applicant shall agree to pay the fee set by Blackford County Commissioners upon recommendation of Blackford County Drainage Board with respect to review of drainage submittals and pre-paid inspection fees.

B. Time of Payment

After the meeting at which Blackford County is scheduled to consider acceptance of applicant's stormwater management plan, Blackford County Drainage Board, through the Blackford County Surveyor, will furnish a written statement to applicant specifying the total amount due for review of applicant's submittal, including pre-paid inspection fees.

As a condition of approval of stormwater permit, applicant shall pay to Blackford County Surveyor the sum set forth in said statement. Blackford County Drainage Board may issue the billing statement before the project advances to final acceptance stage, and such payment will be due upon receipt of said billing statement regardless of whether the project is advanced to final acceptance stage.

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

C. Method of Payment

Fees shall be paid by certified check, cashier's check, money order, or credit card.

Checks shall be made payable to: Blackford County Treasurer

D. Refund of Payment

Fees are refundable **only** if Blackford County determines that compliance to this ordinance is not required.

SECTION 305 REQUIRED ASSURANCES

As a condition of approval and issuance of permit, Blackford County shall require applicant to provide assurance in form of an irrevocable letter of credit or a bond after the stormwater management plan has been accepted, all applicable fees paid, and before construction begins. Said assurance will guarantee a good faith execution of stormwater drainage plan including (if applicable) permit conditions specified in the approval. Assurance shall be for an amount equal to 125 percent of the estimated total costs of all stormwater management measures for the project. The above-mentioned costs shall be based on an estimate prepared by a registered engineer or land surveyor. Said costs shall be for construction and ongoing monitoring and maintenance of storm drainage infrastructure and detention facilities regulated under this ordinance until construction is completed and as-built plans are accepted by Blackford County. Assurances shall be for a minimum of \$5,000. Local governmental jurisdictions may require additional performance and maintenance assurances. 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.

SECTION 306 TERMS AND CONDITIONS OF APPROVALS OR PERMITS

In granting a stormwater management approval, Blackford County may impose such terms and conditions as are reasonably necessary to meet purposes of this ordinance. The project site owner shall insure compliance with such terms and conditions. Non-compliance with the terms and conditions of approvals will be subject to enforcement as described in Chapter 400.

The project site owner shall inform general contractor, construction management firms, grading or excavating contractors, utility contractors, and contractors that have primary oversight on individual building lots of the terms and conditions of the stormwater management permit.

The Blackford County Surveyor is authorized, but is not required, to classify certain geographical areas as Impact Drainage Areas. In determining Impact Drainage Areas, the Blackford County Surveyor shall consider such factors as topography, soil type, capacity of existing drains, and distance from adequate drainage facility. If a project site is in an Impact Drainage Area, Blackford County may require more stringent stormwater measures than detailed in this ordinance.

The following areas shall be designated as Impact Drainage Areas, unless good reason for not including them is presented to the Blackford County Drainage Board.

- i. Floodway or floodplain as designated by FEMA flood hazard maps.
- ii. Land within a Fluvial Erosion Hazard (FEH) corridor of Blackford County streams as shown on the FEH maps created by the Indiana Silver Jackets Fluvial Erosion Hazard Program or any updates, currently hosted on the Blackford County GIS website.
- iii. Land within 75 feet of each bank of any county regulated drain ditch.
- iv. Land within 75 feet of the centerline of any county regulated drain tile.

- v. Land within the expected breach inundation zone of an existing or proposed dam, land within the inundation zone behind an existing or proposed dam assumed full of water to the top of the dam, and areas protected from flooding by a levee.
- vi. Land without an adequate outlet.

Special requirements for development within Impact Drainage Areas are contained in Blackford County Stormwater Technical Standards Manual. Additional special terms and conditions for development within an Impact Drainage Area may be included in the stormwater management approval.

SECTION 307 AS-BUILT PLANS

After completion of construction and before final acceptance, one hard copy and one digital (PDF) copy of certified 'as-built' plans shall be submitted to Blackford County for review. These plans shall include pertinent data relevant to the completed storm drainage system and stormwater management facilities, and shall include:

- A. Pipe size and pipe material
- B. Invert elevations
- C. Top rim elevations
- D. Elevation of emergency overflow (spillway) for ponds
- E. Pipe lengths
- F. "As-planted" plans for vegetation, trees/buffer, as applicable
- G. Data and calculations showing detention basin storage volume
- H. Certified statement on plans stating the completed storm drainage system and stormwater management facilities substantially comply with construction plans and the stormwater management approval by the Blackford County Drainage Board.

The property owner, developer, or contractor shall be required to file a three-year maintenance bond or other acceptable guarantee with Blackford County, prior to final project acceptance, in an amount not to exceed 25 percent of the cost of the stormwater drainage system located outside public road right-of-way, and in a form satisfactory to the Blackford County Drainage Board to assure that such stormwater system installation was done according to standards of good workmanship, that materials used in construction and installation were of good quality and construction, that such project was done in accordance with the accepted plans and this ordinance, and that off-site drainage problems that may arise, whether upstream or downstream of such project, will be corrected if such drainage problems are determined by Blackford County to have been caused by the development of such project. The bond or other acceptable guarantee shall be in effect for a period of three years after the date of the final project acceptance by Blackford County.

To verify that all regulated drain tiles are functioning properly, visual recordings (via closed circuit television) of such tile drains shall be required, once following completion of installation (including installation of all utility mains) and a second time before release of maintenance bond. These visual recordings will be scheduled by Blackford County and paid for by the developer. Notices shall be provided to Blackford County 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 Blackford County before the plat is recommended for recording and again before release of maintenance bond is recommended.

SECTION 401 COMPLIANCE WITH THIS ORDINANCE

In addition to requirements of this ordinance, compliance with requirements set forth in local zoning ordinances is also necessary. Compliance with all applicable ordinances of Blackford County as well as with applicable state of Indiana statutes and regulations shall also be required. Unless otherwise stated, other specifications referred to in this ordinance shall be the most recent edition. Violations of requirements of this ordinance are subject to penalties listed below.

SECTION 402 PENALTIES FOR VIOLATIONS

Any person found in violation of any provision of this ordinance shall be responsible for a civil infraction and subject to a fine of not less than \$500 for a first offense, and not less than \$1,000 for a subsequent offense, plus damages, expenses, and costs. Each day such violation occurs or continues shall be deemed a separate offense and shall make the violator liable for the imposition of a fine for each day. The rights and remedies provided for in this section are cumulative and in addition to any other remedies provided by law. An admission or determination of responsibility shall not exempt the offender from compliance with the requirements of this Ordinance.

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

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

SECTION 403 STOP WORK ORDER

In addition to the penalties listed in Section 402, if construction activities are conducted contrary to provisions of this ordinance or approved final stormwater management plans, the Blackford County Drainage Board 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. Any such persons shall forthwith stop such work until authorized by the Blackford County Drainage Board to proceed with the work. The Blackford County Drainage Board may also undertake or cause to be undertaken, any necessary or advisable protective measures to prevent violations of this ordinance or to avoid or reduce the effects of noncompliance herewith. The cost of any such protective measures shall be the responsibility of the owner of the property upon which the work is being done, and the responsibility of any person carrying out or participating in the work.

Any person who neglects or fails to comply with a stop work order shall be responsible for a civil infraction and subject to a fine of not less than \$500.00 for a first offense, and not less than \$1000 for a subsequent offense, plus damages, expenses, and costs. 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.

SECTION 404 FAILURE TO COMPLY OR COMPLETE

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

SECTION 405 CORRECTIVE ACTION

Nothing herein contained shall prevent Blackford County Drainage Board 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, including the landowner of any land where such a violation occurs. Costs include, but are not limited to, repairs to the storm drain system made necessary by the violation and other costs and expenses.

SECTION 406 APPEALS

Any person to whom any provision of this ordinance has been applied may appeal in writing, not later than 30 days after the action or decision being appealed from, to the Blackford County Drainage Board 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 Blackford County Drainage Board shall consider the appeal and make a decision whereby it affirms, rejects or modifies the action being appealed. In considering any such appeal, the Blackford County Drainage Board may consider the recommendations of the Blackford County Surveyor and the comments of other persons having knowledge of the matter. In considering any such appeal, the Blackford County Drainage Board may grant a variance from the terms of this ordinance to provide relief, in whole or in part, from the action being appealed, but only upon finding that the following requirements are satisfied:

- A. The application of the ordinance provisions being appealed will present or cause extraordinary difficulties for a development or development site; provided, however, that extraordinary difficulties shall not include the need for the developer to incur extreme expenses in order to comply with the ordinance; and
- B. The granting of the relief requested will not prevent the goals and purposes of this ordinance, nor result in less effective management of stormwater runoff.

Section II

The Blackford County Surveyor is authorized to adopt Stormwater Technical Standards, which shall be on file in that office for public inspection.

Section III

This ordinance takes effect on October 7, 2019

Ordinance 3019-05 is adopted this 7th day of October, 2019.

Attest:

Sharon Hartley, Blackford County Auditor

Blackford County, Indiana Board of County Commissioners

John Laneaster President

John Oxley, Vice President

Nick Rhodes, Member