

Quick facts on local Stormwater Ordinances & Technical Standards...

The Necessity for Updating Local Development Standards

Complying with the minimum Federal and State regulations **has not and will not** protect our communities against the increased flood stages and increased streambank erosion that we have observed throughout Indiana. This Fact Sheet is a tool to educate community leaders on proven methods to implement proactive measures that are appropriate for and tailored to local conditions aimed at preventing an increase in community's vulnerabilities to flooding, erosion, and stormwater quality degradation: local **Stormwater Ordinances** and **Stormwater Technical Standards**.

Our Vulnerabilities:

- There is visual, scientific, and statistical evidence that Indiana communities are experiencing more frequent and higher rainfalls.
- If we do not address stormwater runoff from increased rainfall and future changes to land use (such as converting green space to developed/impervious areas and filling depressional areas and floodplains), flood stages will continue to rise and the flow path of flood waters will continue to spread further and further into our communities.

In addition, while most communities regulate land use for stormwater runoff from medium (2-year storm events) to large (100-year) storms, many do not regulate smaller (1-year to 2-year) storms that cause rivers and channels to seek a new shape and erode streambanks. This must change to protect our communities.

- Communities across Indiana must update local ordinances to incorporate the latest stormwater quality requirements and the updated requirements contained within IDEM's new Construction Stormwater General Permit (CSGP) that became effective on December 18, 2021.

Our Response:

Local governments can implement No-Adverse-Impact stormwater measures that encompass:

- Prohibiting/discouraging development in floodplain areas and prohibiting encroachment into floodways and erosional corridors.
- Implementing stormwater control measures appropriate for local conditions by upgrading Stormwater Ordinances and Stormwater Technical Standards. These must include regulations and guidance for smaller (1-year to 2-year) storms; the storms that are shaping our local streams and channels.
- Improved water quality through incorporating best practices and mandated IDEM requirements for smaller floods.
- The collection and organization of all stormwater-related legal requirements into a single, streamlined comprehensive document, along with detailed technical requirements organized into a companion technical standards manual. This will help both the development community better navigate the requirements and help plan reviewers better focus on major items.

Why have a Model Ordinance & Standards?

For over 40 years, Purdue University (through LTAP, formerly HERPIC) has helped develop drainage standards and ordinances that could be adopted by Indiana jurisdictions to satisfy local needs related to: the current state of stormwater engineering practice; reasonable drainage control regulations; and reasonable engineering standards.

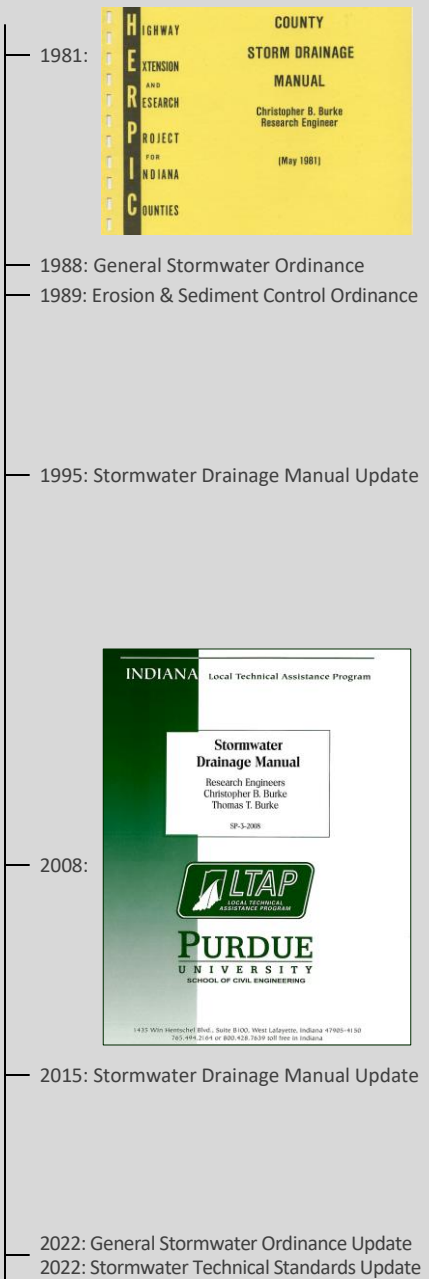
Who are these tools intended for?

While the model ordinance and standards meet the minimum requirements of the new IDEM CSGP which includes requirements for MS4-designated communities, they also contain practices and standards that every community in the state should consider adopting. These tools establish a baseline standard for responsible stormwater management, regardless of whether or not such a standard is required by a federal or state agency.

How were the 2022 updates prepared?

Following past practice, LTAP worked with experts in stormwater management, IDEM, County Surveyors, and MS4 Coordinators to prepare the 2022 model ordinance and accompanying technical standards updates. Christopher B. Burke Engineering, LLC, developed the initial drafts, followed by peer review and incorporation of comments.

Timeline of Drainage Standards and Model Ordinance Updates Developed by HERPIC and LTAP:



THE MODEL ORDINANCE

The Model Ordinance is organized into seven sections as identified and summarized below. Sections 2, 4, and 5 have been specifically developed to meet current best practice and the new IDEM CSGP requirements for entities that have MS4 designation. However, these provisions are prudent and recommended to be adopted by all entities regardless of federal or state mandates. Non-MS4 communities who do not wish to proactively regulate the water quality or prohibited non-stormwater flows in their communities can delete the sections highlighted in green.



SECTION 1: GENERAL INFORMATION

This Ordinance provides for the health, safety, and general welfare of the citizens of the *Jurisdiction Entity* 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 *Jurisdiction Entity*.



SECTION 2: 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.



SECTION 3: STORMWATER QUANTITY MANAGEMENT

Most streams and drainage channels serving the Jurisdiction Entity 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 shall be required for all developments and redevelopments within the Jurisdiction Entity.



SECTION 4: STORMWATER POLLUTION PREVENTION FOR CONSTRUCTION SITES

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.



SECTION 5: STORMWATER QUALITY MANAGEMENT FOR POST-CONSTRUCTION

Developed areas generally have increased imperviousness, decreased infiltration rates, increased runoff rates, and increased concentrations of pollutants (fertilizers, herbicides, greases, oil, and salts). As new development continues, measures must be taken to intercept and filter pollutants from stormwater runoff prior to reaching regional creeks, streams, and rivers.



SECTION 6: PERMIT REQUIREMENTS AND PROCEDURES

The project site owner shall submit an application for a Stormwater Management Permit to the Jurisdiction Entity. The application will include an application checklist, construction plan sheets, a stormwater drainage technical report, a stormwater pollution prevention plan, and any other necessary support information.



SECTION 7: COMPLIANCE AND ENFORCEMENT

If the Jurisdiction Entity determines that an applicant 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 and impose fines to such applicant.

TECHNICAL STANDARDS

This up-to-date, consistent, comprehensive Model Stormwater Technical Standards Manual works hand-in-hand with its companion Model Stormwater Ordinance. The standards provide details of how the ordinance provisions will need to be satisfied and are intended to help counties and communities in Indiana manage stormwater impacts in a changing climate, which has exacerbated these impacts and created new concerns. Chapters 7, 8, and 9 have been specifically developed to meet IDEM's requirements for entities that have MS4 designation. Non-MS4 communities who do not wish to proactively regulate the stormwater quality in their communities can delete these chapters highlighted in green.

- Chapter 1: INTRODUCTION
- Chapter 2: METHODOLOGY FOR DETERMINATION OF RUNOFF RATES
- Chapter 3: METHODOLOGY FOR DETERMINATION OF RETENTION/ DETENTION STORAGE VOLUMES
- Chapter 4: STORM SEWER DESIGN STANDARDS AND SPECIFICATIONS
- Chapter 5: OPEN CHANNEL DESIGN STANDARDS AND SPECIFICATIONS
- Chapter 6: STORMWATER DETENTION DESIGN STANDARDS FOR PEAK FLOW CONTROL
- Chapter 7: CONSTRUCTION SITES STORMWATER POLLUTION PREVENTION STANDARDS
- Chapter 8: POST-CONSTRUCTION STORMWATER QUALITY MANAGEMENT STANDARDS
- Chapter 9: METHODOLOGY FOR DETERMINATION OF REQUIRED SIZING OF BMPS

- Chapter 10: MISCELLANEOUS REQUIREMENTS:
 - A. GRADING AND BUILDING PAD ELEVATIONS
 - B. LOT DRAINAGE
 - C. ADJOINING PROPERTY IMPACTS POLICIES
 - D. DEVELOPMENT WITHIN FLOODWAYS AND FLUVIAL EROSION HAZARD CORRIDORS
 - E. ADDITIONAL CONSIDERATION FOR DEVELOPMENT WITHIN OR ADJACENT TO BLUFF ZONES AND STEEP SLOPES
 - F. FLOODPLAIN AVOIDANCE/NO NET LOSS FLOODPLAIN STORAGE POLICY
 - G. POLICY ON DAMS AND LEVEES
 - H. DEVELOPMENTS DOWNSTREAM OF DAMS
- Appendix A: ABBREVIATIONS AND DEFINITIONS
- Appendix B: STANDARD FORMS