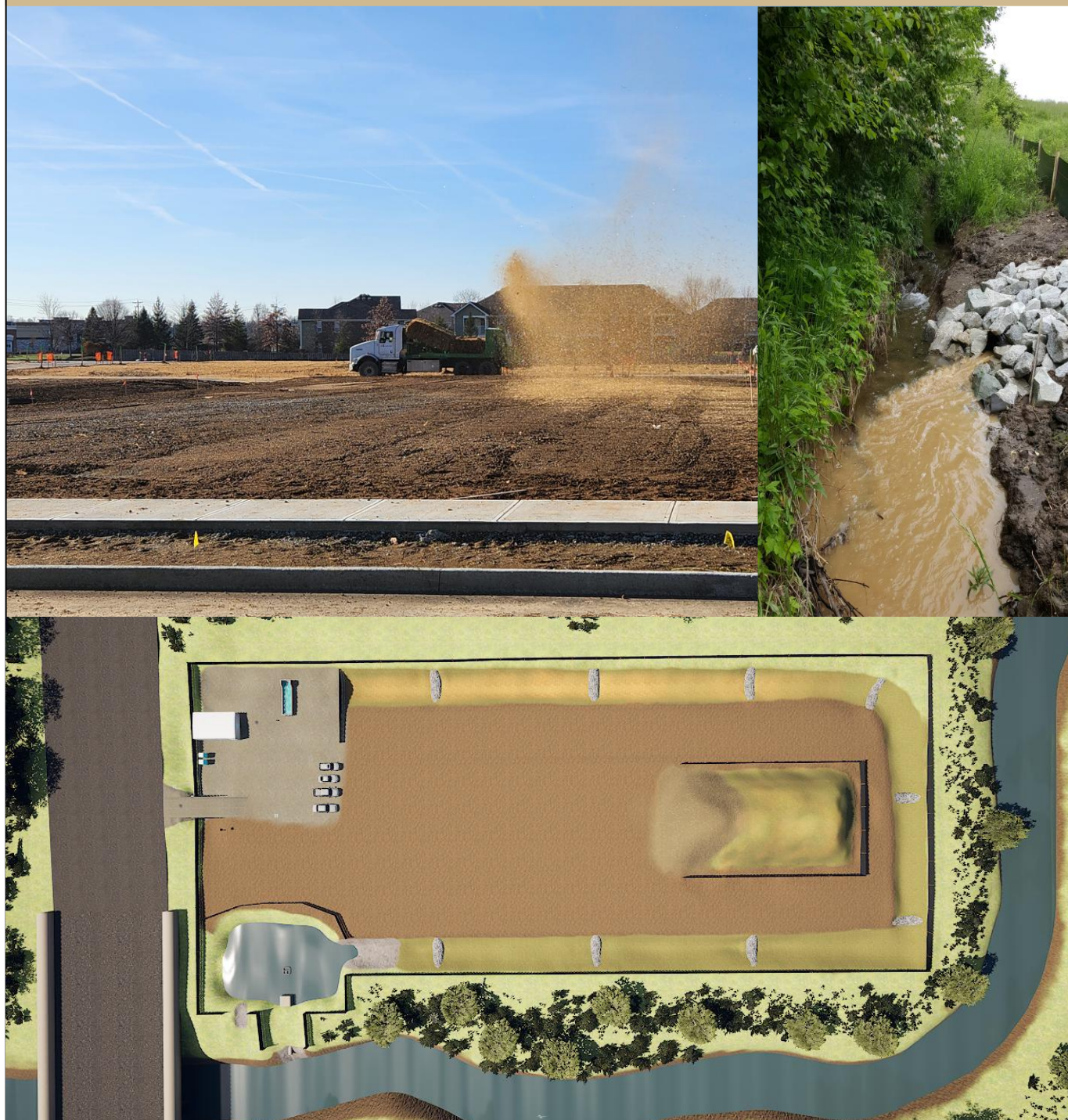


Quick facts on Stormwater Pollution Prevention...

The Importance of Construction Programs

The U.S. Environmental Protection Agency has identified **stormwater runoff** as a leading source of water pollution in nearly 40% of surveyed water bodies in the United States. Contaminants in stormwater runoff include sediments, nutrients, pathogens, oils, greases, and metals. This Fact Sheet describes:

- The critical role of **Construction** programs in protecting local waterways
- **Required annual training** for MS4 staff with responsibilities related to Construction programs
- Resources available within the **LTAP Learning Management System** for best management practices to prevent pollution



Construction Program Training Overview:

Since construction activities have the potential to significantly impact local water quality through increased sedimentation and stormwater runoff, municipal staff play a critical role in protecting water resources during this high-risk period. Construction programs developed by MS4 entities in accordance with the IDEM MS4 General Permit ensure construction site operators plan for erosion and sediment control before construction and implement and maintain appropriate construction Best Management Practices (BMPs) during active construction. MS4 roles in Construction programs include:

- Ensuring an effective local ordinance and technical standards are in place to regulate construction site runoff
- Reviewing construction plans to verify inclusion of appropriate erosion and sediment control BMPs
- Inspecting active construction sites to confirm BMPs are properly installed and maintained
- Responding to public complaints and conducting follow-up site inspections as needed
- Pursuing enforcement actions when sites are out of compliance with local and state stormwater regulations

While MS4 staff must be trained to implement Construction programs in accordance with the IDEM MS4 General Permit, there are many other individuals involved in the construction project process that may require training related to Construction program implementation. MS4 entities and the IDEM Construction Stormwater General Permit (CSGP) require that trained individuals design erosion and sediment control plans and implement self-monitoring programs for construction projects. Furthermore, MS4 entities must provide annual training to builders, developers, contractors, and engineers as required by the MS4 General Permit. In summary, the following individuals should be trained in Construction programs:

- MS4 or Municipal Staff
- Project Developers
- Project Designers
- Contractors and Subcontractors
- Others interested in Construction Program management

Construction Training **Requirements** for MS4 Entities:

Within the IDEM MS4 General Permit (MS4GP), as of July 5, 2022, MS4 entities must comply with the following Construction program training requirements:

- Per IDEM MS4GP Section 4.5(i): "Document **ANNUAL** training attended by MS4 staff and/or contractual staff that is specific to the responsibility (i.e. plan review, inspection, compliance, and enforcement) the individual performs for the MS4. The documentation must at the minimum include: responsibility of staff member, dates and types of training attended, list of professional certifications MS4 staff have obtained or maintained."
- Per IDEM MS4GP Section 4.3(a)(5): "Provide **ANNUAL** training for builders, developers, contractors, engineers, etc. related to the construction site run-off and post-construction MCMs. The training may be completed in cooperation with other entities."

The **LTAP Learning Management System** has been updated with new Construction Training Modules and they are now available for use. These training resources provide an option for MS4s to meet these the IDEM MS4GP training deadlines.

Why would LTAP develop MS4 Training Modules?

For over 40 years, Purdue University (through LTAP, formerly HERPIC) has helped Indiana jurisdictions manage stormwater issues by developing model drainage standards and ordinances. With the additional training requirements contained in the IDEM MS4 General Permit (MS4GP), LTAP has responded by developing MS4 Training Modules to meet this need.

Who are these tools intended for?

These LTAP Learning Management System tools are intended for use by MS4 entities as an efficient and effective method to meet the training requirements related to Construction MS4 elements contained within the IDEM MS4GP. This quality, web-based, on-demand training webinar series is accessible 24/7 to ensure MS4s can meet their training requirements **at no cost**.

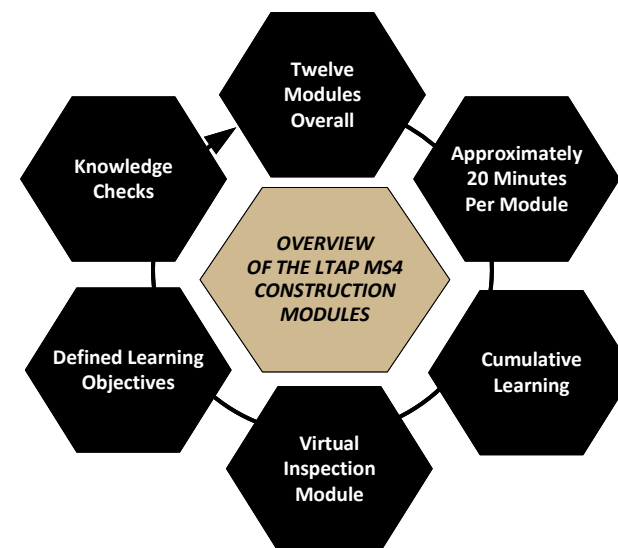
How were the MS4 Training Modules prepared?













LTAP staff worked with Christopher B. Burke Engineering, LLC, to research and compile existing stormwater pollution prevention material, identify relevant training topics, organize topics into a training matrix, and develop content for Training Modules. Purdue University professors reviewed the materials created. Purdue University students developed questions for each module to be answered by trainees to complete a Training Module.

THE TRAINING MODULES

The LTAP MS4 Construction Training Modules:

- Organized into **Twelve Modules**
- Approximately **20 Minutes** each in duration
- Delivered as **Cumulative Learning**
- Based on defined **Learning Objectives**
- Include **Knowledge Checks**
- Incorporate a **Virtual Inspection**



 MODULE 1: CONSTRUCTION PROGRAM OVERVIEW Module 1 covers the background of the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program and provides basic information about how the construction requirements relate to stormwater quality and quantity.	 MODULE 7: PART 2: CONSTRUCTION STRUCTURAL BEST MANAGEMENT PRACTICES Module 7 covers construction BMPs for stormwater quality, including perimeter sediment control measures, inlet protection, runoff management, sediment basins, dewatering, waste management, and temporary/permanent stabilization.
 MODULE 2: CONSTRUCTION PROJECTS OVERVIEW Module 2 covers the construction project process from planning to completion, detailing site assessments, permitting, environmental considerations, best management practices, and regulatory tools.	 MODULE 8: SELF-MONITORING PROGRAM & THE PROJECT MANAGEMENT LOG Module 8 covers the Self-Monitoring Program (SMP), including inspection frequency, inspector responsibilities, and the purpose of the SMP. The module also outlines the Project Management Log (PML), detailing SWPPP updates, off-site material locations, compliance documentation, and various implementation options.
 MODULE 3: KEY COMPONENTS OF MS4 CONSTRUCTION PROGRAMS It covers the essential components of an Municipal Separate Storm Sewer System (MS4) construction program before a new project begins. It identifies key tools and provides guidance on implementing a construction program and meeting the requirements of the MS4 General Permit.	 MODULE 9: VIRTUAL INSPECTION Module 9 goes through the procedure of conducting an example stormwater inspection at an active construction site. The module covers differences between regulatory inspections and self-monitoring, how to plan for an inspection, and how to conduct an inspection. A virtual inspection of an active construction site concludes the module.
 MODULE 4: ORDINANCE & TECHNICAL STANDARDS Module 4 covers key components of construction stormwater ordinances, including applicability, pollution prevention, design standards, and compliance requirements. It also details technical standards for erosion and sediment control, stabilization monitoring, and documentation, along with relevant forms.	 MODULE 10: INSPECTIONS & ENFORCEMENT FOR MS4 INSPECTORS Module 10 provides an overview of inspection requirements that MS4 entities must implement, emphasizing the legal authority granted by ordinances. It covers key components of an inspection program, including compliance strategies, enforcement procedures, and the importance of follow-through to ensure stormwater regulations are met.
 MODULE 5: STORMWATER POLLUTION PREVENTION PLANS Module 5 provides an overview of key considerations when preparing a SWPPP like land disturbance limits, construction sequencing, and runoff controls. It also covers soil and geology factors and working around water resources with practical tips for implementation.	 MODULE 11: CONCLUDING A CONSTRUCTION PROJECT Module 11 covers the final inspection process, including confirming stabilization and the transition of temporary stormwater management measures to permanent measures. It details the Notice of Termination (NOT) process and financial considerations such as releasing performance bonds and transferring post-construction BMP responsibilities to the new owner.
 MODULE 6: PART 1: CONSTRUCTION BEST MANAGEMENT PRACTICES Module 6 covers key concepts of construction BMPs for stormwater management. The module discusses the roles of structural and non-structural BMPs, the importance of planning, and some key construction stormwater BMP concepts.	 MODULE 12: CONSTRUCTION STORMWATER WORKFORCE Module 12 explores career pathways, necessary skills, and real-world applications of stormwater management. It highlights the various roles involved in construction site stormwater management, from academia and engineering to construction to regulations.

THE ‘MS4’ PROGRAM

The term ‘MS4’ is shorthand for Municipal Separate Storm Sewer System and describes a community’s physical infrastructure that conveys stormwater. This publicly owned system includes pipes, ditches, curbs, gutters, inlets, and ponds. The MS4 system is designed for transporting stormwater; it is not designed or managed to treat runoff. Therefore, a critical assumption is that the stormwater runoff conveyed through local stormwater conveyance systems is uncontaminated.

To ensure that stormwater runoff is uncontaminated, federal and state regulations require MS4 entities to implement practices and measures to keep pollutants out of stormwater runoff. These are defined as Minimum Control Measures or MCMs. The MS4 program MCMs have been organized into six categories as follows:

MCM 1: Public Education and Outreach, which includes educating the general public and selected stakeholders.

MCM 2: Public Participation and Involvement, which includes engaging with the general public during meetings and events.

MCM 3: Illicit Discharge Detection and Elimination, intended to minimize non-stormwater discharges by finding and fixing issues with the separate stormwater conveyance systems. This includes detailed mapping of conveyance systems and visually inspecting stormwater outfalls.

MCM 4: Construction Site Runoff Control, which includes a local ordinance requirement that enacts controls identified in the IDEM Construction Stormwater General Permit (CSGP).

- **Document annual training of municipal staff with responsibilities related to Construction MS4 program elements and MS4 entities must provide annual training for builders, developers, contractors, engineers, etc. related to construction site runoff and post-construction MS4 Minimum Control Measures.**

MCM 5: Post-Construction Runoff Control, which includes controls identified in the IDEM CSGP, along with low-impact development and green infrastructure programs.

MCM 6: Pollution Prevention and Good Housekeeping, which includes: Requirements for maintenance of the separate storm system conveyances Operational controls ensuring the proper management of municipal operations and facilities