

CITY UTILITIES DESIGN STANDARDS MANUAL

**Book 2
Stormwater (SW)
SW3 Drawings and Submittals**

June 2015

SW3.01 Purpose

The purpose of this Chapter is to outline the minimum drawing and submittal requirements for proposed stormwater improvements. These requirements are intended to supplement Chapter 53 of the Fort Wayne Code of Ordinances and the Fort Wayne Water Pollution Control Utility General Rules and Regulations.

SW3.02 Stormwater Management Submittal Requirements

The stormwater management plan requires several elements to be considered complete. These are:

- Minimum plan sheet elements
- Stormwater Management Report
- Operations and Maintenance Manual (O&M)

1. Minimum Plan Sheet Elements

All of the following design criteria must be present within a project's construction plan sheets and/or specifications.

- a. The existing conditions. It needs to be a composite of a topographic survey and a boundary survey. The topographic portion will identify the existing surface flow patterns and impervious surfaces. The boundary portion will identify ownership and easement rights. [Exhibit SW3-1](#) identifies the minimum requirements for the existing conditions included in Stormwater Management Submittals.
- b. The proposed grading plan. It needs to show sufficient detail to illustrate that the proposed contours and spot elevations will blend into the adjacent off-site grades without causing off-site drainage obstructions or pockets of standing water. It should also show the on-site slopes and swales.
- c. The proposed stormwater infrastructure. The plans need to show:
 - pipe sizes
 - materials
 - structure types and sizes
 - bedding and backfill requirements
 - rim elevations (at flow line)
 - invert elevations
 - water lines and sanitary sewers
 - elevation labels at potential crossing conflicts
 - profiles are required for storm sewers that will become public
 - profiles may be required for private storm sewer on complicated projects
 - existing and proposed easements

- d. The detention facilities. The plans for detention basins need to show:
 - proposed contours
 - label or cross-section clearly identifying the side slopes
 - label or cross-section identifying the berm width
 - longitudinal slope of the bottom of the basin
 - detail of the outfall structure
 - maintenance and safety ledges as necessary
 - pipe outfalls
 - emergency overflow and detail thereof
- e. The post construction SWPPP (PC-SWPPP). A sheet uniquely dedicated to the PC-SWPPP must be provided. The sheet needs to show:
 - all post-construction water quality features
 - water quality features need to be clearly labeled and dimensioned as applicable
 - a detail for each water quality feature
 - a pollutants of concern table (This can be in the O&M or on the PC-SWPPP sheet.)

2. Stormwater Management Report

The stormwater management report needs to include a narrative and all of the necessary supporting documents and calculations. The stormwater management report needs to include, as applicable:

- A narrative explaining the project's overall drainage plan.
- A completed [Exhibit SW3-2](#) "Detention Facility Design Summary" for each stormwater storage facility.
- A watershed map of the overall project with the sub-basins identified.
- A "stage-volume" table or graph for detention facilities.
- A "stage-discharge" table or graph for detention facilities.
- Documentation of any composite Curve Number or weighted Run-off Coefficient calculations.
- Documentation of the drainage model inputs.
- Documentation of Routing Calculations that includes the peak inflow into the basin, the peak discharge from the basin and the peak water surface level. The Routing Calculation documents can be summaries that are produced by the routing software.
- Documentation of the sizing calculations for the PC-SWPPP features
- The emergency overflow calculations.

3. Operations and Maintenance Manual (O&M)

All projects with post-construction water quality features require an O&M. The O&M will identify the site's water quality features and how the owner is to maintain them. It should include:

- an introductory paragraph or page that states all water quality features are to be maintained in perpetuity
- a statement that the City has a right to enter the property and inspect the water quality features
- a requirement for the owner to keep a log of inspections and maintenance
- an exhibit map that clearly identifies the location of all the water quality features
- a table that identifies the inspection schedule for the individual water quality features
- a narrative defining what the inspections should include and how to address any deficiencies for each water quality feature
- an inspection and maintenance log form

SW3.03 Erosion Control Submittal Requirements

The City of Fort Wayne reviews erosion control submittals as part of the Rule 5 process. The approval from the City is part of IDEM's Notice of Intent submittal requirements. Erosion Control submittals have two elements.

- Construction Plan Elements
- Construction Components (Plan Sheets)

1. Construction Plan Elements

The construction plan elements are the minimum research and site impact consideration items identified in Title 327 IAC 15-5-6.5. These items can be submitted in a booklet form or on a plan sheet. These plan elements include:

- Index of Plan Elements
- Narrative described the nature and purpose of the project
- Vicinity map of the project's site
- Latitude/Longitude of the project's site
- 14 Digit Hydrologic Unit Code (HUC)
- Notation of State and/or Federal water quality permits that will be required for the project
- Location and name of all wetlands, lakes and water courses on or adjacent to the project's site
- Identification of all receiving waters
- Identification of potential discharges to ground water
- 100-year floodplains, floodways and floodway fringes

- Pre and post-construction estimate of peak discharge for the 10-year event
- Adjacent land uses
- Approximate boundaries of all disturbed areas
- Identification of existing vegetative cover
- Soils Map
- Plans for any off-site construction activities
- Proposed soil stockpile and/or borrow areas
- Existing & Proposed topography
- Description of potential pollutants during construction
- Sequence for the implementation of stormwater quality techniques

2. Construction Components

The construction components are the Erosion Control Plan Sheets. The sheets shall specify an erosion control technique or product everywhere erosion or sediment laden run-off is expected. A detail for each technique shall be included. The plans need to identify the location and provided details for techniques that address:

- Temporary construction entrances
- Sheet Flow
- Concentrated flows
- Storm structure inlet protection
- Outfall protection
- Material handling and spill prevention plan
- Protection for water bodies, wetlands and other sensitive areas