

Iowa Stormwater Management Manual (ISWMM)

About the manual:

The ISWMM is owned and maintained by the Iowa Department of Natural Resources (DNR). Even though the DNR does not have a process to review the design of most post-construction stormwater best management practices (BMPs), this manual has been assembled to provide resources to local jurisdictions (cities, counties, etc.) that adopt ordinances or policies which set requirements for storm water management. Some grant programs also require ISWMM to be followed in the design of BMPs in order to be eligible to receive funding.

Resources for Jurisdictions:

Since the DNR does not require or enforce the use of ISWMM, the document has been written as a guideline, not a standard. When jurisdictions choose to adopt ISWMM as a resource for enforcement, it should include language that clarifies details about how the manual is to be interpreted and what is used to determine if stormwater management standards have been satisfied.

Section 3.01 (Unified Sizing Criteria) of the ISWMM includes important resources that jurisdictions can use when establishing local requirements and ordinances. In particular, Section 3.01-2 (Evaluation and Measurement) describes various aspects of the “Unified Sizing Criteria” which can be selected to establish specific measures for enforcement to evaluate if desired stormwater management goals are being met. Section 3.01-7 (Local Ordinance and Policy Guidance) is essentially a checklist of key items that should be considered when local codes and standards are created that will adopt ISWMM as a reference.

Resources for Designers and Reviewers:

The remaining sections of the ISWMM offer guidance on how to properly size and design various post-construction stormwater management practices. Most sections include detailed technical guidance and calculation examples. These resources can be used by designers to evaluate a site, understand regulatory requirements, select appropriate stormwater management practices and ensure that they are properly sized and designed to serve their intended functions. Jurisdictions may use these resources to evaluate if proposed designs satisfy local requirements and comply with ISWMM’s design guidelines as adopted.

Additional Available Resources:

The manual includes additional resources that may be used in the design and evaluation of stormwater practices. These resources are linked and listed with the corresponding chapters.

- [Stormwater Management Plan \(SWMP\) Template](#)

Section 1.05 (Stormwater Management Plan) offers guidance on the technical information that should be included by designers for review. This template is a Microsoft Word format document that follows the format described within this section. Designers may use this template as a starting point to create a SWMP for a given project. Jurisdictions may choose to encourage designers to use this resource, which would make it easier to find key design information by presenting it in a common format.

- [Stormwater Design Checklists](#)

A series of design checklists have been prepared in Microsoft Excel format. These documents allow designers to enter key design parameters in a “dashboard” format, which highlights if key design criteria are being met. These checklists are intended to allow for data entry through the design process and present that information in a consistent format for review. Certain grant funding programs require completion of these checklists as part of the grant approval process. Currently, these checklists are available and are listed with the following practice chapters:

- Permeable Pavement
- Constructed Stormwater Wetlands
- Dry Detention Basins
- Wet Detention Ponds

- Storm Sewer Design Tables
Although the ISWMM does not include guidance on the design of storm sewers and other conveyance systems, tables have been prepared in Microsoft Excel format under section 1.05, which could be used to present design information in a standard format for review. These tables include key design parameters for storm sewer pipes and inlets referenced in Chapter 2 of the Design Manual of the Iowa Statewide Urban Design Standards and Specifications (SUDAS). These spreadsheets do not include any design formulas or calculations. Designers will need to refer to SUDAS and enter their own calculations or values into the spaces provided.
- Engineering Technical Standards
This is a Microsoft Word format document listed under section 1.05, which contains brief summaries of topics discussed within the ISWMM. These documents are adapted from versions prepared by a local consultant for various Iowa communities. These may be used and adapted by local jurisdictions to further refine their preferences for key design approaches and assumptions related to the ISWMM. Jurisdictions may use any or all of this document and amend it at their discretion. Their final adapted version could be used as a “supplemental document” to the ISWMM and adopted into their local stormwater regulations.
- Specifications
There are sample construction specifications for some of the stormwater BMPs included in the ISWMM. Designers may use and adapt these specifications in development of construction documents for these practices.

Other Permitting Requirements:

Even though the DNR does not have a separate review process for post-construction stormwater BMPs, that does not exempt projects which other permits that may apply. Owners and designers are responsible to obtain all other federal, state or local permits that may apply to a given project. These may include storm water construction permit authorizations, floodplain and dam safety permits.

ISWMM Update Process:

Updates to the manual are reviewed and approved by a technical advisory committee made up of volunteer representatives from cities, counties, government agencies, non-profit groups and consultants. Selected consultants have been employed by the state to draft and prepare updates to ISWMM. Draft sections go through a review and comment process before being approved by the committee for posting.