



**Utilities Commission
Commission Meeting**

Agenda

**January 8, 2026
8:30 AM**

CALL TO ORDER

MINUTES APPROVAL

December 4, 2025

NEW BUSINESS

OLD BUSINESS

Backflow/FOG legislation discussion

Stormwater Management Plan (SMP) Guidance Manual

OTHER

ADJOURN



**STORMWATER MANAGEMENT PLAN (SMP)
GUIDANCE MANUAL**

**Established by:
THE UTILITIES COMMISSION OF THE CITY OF MOUNT VERNON**

December 4, 2025

INTRODUCTION

Well-documented techniques to mitigate the impacts of landscape changes due to development have led to state and local stormwater management requirements, as well as associated technical guidance, to assist with implementation. Effective implementation of post-construction stormwater management requirements depends on accurate estimates of pre- and post-construction runoff that are subsequently used to determine detention requirements for both water quality treatment and peak discharge control.

The City of Mount Vernon (City) requires developers to prepare a Stormwater Management Plan (SMP) whenever one (1) or more acres of land are disturbed, as described in the City of Mount Vernon Codified Ordinances (MVCO) Chapter 920.15. The intention of this guidance document is to aid developers in preparing a SMP that meets the requirements described in MVCO 920.21 and facilitates an efficient review process. The protocols that follow reflect the latest guidance from Natural Resources Conservation Service (NRCS), National Oceanic and Atmospheric Administration (NOAA), and Ohio Environmental Protection Agency (EPA).

SMP NARRATIVE [Chapter 920.21(a)]

The City highly recommends including the following in the SMP's narrative section:

1. Watershed/Drainage Area Summaries

Watershed/drainage area summaries should include a summary of pre- and post-development characteristics for each sub-watershed. A table summarizing A_{total} , A_{imp} , A_{perv} , CN, TC, % impervious (i), R_v and WQ_v for the pre- and post-development conditions of each modeled sub-watershed should be provided to facilitate the review. Maps showing sub-watershed drainage consistent with hydrologic modeling shall be provided for both pre- and post-development conditions. These maps may be provided in a subsequent section and/or appendix as long as their location within the report is referenced in the summary.

2. Outfall Conveyance Summaries

For each discreet City drainage conveyance (e.g., storm sewer, surface channel/ditch, or stream) to which the development discharges, a table should be provided that lists the 1-year through 100-year rainfall depths along with the respective pre- and post-development runoff volume (Acre-ft) and peak discharge (cfs).

3. Critical Storm Determination

The introduction should include determination of the Critical Storm, including pre- and post-construction runoff volume calculations used for that determination.

WATER QUALITY VOLUME (WQ_v)

1. WQ_v Design Guidance

Guidance for determining the water quality volume (WQ_v) and designing an appropriate stormwater control with a water quality outlet is explicitly described in the Ohio EPA 2023 Construction General Permit (CGP) OHC000006 and the Ohio EPA's Rainwater and Land Development manual. The City expects developers to strictly adhere to this guidance. To ensure compliance with Ohio EPA WQ_v requirements, a completed WQ_v best management practice (BMP) spreadsheet provided by Ohio EPA (website) should be submitted.

2. Redevelopment Treatment Credit

Guidance to receive partial WQ_v treatment credit for site redevelopment is detailed in Ohio EPA 2023 CGP OHC000006. For help with redevelopment credit, developers may contact the City Engineer and/or Ohio EPA Division of Surface Water stormwater technical assistance.

3. Runoff Reduction Method (RRM)

It is recommended that developers and their consultants utilize the Runoff Reduction Method (RRM) to lessen or eliminate WQ_v detention volumes, especially for sites located on outwash terraces of the Kokosing River (much of Mount Vernon) or other soils with high infiltration capacity. For help with Runoff Reduction Method credits, contact the City Engineer and/or Ohio EPA Division of Surface Water stormwater technical assistance.

TIME OF CONCENTRATION (T_c)

Developers should apply the following to all Time of Concentration (T_c) calculations:

1. The T_c for sheet flow and shallow concentrated flow should reflect guidance from NRCS (NRCS 2010. NEH 630 Chapter 15 Time of Concentration).
2. Sheet flow length for the velocity method should be limited to 100 ft (NEH 630 Chapter 15 Time of Concentration p15-6) for both pre- and post-development conditions.
3. The shallow concentrated flow velocity equations should reflect current cover/surface (NEH 630 Chapter 15 Time of Concentration p15-8, Table 15-3, Figure 15-4). Note the often misused "unpaved" equation reflects shallow concentrated flow only for graded grass waterways and not pre-developed condition.
4. The T_c for all directly connected impervious area will include only the travel time for impervious drainage—i.e., no pervious area travel time shall be included.
5. The minimum T_c that may be used is five (5) minutes.

PEAK DISCHARGE (Q_{peak})

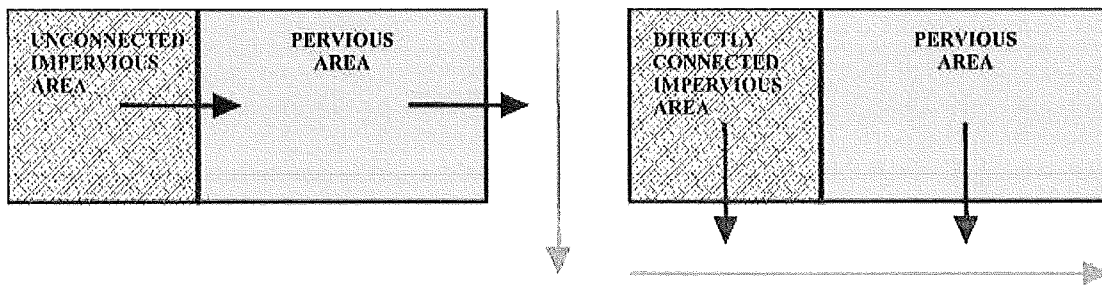
Hydrologic analyses for the 1-year through 100-year recurrence interval (RI) storm events that present inaccurate or incomplete pre- and/or post-construction site hydrology will complicate reviews and delay permit approval. The following outlines the NRCS curve number approach for calculating pre- and post-construction flow peaks used to determine the Critical Storm and size stormwater detention facilities to meet post-construction peak discharge requirements outlined in the City of Mount Vernon development regulations. This approach applies to NRCS-specific models TR-55 and TR-20 (NRCS, Urban Hydrology for Small Watersheds) as well as all proprietary software (e.g., HydroCad, Intellisolve, PondPack, etc.) that utilizes either TR-55 or TR-20 as their model engine.

1. Peak Discharge Design Table

A table summarizing the site's pre-construction, post-construction, allowable and design peak discharge rates (cfs) for each RI should be provided to facilitate the review.

2. Directly Connected Impervious Area

Pre- and post-development peak discharge hydrology must be appropriately modeled. At minimum, to accurately estimate discharge to each stormwater BMP, directly connected impervious area must be modeled separately from pervious area and unconnected impervious area for each storm drainage network outlet that discharges to the BMP.



3. Curve Number (CN) Selection

Frequently, not enough information is provided to evaluate or comment on the CNs selected for either pre-development or post-development conditions. Use of CNs that result in reduced stormwater treatment capacity must be supported by field tests or other supporting documentation. At minimum, a table should be provided to summarize the area and CN for all areas with a unique CN, with documentation that supports the selections. For example: What are the HSG and land cover? What assumptions were made about the hydrologic condition of post-development pervious areas? How much of the pervious area is HSG-C or HSG-B? What pre-development land cover type was selected?

4. Pre-Development Soil Assumptions

Unless supported by field evaluations that show otherwise, all pre-development soils should be assumed to have good hydrologic condition and all pre-development agricultural land covers should assume crop residue (CR) cover.

5. Post-Development Soil Assumptions

Compaction during construction should be assumed unless soil preservation areas are explicitly noted in design plans and strictly enforced during construction. All post-development soils are assumed to be HSG-D in poor hydrologic condition unless the soil profile has been restored, or supported by field evaluations. If soils have been graded and/or compacted during construction, soils with loamy sand, sandy loam, silt loam and loam surface textures must have the surface soil profile restored to a minimum 12” rooting depth following “Soil Restoration” guidance in Rainwater and Land Development (Ohio EPA, 2021) to be classified as HSG A, B or C; otherwise, post-development soil shall be classified as HSG D.

MULTI-PHASE PROJECTS

For multi-phase projects, the developer shall provide stormwater designs and calculations for final build-out as well as the current phase of construction. While the City is aware that design plans may change, SMP reviewers need to be able to evaluate the current phase and management of its Municipal Separate Storm Sewer System (MS4) within the context of the full project.

Stormwater calculations and stormwater BMP outlets must be modified at each phase, unless construction is continuous across phases, to meet WQ_v and Q_{peak} requirements at completion of each phase.