

## **Section 1124.03 Flood Plain and Stormwater**

B. Storm Water Management Plan. All subdivisions or site development shall contain a Storm Water Management Plan submitted with the preliminary plat or site plan, as required by this Code and the City Engineer.

1. The Storm Water Management Plan shall analyze the impact of development of all parcels within the subdivision assuming full build-out of all lots proposed in the development. The impact analysis shall identify how the subdivision will impact all groundwater and natural wetlands in the watershed. The analysis shall incorporate impacts of all other known and planned development activity and make reasonable assumptions about future development on other lots and parcels, and identify any opportunities for joint management of storm water among other potential development parcels.
2. The Storm Water Management Plan shall propose Best Management Practices ("BMP") in the treatment of storm water in order to best meet the Storm Water Management intent in Section 1124.03.A and as per these requirements:
  - a. Peak Discharge

The peak discharge shall be controlled by reducing the 50-year post-developed peak discharge to the 2-year pre-developed peak discharge over the same area, except for projects containing impacts to the Yellow Creek, Mud Brook and/or Kelsey Creek Watersheds. Projects with impacts to those watersheds shall be controlled by reducing the 100-year post-development peak discharge to the 2-year pre-developed peak discharge over the same area. The requirements of this Section for runoff rates and volumes shall be satisfied at each location where runoff leaves the development area.

- (1) Site Analysis: Must be performed showing existing and proposed peak runoff rates for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events. Acceptable methods to calculate peak flows are:

- Rational Method – suitable (and recommended) for small drainage areas (typically less than 30 acres);
- Soil Conservation Service ("SCS") Method;
- USGS regression equations as described and referenced in the current edition of ODOT's L&D Manual – Volume II – Drainage Design;
- Other methods may be used if pre-approved by City Engineering.

- a. All values, assumptions, and other data used must be clearly shown and, where appropriate, supported by calculations.

Detention/retention structures located "in-line" (receive runoff from off-site areas), shall be designed as regional detention/retention facilities. Post-construction hydrographs shall be developed for the entire watershed assuming full development of upstream areas according to current zoning requirements. The post-construction hydrographs shall be routed through the basin and shall not exceed the allowable release rates according to the applicable design criteria. The design criteria for a regional basin shall be as described herein under Critical Storm method by considering the percent increase in runoff from the entire watershed assuming full development of upstream areas, unless otherwise approved by the City.

- b. Downstream Analysis

If the development or redevelopment contains impacts to the Yellow Creek, Mud Brook and Kelsey Creek watersheds, a Downstream Analysis shall be performed. The purpose of the analysis is to protect downstream properties from flood increases due to upstream development. Due to peak flow timing and runoff volume effects, some structural controls fail to reduce downstream peak flows to pre-developed levels. Therefore, a downstream analysis is required to ensure no adverse impacts to downstream properties. The downstream analysis shall consist of a hydrologic model of the larger watershed which includes the area draining to the site and shall include key detention structures existing in the watershed. The watershed shall be divided into an appropriate number of sub-areas with homogeneous hydrologic characteristics, and peak flows shall be determined in the downstream channel or system by combining the hydrographs generated for the applicable sub-areas. The analysis must begin at a point downstream of the site where the watershed is at least 10 times larger than the site

area. The analysis must show that the post-developed 100-year peak flow does not exceed the pre-developed 100-year peak flow in the downstream channel or system at all critical points in the downstream system including stream confluences, major storm sewer outfalls, and any other locations which experience a significant change in flow as directed by the City. A drainage map of the watershed with the critical locations identified shall be submitted to the City for review prior to proceeding with the downstream analysis. An estimate of the most restrictive storm event capacity (2-yr, 5-yr, 10-yr, 25-yr, 50-yr, or 100-yr) of the downstream systems shall be provided.

The downstream analysis will be performed by the City of Cuyahoga Falls in areas where the City has previously developed a watershed model. The design engineer may be requested to submit additional information or calculations for the site being developed to update the City's watershed model. The City understands the Northeast Ohio Regional Sewer District has models for these watersheds within their Cuyahoga River South Stormwater Master Plan. For models, the design engineer shall contact the City to determine the availability of the models from NEORS or other known sources.

- (1) Long Term Maintenance Plan  
A Long-term Maintenance Plan ("LTMP") shall be provided for all post-construction storm water elements. LTMPs shall comply with the following requirements:
  - a. LTMPs shall be provided by the regulated party to the Summit County Soil and Water Conservation District ("Summit SWCD") as part of the Storm Water Pollution Prevention Plan ("SWP3") review.
  - b. LTMPs shall be provided to the party responsible for post-construction operation of the site (including homeowner associations) upon completion of construction activities or as otherwise directed by Summit SWCD.
  - c. Separate LTMPs shall be submitted for BMPs located on separate properties.
  - d. LTMP contents: To ensure that storm water management systems function as they were designed and constructed, the LTMP shall be a stand-alone document, which contains, at a minimum:
    - i. Cover sheet showing site name, date, and description of site's immediate receiving drainage system (e.g. Water of the State, private system, City of Cuyahoga Falls MS4, Summit County MS4, Township MS4, etc.).
    - ii. Responsible party: A designated person, party, or entity responsible for inspection and maintenance of the BMP(s), including contact information (i.e. address, telephone number, email, etc.).
    - iii. Assurance of operation and maintenance: A description of how BMP(s) will be operated and maintained in the absence or dissolution of the designated responsible party, including how such responsibilities will be transferred upon the sale of the subject property.
    - iv. BMP information: Descriptions of all post-construction storm water BMPs and all supporting design and installation data.
    - v. Maintenance responsibilities: The routine and non-routine maintenance tasks to be undertaken.
    - vi. A schedule for inspection and maintenance.
    - vii. Easements and agreements: Any necessary legally binding maintenance easements and agreements.

- viii. Map: A map showing all BMP locations and any access and maintenance easements.
  - ix. Statement prohibiting BMP alterations: A statement prohibiting the alteration of BMPs unless otherwise approved by the City and/or Summit SWCD.
  - x. Pollutant disposal statement: A statement that any pollutants collected within post-construction BMPs shall be disposed of in accordance with local, state, and federal regulations.
  - xi. Statement of City of Cuyahoga Falls authority: A statement acknowledging the City of Cuyahoga Falls's inspection and enforcement rights for violations of Section 1111.08 of the City's Codified Ordinances-General Development Code.
  - xii. Statement of acceptance of responsibility: A statement acknowledging that the contents are requirements of the LTMP are understood and accepted by the responsible party.
  - xiii. A printed name, signature, and date of signature of the responsible party.
  - xiv. Any other information as required by Summit SWCD.
3. Regulated parties/responsible parties shall at all times properly operate and maintain ("O&M") all storm water practices, facilities, and systems of treatment and control (and related appurtenances) which are installed or used to achieve compliance with the conditions of these regulations. A description of maintenance procedures needed to ensure the continued performance of control practices shall be provided.

All permanent storm water quantity management infrastructure and related appurtenances installed per these regulations must be maintained by the respective owner or responsible party.

All permanent storm water quality BMPs and related appurtenances installed per these regulations must be maintained in accordance with a Long-Term Maintenance Plan which has been approved by the City and Summit SWCD.

4. All subsequent final plats and site development plans shall include a storm water treatment statement identifying compliance with the Storm Water Management Plan submitted with the preliminary plat, or if not consistent with the Storm Water Management Plan, the plat or site development plan shall include an impact analysis comparable in scope and detail to that required for Storm Water Management Plan, with a finding that any modifications will equally or better serve the storm water treatment goals.
5. All areas dedicated to storm water treatment or drainage ways for site shall be identified by storm water easements. All easements required pursuant to these regulations should expressly state that the City has entrance, inspection, maintenance, and enforcement rights as described in Section 1111.08 of this General Development Code. Storm water treatment systems should be integrated into the site design wherever possible. Treatment area may be used to satisfy required open space standards in the zoning regulations provided the area is designed so that it both meets the open space design standards and performs the desired storm water best management practice.
6. Disclaimer of Liability
- (a) Compliance with the provisions of this Chapter shall not relieve any person from responsibility for damage to any person otherwise imposed by law. The provisions of this Chapter are promulgated to promote the health, safety and welfare of the public and are not designed for the benefit of any individual or for the benefit of any particular parcel of property.
  - (b) Failure of the City of Cuyahoga Falls to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the project owner from the responsibility for the condition or damage resulting therefrom and shall not result in the City of Cuyahoga Falls, its officers, employees or agents as being responsible for any condition or damage resulting therefrom.
  - (c) By approving a plan under this Chapter, the City of Cuyahoga Falls does not accept

responsibility for the design, installation and operation and maintenance of private stormwater management systems.

1. Inspection

(a) Upon presentation of proper credentials and having obtained consent from the property owner or tenant in possession, representatives of the City or other authorized designee or government agency may enter at reasonable times or such other times as may be necessary, any site for the purpose of making storm water inspections and performing the duties required by this Chapter.

(b) If acting to determine compliance with applicable provisions of the Storm Water Management Plan, persons described in subsection (a) hereof may enter any site currently under construction or under permit by the City without first obtaining consent of the property owner or tenant in possession.

(c) If acting due to actual or apparent emergency conditions, and in conjunction with the authority set forth in Section 1111.08.B. 1. a, persons described in subsection (a) hereof may also enter without first obtaining consent of the property owner or tenant in possession.

(d) The City shall have the right to set up at facilities subject to this Chapter such devices as are necessary, as determined by the City, to conduct monitoring and/or sampling of the facility's storm water discharge.

(e) The City shall have the right to require the facility owner/operator to install monitoring equipment as necessary. This sampling and monitoring equipment shall be maintained at all times in safe and proper operating condition by the facility owner/operator at the owner/operator's expense. All devices used to measure storm water flow and quality shall be calibrated by the City or its authorized representative to ensure their accuracy.

(f) Any temporary or permanent obstruction to safe and reasonable access to the facility to be inspected and/or sampled shall be promptly removed by the facility's owner/operator at the written or oral request of the City. The costs of clearing such access shall be borne by the facility owner/operator.

(g) Unreasonable delay in allowing the City or designee access to a facility subject to this Chapter for the purposes of illicit discharge inspection is a violation of this Chapter.