



## Legislation Text

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**File #:** 14-1156, **Version:** 1

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An Ordinance to Amend Section 5:652 of Chapter 63 (Stormwater Management and Soil Erosion and Sedimentation Control) of Title V of the Code of the City of Ann Arbor (Ordinance No. ORD-14-22) Your approval is requested to amend Section 5:652 of Chapter 63 of Title V of the Code of the City of Ann Arbor to adopt the revised Rules of the Washtenaw County Water Resources Commissioner (WCWRC) as the standards used for stormwater management by the City of Ann Arbor. The previous Rules of the WCWRC, dated May 15, 2000, are currently cited within Chapter 63. To adopt the new rules only requires changing the reference date within City Code to August 6, 2014.

It is necessary for the City to adopt the Revised Rules of the WCWRC to remain in compliance with the City's National Pollution Discharge Elimination System (NPDES) Permit, which is issued by the Michigan Department of Environmental Quality on behalf of the Federal Environmental Protection Agency (EPA).

This edition of the Rules of the WCWRC continues a stormwater management philosophy that considers stream channel protection and stormwater quality management in addition to flood control. These revisions promote using stormwater as a resource, onsite, where possible, with strategies designed to better mimic the natural hydrology of an undeveloped site by promoting infiltration. Significant information for these Rules was taken from the Southeast Michigan Council of Governments (SEMCOG) Low Impact Development Manual for Michigan. The new rules also incorporate the latest precipitation frequency data issued by the National Oceanic and Atmospheric Administration (NOAA).

The primary things that changed in the regulations:

- **PROCESS: MANDATORY PRE-APPLICATION MEETING**
  - There is now a mandatory pre-application meeting that must include the Owner/applicant, mainly to emphasize the importance of on-site soils to development feasibility and costs. Some of the items in the regulation are new to some consultants, and WCWRC wants to make sure the Owner is aware of the expectations firsthand, as well as information that WCWRC has seen about case studies where green infrastructure can be less expensive in "greenfield" development, and sometimes in redevelopment.
- **TECHNICAL APPROACH**
  - **METHOD OF CALCULATING RUNOFF: NO IMPACT**
    - The method of technical calculations has changed, mainly to bring the method to a widely used national standard that is more consistent with soil types, since the soil type is critical to infiltration rates.
  - **STORMS HAVE GOTTEN BIGGER** (2012 data set shows a 6% increase in the 100 yr, 24 hr storm over the 1988-89 data set, although MDEQ artificially lowered the 100 yr rain in the late 1990s, so the standards are increasing the number to use in design by 17%)

- Related to climate, design for storms that are larger than the prior 1998 standard is required. The most recent NOAA statistical analysis of rain data (data through 2012) shows an increase in the size of design (and non-design) storms from the last analysis, which was done in the late 80s. The attached document shows the increases, and I would note that these “design storms” are the 10-year, 24-hour storm for pipes, and the 100-year, 24-hour storm for detention. There are many detailed aspects of rainfall data and statistical analysis that are standalone topics, one of which is the observation of an upward trend used to establish the 20% “overdetention” where infiltration is not used.
- INFILTRATION REQUIREMENT (the first inch of rain must be infiltrated unless the applicant can demonstrate the site is unsuitable, usually due to heavy soils, high groundwater, and/or mobile soil contaminants, or other site specific issues)
  - Infiltration of the first 1” of rainfall is required, unless the applicant can demonstrate that the site is unsuitable for infiltration. Soils investigation is necessary to prove that all of the site is unsuitable. Suitability will be recommended by a certified professional, but Washtenaw County Water Resources Commission (WCWRC) staff must be on-site during the testing. Where it is agreed that infiltration is not feasible (generally due to clay or other impermeable soils, or high groundwater), the applicant will be required to provide additional detention of 20% more than the calculated amount, to account for climate variability.

The Washtenaw County Board of Commissioners supported the revised Rules of the WCWRC on August 6, 2014. See the attached Washtenaw County administrative review request for more detail on the changes within the Rules of the WCWRC.

Prepared by: Jerry Hancock, Stormwater and Floodplain Programs Coordinator, Public Services

Reviewed by: Craig Hupy, Public Services Area Administrator

Approved by: Steven D. Powers, City Administrator

ORDINANCE NO. ORD-14-22

First Reading: September 15, 2014

Public Hearing: October 6, 2014

Approved: October 6, 2014

Published: October 9, 2014

Effective: October 19, 2014

AN ORDINANCE TO AMEND SECTION 5:652 OF CHAPTER 63 (STORMWATER MANAGEMENT AND SOIL EROSION AND SEDIMENTATION CONTROL) OF TITLE V OF THE CODE OF THE CITY OF ANN ARBOR

The City of Ann Arbor ordains:

Section 1. That Section 5:652 of Chapter 63 of Title V of the Code of the City of Ann Arbor be amended to read as follows:

Section 5:652. Definitions.

In addition to the definitions below, the definitions from the following documents shall apply to this

chapter: (1) Part 91 of 1994 PA 451 (Michigan Compiled Laws) as amended; (2) Ann Arbor City Code Chapter 57 (Subdivision and Land Use Control); (3) Rules of the Washtenaw County Water Resources Commissioner; (4) Ann Arbor City Code Chapter 60 (Wetland Preservation); (5) Ann Arbor City Code Chapter 103 (Historical Preservation). In the case of a conflict among the definitions in the documents listed above, the document listed first shall prevail over any conflicting definition of a document listed later.

- (1) Accelerated soil erosion. The increased loss of the land surface that occurs as a result of human activities.
- (2) Architect. A person licensed by the State of Michigan to engage in the practice of architecture or landscape architecture, as defined by Act 299 of the Public Acts of 1980 (as amended), being Section 2001 or 2201 of the Michigan Compiled Laws of 1979.
- (3) Canopy. The area within the outermost spreading vegetative layer of any woody plant(s) delineated by the critical root zone.
- (4) Certification. A signed, written statement by the Code Official that specific constructions, inspections or tests, where required, have been performed and that such comply with the applicable requirements of this chapter or regulations adopted pursuant thereto.
- (5) Clearing. The severing of woody plants (herein defined) above ground level, leaving root system and stumps intact.
- (6) Code official. For the purposes of Chapter 63, the Planning and Development Services Manager, or his/her designated representative.
- (7) Debris. A term applied to loose refuse or earth material not suitable for use as presently situated or constituted, as determined by the Code Official.
- (8) Earth change. Any excavation or cut, fill or grading as herein defined.
- (9) Erosion. The process by which the ground surface is worn and carried away by the action of wind, water, gravity or a combination thereof.
- (10) Excavation or cut. Any act, by which soil or rock is cut into, dug, quarried, uncovered, removed, displaced or relocated, and shall include the conditions resulting therefrom.
- (11) Fill. A deposit of soil or rock placed or replaced by people or machine.

- (12) Grade or grading. Any stripping, excavating, filling, stockpiling or any combination thereof, and shall include the land in its excavated or filled condition.
- (13) Grading permit. A soil erosion and sedimentation control permit issued to authorize work to be performed under this chapter. The City of Ann Arbor has been granted authority, by the State of Michigan, as a Municipal Enforcement Agency to issue soil erosion and sedimentation control permits under Part 91 of 1994 PA 451 (Michigan Compiled Laws) as amended.
- (14) Grubbing. To clear ground of roots and stumps by digging them up.
- (15) Haul road. An on-site roadway constructed to prevent the spread of debris onto the public right-of-way.
- (16) Hazard. Any danger to public health, welfare and safety including exposure to risk of damage to property or liability for personal injury; or risk of harm to land, air or water resulting in environmental degradation. Hazards can include flooding and ponding, compaction and settling, landslides, earthquakes, toxic chemicals, radiation, fire and disease.
- (17) Impervious surfaces. All paved or hard surfaced areas, such as areas covered by buildings and structures; roads and drives; parking lots; formed curb and gutters; vehicular use areas; brick or gravel surfaces; sidewalks; bike paths; patios; and any areas of concrete or asphalt or non-absorbent material.
- (18) Non-erosive velocity. A speed of water movement that is not conducive to the development of accelerated soil erosion.
- (19) Permanent soil erosion and sedimentation control measures. Control measures which are installed or constructed to control soil erosion and sedimentation and which are maintained after project completion.
- (20) Professional engineer. A person licensed by the State of Michigan to engage in the practice of professional engineering as defined by Act 299 of the Public Acts of 1980 (as amended), being Section 2001 of the Michigan Compiled Laws of 1979.
- (21) Rules of the WCWRC. The Rules of the Washtenaw County Water Resources Commissioner, Procedures and Design Criteria for Stormwater Management Systems, dated

May 15, 2000 [August 6, 2014](#).

- (22) Sediment. Any solid particulate matter, mineral or organic, that has been deposited in water, is in suspension in water, is being transported, or has been moved from its site of origin by the process of soil erosion.
- (23) Site. Any lot or parcel of land or combination of contiguous lots or parcels of land where grading is performed or permitted.
- (24) Soil erosion control measure. A facility or measure placed or constructed as necessary for the successful control or abatement of accelerated soil erosion.
- (25) Stabilization. The establishment of vegetation or the proper placement, grading, or covering of soil to insure its resistance to soil erosion, sliding or other earth movement.
- (26) Stockpiling. The depositing of earth materials or rock for temporary periods of time for the purpose of facilitating construction operations.
- (27) Stripping. Any activity which removes or significantly disturbs the vegetative surface cover, including clearing and grubbing operations.
- (28) Storm water management system. A system that is designed and constructed or implemented to control runoff, incorporating methods to collect, convey, store, absorb, inhibit, treat, use or reuse water to prevent or reduce flooding, overland flow, environmental degradation, and water pollution or otherwise affect the quality and quantity of the discharges. The storm water management system includes but is not limited to, any of the following: conduits and appurtenance features, canals, channels, ditches, streams, culverts, streets, storm sewers, detention basins, infiltration devices, swales and pumping stations.
- (29) Temporary soil erosion and sedimentation control measures. Interim control measures which are installed or constructed to control soil erosion and sedimentation and which are not maintained after project completion.
- (30) Woody plants. Trees 2 inches or greater in diameter measured 4 feet above the existing grade, shrubs 2 inches or greater in diameter measured at the existing grade (ground level), or trees and shrubs 10 feet or greater in height.

Section 2. This ordinance shall take effect on the tenth day following legal publication.

**CERTIFICATION**

I hereby certify that the foregoing ordinance was adopted by the Council of the City of Ann Arbor, Michigan, at its regular session of October 6, 2014.

Jacqueline Beaudry, City Clerk

John Hieftje, Mayor

I hereby certify that the foregoing ordinance received legal publication on the City Clerk's webpage on October 9, 2014.

Jacqueline Beaudry, City Clerk