



CITY OF WASHINGTON, ILLINOIS

City Council Agenda Communication

Meeting Date: December 16, 2019

Prepared By: Jon R. Oliphant, AICP, Planning & Development Director

Agenda Item: City Code Amendment – Storm Water Discharge Rates

Explanation: One of the engineers the City of Washington is utilizing to provide temporary technical assistance recommended an addition to Chapter 53 of the City Code (Storm Water Runoff Control) recently while reviewing construction plans for a detention basin. Namely, it would be within 53.004 (C)(4) pertaining to the design criteria of the storm water drainage system and the calculation of storm water discharge rates using the rational method. The suggested code amendment would add the following after the first sentence of that paragraph:

“Rainfall data shall be from the Illinois State Water Survey, Bulletin 70, Current Edition.”

This would accommodate the current version and any future revisions. The most recent report was updated in March 2019 and it increased peak flow rates in central Illinois by about 10%. This would increase the required detention on sites to conform to current average rainfall events, which have intensified over the last 40 years. It would also increase allowable outflow rates because the historic two-year event now has more years of data with which to base modeling. The original Bulletin 70 was published around 1983 and the updated writing includes decades of observed rainfall data, which shows a general rise in peak flow rates for all storm events.

Fiscal Impact: No City fiscal impact.

Recommendation/

Committee Discussion Summary: Staff recommends approval of the text amendment. The Public Works Committee unanimously recommended approval of this project at its meeting on December 2.

Action Requested: Approval of the attached ordinance. A first reading ordinance is scheduled for the December 16 City Council meeting with a second reading to be scheduled for the January 6, 2020, meeting.

ORDINANCE NO. _____

(Synopsis: Approval of this ordinance would insert language into the City of Washington's Storm Water Runoff Control regulations to address current peak flow rates and discharge rates to utilize in the design of storm water drainage systems.)

**AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF
THE CITY OF WASHINGTON, ILLINOIS BY AMENDING CHAPTER 53.004
ENTITLED "DESIGN CRITERIA"**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF
WASHINGTON, TAZEWELL COUNTY, ILLINOIS, as follows:**

Section 1. That § 53.004 of Chapter 53 of the Washington Municipal Code of Ordinances entitled "Design Criteria" is hereby amended by deleting § 53.004(C)(4) in its entirety and substituting the following hereafter:

"§ 53.004 DESIGN CRITERIA

- (4) Calculation of storm water discharge rates shall be made using the rational method. Rainfall data shall be from the Illinois State Water Survey, Bulletin 70, Current Edition. Design calculations and support data for storm water detention facilities shall be submitted to the Public Works Director for review and approval.
 - (a) The undeveloped storm water release rate shall be calculated using a time of concentration for the entire tributary watershed in which the development is located including all other upstream and downstream areas. In no case shall a time of concentration of less than 15 minutes be used. For large watersheds, the time of concentration may be limited to 60 minutes.
 - (b) In determining the time of concentration, a maximum velocity of three (3) feet per second shall be used for channel flow conditions, unless convincing data is provided to justify use of greater velocities.
 - (c) A maximum coefficient of runoff of twenty-five hundredths (0.25) shall be used for undeveloped farm ground. The coefficient of runoff shall be reduced accordingly for natural undeveloped conditions such as grass, brush or wooded areas
 - (d) In the case of commercial, and industrial developments, calculations shall be based upon the assumption of one hundred percent (100%) of the useable lot area having impervious surface."

Section 2. That this ordinance shall be in full force and effect from and after its passage, approval, and publication as provided by law.

Section 3. That all ordinances or parts thereof in conflict herewith are hereby expressly repealed.

PASSED AND APPROVED this _____ day of _____, 2020.

AYES: _____

NAYS: _____

Mayor

ATTEST:

City Clerk