

Memorandum

Public Works Department



To: City Manager
Subject: Storm Water Control Ordinance
Date: October 26, 2012
Number: 2012-233

The storm water control facilities for developments exceeding one acre are designed so the peak post-development runoff does not exceed the peak pre-development runoff. Among other factors, this calculation involves measuring the pre-development impervious area.

The Storm Water Control Ordinance does not identify the date to be used for measuring the pre-development impervious area. In 2006, the City Council determined that the pre-development impervious area is the amount of impervious area on the site four years prior to the application for a Grading and Drainage Permit. This allows developers four years to redevelop the property after demolition and still receive credit for the demolished impervious area.

The City Council asked the staff to review the archives of aerial photography and determine whether it is feasible to use a fixed date for the pre-development impervious area calculation rather than the moving four-year window. The City has access to several sets of aerial photography that could be used to measure pre-development impervious area.

1982	city-wide	hard copy only
1997	south of Rock River	
2000	north of Rock River	
2005	city-wide	used as the current city base mapping
2006	city-wide	
2008	city-wide	
2010	city-wide	
2012	city-wide	

The 1982 photography is not a good choice because there is no digital version. This makes it more difficult to access and use. In addition, it would probably be overly conservative by not showing impervious areas built between 1982 and the adoption of the Storm Water Control Ordinance in 2004.

The 2005 and newer photography is probably not a good choice because it is not old enough.

The 1997/2000 photography is the best choice because it is available in digital format and reaches several years farther back than the four-year moving window.

RECOMMENDATION

The staff recommends that developers document pre-development impervious area by either of two methods.

- 1) The developer may measure the impervious area shown on the 1997 or 2000 aerial photography provided by the City.

2) If the developer believes the aerial photography available for method 1 underestimates the maximum pre-development impervious area that existed on the site since 1997, the developer can document the impervious area through other records.

If this approach is acceptable to the City Council, the staff will communicate the change in policy to the engineers that undertake the storm water control designs for developers.

As shown in the following comparison, the recommended policy change would have no impact upon the pre-development impervious area for the New Old Chicago Redevelopment Addition.

- 1983 – 10 houses in place
- 2000 – 8 houses in place
- 2005 – 8 houses in place
- 2008 – 8 houses in place (current procedure)

However, it will simplify the process for determining pre-development impervious area and it will surely reduce the size of detention facilities for some future redevelopments.

Submitted by: Robert T. Hawes, P.E., Assistant City Manager/Public Works Director
