



by Douglas H. Frazer

STORM WATER



When it comes to water we all know a few things. First, we know that water flows downhill. Second, we know that within a basin water will find the lowest point. Third, we know that we do not want water collecting in our basements, yards, or driveways. This is where stormwater management comes in.

The Wisconsin Department of Natural Resources (DNR), the Milwaukee Metropolitan Sewerage District (MMSD) and the Village of Fox Point each issues regulations and rules for storm water management. Generally, MMSD is tasked with managing storm water on a regional basis and the Village of Fox Point Department of Public Works handles stormwater management on a Village-wide basis. These responsibilities are sometimes shared and must be coordinated.

Rain water or snow runoff finds its way into one or more watersheds. A watershed is an area or basin within which all land and water areas drain or flow toward a point at a lower elevation: on a creek, stream, river, or lake. Watersheds or basins can be large or small. The boundary of a watershed is called the watershed divide. If you stand at any point on a watershed divide and look into the watershed, the land will slope downward. Behind you, the land will slope downward into the adjacent watershed.

Given the interconnectedness of the watershed, a flooding or pollution solution that could solve a local problem might be unwise because of adverse downstream or upstream effects. This is why storm water management needs to be addressed in a "big picture" kind of way.

A modern urban storm water system consists of various components designed to function together for the purpose of preventing flooding and pollution.

MMSD, a state-chartered agency, has principal jurisdiction over a service area that includes several large basins: the Milwaukee River watershed, the Menomonee River watershed, the Kinnickinnic River watershed, and the service area's direct drainage into Lake Michigan. Wisconsin law charges MMSD not only with operating a sewage system within its service area but also for the provision and management of a system of facilities for the collection, transmission, and disposal of stormwater and groundwater.

In Fox Point, as is the case in the rest of the MMSD service area (with the significant exceptions of the City of Milwaukee and southern parts of Shorewood), storm water and sewer water are separated. Given the far from unlimited capacity of MMSD's deep tunnel to accommodate sewerage flow, maintaining this separation is essential. If too much storm water infiltrates the MMSD sewerage system, MMSD is forced to dump untreated, partially treated, or diluted ("blended") sanitary sewerage directly into Lake Michigan and our streams and rivers. Infiltration can also lead to sewer backups that can flood basements.

For this reason, Village ordinance Chapter 4B strictly prohibits the connection of an element of the Village storm water drainage system to a waste water building sewer or drain connects into the sanitary sewerage system.

As is apparent, storm water management is important to the entire region. The most visible project in Fox Point is along Indian Creek. MMSD and the Village have designed and built significant stormwater management infrastructure along the creek, including large drainage channels and culverts that conduct water under Port Washington Road, into a water retention basin south of Mapledale School, under I-43 into the neighboring Village of River Hills, and eventually to the Milwaukee River. A second example of MMSD-Village collaboration is the bio-swale water collection area in front of Village Hall.

Within the municipal boundaries, the Village has principal oversight over much of the rest of the stormwater infrastructure and management. This authority derives from several Village ordinances: the Chapter 37 Stormwater Management Regulations, the Chapter 38 Construction Site Erosion Control, and the Chapter 30 Building Code – which, among other provisions, requires pre- and post-development flow analysis for residential or commercial developments greater than 4,000 square feet.

The Village manages several storm water basins within its boundary. The major basins include direct drainage into Lake Michigan, Indian Creek, and in connection with the southwest portion of the Village, drainage into the Milwaukee River.

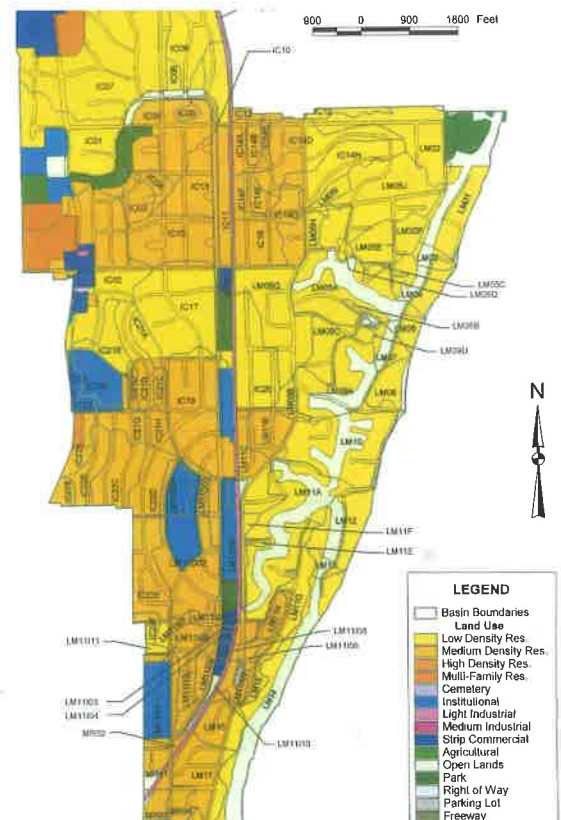
The principal conduits for stormwater include a system of underground storm sewer pipe with diameters of between 12 and 60 inches. Other conduits are drainage ditches or channels (e.g., alongside Santa Monica Boulevard north of Green Tree Road, or along the trail from Fox Lane to Beach Drive), naturally occurring water courses, and ravines, including Bridge Lane, Beach Drive, Goodrich, and four smaller ravines.

Scott Brandmeier, the director of Public Works, and Mike Krueger, the Department of Public Works foreman, and those who report to them, devote a great deal of time to stormwater maintenance and infrastructure, building, and repair in order to keep property owners in the Village as dry as possible.

To fund storm water management, services, and facilities, the Village created by ordinance Chapter 9 a stormwater utility. The Village sets rates for this utility and charges property owners a fee based on those rates. This system provides a dedicated and immediately adjustable source of revenue for this purpose.

The advantage of this system is that a direct correlation exists between property owner use and the service provided. In addition, property owners exempt from the levy are not exempt for this fee. The disadvantage is that fees are not tax deductible.

Next time it rains hard, pay attention to where the water goes. Nature, of course, plays a role, but in large part the drainage, in a never ending effort to keep us safe and dry, is by human design.



Douglas H. Frazer is a trustee on the Fox Point Village Board. The views expressed are his own and not necessarily those of the Village, the Village Board, other Village Board members, or Best Version Media, LLC.