Stormwater Management

City of Des Moines Storm Water Utility and You

The City of Des Moines formed a **Storm Water Utility** in 1995 to manage rainfall runoff in the City. Rainfall runoff management involves taking steps to prevent flooding, but also includes efforts to minimize pollutants entering storm sewers, streams, lakes and rivers. The rain or snow that runs off of city streets, parking lots, driveways, and construction sites can wash such pollutants as soil, oil, grease, toxic chemicals, bacteria, and pet waste into nearby **storm drains, which lead right to our rivers into the Des Moines and Raccoon Rivers –** the same two sources used to produce our drinking water. These pollutants are a threat to public health as well as the environment.

The Storm Water Utility must comply with a Storm Water Permit that is issued by the Iowa Department of Natural Resources. The utility is required to take storm water samples, put storm water controls into place, such as detention and retention ponds (see other article), and educate the community about ways that **everyone can do their part to keep our water clean in the Des Moines area.**

Retention and Detention Ponds

That pond in your neighborhood may be more than landscape enhancement and wildlife habitat; it may have been put in for the purpose of helping prevent storm water pollution**.** ***Retention ponds***, as they are called, can provide high removal rates of pollutants such as sediment, organic nutrients, and trace metals after a rainfall. By capturing storm water before it reaches the storm sewer, these ponds help improve the water quality in our rivers and streams. Vegetation around the ponds can filter out some of the pollutants before they even reach the pond. Further sediment removal occurs by gravity in the ponds. The biological activity carried out by plants and microorganisms in the pond removes dissolved nutrients, like nitrate and phosphorus that contribute to excessive algae growth when present in our rivers and streams, The algae growth can then lead to depleted oxygen supplies, thus, are less able to support aquatic life.

Detention ponds serve a similar purpose, but are really dry basins most of the time and only function for a few days right after a storm event to prevent pollutants from entering storm sewers. Rain water is held in the ponds until it evaporates or percolates down into the ground.

Both types of ponds aid in groundwater regeneration, too.

Swales are Swell

You may have seen a swale and not known it. Grassed swales are vegetated small depressions that are usually seen in residential areas or on roadway medians. The vegetation collects storm water and slows its flow during a rain event. Some pollutants then have time to become filtered out of the storm water before it reaches the storm sewers and our waterways.