



## Stormwater Retention Ponds

Stormwater Retention Ponds are designed and constructed to hold designated amounts of stormwater runoff for specified periods of time, resulting in the settling of sediment and some water into the ground. This is beneficial because it lowers the amount of Total Suspended Solids in runoff from rainfall events, and helps stabilize the water table.

Stormwater Retention Ponds typically will be regional in nature serving a drainage area of 10-200 acres.

There are a couple of stewardship practices that the Village needs the communities that have these management practices in place to be aware of:



**Pollutants such as oils, fertilizers, and soil end up in our streams, lakes and rivers.**

- Report odor problems and visible damage to shorelines.
- Report signs of invasive species.
- Report excessive algae growth.
- Do not dump grass clippings, pet waste, or fertilizers into pond.

## Additional Information

- Use as little fertilizer as possible on lawns.
- Work with your landscape to slow the storm runoff from your gutters. Rain Gardens serve as good catchment basins and can beautify your property.
- Retention ponds **do not** serve as breeding grounds for mosquitoes. Mosquitoes breed in stagnant water, correctly designed ponds minimize stagnant water.
- Cattail growth is welcome, do not inhibit growth. Cattails stabilize the shoreline and reduce the nutrient load in the water, preventing algae growth. They also provide habitat for wildlife.

### Village of Bellevue Department of Public Works

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## Stormwater Retention Ponds and Biofiltration Swales



Best Stormwater Management Practices



# Important information about stormwater management and your neighborhood...



## Stormwater Pollution Control History

Wisconsin places a high priority on reducing the number of waterways that are impaired. Impaired means that a waterway cannot support basic wildlife, plant life, health and recreation as it exists.

Our state has implemented rules and regulations to im-

prove our waterways by controlling stormwater discharges during and after the construction of the development. The measure of pollution reduction is Total Suspended Solids (TSS). Wisconsin has placed the responsibility of regulating the storm water discharges on municipalities.

Limited funding is available through grants for assisting communities financially. Wisconsin Statutes have mandated that all municipalities reduce their TSS loading by at least 20% and continue to work towards 40%. All new developments must meet an 80% reduction in TSS, but the municipal 40% reduction applies to cleaning up the past. Municipalities also use programs such as education and outreach, illicit discharge prevention, and monitoring.



## How do we approach our stormwater management?

The best way to clean up our stormwater is to prevent pollution from getting into it in the first place. The first step begins with you.

There are a number of ways you can prevent pollution from getting to our streams. The first step is educating yourself on the types of common pollution

found around your neighborhood. Things like preventing car fluids from dripping onto the pavement, reducing the amount of fertilizer on your lawn, and preventing grass clippings from falling on the street all can have a significant impact on reducing the pollution in our waterways.

The Village realizes that these items alone cannot reverse the pollution in our waterways and have set up programs to take us the rest of the way.

Two of the main tools we plan to use to further improve our stormwater management are stormwater retention ponds and biofiltration swales. These are built in developed areas that are at risk of causing overly exhaustive discharges in the event of a heavy rainfall. These two BMP's (Best Management Practices) differ slightly in operation but provide similar benefits to communities.

## Biofiltration Swales

Biofiltration swales, (pictured below) are ditches that have a layer of washed rock and sand underneath a layer of grass that let water trickle down slowly into a perforated underdrain pipe that is connected to the stormwater management system. This differs slightly from stormwater retention ponds, in that ponds usually just allow the stormwater and sediment present in the water to settle right into the ground. Biofiltration swales also handle a significantly less amount of stormwater than stormwater retention ponds and are best used in areas of development that handle the runoff from a parcel 5 acres or smaller.



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