



# VILLAGE OF BROWN DEER STORM WATER MANAGEMENT

**CREATING A HEALTHIER COMMUNITY AND ENVIRONMENT THROUGH PROPER STORM WATER GUIDED LIVING AND ACTIVITIES.**

**What is Storm Water?** Storm water is any water that falls from the sky and runs across the land to streams, rivers, and lakes. That includes water off building roofs, streets, and melting snow. Also included are potable water from irrigation, AC condensate, de-chlorinated pool water, and water from fire fighting.

**What is not Storm Water?** Any water that has been treated or has had any substance added – soap, any waste materials, sanitary sewer, etc.

**What is Storm Water Management?** Storm Water Management consists of all the activities that the Village must do to control flooding and improve the quality of storm water entering the streams and river. It also includes a way of living for the residents of the Village.

**What is the Village's Storm Water Management Plan (SWMP)?** As required by the Federal EPA and the State DNR, the Village had to develop a Storm Water Management Plan and obtain a Municipal Separated Storm Sewer System permit. The Village's SWMP was adopted in 2001 and the Village is now entering into its second permit period under WDNR.

The first phase of the plan was the implementation of flood control projects. The main projects included the basins at the Library/High School, Dean School west of 55<sup>th</sup>, and Churchill east of 51<sup>st</sup>. The Village improved the road crossings over Beaver Creek at 66<sup>th</sup> and 64<sup>th</sup> Streets. Other projects included a storm diversion sewer down 60<sup>th</sup>, improved drainage from 44<sup>th</sup> to Southbranch Creek, Alpine storm diversion sewer, the dredging of the Village Lagoon by the Village Park, and storm boxes with the 60<sup>th</sup> Street project in 2006.

The second phase of the SWMP coincided with the first storm water permit. From 2001 through 2006 the Village developed policies on the

improvement of the storm water before it enters the streams and river. This included the monitoring of storm pipes as they open to the streams or river; increased street sweeping, and catch basin cleaning; ordinances to control storm water runoff from developments during and after construction; inspection of streams, storm water basins, business properties; policies for providing education and information to the public; and more. In storm water quality the village has naturalized Beaver Creek from 64<sup>th</sup> east to Brown Deer Rd. with plans to continue downstream to 60<sup>th</sup>, the 44<sup>th</sup> project and Lagoon project previously mentioned, the installation of 7 structural units on storm sewer outfalls to separate debris from the storm water before it enters Beaver Creek, the rehab of service drive medians on Green Bay and County Line to store and filter storm water, the reshaping of roadside ditches, and much more.

On the private side the Village has enforced storm water regulations on new and re-developments – Donges Woods, Deerbrook Estates, Lowes, Market Place, and the new development at the corner of 60<sup>th</sup> and Brown Deer, just to name the larger projects.

Each year the Village must submit a report to WDNR of all storm water related activities. Copies of these reports are at the Village Hall, Library, and Public Works Office. The Village Board holds a Public Hearing each March prior to the submittal of the report to WDNR.

**What does it mean to you as a resident to live a life guided by improving the storm water? That's answered on the next pages.**

***IT'S NOT JUST STORM RUN-OFF, IT'S A NATURAL RESOURCE***

## STORM WATER AND YOU

Let's start with the basics of managing your property and your responsibility for the public parkway/ditch next to it. Let's take a tour of your property, we'll start outside and work our way in.



**Ditch and Culvert:** If you have these, and most residents do, you should clean debris out of the culvert and make sure the ends are completely open. The ditch should not have any block, concrete or asphalt lining put in, but repair the turf as possible. The ditch is meant to hold water and can be wet through the spring and the fall. In areas with active sump pumps the ditch could be wet for part of the summer too. Contact the Department of Public Works for instructions of approved plantings in the ditch area. Sump pumps and downspouts should be directed and dispersed over the yard and not piped directly to the ditch. Do not stockpile leaves or other material in the ditch.

**Curb and Gutter:** If you have a curb on your street, you are serviced by a storm sewer. You need to be careful not to blow grass clippings on to the road. Do not allow fertilizers and herbicides from falling onto the street and gutters. Clean up any material that falls from your yard work onto the street and gutter. Follow housekeeping practices for car washing. Do not stockpile leaves or other material in the gutter of the street.



**The Yard:** Your yard should not have any areas that are bare where soil could be washed away. The grass should be cut to a height of 2.5" and no shorter. This will create a deeper root and save on watering in dryer weather. Use a mulching type mower and for a high grass you will need to make two or three cuttings to get the grass down to 2.5". If you clump it – then compost it or use it in a garden area for mulch to reduce watering. Mulching saves on fertilizer and time in spreading it (clippings from 1,000 sq. ft. of lawn contains 6 pounds of nitrogen and 1 pound of potassium – all that the lawn needs). Use of fertilizers and herbicides should be kept to a minimum. Look for simple soil test kits to check your soil before applying any fertilizer. A slow release type fertilizer with no or the smallest amount of phosphorous is all that an established turf needs.



Excess fertilizer only gets washed off, adversely affects the habitat in streams and rivers, and it's your money going down the drain/ditch. Look for natural fertilizers and herbicides like corn gluten meal. Minimize herbicide application by treating the weed itself and not the entire yard – try not to use weed & feed fertilizers – just spot treat the weed.



**Landscaping:** The combined landscaping, when done properly, on properties can be the largest storm water control in the Village.

Look at your property and see how the water drains. Place planting beds and ground covers to collect and filter storm water before it leaves your property. Look at installing rain gardens or decorated rain barrels at downspout locations. Information on purchasing rain barrels can be obtained from the Public Works office and MMSD website. Rain garden and prairie plant information can be obtained from the Public Works office, MMSD website, or UW-Extension website. Shrubs, plant beds, prairie beds, ground covers, and trees absorb and filter much more water than grass and provide you with a colorful variation through the seasons. These areas also provide space for leaving or spreading leaves for decomposition. Proper location of trees can improve storm water and save you on heating and cooling, watering and fertilizing.



**Housekeeping:** Let's take a look at all those other activities around your property and house.



**Car Washing:** The most water friendly way is to take your car to the car wash where the water is recycled or goes to a sanitary sewer.

If you wash at home, move your car onto the lawn and wash it there. The lawn will infiltrate the water and soap, and settle out the fine dirt washed off the vehicle. Use a bio-degradable soap to clean your car, boat, trailer, house siding, etc.



**Auto Servicing:** You should have your vehicle's oil change and greasing done at an oil/lube/service center for proper disposal of fluids. If you do your own oil change at home, dispose of the oil at a service center or at the Recycling Center. Anti-freeze should be taken to a service center for disposal. **DO NOT POUR ANY VEHICLE FLUIDS DOWN ANY STORM OR SANITARY SEWER.** Tires should be taken to a tire center for

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disposal. If you have tires, store them in the garage, shed, or keep them covered so they will not fill with storm water. Tires filled with water are #1 for breeding mosquitoes.



**Refuse Storage:** Keep all refuse enclosed so that it does not get blown away or torn open by animals. Reuse and recycle as much as you can. Paints, thinners, herbicides and pesticides, and other household hazardous waste should be taken to the Household Hazardous Waste Drop-off, Veolia Environmental Services, W124 N9451 Boundary Road (124<sup>th</sup> Street). **DO NOT POUR ANY HOUSEHOLD CHEMICALS DOWN ANY STORM OR SANITARY SEWER UNLESS DIRECTED TO POUR INTO THE SANITARY BY THE CHEMICAL LABEL.**



**Pet Care:** It's your duty to clean up after your pet has done its duty. Pollutants from improperly disposed pet waste may be washed into storm sewers by rain or melting snow. When pet waste decays in lakes or streams it can kill fish, encourage algae and carry disease. When pet waste is disposed of improperly, not only water quality suffers – your health may be at risk, too. Pets, children who play outside and adults who garden are most at risk for infection from some of the bacteria and parasites found in pet waste. Flies may also spread diseases from animal waste. Even if you are a diligent “pooper scooper” remember the best protection is washing hands with soap and water!



**Composting and Yard Storage:** Follow Village rules on composting and keep the compost area secured so storm water cannot run through or out of the compost area. Mowers, garden tractors and tools should be stored in the garage or in a yard shed with a floor. Do not allow oil and fuel from yard/garden equipment from entering the soil or running down the drive to the street gutter.



**Swimming Pools:** Water used in swimming pools is treated with a high chlorine level. The water from a swimming pool needs to have the chlorine neutralized before it can be discharged over the lawn and into the ditch or storm sewer.



**Construction:** All construction areas where the vegetative cover has been removed shall have erosion protection installed. Stockpiles of soil and gravel shall be covered if not located within the erosion control area or if placed on paved surfaces. Storm inlets in the area shall have a fabric filter installed. Erosion controls shall remain until ground cover is re-established.



**Stream and River Banks:** If you happen to have a stream or river bank along your property – you may be a riparian owner. Call the Department of Public Works to see if the Village has maintenance rights (an easement) or if you fully own the stream/river bank. If you own the bank, you should inspect your banks and ensure that there is good vegetative cover and no erosion. Eroded areas should be filled in, seeded or planted, and protected until the planting material has established. If the Village has maintenance rights, notify the Department of Public Works of any erosion. The banks of drainage swales, streams, and rivers are not areas for the disposal of yard/garden waste, tree/brush materials, soil, or any other materials.

### A Storm Water Manager



As you can see the management of storm water is not just a function/activity of the Village government. It is a way of living for every resident of the Village of Brown Deer and for every resident in the United States. You and every member of your family are a Storm Water Manager.

### GO WITH THE FLOW AND DO MORE



The Department of Public Works has a list of projects that can be performed by volunteers, businesses, and organizations. These projects consist of stenciling of storm inlets, distribution of storm water education materials, clean-ups, Site Assessment of Better Management Storm Water Practices, Stormie's Neighborhood Water Watch, and any idea that an individual has to improve the quality of *A NATURAL RESOURCE*.

***JT'S NOT JUST STORM RUN-OFF, JT'S A NATURAL RESOURCE***