

Waukesha County Land Resources Division

Your partner in Storm water Programs

- Fulfills requirements under Wisconsin NR 216 to maintain compliance with storm water permits

www.waukeshacounty.gov/cleanwater

Runoff Pollution



Now the number one source of pollution to our surface waters.

Storm drains deliver water—and more!

Storm water carries pollutants such as:

- Sediment
- Oil and gas
- Fertilizers
- Pet Waste
- Heavy metals
- Grass Clippings
- Leaves

Straight to the closest river , lake or wetland.



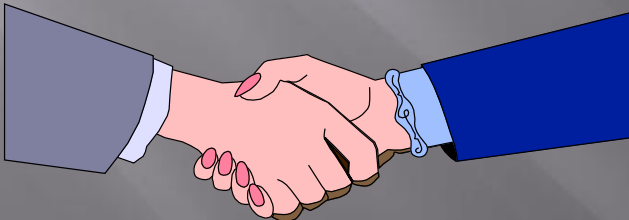
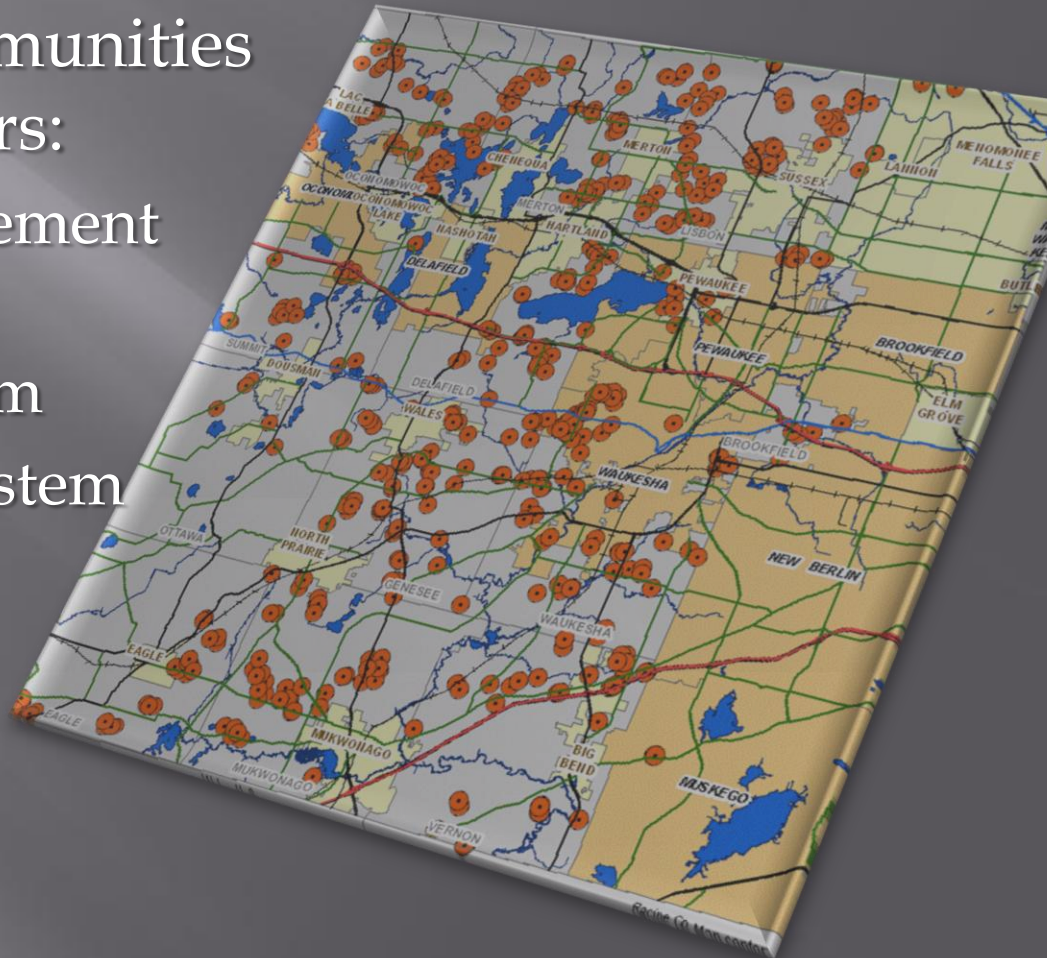
EPA/Wisconsin Pollutant Discharge Elimination System (WPDES) Storm Water Discharge Permit Program

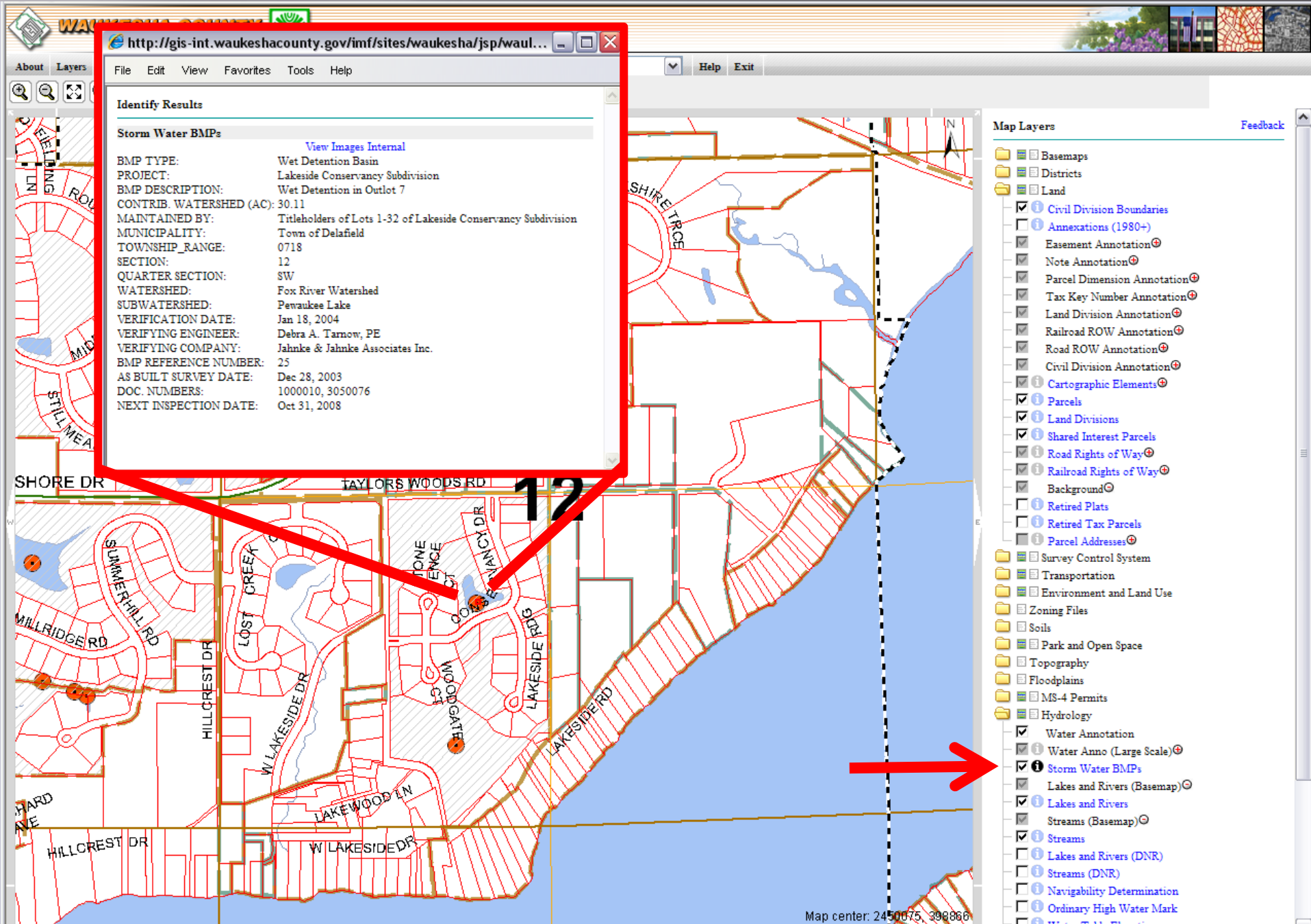
- Requires Municipal Separate Storm Sewer System (MS4) discharge permits
- MS4 Permit requires:
 - SW ordinance enforcement
 - Information & education
 - BMP maintenance (if needed for municipal pollution control)



Waukesha County Storm Water Intergovernmental Agreements

- ▣ Executed with 25 communities starting in 2006. Covers:
 - SW Ordinance enforcement (Towns)
 - SW Education program
 - Web BMP tracking system





Photos

Waukesha County Storm Water (BMP) Tracking System
Provided by the Department of Parks and Land Use

Storm Water BMP Images

Project Name	Lakeside Conservancy Sub-division
BMP Description	Wet Detention in Outlot 7
BMP Type	Wet Detention Basin
BMP Identifier	25
Survey Township	Delafield

Open Previous Next Return to Thumbnails

Image 1 of 1

This may be a distorted view of the image. For a scaled view of the image click "Open" button.



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As-built Survey Data

Maintenance Plan

Exhibit C Minimum Storm Water Practice Maintenance Requirements

001459 HAR-38

This exhibit explains the basic function of each of the storm water practices listed in Exhibit B and prescribes the minimum maintenance requirements to remain compliant with this Agreement. The maintenance activities listed below are aimed to ensure these practices continue serving their intended functions in perpetuity. The list of activities is not all inclusive, but rather indicates the minimum type of maintenance that can be expected for this particular site. Access to the stormwater practices for maintenance vehicles is shown in Exhibit B. Any failure of a storm water practice that is caused by a lack of maintenance will subject the responsible party to enforcement of the provisions listed on page 1 of this Agreement by the Town of Lisbon.

System Description:

The wet detention basin is designed to trap 80% of sediment in runoff and maintain pre-development downstream peak flows. The basins have two forebays (smaller ponds) located at the end of storm sewer outlets. The forebays are each 4 to 5 feet deep. They are connected to the main pool by a weir. The forebays will trap coarse sediments in runoff, such as road sands, thus reducing maintenance of the main basin. The main pool will trap the finer suspended sediment. To do this, the pond size, water level and outlet structures must be maintained as specified in this Agreement (see Figures 1 and 2).

The basin #1 receives runoff from a 9.25 acre drainage area. During high rainfall or snow melt events, the water level will temporarily rise and slowly drain down to the elevation of the control structure. The water level is controlled by a 15-inch cnp extending through the berm in the southeast corner of the basin. On the face of the 15-inch pipe, there is a 18" riser with 1-3/8-inch drilled hole (orifice) with stone in front of it. This orifice controls the water level at elevation 1095.50 and causes the pond to temporarily rise during runoff events. Washed stone (1-2" diameter) is placed in front of the orifice to prevent clogging. High flows may enter the top of the riser or flow over the rock lined emergency spillway. The basin #2 receives runoff from a 32.3 acre drainage area. During high rainfall or snow melt events, the water level will temporarily rise and slowly drain down to the elevation of the control structure. The water level is controlled by a 12-inch cnp extending through the berm in the southeast corner of the basin. On the face of the 12-inch pipe, there is a 18" riser with 1-4-5-inch drilled hole (orifice) with stone in front of it. This orifice controls the water level at elevation 1070.50 and causes the pond to temporarily rise during runoff events. Washed stone (1-2" diameter) is placed in front of the orifice to prevent clogging. High flows may enter the top of the riser or flow over the rock lined emergency spillway. All elevations in the figures below represent planned values and are presented in feet above mean sea level (NAD 1929). These are required to be field verified upon construction. Actual elevations (and more detailed information on the designs) can be obtained by contacting the Waukesha County Department of Parks and Land Use or Town of Lisbon, and can be used as a reference point during maintenance inspections.

Minimum Maintenance Requirements:

To ensure the proper function of the storm water management practices described above, the following activities must be completed:

1. All outlet pipes must be checked monthly to ensure there is no blockage from floating debris or ice, especially the washed stone in front of the orifices and the trash rack on the riser in the main basin. Any blockage must be removed immediately. The washed stone must be replaced when it becomes clogged.
2. Grass swales shall be preserved to allow free flowing of surface runoff in accordance with approved grading plans. No buildings or other structures are allowed in these areas. No grading or filling is allowed that may interrupt flows in any way.
3. Grass swales, inlets and outlets must be checked after heavy rains (minimum of semi-annually early spring & early autumn) for signs of erosion. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the downstream forebays or basin. Erosion matting is recommended for repairing grassed areas.
4. NO trees are to be planted or allowed to grow on the earthen berms. Tree root systems can reduce soil compaction and cause berm failure. The berms must be inspected annually and any woody vegetation removed.
5. If floating algae or weed growth becomes a nuisance (decay odors, etc.), it must be removed from the basin or the forebay and deposited where it cannot drain back into the basin. Removal of the vegetation from the water reduces regrowth the following season (by harvesting the nutrients). Wetland vegetation must be maintained along the waters edge for safety and pollutant removal purposes.

Also allows inspection reports

Coordination & Enforcement of County Storm Water Ordinance (8 Towns)

- ▣ Designed to address storm water issues early in the site planning or land division process
- ▣ County is responsible for issuing and enforcing storm water permits
 - SW & EC on new construction sites
 - Coordinate with Town P.E.
 - Basement/water table separation
 - BMP maintenance agreements

Waukesha Co. Ordinance

The Waukesha County Board hereby finds that eroding construction sites are polluting the water resources of the county. This ordinance is designed to address this concern by requiring all construction sites to obtain a permit and follow an erosion control plan. Failure to comply with this ordinance will result in



Waukesha County Storm Water Information and Education Program

Coordinated information and education strategy includes:

- Speakers for schools and civic groups
- Teacher training and resources
- Storm Drain Stenciling program
- News articles and press releases



Waukesha County Storm Water Information and Education Program

- Citizen Stream Monitoring
- Rain garden and rain barrel promotions and programs
- Composting and yard care programs
- Display for community events
- School programs and field trips



Communication and Coordination make it work

We need your help:

- Connect us with local civic groups
- Let us know about community events
- Link your website to ours



We have the resources--maximize your investment!

Contact us

www.waukeshacounty.gov/cleanwater

Storm water education:

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Perry Lindquist, Land Resources Manager

plindquist@waukeshacounty.gov

262-548-7867

Additional Storm Water Information

- Dog waste is a big problem — an average dog produces ½ pound of waste a day and there are over 100,000 dogs in Waukesha County
- The average homeowner uses 10X as many fertilizers and chemicals as farmers on a per acre basis
- Sediment is the number one pollutant of water
- Construction sites erode on average 3 to 4 times as much sediment per acre than farm fields