

STORM WATER PLAN TO MEET 2013 TREATMENT REQUIREMENTS

Village of Allouez

The following is a summary of the current status and requirements that must be met by the Village of Allouez, and the plan for meeting the long term storm water treatment requirements required by the Wisconsin Department of Natural Resources. This plan is summarized from the storm water planning work by McMahon Associates, the WDNR MS4 storm water permit requirements, and the estimated Fox River TMDL requirements.

Treatment Requirements

The Village of Allouez was issued a WPDES Storm Water Discharge Permit in October 2006 which requires the following;

1. By 2008 the Village must provide 20% removal of total suspended solids for the combined storm water discharge into the East River and the Fox River. The Village has met this requirement.
2. By April 2008 the Village must meet several discharge permit requirements including inspections, ordinances, and public education programs as defined in the MS4 storm water permit. These requirements have been met.
3. By 2013 the Village must meet 40% removal of total suspended solids for the combined storm water discharge into the East River and the Fox River. The Village must provide additional storm water treatment to meet this requirement, including increased street sweeping.
4. The future Fox River TMDL storm water treatment requirements should be known by 2010 and become effective when the existing storm water discharge permit is reissued in 2011, and will likely require compliance by 2016-2018. This will likely require 40% TSS removal for the discharge to the Fox River, 60% TSS removal for the East River discharge, and require phosphorus removal.

Storm Water Compliance Planning

Storm water modeling of the Allouez storm water discharges and the treatment options to meet the 2013 suspended solids (TSS) removal requirements was performed by McMahon Associates. As part of the recent permitting effort with the WDNR for the Riverview and Taft sites, the modeling was updated based on the estimated TMDL requirements for the Fox River. The updated storm water modeling including the TMDL requirements is attached.

To meet the 2013 and TMDL requirements, several storm water treatment wet detention ponds must be constructed and the options are presented in this summary.

Storm Water Grant Program

Allouez has qualified for construction grants for both the Hoffman Road and Kiwanis Park wet detention pond projects. However, the final grant awards have not been received as yet (expect in late February) and the grant awards will probably be lower than the original 50% funding level due to state budget cuts. Acceptance of these awards is a decision Allouez needs to make soon.

The WDNR announced that a storm water planning grant funding cycle has been added for 2010, with a funding application deadline of April 2009. A planning grant should be submitted by Allouez. Recall that Allouez qualified for a planning grant for 2009 but the grant was eliminated due to state budget cuts.

Allouez is in the East River high priority watershed and has a high probability of obtaining grant funding.

Proposed Treatment Options

The following treatment options appear to be a good fit to meet the WDNR requirements and fit Village needs best. With regard to meeting the WDNR suspended solids removal requirements in the storm water permit, the Village removes 133,708 lbs TSS with current storm water treatment provided within the Village. The storm water discharge permit required removal is 105,552 lbs TSS for 2008, therefore the Village complies with the 2008 requirement.

A biweekly Village street sweeping program with parking controls is recommended and all of the following options assume that sweeping is bi-weekly.

The TSS removal increments to reach the 2013 TSS goal and the estimated future TMDL requirements are presented in the following storm water treatment options.

The 2013 TSS removal requirement is 211,104 lbs TSS per year. This is the current permit removal requirement.

The Fox River TMDL requirement may be 40% TSS removal for all discharges to the Fox River and 60% TSS removal for the East River, plus phosphorus removal for discharges to both rivers. This is an estimated 55,698 lbs TSS removal for the discharges to the Fox River and 233,110 lbs TSS removal for the East River (a total TSS removal of 288,808 lbs per year for the Village).

Treatment System Options

Feasibility and TSS Removal

Kiwanis Wet Detention Pond

Provides 16,841 lbs TSS removal (net gain). This project is WDNR approved and grant funding may be awarded soon. The grant amount subject to state budget reductions.

Hoffman Road Detention Pond

Provides 16,558 lbs TSS removal (net gain). This project is WDNR approved and grant funding may be awarded soon. The grant amount is subject to state budget reductions. *(Kiwanis and Hoffman result in a total TSS of 167,107 lbs removal, excluding street sweeping with parking controls).*

High Efficiency Street Sweeping	Street sweeping twice per month with parking controls. TSS net gain is 28,544 lbs per year when the parking controls are implemented (no parking on garbage collection day). This would be a possible 2010 implementation. <i>(Total TSS removal is 195,651 lbs TSS with Hoffman and Kiwanis ponds).</i>
Riverview Park Site 1 Pond	Submitting justification for permitting this site to the WDNR. This site provides 22,736 lbs TSS net gain. This is a less than 50% probability of permitting Site 1 (other sites may be available w/o wetlands). <i>(Riverview Site 1, Kiwanis, Hoffman, sweeping w/parking controls provides 219,704 lbs TSS removal, complying with the 2013 requirement.)</i>
Bethel Wet Detention Pond	Small wet detention pond on site now owned by Village. Site will be WDNR permitted. Bethel provides a net gain of 10,489 lbs TSS. <i>(Bethel results in total TSS removal of 206,140 lbs, which does not meet the 2013 requirement).</i>
Riverview Park Site 2 Pond	Site 2 provides 21,364 lbs TSS net gain. Site was previously permitted by WDNR but has public acceptance concerns. Site 2 provides about same TSS net gain as Site 1. <i>(Site 2, Kiwanis, Hoffman, sweeping w/parking controls provides 217,015 lbs TSS removal and meets 2013 requirements).</i>
Optimist Park Detention Pond	Obtaining a permit for this navigable water/wetland is lower probability of obtaining due to the Bethel site. This site would provide 13,787 lbs TSS removal.
W. Taft St. Detention Pond	Difficult to permit this site in the navigable waterway. The option of using state land north of waterway is being investigated. Taft provides 34,908 lbs TSS net gain, and is the only suitable site on the Fox River. <i>(Taft would nearly meet the estimated TMDL</i>

40% TSS requirement on the Fox River).

STH 172 Detention Pond	This site would provide 14,645 lbs TSS removal but is wetland site. Unable to permit due to other suitable site at Bethel or Riverview.
Dauphin St. Detention Pond	Would be able to permit and provide 22,001 lbs TSS removal but requires significant land purchase cost. Backup option if other sites not permitted.
Stambaugh Road Detention Pond	This site is not considered further due to significant land acquisition cost. The Taft site is preferred.

To meet the estimated future TMDL TSS removal requirement of 233,110 lbs TSS per year for discharge to the East River, the street sweeping with controls/ Kiwanis/Hoffman/Riverview 1 or 2 and Bethel sites will be required. This will provide approximately 230,000 lbs TSS removal per year, close to the required 233,000 lbs per year requirement.

To meet the TMDL requirement for the Fox River the Taft pond will need to be Constructed, and will provide close to the required TSS removal.

The following action plan is proposed to comply with the WDNR storm water requirements.

Proposed Implementation Plan and Schedule

Phase 1 – April 2008

1. The storm water compliance report, Kiwanis and Hoffman grant applications, and planning grant were completed. Planning grant program was cancelled by WDNR, but treatment pond grants will be awarded to Allouez (the 2 grants to Allouez are part of only 15 grants awarded statewide).

Phase 2 – April 2009

1. Submit storm water compliance report to WDNR (in progress).
2. Submit a planning grant funding application for Taft site permitting, illicit discharge program implementation, street sweeping program development, and TMDL planning.

Phase 3 – April 2010

1. Submit a construction grant funding application for the Bethel detention pond (or alternate Riverview Site 1 if permitting appears feasible).

2. Submit a grant assistance application for a high efficiency street sweeper and Other costs incurred in implementing the parking control program. This grant funding and trade-in of the old mechanical street sweeper should result in a very economical fleet addition. A second high efficiency sweeper is important for the future increased sweeping frequency.
3. Begin implementation of the high efficiency street sweeping plan with parking controls.

Phase 4 -- April 2012

1. Submit a construction grant assistance application to the WDNR for construction of the Taft St. wet detention pond if site is obtained and permitted by WDNR.

Phase 5 -- April 2014

1. Submit a construction grant application for a Riverview Site and one additional treatment site on the East River.