

VILLAGE OF ALLOUEZ

Allouez Village Hall • 1900 Libal Street • Green Bay, Wisconsin 54301-2453
Phone No.: (920) 448-2800 • Fax No.: (920) 448-2850

Department of Public Works

MS4 2016 STORMWATER ANNUAL REPORT SUMMARY

The following is a brief summary of the 2016 annual report.

1. Allouez provides 44% removal of suspended solids (TSS) prior to discharge to the Fox and East Rivers. This is higher than most other urban municipalities.
2. The Fox River Total Mass Daily Loading (TMDL) requirements are 52% TSS removal for discharges to the East River and 72% TSS removal for the Fox River. The required total phosphorus removal is 41%, and Allouez is estimated at a 30% removal at this time.
3. The Post-Construction Stormwater Management and Construction Site Erosion Control ordinances have been updated to comply with the new WDNR administrative code changes.
4. Preliminary design of the two Riverside Drive cloverleaf stormwater treatment ponds has been completed. These are being integrated into the highway project. These ponds will help in meeting the Fox River TMDL requirements. An application for grant assistance for pond construction should be made in 2018, with 4 years after grant and loan award for construction.
5. Allouez does very well with regard to managing road salt application, fall leaf collection which reduces pollutant loading, management of the village hall and yard waste sites, and street sweeping. All of these services are in compliance with stormwater treatment goals.
6. Final modeling of the stormwater discharges will need to be completed to determine the path forward to meet the Fox River TMDL. This is a small task.

C. Berndt
February 10, 2017

Due by March 31, 2017

Notice: Pursuant to s. NR 216.07(8), Wis. Adm. Code, an owner or operator of a Municipal Separate Storm Sewer System (MS4) is required to submit an annual report to the Department of Natural Resources (DNR) by March 31 of each year to report on activities for the previous calendar year. This form is being provided by the DNR for the user's convenience. Personal information collected will be used for administrative purposes and may be provided to the extent required by Wisconsin's Open Records Law [ss. 19.31-19.39, Wis. Stats.].

This form is for reporting on activities undertaken in calendar year 2016.

Instructions: Complete each section of the form. If additional space is needed, attach additional pages. Provide descriptions that explain the program actions taken to comply with the general permit. Complete and submit the annual report by March 31, 2017, to the appropriate address indicated on the last page of this form.

Part I. Municipal Information			
Name of Municipality Village of Allouez		Facility ID No. (FIN) 31085	
Mailing Address 1900 Libal Street	City Green Bay	State WI	ZIP Code 54301
County(s) in which Municipality is located Brown	Municipality Type: (select one) <input type="radio"/> County <input type="radio"/> City <input checked="" type="radio"/> Village <input type="radio"/> Town <input type="radio"/> Other (specify)		

Part II. Municipal Contact Information			
Name of Municipal Contact Person Craig L. Berndt, P.E.		Title Director, Public Works	
Mailing Address (if different from above)	City	State WI	ZIP Code
Email craig@villageofallouez.com	Phone Number (include area code) (920) 448-2800	Fax Number (include area code) (920) 448-2850	
Has the contact person changed in the last year? <input type="radio"/> Yes <input checked="" type="radio"/> No			

Part III. Certification			
<p><i>I hereby certify that I am an authorized representative of the municipality covered under MS4 General Permit No. WI-S050075-2 for which this annual report is being submitted and that the information contained in this document and all attachments were gathered and prepared under my direction or supervision. Based on my inquiry of the person or persons under my direction or supervision involved in the preparation of this document, to the best of my knowledge, the information is true, accurate, and complete. I further certify that the municipality's governing body or delegated representatives have reviewed or been apprised of the contents of this annual report. I understand that Wisconsin law provides severe penalties for submitting false information.</i></p>			
Authorized Representative Printed Name Craig L. Berndt, P.E.		Authorized Representative Title Director, Public Works	
Signature of Authorized Representative		Date	
Email craig@villageofallouez.com	Phone Number (include area code) (920) 448-2800	Fax Number (include area code) (920) 448-2850	

Part IV. General Information

a. Describe the municipality's efforts to invite the municipal governing body, interest groups, and general public to review and comment on the annual report.

The stormwater annual report was reviewed at the Public Works Committee meeting on February 15th and at the Village Board meeting on March 7th. The report was posted on the Village of Allouez website under Stormwater Management, and available at the Village Hall reception desk for review. The contents of the report were reviewed at both of the Village meetings. These meetings are public noticed to the press and posted on the Village website and

b. Describe how elected and municipal officials and appropriate staff have been kept apprised of the municipal storm water discharge permit and its requirements.

A condensed summary of this annual report and the stormwater program status was prepared and presented to the Public Works Committee and the Village Board. This summary presented the current status and the path forward for the stormwater program.

The recent development and approval of the Lower Fox River TMDL has been presented to the Public Works Committee and the Village Board. The implications for the stormwater program have been presented.

The development of the Riverside Drive highway reconstruction project continued in 2016. Stormwater management proposed by the Village for this project has been presented to the design consultant and will be included in the project. This plan will provide additional suspended solids and phosphorus removal for the stormwater discharges to the Fox River.

An update to the stormwater management plan was completed at the end of 2012. The stormwater management plan was presented to the Public Works Committee and the Village Board in November and December 2012. The plan was approved by the Village Board in December 2012. This plan was used as part of the preliminary engineering of the Riverside Drive highway project.

- c. Has the municipality prepared its own municipal-wide storm water management plan? Yes No

If yes, title and date of storm water management plan:

Stormwater Management Plan, Village of Allouez, dated August, 2008

Stormwater Management Plan Update, Village of Allouez, dated December 2012.

South Cloverleaf Pond, Village of Allouez, dated December 2012. Recently updated.

North Cloverleaf Pond, Village of Allouez, dated December 2012. Recently updated.

- d. Has the municipality entered into a written agreement with another municipality or a contract with another entity to perform one or more of the conditions as provided under section 2.10 of the general permit? Yes No

If yes, describe these cooperative efforts:

- e. Does the municipality have an internet website? Yes No

If yes, provide web address:

www.villageofallouez.com

If the municipality has an internet website, is there current information about or links provided to the MS4 general permit and/or the municipality's storm water management program?

Yes No

If yes, provide web address:

www.villageofallouez.com; click "Departments", click on "Stormwater Management"

SECTION V. Permit Conditions

- a. **Minimum Control Measures:** For each of the permit conditions listed below, provide a description of the implementation of each program element, the status of meeting measurable goals, and compliance with permit schedule in section 2.11 of the MS4 general permit. Provide an evaluation of program compliance with the general permit, the appropriateness of identified best management practices, and progress towards achieving identified measurable goals. Be specific in describing the actions that have been taken during the reporting year to implement each permit condition and whether measurable goals have been met, including any data collected to document a measurable goal. Also, explain the reasons for any variations from the compliance schedule in the MS4 general permit.

Public Education and Outreach

BMP: Use website to educate and promote the stormwater program. The stormwater management link on the website is used to provide information on many stormwater management techniques, and is updated as needed.

BMP: Display educational materials (passive distribution). An informational kiosk is maintained at the Village Hall entrance. Many articles on several stormwater topics are picked up by residents during the year.

BMP: Distribute educational materials (active distribution). The Village mails the booklet "All About Allouez" to all residents and business's in January each year, and mails it to new residents during the year. It is also in the village hall kiosk. This booklet contains several pages of information on stormwater management. This booklet is sent to about 6,000 residents and businesses.

BMP: Publish meetings minutes, permits, and events. All committee and Village Board meeting minutes and reports regarding stormwater are posted on the Village website under Stormwater Management. All Village meetings are noticed to the press and posted at the Village Hall and website.

BMP: Publish stormwater articles, meeting notices and event in municipal newsletter. As mentioned, stormwater articles are included in the booklet "All About Allouez" each year and distributed to all residents and businesses.

BMP: Install signs to educate about stormwater pollution. None in 2016.

Stormwater permits for erosion control and post-construction stormwater management were posted at 4 private construction sites in 2016. There were no municipal projects requiring permits in 2016.

BMP: Give presentations, meetings, and workshops to educate about stormwater impacts. Several meetings were held with the four developers with regard to erosion control and stormwater management plans. These meetings resulted in permits issued, engineering plans developed, and project controls installed. Allouez is a member of NEWSA.

- **Public Involvement and Participation**

BMP: Hold public meetings on the stormwater program. There was two public meetings held in 2016. There was the Public Works Committee meeting and the Village Board meeting for review of the stormwater program.

BMP: Develop partnerships and stakeholder meetings to involve the public. This task remains as presented in the 2011 annual report.

BMP: Citizen Stormwater Advisory Committee. A committee has been established but did not meet in 2016.

BMP: Organize and/or promote volunteer storm drain stenciling, stream cleanups, shoreline cleanups, highway cleanups, and numerous other potential projects. Storm drain stenciling was done in 2012, 2013, and 2014. A Fox River cleanup was done in 2016 that the village supported.

Illicit Discharge Detection and Elimination

BMP: Adopt illicit discharge detection & elimination ordinance or other regulatory mechanism. The illicit discharge ordinance was originally adopted in 2008. The ordinance was reviewed as part of the 2012 stormwater plan update. The ordinance was reviewed for updates and is now contained in Ordinance Chapter 387 of the Village Ordinances.

BMP: Create dedicated funding sources (storm utility ERU fees, permit fees, non-compliance fees). The stormwater utility ERU fee was established at \$6.47 per ERU in 2004. The ERU fee has been increased since, and for 2015/2016/2017 has been established at \$7.50 per residential ERU.

BMP: Develop policies & procedures for the illicit discharge detection & elimination program. The program details and procedures are identified in the annual inspection reports, and also identified in the illicit discharge ordinance that was adopted in 2008. Refer to that report for further details. The illicit discharge inspection report for 2016 is available for review.

BMP: Update the municipal separate storm sewer system (MS4) map. The storm sewer system map was updated in 2015 and remains the same for 2016 as previously submitted in 2015.

BMP: Conduct field screening, on-going filed screening, and routine inspections. The field inspections conducted in 2016 are available for review. The inspections are in accordance with the procedures manual adopted in 2008. No violations or pollution indicators were discovered in 2016.

- **Construction Site Pollutant Control**

BMP: Adopt construction site erosion control ordinance or other regulatory mechanism. Ordinance No. 52 Construction Site Erosion Control was revised and updated in 2008 and is now Ordinance Chapter 200 Construction Site Erosion Control in the Village of Allouez General Ordinances.

BMP: Create dedicated funding sources (application fee, inspection fees, & forfeitures). This BMP remains as previously reported with no changes.

BMP: Review permit applications, erosion & sediment control plans & financial guarantees. Two stormwater management plans and 4 erosion control permits were issued in 2016 for private development and private utility projects. There were no municipal projects in 2016 requiring erosion control practices in compliance with municipal ordinance. Erosion control permits were posted at all sites.

BMP: Conduct site inspections for erosion control and enforce the erosion control ordinance. All construction sites were inspected on a weekly basis by the contractor and as needed by the building inspector. There were no corrective actions were required.

BMP: Consider information submitted by the public to the municipality. No tips were received during 2016.

Post-Construction Storm Water Management

BMP: Adopt stormwater management ordinance or other regulatory mechanism. Ordinance No. 53 Post Construction Stormwater Management was revised and updated in 2016 to comply with changes implemented by the WDNR and is Ordinance Chapter 387 Stormwater Management, Post-Construction. The Allouez stormwater ordinances are posted on the village website under Stormwater Management under Departments.

BMP: Create dedicated funding sources (application fee, inspection fee and forfeitures). The funding for the stormwater management permits was established in 2008, and the fees were updated in 2010. The stormwater permit fee is based on the cost to review the permittee's stormwater management plan, and provide inspection of the BMP's installed. The permit fees have been adequate to cover the village costs.

BMP: Review permit applications, plans, maintenance agreements, and financial guarantees. Two stormwater management permits were issued in 2016. The maintenance agreements were recorded at the Register of Deeds.

BMP: Track long-term maintenance of stormwater management facilities. There are now 6 operating municipal stormwater treatment systems (large wet detention ponds), and 18 operating private facilities (small treatment systems). Establishing a monitoring program for the municipal facilities is a future task as sediment removal is not required this early in their operation except for the Longview detention pond. Due to the presence of rough fish in this pond it was drained completely and a large amount of the settled solids in this pond were excavated and used to repair the shoreline and create an improved vegetated area around the pond. The private facilities will be monitored as a program is established to do this.

BMP: Educate permit applicants, designers, contractors, inspectors, and facility owners. The four projects permitted in 2016 included meetings with the designers.

- **Pollution Prevention**

BMP: Conduct routine inspections and maintenance of municipally owned structural BMP's. See the attached summary for pollution prevention in 2016. This section is essentially the same as described for the 2011 annual report.

b. **Winter Road Management Activities:**

Provide the name, title, and phone number for the individual(s) with overall responsibility for winter roadway maintenance.

Jim Cegelski, Street Foreman, 920-448-2800.

Describe the types of products used for winter road management (e.g., deicing, pre-wetting, salting, etc.).

Road salt with pre-wet with salt brine on all plow trucks. Liquid salt brine is used before storm events under weather conditions for which it is effective.

Describe the type of equipment used to apply the products.

See the attached report "Winter Road Management Activities--2016 Annual MS4 Report."

Report the amount of product used per month.

See the attached report titled Winter Road Maintenance Activities--2016 Annual MS4 Report.

Report the snow disposal locations, if snow is hauled away.

Snow is hauled when snow conditions are significant requiring clearing of intersections and curb areas. This is a limited amount of snow hauling. Sites for snow storage are: Yard waste site at 911 LeBrun Street for most hauled snow, and the rear yard dry pond area at the village hall at 1900 Libal Street for a small amount of snow.

Describe any anti-icing, equipment calibration, and salt reduction strategies considered.

The plow truck salt spreaders are factory service calibrated every two years. The salt application rates have been reduced by setting lower salt spreader rates each year, to a low range of 200 lbs (residential streets) to 300 lbs (main street) per lane mile for 2016. Liquid salt brine is added to dry salt in the truck salt spreaders to reduce usage. Liquid salt brine is applied to streets before ice/snow storm events to reduce the need for dry salt addition for ice control. Dry road salt and/or brine addition is targeted to intersections and hill sections to reduce usage, and street traffic spreads the salt over the entire roadway. The use of liquid salt brine has been very effective.

Describe any other additional measurable data or information that the permittee used to evaluate its winter road management activities.

The tonnage of road salt used annually and lbs per curb mile are used as annual measures. Operators must fill out salt usage information for their trucks for each snow event which increases awareness of salt usage. Track annual salt usage and have reduced usage each year for the past five years (salt budget has remained the same for 5 years though salt cost has increased by a factor of nearly two). Annual salt usage was 3.8 tons/curb mile/year in 2016.

c. Municipal facility(s):

Provide an inventory of municipally owned or operated structural storm water management facility(s), include: Location of each facility and contact information for the individual(s) with overall responsibility for each facility.

See attached list to this report. All stormwater facilities are under Public Works and the responsibility of the Public Works Director.

Describe the housekeeping activities and best management practices installed to reduce or eliminate storm water contamination.

These management practices are included in the village hall and garage facility housekeeping program as described in the two Allouez stormwater management plans listed elsewhere in this annual report.

Discuss recommendations for improvements to current storm water management practices at the facility(s) and a timeline for installation and/or implementation of these recommendations.

The stormwater management program at the village hall facility is fully implemented as this is a relatively new facility. No improvements are planned or needed. Recent improvements in the salt shed area were completed in 2013 which was to remove and repave the loading area to eliminate poor pavement. The parking lot yard was repaved and sloped to better drain and the entire lot was sealed. A second sealer coat will be applied.

Describe the municipal facility(s) employee training on storm water pollution prevention provided.

No training was provided in 2016.

Describe the spill prevention and response procedures in place at the municipal facility(s).

The village hall fueling facility is a double wall tank system and with leak monitoring. The lubricant storage area in the village garage utilizes a spill containment basin. The waste oil collection system at the village yard site is contained in a spill tank for containing any spillage. All tankage is covered by an SPCC plan.

d. Storm Water Quality Management: Has the municipality completed a pollutant-loading analysis to assess compliance with the 20% TSS reduction developed urban area performance standard? Yes No

If yes, provide the following: Model used WinSLAM Version V10.0 Reduction (%) 43.8

If no, include a description of any actions the municipality has undertaken during 2015 to help achieve the 20% standard.

Has the municipality completed an evaluation of all municipal owned or operated structural flood control facilities to determine the feasibility of retrofitting to increase TSS removal? Yes No

If yes, describe:

e. Best Management Practices Maintenance: Does the municipality have a maintenance program for installed storm water best management practices? Yes No

If yes, describe the maintenance program and any maintenance activities that have occurred for best management practices in 2015. If available, attach any additional information on the maintenance program.

The village stormwater treatment ponds are mowed/reseeded/weed control/inlet and outlet cleaning are completed based on an annual maintenance plan. McMahon Associates is retained to monitor and conduct wetland plantings/weed control/maintenance duties. All ponds have had the inlet and outlet structures modified to reduce blockage by weeds and debris.

f. **Storm Sewer System Map:** Describe any changes or updates to the storm sewer system map made in the reporting year. Provide an updated map if any changes occurred during the reporting year.

No changes to the stormwater system in 2016. Allouez is a fully built-out municipality. There is very little vacant land area for residential development, but there are commercial lots that are available in some areas. However, the extent of additional storm sewer system expansion are limited. No changes occurred in 2016 that resulted in map changes.

SECTION VI. Fiscal Analysis

a. Provide a fiscal analysis that includes the annual expenditures for 2015, and the budget for 2015 and 2016. A table to document fiscal information is provided on page 10.

A copy of the stormwater utility budget is attached. This is the budget summary only for stormwater operations and engineering. The Storm Water Utility budget for the Village of Allouez also includes the storm sewer maintenance, street sweeping, and other functions. The Storm Water Utility enterprise fund and maintains an appropriate fund

b. What financing/fiscal strategy has the municipality implemented to finance the requirements of the general permit?

Storm water utility General fund Other _____

c. Are adequate revenues being generated to implement your storm water management program to meet the permit requirements? Yes No

Please provide a brief summary of your financing/fiscal strategy and any additional information that will assist the Department in understanding how storm water management funds are being generated to implement and administer your storm water management program.

Allouez established an enterprise stormwater utility in 2004. The stormwater utility is funded by the ERU fees collected. The fund is further described in the previous 2011 annual report. The ERU fee was increased to \$7.50 per ERU in 2015 and remains at this rate in 2016 and 2017. The stormwater utility maintains a cash balance (reserve funds) for operations and debt service. The Storm Water Utility budget and required ERU revenue is reviewed annually, and the ERU rate adjusted when necessary.

SECTION VII. Inspections and Enforcement Actions

Note: If an ordinance listed below has previously been submitted and has not been amended since that time, a copy does not need to be submitted again. If the ordinance was previously submitted, indicate such in the space provided.

a. As of the date of this annual report, has the municipality updated or revised its construction site pollutant control ordinance in accordance with subsection 2.4.1 of the general permit? Yes No

If yes, attach copy or provide web link to ordinance:
Previously submitted and is available on the village website.

b. As of the date of this annual report, has the municipality updated or revised its post-construction storm water management ordinance in accordance with subsection 2.5.1 of the general permit? Yes No

If yes, attach copy or provide web link to ordinance: Previously submitted and is available on the village website.

c. As of the date of this annual report, has the municipality updated or revised its illicit discharge detection and elimination ordinance in accordance with subsection 2.3.1 of the general permit? Yes No

If yes, attach copy or provide web link to ordinance:
Previously submitted and is available on the village website.

d. As of the date of this annual report, has the municipality adopted any other ordinances it has deemed necessary to implement a program under the general permit (e.g., pet waste ordinance, leaf management/yard waste ordinance, parking restrictions for street cleaning, etc.)? Yes No

If yes, attach copy or provide web link to ordinance:
These were described in the 2011 annual report. Refer to that report for further information.

e. Provide a summary of available information on the number and nature of inspections and enforcement actions conducted during the reporting period to ensure compliance with the ordinances described in a. to d. above.

There were no erosion violation notices during 2016.

There were no violations of the post-construction stormwater management ordinance in 2016.

SECTION VIII. Water Quality Concerns

- a. Does any part of the MS4 discharge to an outstanding resource water (ORW) or exceptional resource water (ERW) listed under s. NR 102.10 or 102.11, Wis. Adm. Code? (A list of ORWs and ERWs may be found on the Department's Internet site at: <http://dnr.wi.gov/topic/surfacewater/orwerw.html>) Yes No

If yes, list:

- b. Does any part of the MS4 discharge to an impaired waterbody listed in accordance with section 303(d)(1) of the federal Clean Water Act, 33 USC § 1313(d)(1)(C)? (A list of the most current Wisconsin impaired waterbodies may be found on the Department's Internet site at: <http://dnr.wi.gov/water/impairedsearch.aspx?status=303d>) Yes No

If yes, complete the following:

- Impaired waterbody to which the MS4 discharges:

The Fox River and the East River.

- Description of actions municipality has taken to comply with section 1.5.2 of the MS4 general permit for discharges of pollutant(s) of concern to an impaired waterbody:

The Village of Allouez has completed the construction of six stormwater wet detention ponds for treatment of stormwater runoff. During 2013 the construction of the sixth pond, the Heritage Hill/Taft wet detention pond, was completed. Final prairie seeding was completed in 2015. This wet detention pond is located on the Fox River and will treat stormwater discharges to the Fox. Thus, the Village has provided considerable stormwater treatment for runoff discharged to the Fox and East Rivers, both impaired waterways.

Further information on actions by the Village were included in the 2011 annual report. Those actions included street sweeping, fall leaf collection for the entire village, catch basin cleaning, and the proprietary stormwater treatment devices in the Village. Street sweeping remove 383,000 lbs suspended solids (35% dry basis) in 2016, and is accomplished with two high efficiency street sweepers.

- c. Identify any known water quality improvements in the receiving water to which the MS4 discharges during the reporting period.

The Fox River dredging to remove sediment laden with PCB's has been underway for several years.

- d. Identify any known water quality degradation in the receiving water to which the MS4 discharges during the reporting period and what actions are being taken to improve the water quality in the receiving water.

There is no increase in degradation of the Fox and East Rivers due to discharges from the Village of Allouez MS4.

SECTION IX. Proposed Program Changes

Describe any proposed changes to the storm water management program being contemplated by the municipality for 2016 and the schedule for implementing those changes. Proposed program changes must be consistent with the requirements of the general permit.

The Village of Allouez is proceeding with additional stormwater treatment beyond the current WDNR TSS removal requirements to meet the future TMDL goals. This includes stormwater treatment as part of the Riverside Drive HWY 57 reconstruction project. The highway design is underway.

The Village street sweeping program has been fully implemented. The no parking on garbage collection day ban is implemented, and the final placement of no parking signs is completed.

The Village of Allouez Stormwater Management Plan Update has been completed. This plan addresses the treatment requirements to meet the long range goals of the TMDL. The plan incorporates the future Riverside Drive reconstruction and stormwater treatment requirements.

SECTION X. Other

Any other additional information the permittee would like to provide in the Annual Report regarding their storm water program?

Two additional stormwater wet detention pond treatment facilities are planned for construction as part of the Riverside Drive STH 57 reconstruction project. This will increase overall TSS removal by 3%. These are planned as 2019/2020 construction projects.

The Bethel Church stormwater pond is in the planning phase for implementation with the 2019/2020 projects.

Annual Report under MS4 General Permit No. WI-S050075-2

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Fiscal Analysis Table. Complete the fiscal analysis table provided below.

Program Element	Annual Expenditure 2016	Budget		Source of Funds
		2016	2017	
Public Education and Outreach	\$1,000	\$1,000	\$1,000	ERU fees funds all storm utility operations.
Public Involvement and Participation	\$1,000	\$1,000	\$1,000	
Illicit Discharge Detection and Elimination	\$5,388	\$5,000	\$5,000	
Construction Site Pollutant Control	\$1,000	\$1,000	\$1,000	Inspections by engineering staff under building inspection or construction project budgets. Fees are collected for commercial project permits.
Post-Construction Storm Water Management	\$2,000	\$4,000	\$4,000	
Pollution Prevention	\$1,000	\$1,000	\$1,000	
Storm Water Quality Management (including pollutant-loading analysis)	\$5,000	\$10,000	\$10,000	
Storm Sewer System Map	\$500	\$500	\$500	
Other:	\$35,564	\$25,000	\$25,000	Annual pond maintenance including wetland replacement plantings, weed control, prairie maintenance and overseeding.

Pollution Prevention

BMP: Conduct routine inspections and maintenance of municipally owned structural BMP's.

-Number of municipally owned or operated structural BMP's: There are 6 operating wet detention pond stormwater treatment facilities owned and operated by the Village in 2016.

-Number of 5-year inspection reports for municipally owned or operated structural BMP's: There are no five year inspections at this time because the wet detention ponds are relatively new. We will be beginning a sediment monitoring program in 2018. The Longview wet detention pond was completely drained in 2015 due to rough fish present in the pond, and much of the sediment was removed and placed at the pond edge to reconstruct eroded shoreline areas. This is the oldest operating stormwater detention pond.

-Number of routine Village structural BMP inspections performed: The Village wet detention ponds are inspected and the outfall structures cleaned on a weekly basis during the wet weather periods (March-June, September-November) and on a biweekly or monthly basis as needed during the low rainfall periods. The cleaning is to keep the overflow structures functioning properly. The Public Works Department is responsible for this maintenance and one operator is responsible for tracking and completing this work.

The Village contracts with an aquatic biologist to inspect and maintain the operating ponds with respect to weed control, additional wetland and prairie plantings, and other pond maintenance as required. A pond annual maintenance budget is included in the stormwater utility budget, and the actual expenditure was \$35,000 for 2016 due to pond maintenance, trapping, and plantings. It has been the Allouez experience with wet detention ponds that it requires about 3 years of additional wetland and prairie maintenance to fully establish the ponds to the desired flora. This budget covers those activities. Also, Allouez contracts with a fur trapper to remove muskrats both spring and fall, and our operator inspects the ponds after trapping and plugs any damage with clay.

BMP: Conduct routine street sweeping where appropriate and properly dispose of waste.

-Number of curb miles swept each year: The approximate number of street miles swept in 2016 was 875 miles, or in curb miles it was 1,750 miles. The entire Village was swept 15 times plus the weekly street sweeping in the commercial area.

-Tons or cubic yards of street sweeping waste disposed each year: The sweeping total to landfilling was 191.6 tons in 2016. All street sweepings are landfilled except for fall leaf collection in October and November which are leaves only and these are recycled with the bulk volume of leaves.

BMP: Routine catch basin cleaning program.

-Catch basin cleaning maintenance program: The Village storm sewer system inlets that contain sumps are cleaned once per year before the fall leaf collection season. The Village uses a Vactor truck for catch basin cleaning. The captured debris is hauled to the yard waste site and subsequently hauled to landfill. All new storm inlets are constructed with minimum 2-foot deep sumps, and all repaired inlets are reconstructed with a sump.

BMP: Snow Storage Management.

-Manage winter snow storage to minimize pollution runoff: Snow that is removed from residential street areas due to excess accumulation is transported to one of a few storage sites the Village maintains for this purpose (Farm site, sites located on vacant lands, Village Hall site) and each site has either a stormwater treatment system for the melted snow or a vegetated buffer to filter the melt. Debris left after melting is removed from each site and landfilled.

BMP: Street snowplowing road salt usage. Apply road salt only as necessary to maintain public safety,

-Management of road salt usage and reduction efforts: The Village of Allouez continues its efforts to reduce road salt usage to minimize impact on stormwater discharges and operating cost. Road salt usage in 2016 was 420 tons per year. In 2016 all salt spreading equipment was adjusted by a factory service representative to reduce salt usage. In 2012 liquid salt brine tanks were added to all snowplow trucks. Further, liquid salt brine use has been implemented for Libal Street, major intersections, and hillside streets to reduce the need for street salting in advance of ice and snow events. Allouez fabricated its own liquid salt brine tanker and applicator in 2014.

-Pounds of salt applied per curb mile of street: Road salt is applied to street intersections and steep grades only, and is applied in lieu of snowplowing if light snowfall and if icing conditions occur which is a safety concern. Sidewalk salt is applied only on Village sidewalks when severe icing occurs. The approximate road salt usage in 2008 was 1,400 tons (approximately 12.9 tons salt per curb mile), for 2009 was 1,100 tons (approximately 10.2 tons salt per curb mile), for 2010 was 1000 tons (approximately 9,25 tons salt per curb mile), for 2011 was 609 tons (approximately 5.6 tons salt per curb mile, for 2012 was 520 tons or (approximately 4.8 tons salt per curb mile), for 2013 the total salt usage was 448 tons (approximately 4.1 tons salt per curb mile, and for 2014 the total salt usage was 510 tons (approximately 5 tons per curb mile). For 2015 approximately 360 tons of salt was used, which is 3.6 tons per mile. This is a lower than expected usage. For 2016 approximately 420 tons of salt was used which is 3.8 tons per mile. About 5 tons per mile and 500 tons salt per year is the expected average usage.

-BMP: Proper management of leaves, brush and grass clippings to minimize stormwater impacts.

-Leaves, brush and grass clippings collection and disposal program: The Village of Allouez has an extensive fall leaf collection program, and a spring clean-up program for leaves and garden wastes. Residents are required to collect and may dispose of grass clippings at the Village Farm Site as an option as the Village does not collect grass clippings. The fall leaf collection program includes baling of leaves and subsequent transport to one or more recycling options (farms, re-vegetation cover, landscaping). When leaves are collected on Village streets comprehensive

sweeping follows immediately and results in very high suspended solids capture, much more effective than previous Village methods of leaf collection. Spring cleanup includes garden waste and a smaller quantity of leaves. This Village program is effective in reducing stormwater impacts and the operating cost is much lower than the past practice of using vacuum leaf collection. All leaves are recycled to landscapers and farmers.

The Village of Allouez along with other metro communities are conducting a preliminary engineering study to evaluate long-term options for disposal of brush and leaves. This study is expected to be completed in 2017.

-Provide schedule of curb-side pick-up days for leaves and brush: A curb-side pick-up schedule for brush and leaves is published annually in the "All About Allouez" booklet mailed to residents, and posted on the Village website under "Public Works." During fall leaf collection the weekly collection route and schedule is posted on the village website to assist residents planning for leaf pick-up.

-Tons or cubic yards of leaves and grass clippings disposed of each year: Leaves are baled on the street and hauled to two recycling operations for reuse. Approximately 1,400 tons of leaves were hauled to recycling in 2016. The recycling operations include farm use, use by a landscaping operation, and organic farming operations.

BMP: Management of Village Hall garage maintenance operations.

-Management of garage maintenance activities to reduce pollution: An extensive management program is maintained for the Village Hall site and the maintenance garage. This includes the following items: garage operations are contained within the building and all oils and wastes go to the sanitary sewer with sand traps to minimize sand discharge; salt storage is self-contained with sealed floors and paved entry area; waste oil is properly disposed; fuel is properly stored and handled to prevent spills; a chain link fence surrounds the storage yard to prevent access; vehicles are washed in an indoor wash bay; and all chemicals used are stored indoors. The garage operations are discussed in more detail in the Allouez Stormwater Management Plan dated 2008.

BMP: Farm site management to reduce stormwater pollution.

Manage farm site (yard waste site) to minimize stormwater runoff: The farm site is operated to not store baled leaves, white goods, refuse, scrape materials, and brush for any extended period. No leaves are stored on-site, they are direct hauled to end users following collection. Brush is collected curbside and hauled to the yard waste site and piled until September when it is ground up. Some ground mulch is hauled of landscapers and other users, and some ground mulch is made available to residents for pickup. No materials are stored thru the winter except for the ground mulch. Vegetated cover surrounds the farm site to reduce impact of any runoff. The waste oil facility is located at the resident accessible section of the site, and is covered and enclosed in a spill containment tank. The yard waste drop-off site is staffed by a Village employee for most of the operating hours of the facility to reduce unwanted materials.

BMP: Conduct nutrient management planning for Village owned properties.

-Number of Village owned properties with >5 acres of turf area fertilized: The one property larger than 5 acres that is fertilized is the Allouez soccer complex and baseball fields. Management of this property is under a nutrient management plan. The other large properties are the river parkway areas which are not fertilized.

-Number of nutrient management plans prepared for Village owned properties: A nutrient management plan has been prepared for the Allouez soccer complex by a professional landscaping firm.

MS4 2016 Annual Report Pollution Prevention March 2017
Updated: February 2017

VILLAGE OF ALLOUEZ

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Department of Public Works

Winter Road Management Activities—2016 Annual MS4 Report

Products used for Winter Road Management

Liquid salt brine is used on village streets in advance of snow and ice storms--primarily on the main village streets (Libal Street), intersections with stop signs, and hillside streets. The application is by a liquid tank and feed system installed on one plow truck.

The six plow trucks employ road salt addition pre-wetted with liquid salt brine at the Swenson spreader. Though plow travel speeds are low in the village (probably not requiring brine addition) brine is used as it may benefit in reducing road salt usage. The sixth plow truck was outfitted with liquid brine in 2015.

Type of Equipment used to apply Salt Products

Plow trucks include the following:

1. Plow Truck #8 International—Monroe 50-gallon brine system, Force America controller, Swenson spreader, Wausau plow and wing.
2. Plow Truck #26 Peterbilt—Shop built brine system 1,800-gallon tank, brine pump, and spray bar. This is a mobile tank system that can be loaded into Truck #26 as-needed. Brine is purchased from DePere/Green Bay/Brown County as needed.
3. Plow Truck #29 Western Star—VariTech 120-gallon brine system, Certified Power Controller, Swenson spreader, Henke plow and Universal wing plow.
4. Plow Truck #42 Peterbilt—Monroe 50-gallon brine system, Force America controller, Swenson spreader, Wausau plow and wing.
5. Plow Truck #91 Peterbilt—Certified Power Controller 75-gallon brine system, Swenson spreader, Henke plow.
6. Plow Truck #93 International—Monroe 50-gallon brine system, Force America controller, Swenson spreader, Wausau plow and wing.
7. Grader #51 John Deere—Belly plow and Falls wing plow. Used for removing heavy snow and ice build-up.
8. Front Loader Plow #49 Volvo—Drott plow. Used for plowing street courts.
9. Front Loader Plow #50 Volvo—PRQ11 plow. Used for plowing street courts.

Amount of Product used per Month

Road salt usage is as follows:

<u>Month</u>	<u>Product Used (tons)</u>
January 2015	95
February	80
March	80
November	65
December	<u>100</u>
Total Used 2014	420 tons

Dry road salt is applied at salt spreader settings ranging from 200-300 lbs per mile, with the target being 200 lbs per mile. This is the spreader setting but the spreader only operates intermittently as actuated by the operator. The actual application rate for the year is approximately 3.5 tons dry salt per curb mile per year.

Streets are pretreated with liquid salt brine using Truck #26 equipped with a 1,800 gallon brine tank, pump, and spray bar system that is controlled from the driver cab. Liquid brine is used dependent on temperature (not used when the road surface temperature is less than 15-degrees) in advance of snow and ice storm events. Liquid brine is effective at reducing snowplowing for the minor snow events.

Liquid brine used in 2015 was 5,760 gallons. Liquid brine is applied at a rate of 30-gallons per curb-mile.

Liquid brine used in 2016 was 1,702 gallons. Liquid brine is applied at a rate of 30-gallons per curb-mile.

Anti-Icing, Equipment Calibration, and Salt Reduction Strategies

The plow truck spreaders and brine systems are calibrated annually by staff, and also calibrated every two years by a factory trained service representative.

The dry road salt application rate has been reduced each year to a low rate of 200 lbs (residential streets) to 300 lbs (main streets) per mile for 2016. Liquid brine is added to the salt spreaders to improve effectiveness and reduce usage. It is felt, in the Allouez situation, to have a small impact on reducing road salt usage.

The remaining plow truck without a brine tank to pre-wet dry salt during spreading was fitted with a brine system in 2015.

Liquid salt brine is applied to village streets in advance of snow/ice storms when the road surface temperature is above 15-degrees F. When the surface temperature is anticipated to drop below this temperature liquid brine is not applied as it can result in icy streets. Liquid salt brine has reduced the need for dry salt spreading and reduced the snowplowing required for storm events of less than 2" snowfall. Liquid brine will continue to be used.

Allouez applies road salt to intersections and on hill slopes. Spot application is used in general and relies on traffic spreading the salt over the remaining roadways. This works well and reduces salt usage.

In general, Allouez has reduced road salt usage. In 2006 and 2007 road salt usage was more than 1,000 tons per year. Since 2012 road salt usage ranged from 500 to 600 tons per year. For 2014 and 2015 road salt usage has been in the range of 350 to 550 tons per year. The low salt usage in 2015 is due to the lack of snow and ice conditions during that winter.

Road salt usage in 2016 is slightly increased to 420 tons, but this is within the expected operating range for the village.

MS4 Winter Road Maintenance 2016 Annual SW Report Feb 2017
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Department of Public Works

MUNICIPAL STORMWATER TREATMENT FACILITIES

The following are the installed and operating municipal stormwater treatment facilities in the village of Allouez as of January 1, 2017.

<u>Treatment Facility</u>	<u>Watershed</u>	<u>Drainage Basin</u>	<u>Acres</u>
1. Longview Pond	East River	EBMPE020	190.45
2. Kiwanis Pond	East River	EBMPE030	127.82
3. Hoffman Pond	East River	EBMPE040	158.77
4. Boyd Pond	East River	EBMPE210	114.56
5. Macco Pond	East River	EBMPER9	246.39
6. Heritage Hill Pond	Fox River	EBMPF042A	253.80
		EBMPF042B	41.28
		EBMPF060	5.29