



# Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Division of Water Pollution Control ANNUAL FACILITY INSPECTION REPORT

### for NPDES Permit for Storm Water Discharges from Separate Storm Sewer Systems (MS4)

*This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. Complete each section of this report.*

Report Period: From March, 2017 To March, 2018

Permit No. ILR40

#### MS4 OPERATOR INFORMATION: (As it appears on the current permit)

Name: Village of Brookfield

Mailing Address: 4545 Eberly Avenue County: Cook

City: Brookfield State: IL Zip: 60513 Telephone: (708) 485-2540

Contact Person: Ms. Amy Wagner Email Address: (Person responsible for Annual Report)

#### Name(s) of governmental entity(ies) in which MS4 is located: (As it appears on the current permit)

Village of Brookfield

#### THE FOLLOWING ITEMS MUST BE ADDRESSED.

A. Changes to best management practices (check appropriate BMP change(s) and attach information regarding change(s) to BMP and measurable goals.)

- 1. Public Education and Outreach
- 2. Public Participation/Involvement
- 3. Illicit Discharge Detection & Elimination
- 4. Construction Site Runoff Control
- 5. Post-Construction Runoff Control
- 6. Pollution Prevention/Good Housekeeping

B. Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.

C. Attach results of information collected and analyzed, including monitoring data, if any during the reporting period.

D. Attach a summary of the storm water activities you plan to undertake during the next reporting cycle ( including an implementation schedule.)

E. Attach notice that you are relying on another government entity to satisfy some of your permit obligations (if applicable).

F. Attach a list of construction projects that your entity has paid for during the reporting period.

**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Owner Signature:

Ms. Amy Wagner

Printed Name:

5/30/2017

Date:

Director of Public Works

Title:

EMAIL COMPLETED FORM TO: [epa.ms4annualinsp@illinois.gov](mailto:epa.ms4annualinsp@illinois.gov)

or Mail to: ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
WATER POLLUTION CONTROL  
COMPLIANCE ASSURANCE SECTION #19  
1021 NORTH GRAND AVENUE EAST  
POST OFFICE BOX 19276  
SPRINGFIELD, ILLINOIS 62794-9276

IL 532 2585 WPC 691 Rev 6/10 This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

**SECTION A.  
 CHANGES TO BEST MANAGEMENT PRACTICES**

X Indicates BMPs performed as proposed

√ Indicates changes to BMPs

Year 4		Year 4	
	<b>A. Public Education and Outreach</b>		<b>D. Construction Site Runoff Control</b>
X	A.1 Distributed Paper Material	X	D.1 Regulatory Control Program
	A.2 Speaking Engagement	X	D.2 Erosion and Sediment Control BMPs
	A.3 Public Service Announcement	X	D.3 Other Waste Control Program
	A.4 Community Event	X	D.4 Site Plan Review Procedures
	A.5 Classroom Education Material	X	D.5 Public Information Handling Procedures
X	A.6 Other Public Education	X	D.6 Site Inspection/Enforcement Procedures
			D.7 Other Construction Site Runoff Controls
	<b>B. Public Participation/Involvement</b>		
	B.1 Public Panel		<b>E. Post-Construction Runoff Control</b>
	B.2 Educational Volunteer	X	E.1 Community Control Strategy
X	B.3 Stakeholder Meeting	X	E.2 Regulatory Control Program
	B.4 Public Hearing	X	E.3 Long Term O&M Procedures
X	B.5 Volunteer Monitoring		E.4 Pre-Const Review of BMP Designs
	B.6 Program Coordination	X	E.5 Site Inspections During Construction
X	B.7 Other Public Involvement	X	E.6 Post-Construction Inspections
			E.7 Other Post-Const Runoff Controls
	<b>C. Illicit Discharge Detection and Elimination</b>		
X	C.1 Storm Sewer Map Preparation		<b>F. Pollution Prevention/Good Housekeeping</b>
X	C.2 Regulatory Control Program	X	F.1 Employee Training Program
	C.3 Detection/Elimination Prioritization Plan	X	F.2 Inspection and Maintenance Program
	C.4 Illicit Discharge Tracing Procedures	X	F.3 Municipal Operations Storm Water Control
	C.5 Illicit Source Removal Procedures		F.4 Municipal Operations Waste Disposal
	C.6 Program Evaluation and Assessment		F.5 Flood Management/Assess Guidelines
X	C.7 Visual Dry Weather Screening	X	F.6 Other Municipal Operations Controls
	C.8 Pollutant Field Testing		
X	C.9 Public Notification		
X	C.10 Other Illicit Discharge Controls		

## **SECTION B. STATUS OF COMPLIANCE WITH PERMIT CONDITIONS**

The status of BMPs and measureable goals from Year 4 are described below in the following categories (A-F):

### **A: PUBLIC EDUCATION AND OUTREACH**

#### **A.1: Distributed Paper Material**

The Goal for this program is to increase the awareness to impacts of stormwater discharges on water bodies and the actions the public can take to reduce discharge of pollutants, as well as discharge overall.

Goal for Year 4: Include information in Newsletter regarding green infrastructure strategies.

Status: Information regarding storm water issues, flooding, recycling, leaf pickup, Village-wide cleanups, Salt Creek cleanup activities, Adopt-a-Spot, bulk item removal, water conservation, Christmas tree recycling, as well as articles from the Conservation Commission, Tree City USA, and spring cleanup recommendations are included in the Village's newsletter, entitled "The Brookfielder." The newsletter is mailed to all 19,000 residents, and may also be picked up at Village Hall as well as viewed online. Additional green infrastructure strategies are being researched and will be included in future publications. The intent is to reach out to all residents of all ages. Copies of the newsletter are kept on file.

#### **A.6: Other Public Education**

The Goal for this program is to increase the awareness of impacts of stormwater discharges on water bodies and the actions the public can take to reduce discharge of pollutants as well as discharge overall.

Goal for Year 4: Continue website and modify as needed.

Status: The Village has launched a section on the Village website entitled "Stormwater Information" which contains background information regarding the NPDES Phase II Stormwater Program (MS4s) as well as a link to the EPA MS4 website: [www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater). It also includes the Notice of Intent (NOI) document and Annual Reports. Background information regarding Green Infrastructure strategies is currently being reviewed with the intent of being included in the future.

Currently, the website contains an informative section from the Beautification Commission regarding the mission of the various clean up and planting groups in the Village. The website also contains a page from the Conservation Commission with informative material regarding ecological restoration as well as links to Chicago Wilderness, Salt Creek, Forest Preserve District of Cook County, and DesPlaines River Valley Restoration Volunteers, which all contain further education regarding stormwater and ecological processes.

Furthermore, the Village website continued to include information regarding street sweeping, yard waste disposal, tree planting, recycling, and garbage pick-up as it has done in years past. The website is maintained by the Village Manager's office. The intent is to reach out to all residents of all ages.

### **B: PUBLIC PARTICIPATION/INVOLVEMENT**

#### **B.3: Stakeholder Meetings**

The Goal for this program is to facilitate resident participation and involvement, thereby increasing resident empowerment and responsibility. Through this partnership, the residents can be utilized as a resource in the Storm Water Program.

Goal for Year 4: No milestone goal established.

Status: The Conservation Commission hosts meetings on a monthly basis. The meetings are open to all residents. Approximately 12 residents are in attendance each meeting. The Beautification Commission also hosts meetings on a monthly basis, which are open to all residents. Approximately 12 residents are in attendance each meeting. Adopt-a-Spot hosts a yearly meeting, of which approximately 35 people attend each year.

All of the above groups provide excellent opportunities for resident involvement and are in partnership with the Village Staff.

#### **B.5: Volunteer Monitoring**

The Goal for this program is to facilitate resident participation and involvement, thereby increasing resident empowerment and responsibility. Through this partnership, the residents can be utilized as a resource in the Storm Water Program.

Goal for Year 4: Continue volunteer based annual clean-up program.

Status: Adopt-a-Spot is an ongoing program which was overseen by the Beautification Commission. The program includes approximately 40 sites within the Village and is implemented approximately 5 times over the course of the year. Volunteers are organized to pick up litter and pull weeds from flowerbeds in parks, provide landscaping to traffic islands, historical markers and other public spaces. The Village provides supplies such as trash bags and disposal service for debris and litter.

The Beautification Commission is the local group which also hosts an Adopt-a-Highway program. Approximately 12 residents participate in clean-up activities along Ogden Avenue, 4 times a year. The Village provides supplies such as trash bags and disposal service for debris and litter.

The Conservation Commission held a Clean Up Day entitled "Project N.I.C.E." which was held in April and October. Approximately 4 each 20 Cubic Yard dumpsters were filled with debris and removed, for a total of 80 Cubic yards of removal. In the Spring, the Village provided 190 Cubic Yards of Mulch, 8 Cubic Yards of Topsoil, and 37 man-hours and equipment hours of assistance. In the Fall, the Village provided Gloves, Flowers and Bulbs, Grass Plants, and 33 man-hours and equipment hours of assistance.

The Village continued its "Meet the Creek" program for the 12<sup>th</sup> consecutive year. The program is based upon educating residents of all ages about the Salt Creek ecosystem and includes Canoe Training on Salt Creek, as well as reptilian education and information regarding wildflowers. A relevant subject of the education that is provided is storm water awareness, specifically the quality and quantity of storm water entering the creek and how it affects the ecosystem. The program also includes a volunteer aspect which includes 4 to 5 work days of removing invasive species along the creek such as Crownweed, Teasle, Buckthorn, Honey Suckle, etc. Over 30 residents were involved this past reporting period.

The Village has maintained its Governor's Hometown Award status for 24 years, by working together with local schools, cub scouts, religious organizations, and others to include for over 250 residents in participation with volunteer activities, many of which include clean up and debris removal.

#### **B.7 Other Public Involvement**

The Goal for this program is to facilitate resident participation and involvement, thereby increasing resident empowerment and responsibility. Through this partnership, the residents can be utilized as a resource in the Storm Water Program.

Goal for Year 4: Continue volunteer stenciling program.

Status: All newly installed lids on Capital Improvement Projects (approximately 25 Each) contained the labeling, "No Dumping, Drains to Waterways". Public Works has purchased a placard which contains the same message. A copy of the placard is kept on file and is being considered for use in the future.

## **C: ILLICIT DISCHARGE DETECTION AND ELIMINATION**

### **C.1: Storm Sewer Map Preparation**

The Goal for this program is to develop a map of storm sewers and their outfalls.

Goal for Year 4: Continue to update atlas with as-built information.

Status: The Storm Sewer map is continually updated each Construction season by Hancock Engineering. Any additional outfalls or revisions to existing outfalls are added to the map.

### **C.2: Illicit Discharge and Dumping Ordinances**

The Goal for this program is to reduce and eliminate all illicit discharges and illegal dumping into the storm sewer system.

Goal for Year 4: Coordinate Village ordinance with proposed updated Cook County (WMO).

Status: The Illicit Discharge and Illegal Dumping Ordinance with penalties remains in place. As of May 1, 2014, the Cook County Watershed Management Ordinance (WMO) which contains language and authority regarding this matter became effective. Upon further review of the WMO, Village staff will determine if additional requirements or more stringent penalties are found. The draft WMO contained language regarding enforceable requirements for the prompt reporting to the MS4 of all releases, spills and other unpermitted discharges to the separate storm sewer system. The final version will be reviewed to ensure similar content is included.

### **C.7: Visual Dry Weather Screening**

The Goal for this program is to determine the amount of illegal discharges which are occurring within the Village.

Goal for Year 4: Inspect and document all storm sewer outfalls.

Status: All of the nine (9) outfalls in the Village were inspected approximately on a quarterly basis. In total, 36 inspections were performed. No illegal discharges were observed, fish kills, color changes, or detection of any other unknown substances. The Village has created a form to record and monitor the inspection data. The form will be utilized in future reporting periods.

The Village inventory includes approximately 125 industrial and commercial facilities. No violations were reported or found at these locations. These locations are inspected periodically on an as-needed basis. The next reporting period will attempt to quantify the amount of facilities and the amount of inspections performed.

### **C.9: Public Notification**

The Goal for this program is to make the public aware of the penalties for illegal discharge and discourage illegal discharge.

Goal for Year 4: Continue updates.

Status: Typically, one of the quarterly newsletters addresses this matter, as reflected in this reporting period.

### **C.10: Other Discharge Controls**

The Goal for this program is to ultimately reduce and eliminate all illicit discharges and illegal dumping into the storm sewer system.

Goal for Year 4: Continue all programs.

Status: The Village of Brookfield has maintained its membership in the West Cook County Solid Waste Agency (WCCSWA). The WCCSWA offers many beneficial recycling programs to its members, with no direct costs to the

residents. As part of a joint program with the WCCSWA this year, the Village has been able to offer free electronics recycling to residents. The entire program including other member communities has yielded over 230,000 lbs. of electronic waste. Additionally, another opportunity to properly dispose of electronics is held at local area community college, Triton College twice yearly. The WCCSWA hosted an Annual National Prescription Drug Take Back Day in October of 2017. Illinois had 147 collection sites, with 44,081 pounds of medications collected. In the past, an annual Household Hazardous Waste event was held, which received over 3,000 vehicles who deposited waste. Unfortunately, due to funding cutbacks, the County has no longer been able to provide funding for this program. We look forward to the reinstatement of this program. In the meantime, a long term Hazardous Waste collection program is available in Naperville for the surrounding areas.

The Village has proudly implemented an intermittent program to provide a “Drop-Off” facility for residents to deposit electronic waste, at Village Hall. This service to residents has been quite popular, and has disposed of approximately 100 Cubic Yards over the past reporting period.

## **D: CONSTRUCTION SITE RUNOFF CONTROL**

### **D.1: Regulatory Control Program**

The Goal for this program is to submit erosion and sediment control plans for all developments greater than or equal to one acre in size to the IEPA.

Goal for Year 4: Continue program.

Status: Development plans that require a NOI for Construction Activities under NPDES permit No. ILR10 are identified by the Village Engineer as part of the site plan review process. The erosion and sediment control plans are reviewed by the Building Department and/or Hancock Engineering during the site plan review process. For Federally funded projects or projects involving IDOT, a Stormwater Pollution Prevention Plan is also required for developments of this size and the Contractor is also required to sign the Contractor’s Certification Statement (IDOT BDE 2342), of which he will then assume the responsibility and release the Village from liability. During this reporting period, approximately 8 development plans were reviewed, all of which were below 1 acre in size, thereby exempt from the requirements listed above.

Furthermore, within the erosion and sediment control plans, the type of inlet filters required on construction projects has been revised to reflect the recent update to the Illinois Urban Manual. The use of hay bales is considered obsolete, and the new method of reusable sediment trap filters is more effective and efficient. Hancock Engineering attended a detailed presentation on this matter by the Kane-Dupage Soil and Water Conservation District. The presentation provided further information regarding Green Infrastructure storm water management techniques. The use of the new inlet filters is considered to be a Green method. We look forward to including additional Green methods in the upcoming reporting periods.

### **D.2.: Erosion and Sediment Control BMPs**

The Goal for this program is to investigate and inspect the erosion and sediment control measures in public projects as part of developments greater than 1.0 acre.

Goal for Year 4: Continue program.

Status: This reporting period, 3 public projects and 6 private projects were inspected by the building department or Hancock Engineering with respect to erosion and sediment control measures, as listed within Section F of this report. Hancock Engineering typically provides the construction site inspection for the public projects. There are approximately 3 inspectors in total who perform erosion control inspections. Hancock Engineering attended an NPDES Compliance seminar led by CPESC speakers, in order to obtain updated information in regard to erosion and sediment control measures. Additionally, Hancock Engineering added a Designated Erosion Control Inspector (DECI) to staff, in an effort to improve erosion and sediment control inspection practices.

### **D.3: Other Waste Control Program**

The Goal for this program is to ensure excavated materials are inspected, classified, and then delivered to the appropriate dumping facility based on the determined classification of waste.

Goal for Year 4: Continue program.

Status: Effective August 2010, the IEPA has placed more stringent requirements regarding the excavation of soils from construction sites. In order for the Contractor to utilize Clean Construction and Demolition Debris (CCDD) landfills, the excavated material must be certified and tested by a Licensed Professional Engineer, as stated in EPA Form LPC 662 and 663. Furthermore, the IEPA is required to be notified by the landfill whenever material is delivered and discovered to not be acceptable CCDD fill and thereby rejected from the landfill. This process, including the established penalties in place, help ensure that the materials will then be delivered to an appropriate facility. The mentioned requirement has been required by the Village Engineer to be provided as a General Note on all Construction Plans. This helps to ensure that all excavated materials are disposed of properly.

#### **D.5: Public Information Handling Procedures**

The Goal for this program is to track the number of complaints received and processed related to soil erosion and sediment control.

Goal for Year 4: Continue and review the specific complaints.

Status: The Village currently keeps record of all of the public works directed complaints. The department is attempting to assemble a filing system to better categorize the complaints. Once this system is implemented, the specific complaints to erosion and sediment control can be reviewed and the input provided can be of value. The amount of complaints can then be tallied as well. At this time the form has been created and is ready for use. There were no complaints received during the past reporting period directly with regard to erosion control. Several complaints were received due to clogged storm sewer laterals, which turned out to be a result of excessive leaves in the system, not from erosion control methods.

#### **D.6: Site Inspection/Enforcement Procedures**

The Goal for this program is to ensure 100% of all private construction sites are inspected for 100% of the required erosion and sediment control BMPs.

Goal for Year 4: Continue program.

Status: Typically the Building Department is responsible for inspecting private projects in the Grading Phase, Building Phase, and for a Final Inspection. During this reporting period, there were a large number of private developments that were inspected. Approximately 3 private developments were single family homes (of the teardown/rebuild type of construction). No violations or enforcement actions have been reported. A Certificate of Occupancy will not be granted unless the inspection is approved. All sites were approved without incident.

### **E: POST-CONSTRUCTION RUNOFF CONTROL**

#### **E.1: Community Control Strategy**

The Goal for this program is to reach out to the community as a means of reducing sources of post-construction control.

Goal for Year 4: Continue program.

Status: Due to the magnitude of problems from recent flooding, the Village has implemented a Flood Control Program. The intent of the program is to encourage residents to install flood control devices on their privately maintained sanitary sewer services. The flood control devices will keep the combined sewage from entering the basements of residences during storm events. The result will be a decrease in the amount of basement backups by reducing the amount of contaminated sewage entering residences, streets, and storm sewers, and Sanitary

Sewer Overflow (SSO) issues will be mitigated. Examples include installing overhead sewers or backflow preventers. The Village provides as much as 50% reimbursement to residents for an improvement up to \$10,000 in order to aid residents in this venture. Over past reporting periods, the Village has proudly provided over \$88,000.00 to residents as part of the program. This program was unavailable this past reporting period, but the Village plans to offer it again in future reporting periods. This BMP can also be considered a pollution control retrofit.

### **E.2: Regulatory Control Program**

The Goal for this program is to enforce the Cook County Watershed Management Ordinance (WMO) and adopt any amendments.

Goal for Year 4: Continue enforcement of WMO.

Status: As of May 1, 2014, the WMO was considered effective. The WMO contains restrictions on the quality and quantity of water to be permitted to be discharged from developed sites.

### **E.3: Long Term O&M Procedures**

The Goal for this program is to include Green measures in future developments.

Goal for Year 4: Continue implementation of Green construction as budget allows.

Status: The Village is continually learning about Green construction methods and how they can be applied to the urban characteristics of the Village, with the intent of introducing requirements for such.

As part of the Grand Boulevard Improvements Project, the Village of Brookfield sought after the inclusion of a bioswale. The bioswale included the subsurface storage of storm water as well as evapotranspiration by native plantings. The bioswale minimizes the amount of storm water actually leaving the property while filtering a majority of pollutants from the street. A potential outcome of this Green infrastructure project is a rippling effect on other landowners within the Village who are contemplating the installation of a Green project. Lastly, this project should serve as an educational tool to residents about Green infrastructure techniques and the benefits. An educational sign has been installed at the bioswale and the Village has provided maintenance of the bioswale so that it may remain vigorous for years to come.

This previous reporting period's green construction accomplishments included the installation of a Green Alley. The alley utilized permeable pavers to capture storm water and reduce flows to the combined sewer system. This reporting period's planning accomplishments include initial design of a pump station to reduce flooding issues along Salt Creek, and a downspout disconnection program.

The Village intends to continue to look into the feasibility of Green BMP strategies and how to appropriately apply them to future Village capital improvement projects. Upon developing a defined strategy (or various strategies), the Village can then move forward and implement them. This will be elaborated discussed in further detail in the next reporting period.

### **E.6: Post Construction Inspection**

The Goal for this program is to inspect construction sites periodically after final acceptance, to ensure that all BMPs contained in the plans are maintained in place. This will also entail Green construction methods in future developments.

Goal for Year 4: Inspect 50% of all sites on an annual basis, ensure that storm water BMPs are working appropriately.

Status: This task was performed this reporting period, but will be better documented in upcoming reporting periods. The Village would like to inspect the various aspects of storm water improvements and Green construction wherever within the Village jurisdiction, which were called for in the original construction plans.

Currently, the Village has been performing Post Construction Inspection wherever complaints have been presented or an observed issue was noted. As a preventative measure, the Village should inspect sites which are not initially deemed to be a problem.

## **F: POLLUTION PREVENTION/GOOD HOUSEKEEPING**

### **F.1: Employee Training Program**

The Goal of this program is to identify current practices that contribute to stormwater pollution and implement programs and procedures for Public Works activities that reduce and eliminate the discharge of pollutants into storm sewer systems.

Goal for Year 4: Continue training program as well as incorporate Green/Sustainability education.

Status: The Village continues the training program by educating its employees in topics applicable to storm water management. The Public Works Water Operator attended annual training classes containing information regarding reduction of water losses, as well as a seminar regarding Corrosion of Water Mains. Public Works employees again attended training upon the purchase of a new and improved street sweeper. The training program for the sweeper included methods to reduce the sweeping of debris and leaves into the storm system. Public Works employees also attended IRMA safety training, which touched upon the safe management of materials and liquids which could ultimately enter the storm system. The Village Forester attended several seminars regarding various topics with respect to trees.

### **F.2: Inspection and Maintenance Program**

The Goal of this program is to directly reduce the amount of debris from entering storm sewer structures and entering the storm sewers.

Goal for Year 4: Continue street sweeping program and sewer cleaning/structure cleaning program.

Status: The entire Village is swept on average once every 7 days. Street sweeping covers approximately 10 miles per day of operation, operating 5 days per week. Street sweeping is performed for a minimum of 8 months, but changes in weather may increase the amount. 4.5 cubic yards of debris is removed per day on average, resulting in a yearly total of 810 cubic yards of debris removal.

Approximately 500 Catch Basins were cleaned this reporting period. The jetting of sewers is performed on an "as needed" basis. Approximately 3,500 feet of sewers were jetted this year by public works. Approximately 40,000' of combined sewers were jetted and televised by a Contractor this year as well.

The Village provides extensive leaf removal in the fall, utilizing their own manpower as well as Contractors. In total, approximately 3,300 Cubic Yards of leaves were removed. This preventative measure reduces substantial discharges of particulates/solids, phosphorus and petroleum based materials into Salt Creek. Public Works provides branch pickup for parkway trees as well as special private property pickup under special circumstances.

The "Small Streams" debris removal program, as carried out by the MWRD, was not performed this reporting period. The program is performed as needed and as funding allows. The Village works in partnership with the MWRD by providing aid to the debris removal process.

### **F.3: Municipal Operations Storm Water Control**

The Goal of this program is to directly reduce the amount of contaminants entering the storm sewer system, as a result of municipal operations.

Goal for Year 4: Continue modified program.

The Village of Brookfield provides a storage facility for its salt. The salt is kept beneath a covered structure. The application of the salt to streets has been kept at a minimum, and additives are applied to increase the

effectiveness of the salt while minimizing the quantity. Approximately 1,000 Ton of Rock Salt with Calcium Chloride was applied to the streets this past year. Other less abrasive salts were used on sidewalks containing Magnesium Sulfate, reducing corrosion and damage to surface materials.

The Village of Brookfield also has a strict schedule of frequent maintenance on its fleet of Village vehicles, in order to reduce the amount of unnecessary discharge of automotive fluids. The machinery is under a schedule which is monitored on an "hourly" basis. This program will be continued. Triple Basins in garage areas are continuously inspected and cleaned on a regular basis. The maintenance yard is inspected on an as-needed basis, and maintenance is performed accordingly. A Stormwater Pollution Prevention Plan (SWPPP) was created in an effort to address the stormwater control needs of the Public Works Yard.

25 gallons of pesticides and herbicides were applied throughout the Village by staff. The targeted locations are typically vacant lots and overgrown areas. Approximately 500 gallons were applied by Contractors to other locations within the public Right-of-Way.

The Village has received the Tree City USA award for 37 years and has received an additional distinction by way of the "Growth Award" for 24 years, for those communities who are above and beyond the Tree City requirements. The Village planted approximately 80 trees this reporting period and was fortunate to receive a grant for Emerald Ash Borer (EAB) restoration. The Tree City program reduces the amount of erosion while improving aesthetics at the same time. Furthermore, the Village is part of the Tree Consortium which helps utilize local nurseries and improve the quality of trees, thereby reducing waste and additional installations.

#### **Assessment of Appropriateness of Identified BMPs (and Progress Towards a Reduction in Pollutants Discharged)**

The BMPs listed below provided pertinent results with regard to their effectiveness in meeting their measurable goals and reducing pollutant discharge, within this reporting period. All other BMPs which are omitted either did not provide an affirmative result this period (either positive or negative), or need more time to be observed in order to fairly judge their effectiveness. An in depth analysis of all BMPs is scheduled for the end of the 5 year period.

**A.1 Distributed Paper Material** Resident input regarding the newsletters is taken into account, when received. It is difficult to attribute a decrease in pollutants directly to the newsletters, so the most appropriate way to determine the effectiveness of a newsletter article is from Resident input at Village Hall.

**B.5 Volunteer Monitoring** An unintended, positive result of trash removal was Public Education. In addition to the reduction of pollutants, many residents were able to become more knowledgeable about the Stormwater System and pass this information along to their neighbors. This can be incorporated in the future as an Outreach Strategy.

**B.7 Other Public Involvement** Public Works employees and Village officials reported that an increase in resident discussion occurred regarding the stencils and lids. This supports the fact that stormwater awareness is on the rise, which leads to the ultimate goal of increasing resident involvement. The strategy is to incorporate as many residents as possible.

**C.7 Dry Weather Screening** The goal of the Illicit Discharge Detection and Elimination category is to reduce and eliminate all illegal discharges. There have been nearly zero illicit discharges reported or prosecuted in the Village. This may or may not be attributed to the effectiveness of the storm water program. In order to support this fact that the program is successful and to increase confidence that no illegal discharges actually occurred, further inspection should be performed. It is anticipated that most of the additional inspection will be performed by residents who have gained a greater awareness of the storm sewer system. They in turn will communicate directly and indirectly with Village staff. Village staff should also increase the amount of inspections, when possible. This relationship between the program and the amount of illegal discharges will be evaluated in depth at the end of the 5 year period.

**C.10 Other Discharge Controls** The goal of this BMP category is a reduction of contaminants. It is unknown whether the reduction would take place primarily at a landfill, within Village boundaries, or a location within transit. The primary source-point needs to be investigated further in order to effectively gauge the program. The electronics recycling is assumed to reduce the amount of mercury. At this time, the Village does not have funding to perform mercury detection tests as a program gauge, but try to obtain data from other testing entities.

**D.1 Regulatory Control Program** The goal of this BMP category is to reach 100% compliance for NOI submittal of development projects that are 1.0 acre or greater. Unfortunately, with the economic downturn there are not many developments being planned. Also, due to the urban nature of the Village, most developments are on property that is less than 1.0 acre in size.

However, when this BMP is indeed applicable, we believe it will be quite effective by placing the responsibility on the Contractor (Contractor's Certification Statement), and should decrease the amount of erosion control/pollutant discharge deficiencies. The amount of penalties given to Contractors, if any, will be tabulated and evaluated at the end of the 5 year period, with the assumption of a decrease.

**D.5 Public Information Handling Procedures**

This BMP will require several years of data collection in order to establish a benchmark. At that time, this BMP will be useful in order to evaluate the Construction Site Runoff Control category. The input from residents can be reviewed to determine if positive and beneficial changes can be made to the program. Also, the amount of complaints received will be analyzed. Ideally, a correlation between the increase/decrease of the amount of complaints and the effectiveness of the program, will be able to be observed.

**E.1: Community Control Strategy**

This BMP will be analyzed in future reporting periods with respect to volume of contamination which is mitigated, as well as the quantity of pollutants removed from the storm sewer system.

**E.3: Long Term O&M Procedures**

An apparent challenge for this BMP is being able to apply the Green Infrastructure strategies to an already developed urban area. The majority of foreseeable Green improvements would come by way of "retro-fit", as opposed to the ease of installation in a new development. Some of the retro-fit options we have been identified at this point are permeable pavers, tree-box biofilters, stand alone biofilters, rain gardens, rain barrels, and bioswales. At this point, the costs need to be fully evaluated, as well as an implementation schedule and associated requirements. The aesthetic concerns of a retro-fit are also to be reviewed. Another challenge is that when using a new technology, unfortunately there is a risk involved. Therefore, other pilot programs and case studies in the area need to be reviewed, while drawing as much pertinent data from them as possible.

**E.6: Post Construction Inspection**

This BMP will include strict inspection of Green construction methods in upcoming reporting cycles. Currently, Hancock Engineering is sharing basic information with the Village regarding Green methods. Over time, the Village inspectors should become more knowledgeable and experienced in this type of inspection. Another desired outcome of Post Construction Inspection is that word will spread amongst property owners to keep their storm systems working as designed, because the Village will perform future inspections.

**F.1: Employee Training Program**

Employee training is a key component to the success of the MS4 program. By educating the Village Staff on current practices that reduce and eliminate the discharge of pollutants into storm sewer systems allows the employees to perform these activities in a more effective manner.

**F.2: Inspection and Maintenance Program**

Street sweeping not only reduces the amount of debris that enters storm sewer structures and sewers, it also enhances the look of the community. This combined with the sewer televising and cleaning program helps the

Village identify areas that require maintenance and repair, thus keeping the sewer system operable and addressing issues before they become more costly.

### **F.3: Municipal Operations Storm Water Control**

By taking measures to properly store and protect the salt supply, the Village is able to reduce unnecessary runoff into the storm sewer. The maintenance of the Village vehicles also helps reduce automotive fluid leaks which in turn keeps these pollutants out of the storm sewer system.

## **SECTION C. INFORMATION AND DATA COLLECTION**

Rainfall data is continuously monitored by the 2 rain gauges at the Public Works yard. Additional local rainfall data is found on the MWRD website. The MWRD has 12 monitoring stations measured daily to the nearest hundredth of an inch. The Village relies on rain gauge information taken from the nearest rain gauge of the MWRD. The MWRD Rain Gauge No. 5 is located in nearby Cicero, IL. The rain gauge data is provided on the MWRD website at <http://www.mwrdd.org/irj/portal/anonymous/overview> and can be reviewed by clicking on the link entitled "Rain Data History."

Water quality testing is performed by the MWRD along the Des Plaines River on an annual basis. The MWRD generates a Water Quality Report, which is made available to the public on its website. The link to the website is: <http://www.mwrdd.org/irj/portal/anonymous/WQM>

The report contains a wide range of testing as well as a detailed analysis. The relevant data from the immediate vicinity of the Village of Brookfield includes a quantity of approximately 12 samples which were taken at a location both upstream and downstream from the Village of Brookfield's outfalls on the Des Plaines River.

## **SECTION D. NEXT REPORTING CYCLE - SUMMARY OF ACTIVITIES TO BE UNDERTAKEN**

The Village of Brookfield intends to pursue the milestones outlined for Year 4 in the 2014 Notice of Intent (NOI) Permit Renewal, with the exception of those discussed in "Assessment of Appropriateness of Identified BMPs (and Progress Towards a Reduction in Pollutants Discharged)", which are to be revised as such.

## **SECTION E. NOTICE OF RELIANCE UPON OTHER GOVERNMENTAL ENTITIES**

The Village of Brookfield relied upon the MWRD to satisfy some of the permit obligations during this time period.

The District's Board of Commissioners adopted the Watershed Management Ordinance (WMO) on October 3, 2013, which became effective on May 1, 2014. Reliance upon BMPs within the WMO will be discussed in future reporting.

