Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • 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 0210

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

Name: Village of Hoffman Estates Mailing Address 1: 1900 Hassell Road

Mailing Address 2: County: Cook

City: Hoffman Estates State: IL Zip: 60169 Telephone: 847-252-5800

Contact Person: Alan Wenderski, P.E. Email Address: alan.wenderski@hoffmanestates.org
(Person responsible for Annual Report)

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

Cook County Kane County

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: Date: 5/23/18

Alan Wenderski Printed Name: Village Engineer Title:

EMAIL COMPLETED FORM TO: 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

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.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

ANNUAL FACILITY INSPECTION REPORT FOR NPDES PERMIT FOR STORM WATER DISCHARGES FROM SEPARATE STORM SEWER SYSTEMS (MS4)

Village of Hoffman Estates
Year 15: March 2017 – March 2018

Section A. Changes to the Best Management Practices

There have been no changes to the Best Management Practices (BMPs) for the six minimum control measures as submitted in the Notice of Intent (NOI) for the Village of Hoffman Estates for the reporting period from March 2017 to March 2018.

Section B. Status of Compliance with Permit Conditions

The Village of Hoffman Estates is committed to the implementation of the BMPs in order to meet the requirements of the NPDES Phase II Stormwater Program. The status or progress of most of the measurable goals have been met or exceeded. This is especially noted for all site development construction projects.

The Village of Hoffman Estates has implemented numerous Best Management Practices (BMPs) in compliance with the goals outlined in the Village's 2014 Notice of Intent (NOI). The following is a status report on each of the BMPs and the activities that were undertaken during the March 2017 to March 2018 reporting period. The status or progress summary for each of the measurable goals in the minimum six compliance areas is presented below.

1. Public Education and Outreach

a. BMP No. A.1 Distributed Paper Material

Measurable Goal(s): Publish one stormwater pollution prevention related article annually in the Village-wide newsletter.

Milestones: Year 15: Publish one stormwater pollution prevention related article annually.

BMP Status: The Village of Hoffman Estates publishes a newsletter that is mailed directly to residents and businesses in the Village. The Village continued publishing stormwater quality articles within the newsletter during the March 2017 to March 2018 reporting period.

Three articles were published in May 2017 that were titled "Facts about Sanitary and Storm Sewers", "Protect our Water!" and "Storm Sewer Infrastructure", discussing water conservation tips and the efforts of the Village to keep debris and chemicals out of the storm sewer system with help from residents and businesses. Another article was published in May 2017, titled "Free Advice on Solving Drainage Concerns" that advertises the Village's effort to help residents to solve their drainage problem properly without creating adverse stormwater pollution. A new article subject published in June 2017, titled "Intro to Public Works – Vactor Sewer Cleaning and Excavating" informed residents and businesses about the Public Works efforts to inspect and clean the storm sewer system of debris and obstructions. An additional article was published in August 2017, titled "10 Facts about Storm Water" that support the Village's efforts to educate residents and businesses about stormwater quality.

The Village also maintains an electronic copy of its stormwater quality articles online on the Village of Hoffman Estates' website.

b. BMP No. A.3 Public Service Announcement

Measurable Goal(s): Twice a year, announce residential and commercial waste and recycling management opportunities through the Village website and newsletter.

Milestones: Year 15: Twice a year, announce residential and commercial waste and recycling management opportunities.

BMP Status: The Village of Hoffman Estates publishes a newsletter that is mailed directly to residents and businesses in the Village. The Village continued publishing various notices of recycling and waste management opportunities for almost every month during the reporting period. For example, in April 2017, notices were published about an electronics recycling opportunity, that yard waste collection had resumed, and that Public Works was coordinating a spring branch pick up service. For June 2017, the residents and businesses were notified of the nearest household hazardous waste disposal location in Naperville. The August 2017 newsletter informed residents that the Village will be hosting a large recycling event to collect various electronics, expired drugs/sharps, CFL light bulbs, batteries, printer cartridges and latex paint. In December 2017 and January 2018, reminders were sent about recycling options for Christmas trees and holiday lights. These articles and many more reminded readers of the proper disposal or recycling options of various items.

In 2017, due to the Village-wide notices about recycling opportunities, 1,036 pounds of holiday lights were recycled, 88.3 tons of electronics were collected throughout the reporting period from April through November and an additional 30.8 tons of electronics were collected at the one-day recycling event in August 2017.

The Village of Hoffman Estates utilizes the services of the Solid Waste Agency of Northern Cook County (SWANCC) to accept household hazardous materials from Hoffman Estates residents and businesses. Various events occur throughout the reporting period that includes arranging for drop off events and supplying the location of permanent SWANCC facilities that accept the hazardous items.

The Village updates the Village website by posting copies of the newsletter and inserting information within the Sustainability Commission, Public Works, Transportation and Engineering and Code Enforcement pages for residents and business to access. Upcoming recycling events are announced on the Village's home page for all to see.

c. BMP No. A.4 Community Event

Measurable Goal(s): The Village Improvement Day will be held annually to help decrease environmental and stormwater pollution.

Milestones: Year 15: Continue to host Improvement Day annually.

BMP Status: The Village of Hoffman Estates Public Works Department conducted an annual cleanup event from March 30 through April 7, 2017. This event was a department-wide effort including individuals from each division. Debris was removed from rights-of-way and Village grounds at Village Hall, Hoffman Estates Police Department, Golf and Higgins Road, Roselle Road, Algonquin Road, and Huntington Boulevard.

At the Public Works Open House event held on November 4, 2017, a storm water brochure was distributed to attendees labeled, "After the Storm – A Citizen's Guide to Understanding Stormwater".

2. Public Participation/Involvement

a. BMP No. B.1 Public Panel

Measurable Goal(s): Hold one meeting annually to discuss the NOI, MS4 annual inspection report, the Village's Storm Water Management Plan and stormwater related activities and projects.

Milestones: Year 15: The Storm Water Management Committee will meet.

BMP Status: The Storm Water Management Committee met on April 5, 2017 and discussed the NPDES permit and Stormwater Management Plan, Village Drainage Policy, MWRD Watershed Management Ordinance (WMO) amendment, and various Village-wide storm sewer improvement projects.

b. BMP No. B.7 Other Public Involvement

Measurable Goal(s): The Village will inform the residents and businesses twice a year of the existence of a contact number to report stormwater related issues.

Milestones: Year 15: Inform residents and businesses of the existence of a contact number.

BMP Status: The Village of Hoffman Estates publishes a newsletter that is mailed directly to residents and businesses in the Village. The Village publishes a contact number to report illegal dumping or spills within its stormwater quality articles located in the newsletter during the March 2017 to March 2018 reporting period.

Three articles were published during this reporting period that requested the residents and businesses help in keeping stormwater pollution at a minimum and how to report and issues. Two of those articles were published in May 2017 that were titled “Facts about Sanitary and Storm Sewers” and “Storm Sewer Infrastructure”, discussing the efforts of the Village to keep debris and chemicals out of the storm sewer system with help from residents and businesses. The third article was published in August 2017, titled “10 Facts about Storm Water” that support the Village’s efforts to educate residents and businesses about stormwater quality.

The Village also maintains an electronic copy of its stormwater quality articles online on the Village of Hoffman Estates’ website. The Village of Hoffman Estates Public Works Department also has a webpage outlining its storm sewer maintenance responsibilities

where readers are encouraged use the contact number to report any violations or contaminants.

3. Illicit Discharge Detection and Elimination

a. BMP No. C.1 Storm Sewer Map Preparation

Measurable Goal(s): Annually review the storm sewer map with respect to Village projects and new developments that have occurred and update as needed.

Milestones: Year 15: Review the storm sewer map and update as needed.

BMP Status: The Village of Hoffman Estates has an existing storm sewer map that is updated routinely in the Village's GIS system. Both Public Works and GIS employees monitor, maintain and verify the storm sewer system map. The GIS map allows detailed information to be incorporated into the drawings of each pipeline, structure and outfall. As-built information is collected and entered for all completed site development and other Village projects.

b. BMP No. C.2 Regulatory Control Program

Measurable Goal(s): Enforce the Village Code to regulate discharges into the storm sewer system.

Milestones: Year 15: Continue to enforce the Village Code for illicit discharges.

BMP Status: The Village of Hoffman Estates continues to enforce its Village Code that prohibits non-stormwater discharges into its storm sewer system.

c. BMP No. C.3/C.7 Detection/Elimination Prioritization Plan

Measurable Goal(s): Continually inspect and monitor outfalls and discharges for the detection and elimination of illicit discharges.

Milestones: Year 15: Continue to inspect and monitor for illicit discharges.

BMP Status: The Village Public Works Department preforms a monthly inspection of all outfalls and creek lines to monitor any illicit discharge. Inspection results are recorded and maintained for historical reference.

The Public Works Department cleaned over 75 catch basins and cleaned 1,100 feet of Poplar Creek East Branch during the reporting period.

d. BMP No. C.9 Public Notification

Measurable Goal(s): The Village will inform the residents and businesses annually of the existence of a contact number to report illegal dumping or illicit discharges.

Milestones: Year 15: Inform residents and businesses of the existence of a contact number.

BMP Status: Through published Village-wide newsletter articles, Facebook and Twitter pages, and the Village website about storm water quality, the public is encouraged to report any deficiencies, blockages or illicit discharges directly to Public Works or the Police non-emergency number. Homeowners are encouraged to report any possible code violations and/or contaminants that may be or have been dumped down a storm sewer catch basin inlet or creek line.

e. BMP No. C.10 Other Illicit Discharge Controls

Measurable Goal(s): Annually review the streets considered for construction in the Street Project and indicate on the plans which inlet structures are to receive stenciled (or equivalent) messages.

Milestones: Year 15: Continue program to stencil inlets within the Street Project.

BMP Status: The Village's street construction project requires that all new storm drain grates shall be Neenah R-3278-A, with barred style curb box that shows "DUMP NO WASTE DRAINS TO WATERWAY" lettering on the grate, or an approved equivalent grate for Type B6.12 and Neenah R-3501-P for M3.12 curb and gutter. For the 2017 Street Revitalization Project, 40 new B6.12 frame and grates and 49 new M3.12 frame and grates, for a total of 89, were installed at various street locations.

4. <u>Construction Site Runoff Control</u>

a. BMP No. D.1/D.2/D.4/D.6 Regulatory Control Program, Erosion and Sediment Control BMPs, Site Plan Review Procedures, Site Inspection/Enforcement Procedures

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual by requiring erosion and sediment control BMPs and inspecting construction sites.

Milestones: Year 15: Review site plans for appropriate BMPs, inspect construction sites for proper installation and maintenance of the BMPs, and respond to complaints.

BMP Status: The Village requires erosion and sediment control BMPs for all projects. The Village reviews site plans and inspects construction sites to ensure conformance with the Village Ordinance. Per Ordinance 10-3-13, the Village requires erosion and sediment control BMP designs prior to construction. The Village reviews the ESC plans for approval.

5. Post-Construction Runoff Control

a. BMP No. E.2/E.3/E.4/E.5/E.6 Regulatory Control Program, Long Term O & M Procedures, Pre-Construction Review of BMP Designs, Site Inspections During Construction, Post-Construction Inspections

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual to prevent stormwater pollution resulting from post-construction runoff.

Milestones: Year 15: Review site plans for appropriate BMPs, inspect construction sites for substantial conformance with the approved site plans, and ensure long-term maintenance of the BMPs.

BMP Status: Per Ordinance 10-3-13, the Village requires erosion and sediment control BMP designs prior to construction. The Village reviews the ESC plans for approval. New detention basin designs and BMPs are incorporated depending on site conditions to lessen polluted runoff from existing sites. Construction sites are inspected during and after construction for conformance and to facilitate in reducing polluted runoff.

6. Pollution Prevention/Good Housekeeping

a. BMP No. F.1 Employee Training Program

Measurable Goal(s): Annually provide Village employees with seminars or workshops for stormwater pollution prevention for municipal operations and illicit discharge detection and

elimination. Other training occurs less formally in an on-the-job fashion.

Milestones: Year 15: Continue stormwater pollution prevention training for Village employees.

BMP Status: The Village of Hoffman Estates Public Works Department currently conducts regular employee training including new employee orientation to prevent or reduce stormwater pollution from municipal activities. Employee training for material handling, storage, inspection and maintenance is also a component conducted by the Village in preventing or reducing stormwater pollution.

The Public Works Department conducted its annual Hazardous Material Awareness Training inclusive of MSDS review and GHS Hazard Information Training for all employees. In addition, annual staff training on winter road salt and deicing applications was completed before the snow season began.

The Village also participates in the DuPage River Salt Creek Workgroup (DRSCW) workshops, training, special meetings and educational activities for additional opportunities for training.

b. BMP No. F.2 Inspection and Maintenance Program

Measurable Goal(s): Continually inspect and maintain the storm sewer system.

Milestones: Year 15: Continue conducting formal inspection and maintenance.

BMP Status: The Village of Hoffman Estates Public Works Department has a formal Standard Operating Procedure in place for Drainage System Maintenance that is followed semi-annually or more frequently after a major storm event. Currently, the storm sewer inspection and maintenance program is conducted on various inlets and outfalls throughout the Village as noted on the inspection log. The regular inspection and maintenance program is also designed to reduce pollutant runoff from municipal facilities and operations. Employee training for material handling, storage, inspection and maintenance is also a component conducted by the Village in preventing or reducing stormwater pollution.

c. BMP No. F.3 Municipal Operations Storm Water Control

Measurable Goal(s): Continue the street sweeping program. Continue offering curbside yard waste and leaf collection weekly from April through the end of November.

Milestones: Year 15: Continue current programs with the current schedule.

BMP Status: The Village of Hoffman Estates' Public Works Department oversees the street sweeping program which conducted four sweeps in 2017; spring, summer and two fall sweeps. A total of 421 yards of debris was collected in 2017 which covered 296 curb miles from this operation.

The Village continues to offer curbside yard waste and leaf collection weekly from April to November through the Village's waste management provider. Spring and fall branch pick up is also offered by the Public Works Department. These services are advertised through the Village-wide newsletter.

Section C. Results of Information Collected/Analyzed/Monitoring

The Village of Hoffman Estates participates in the DuPage River Salt Creek Workgroup (DRSCW) and supports its water quality monitoring program, which meets the ILR40 permit objectives and requirements. The DRSCW reports containing monitoring data that was collected and analyzed, for Salt Creek, including reducing chloride impairments from deicing measures, can be reviewed under the attachment for Section C.

Various agencies have water quality monitoring data for Poplar Creek, including the Fox River Study Group (FRSG), IEPA, Forest Preserves of Cook County, the Illinois State Water Survey and the Metropolitan Water Reclamation District of Chicago.

In accordance with ILR40 V.A.2.b.x, the FRSG satisfies the monitoring requirement for the portion of the community located within the Fox River Watershed, which includes Poplar Creek, a contributor to the Fox River Watershed. The FRSG has developed the Fox River Implementation Plan (FRIP) to take the place of a traditional TMDL for dissolved oxygen and nuisance algae in the Fox River. The FRSG directly coordinates with the IEPA on the efforts described in the FRIP.

The Village of Hoffman Estates is committed to participating in the FRSG and supporting its efforts.

Section D. Summary of Planned Storm Water Activities During the Next Reporting Cycle

A summary of the stormwater activities planned by the Village of Hoffman Estates during the next reporting cycle is presented below:

1. <u>Public Education and Outreach</u>

a. BMP No. A.1 Distributed Paper Material

Measurable Goal(s): Publish one stormwater pollution prevention related article annually in the Village-wide newsletter.

Milestones: Year 16: Publish one stormwater pollution prevention related article annually.

b. BMP No. A.3 Public Service Announcement

Measurable Goal(s): Twice a year, announce residential and commercial waste and recycling management opportunities through the Village website and newsletter.

Milestones: Year 16: Twice a year, announce residential and commercial waste and recycling management opportunities.

c. BMP No. A.4 Community Event

Measurable Goal(s): The Village Improvement Day will be held annually to help decrease environmental and stormwater pollution.

Milestones: Year 16: Continue to host Improvement Day annually.

2. Public Participation/Involvement

a. BMP No. B.1 Public Panel

Measurable Goal(s): Hold one meeting annually to discuss the NOI, MS4 annual inspection report, the Village's Storm Water Management Plan and stormwater related activities and projects.

Milestones: Year 16: The Storm Water Management Committee will meet.

b. BMP No. B.7 Other Public Involvement

Measurable Goal(s): The Village will inform the residents and businesses twice a year of the existence of a contact number to report stormwater related issues.

Milestones: Year 16: Inform residents and businesses of the existence of a contact number.

3. Illicit Discharge Detection and Elimination

a. BMP No. C.1 Storm Sewer Map Preparation

Measurable Goal(s): Annually review the storm sewer map with respect to Village projects and new developments that have occurred and update as needed.

Milestones: Year 16: Review the storm sewer map and update as needed.

b. BMP No. C.2 Regulatory Control Program

Measurable Goal(s): Enforce the Village Code to regulate discharges into the storm sewer system.

Milestones: Year 16: Continue to enforce the Village Code for illicit discharges.

c. BMP No. C.3 Detection/Elimination Prioritization Plan

Measurable Goal(s): Continually inspect and monitor outfalls and discharges for the detection and elimination of illicit discharges.

Milestones: Year 16: Continue to inspect and monitor for illicit discharges.

d. BMP No. C.7 Visual Dry Weather Screening

Measurable Goal(s): Continually inspect and monitor outfalls and discharges for the detection and elimination of illicit discharges.

Milestones: Year 16: Continue to inspect and monitor for illicit discharges.

e. BMP No. C.9 Public Notification

Measurable Goal(s): The Village will inform the residents and businesses annually of the existence of a contact number to report illegal dumping or illicit discharges.

Milestones: Year 16: Inform residents and businesses of the existence of a contact number.

f. BMP No. C.10 Other Illicit Discharge Controls

Measurable Goal(s): Annually review the streets considered for construction in the Street Project and indicate on the plans which inlet structures are to receive stenciled (or equivalent) messages.

Milestones: Year 16: Continue program to stencil inlets (and/or equivalent, by replacing frame and grates) within the Street Project.

4. Construction Site Runoff Control

a. BMP No. D.1 Regulatory Control Program

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual by requiring erosion and sediment control BMPs and inspecting construction sites.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for proper installation and maintenance of the BMPs, and respond to complaints.

b. BMP No. D.2 Erosion and Sediment Control BMPs

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual by requiring erosion and sediment control BMPs and inspecting construction sites.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for proper installation and maintenance of the BMPs, and respond to complaints.

c. BMP No. D.4 Site Plan Review Procedures

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual by requiring erosion and sediment control BMPs and inspecting construction sites.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for proper installation and maintenance of the BMPs, and respond to complaints.

d. BMP No. D.6 Site Inspection/Enforcement Procedures

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual by requiring erosion and sediment control BMPs and inspecting construction sites.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for proper installation and maintenance of the BMPs, and respond to complaints.

5. Post-Construction Runoff Control

a. BMP No. E.2 Regulatory Control Program

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual to prevent stormwater pollution resulting from post-construction runoff.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for substantial conformance with the approved site plans, and ensure long-term maintenance of the BMPs.

b. BMP No. E.3 Long Term O & M Procedures

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual to prevent stormwater pollution resulting from post-construction runoff.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for substantial conformance with the approved site plans, and ensure long-term maintenance of the BMPs.

c. BMP No. E.4 Pre-Construction Review of BMP Designs

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual to prevent stormwater pollution resulting from post-construction runoff.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for substantial conformance with the approved site plans, and ensure long-term maintenance of the BMPs.

d. BMP No. E.5 Site Inspections During Construction

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual to prevent stormwater pollution resulting from post-construction runoff.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for substantial conformance with the approved site plans, and ensure long-term maintenance of the BMPs.

e. BMP No. E.6 Post-Construction Inspections

Measurable Goal(s): Continually enforce the Village Code and the Engineering Development Standards Manual to prevent stormwater pollution resulting from post-construction runoff.

Milestones: Year 16: Review site plans for appropriate BMPs, inspect construction sites for substantial conformance with the approved site plans, and ensure long-term maintenance of the BMPs.

6. <u>Pollution Prevention/Good Housekeeping</u>

a. BMP No. F.1 Employee Training Program

Measurable Goal(s): Annually provide Village employees with seminars or workshops for stormwater pollution prevention for municipal operations and illicit discharge detection and elimination. Other training occurs less formally in an on-the-job fashion.

Milestones: Year 16: Continue stormwater pollution prevention training for Village employees.

b. BMP No. F.2 Inspection and Maintenance Program

Measurable Goal(s): Continually inspect and maintain the storm sewer system.

Milestones: Year 16: Continue conducting formal inspection and maintenance.

c. BMP No. F.3 Municipal Operations Storm Water Control

Measurable Goal(s): Continue the street sweeping program. Continue offering curbside yard waste and leaf collection weekly from April through the end of November.

Milestones: Year 16: Continue current programs with the current schedule.

Section E. Notice of Qualifying Local Program

The Village of Hoffman Estates is relying on the Metropolitan Water Reclamation District of Chicago to enforce the Cook County Watershed Management Ordinance.

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

Construction projects in Permit Year 15 funded by the Village of Hoffman Estates and covered by General Permit ILR400210 are listed below:

- 2017 Street Rehabilitation Project
- 2017 Drainage Improvements Project
- 2017 Contract Street Sweeping Program
- 2017 Crack Sealing Project
- 2017 Surface Patching Project
- West Berkley Lane Storm Sewer Project
- Bode Road and Harmon Boulevard Resurfacing Project
- Hoffman Boulevard Bridge North Parapet Repairs Project
- Annual Creek Cleaning Project
- 2017 Sanitary Sewer Rehabilitation Program
- Miscellaneous Sanitary Sewer Projects

ATTACHMENT
FOR
BMP A.1

Sample Article

Hoffman Estates Citizen

August 2017

News from the Village of Hoffman Estates

Stormwater Pollution Prevention article (see red box)

Village hosts annual "Recycling Extravaganza"

The Village of Hoffman Estates is hosting a one-day recycling and document destruction event. The free drop-off will take place on Saturday, Aug. 19, from 9 a.m. to 1 p.m. at the Susan H. Kenley-Rupnow Public Works Center, 2305 Pembroke Ave.

Document destruction and electronics recycling

Sponsored by the Solid Waste Agency of Northern Cook County (SWANCC), this portion of the recycling event is for residents of Hoffman Estates and other SWANCC-member communities only, and proof of residency is required. There is no cost to attend.

Materials will not be accepted from businesses, institutions, schools or non-SWANCC residents. If you cannot come to the Hoffman Estates recycling day, you may attend any SWANCC recycling event (proof of residency required). Visit www.swancc.org for more collection dates.

Simply drive to the Susan H. Kenley-Rupnow Public Works Center, 2305 Pembroke Ave., and workers will unload the recyclables from your car.

All paper, including medical records, bank statements and retired tax forms, is cross-shredded on site by Accurate Document Destruction, and all electronics will be recycled by COM2 Recycling Solutions. For more information about these companies, visit www.shredd.net or www.com2recycling.com.

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In this issue

Growing to Greenness!

Lead poisoning dangers

If your home was built before 1978, it is possible that it contains some lead-based paint.

Lead is a highly toxic metal that can cause damage to the central nervous system and vital organs. Paint containing lead was previously used on the inside and outside of homes primarily because of its durability. If your home was built prior to 1978 and you see peeling, flaking or chipping paint, you may be at risk.

Children under the age of 6 are especially vulnerable to lead poisoning. They can become poisoned by putting their hands or other lead-contaminated objects into their mouths. State law requires property owners to correct lead-based paint hazards if a child living in the home tests positive for lead poisoning.

For more information on lead poisoning hazard reduction, visit www.hoffmanestates.org/cdbg, or contact the Cook County Department of Public Health Lead Poisoning Prevention Division at 708-633-8054.

August dates for brush drop-off

Brush may be brought to the Public Works Vehicle Maintenance Facility, 2405 Pembroke Ave., from 8 a.m. to 1 p.m. on Saturday, Aug. 5, and Saturday, Aug. 19. This free program, which ends in September, accepts residential brush/branches only (no commercial loads), and proof of residency is required. For more information, call 847-490-6800.

Historian's notebook

By Pat Barch, Hoffman Estates Village Historian

In the February 2017 issue of the Citizen, I wrote about a little-known farmhouse tucked away amongst the ranch homes on Lakeview Lane immediately west of Lakeview Elementary School in Parcel C. Until a realtor's email inquiring about its history arrived in my inbox, I had no idea it even existed.

I asked Schaumburg Township District Library Historian Jane Rozek for more background on the old farmhouse. I was able to identify whose farm it was, thanks to 1942 and 1954 farm plat maps. Comparing the plat maps with a present day map of Hoffman Estates, I discovered that it was the Bartels' farm. Jane helped with the rest.

The realtor learned that it was built in 1879. Records show that the land was owned by H.R. Rockaway from 1871 to 1875. It's unclear who purchased the property next, but it may have been the Gieseke family, who owned the farm to the east. We're not sure who built the house. Arthur Bartels and his son Harvey farmed the property till circa 1950 when F&S Construction developed Parcels A, B and C.

Art married his wife Alma Hitzemann in October 1915. Their fabulous wedding was reported in the Palatine Enterprise newspaper. Over 100 families were invited. Thirty-five automobiles formed the procession from St. Peter Lutheran Church in Schaumburg to the farm, with another 50 cars and horse-drawn buggies parked in front of the spacious house. A large tent was set up for music, dancing, card playing and the wedding feast. Since the farm stood on 160 acres of land, they certainly had a grand time with no worry of disturbing the neighbors.

Jane and I were so excited to receive an invitation to tour the inside of the old farmhouse by the realtor. Unfortunately, we were informed that it would soon be torn down.

As I walked down the old cellar stairs, it was amazing to see the foundation of large field stones. It was cool and damp with separate side rooms for a root cellar and shelves for preserved vegetables from the garden. Another area had been used as a coal bin. The field stone foundation ran the length of the cellar. From the outside, it looked as if the farmhouse had been added on to, but the foundation didn't tell the same story. The hardwood floors seemed different in several rooms, probably due to the division of the house into two separate living areas in later years. The staircase leading from the kitchen to the upstairs bedrooms was so typical of other farmhouses I'd been in. It was a quick way to get a hot cup of coffee and out to the barns to milk the cows. A hearty breakfast would be waiting once the early morning chores were done.

It was an honor to tour the Bartels' 139-year-old farmhouse. I'm glad I got to see it before it gets torn down.

Email Pat Barch at eagle2064@comcast.net.

10 facts about **storm water**

1. Storm water comes from rainfall.
2. Storm water that does not soak into the ground becomes surface runoff.
3. Runoff becomes polluted as it runs along roads, parking lots, roofs, lawns and construction sites.
4. Runoff contains pollutants, such as automotive fluids, fertilizers and pesticides, leaves, sediment, litter, and pet waste.
5. The polluted surface runoff flows into a storm sewer that eventually flows into waterways (ponds, creeks and rivers).
6. Runoff is NOT treated before it enters the waterways.
7. Storm sewers are designed to collect water from sidewalks, parking lots and streets to prevent flooding.
8. Everyone can help reduce the amount of rubbish and pollution carried in storm water.
9. Please do your part to keep storm water clean!
10. Report illegal dumping or spills by calling the Public Works Department at 847-490-6800, or, in the case of an emergency, call 911.

The **CITIZEN** is published monthly by the Village of Hoffman Estates as a public information service for residents and businesses. Previous editions are available online at www.hoffmanestates.org/citizen. This publication may not be reprinted or reproduced as a whole or in part without written permission from the Hoffman Estates Village Manager. © 2017. All rights reserved.

Editor: Doug Schultz
doug.schultz@hoffmanestates.org

ATTACHMENT
FOR
BMP A.3

Sample Articles

Hoffman Estates Citizen

August 2017

News from the Village of Hoffman Estates

Village hosts annual "Recycling Extravaganza"

The Village of Hoffman Estates is hosting a one-day recycling and document destruction event. The free drop-off will take place on Saturday, Aug. 19, from 9 a.m. to 1 p.m. at the Susan H. Kenley-Rupnow Public Works Center, 2305 Pembroke Ave.

Document destruction and electronics recycling

Sponsored by the Solid Waste Agency of Northern Cook County (SWANCC), this portion of the recycling event is for residents of Hoffman Estates and other SWANCC-member communities only, and proof of residency is required. There is no cost to attend.

Materials will not be accepted from businesses, institutions, schools or non-SWANCC residents. If you cannot come to the Hoffman Estates recycling day, you may attend any SWANCC recycling event (proof of residency required). Visit www.swancc.org for more collection dates.

Simply drive to the Susan H. Kenley-Rupnow Public Works Center, 2305 Pembroke Ave., and workers will unload the recyclables from your car.

All paper, including medical records, bank statements and retired tax forms, is cross-shredded on site by Accurate Document Destruction, and all electronics will be recycled by COM2 Recycling Solutions. For more information about these companies, visit www.shredd.net or www.com2recycling.com.

[continued on page 3]

In this issue

Free recycling event

[continued from cover]

Residents will be limited to six file-size boxes or grocery-size paper bags of documents. Do not bring paper in plastic bags. Plastic, metal clips and binders should be removed.

Accepted electronic items include:

- Computers and computer equipment/components (e.g., cables, keyboards, mouse, etc.)
- Printers, scanners, copy machines and fax machines
- Microwaves
- Small home appliances (e.g., toasters, blenders, etc.)
- Cell phones, PDAs and tablets
- Stereos equipment (no wood) and MP3 players
- Cameras and camcorders
- Cellphones, landline phones and answering machines
- Power tools and cords
- TVs (no wood) and VHS, DVD and CD players (no tapes or discs)
- DVRs, cable and satellite receivers, and converter boxes
- Videogame consoles

Do NOT bring humidifiers/dehumidifiers, air conditioners, vacuum cleaners, refrigerators and other large home appliances.

Additional services

In addition to electronics, the Village will be accepting these items for recycling:

- Expired drugs/sharps
- Fluorescent and compact fluorescent lamp (CFL) light bulbs
- Batteries
- Printer cartridges
- Latex (water-based) paint (small fee):
  - *Quarts: $2*
  - *One-gallon containers: $3.50*
  - *Two-gallon buckets: $5*
  - *Five-gallon buckets: $10*

Flammable materials and pressurized containers (e.g., spray paint cans) will not be accepted.

For a list of acceptable items, as well as information about this recycling event and other sustainability programs, visit www.hoffmanestates.org/green.

A message from **Mayor McLeod**

The Northwest Fourth-Fest and Fit America Fest are now behind us. Special thanks to each of our sponsors who donated time, money and resources to make these festivals possible. On behalf of the Village Board, I also thank our volunteers – some who worked multiple shifts – for their time and energy. These events have become a significant part of our community over the past several years, and we couldn't pull them off with you! Check out photos of the Northwest Fourth-Fest and Fit America Fest on our Facebook page at www.facebook.com/hoffmanestatesil.

In July's issue of the Citizen, I wrote about an upcoming presentation featuring the Our Lady of the Angels School fire hosted by the Commission for Senior Citizens. The mention of this program prompted a local resident, and survivor of the tragedy, to contact my office. The caller ultimately coordinated with the chair of the commission to not only attend the event with some of his former classmates, but also provide a firsthand account of their experience. I want to thank both the commission for putting on this valuable program, and our resident who reached out to help. Because of them and the powerful presentation skills of historian Jim Gibbons, the story of this 1958 fire will not be forgotten.

In addition to on-going programs and services, the Village provides for the collection of non-perishable food to support local food pantries. Food dropped off in the Village Hall lobby during business hours will be donated to sites in Schaumburg Township and Hanover Township. The collection of food is particularly important during the summer months when pantries see a dip in donations. Every item donated will help someone in need! For more information as well as a list of pantry locations and hours, visit www.hoffmanestates.org/foodpantry.

Did you miss July's Coffee with the Board event? Join us on Saturday, Oct. 21, at the Village Hall for more coffee and conversation. I hope to see you there! And, as always, don't hesitate to contact me with questions via email or phone at bill.mcleod@hoffmanestates.org or 847-781-2604.

Bill McLeod

Hoffman Estates
Citizen

April 2017

News from the Village of Hoffman Estates

Recycling & Waste management articles (see red boxes)

2017 **Street Revitalization** Project

The Village of Hoffman Estates will be investing approximately $8 million into Village streets this construction season. These infrastructure investments will benefit residents and businesses by improving neighborhoods with a safe and serviceable street for years to come.

The 2017 Street Revitalization Project will consist of the reconstruction of seven street segments, and the resurfacing of 18 others. A separate project will include the resurfacing of Bode Road and Harmon Boulevard with federal Surface Transportation Program (STP) funds covering 80 percent of the cost.

Work is expected to begin in May, and be completed by the end of November. Reconstruction involves the complete removal of the street, and the installation of new base, asphalt pavement, curb and gutter, driveway aprons, and sidewalk repairs. Resurfacing, on the other hand, involves removing the top wearing surface of the street, and replacing it with new asphalt along with minor curb, gutter and sidewalk work.

The 2017 STP project is expected to begin in early July, and be completed by the end of October. The scope of the resurfacing will include the removal and replacement of the top wearing surface of the street, along with curb, gutter and sidewalk repairs. On-street bicycle facilities will also be added to Bode Road.

Information packets will be mailed to all residents living on those streets being rehabilitated before work begins. An open house will be held on Thursday, April 27, from 6:30 p.m. to 7:30 p.m. at the Village Hall. The meeting provides an opportunity to learn what to expect during construction.

[continued on page 3]

In this issue

Growing to Greenness!

Electronics Recycling Drop-off Program resumes

Electronic items are banned from Illinois landfills. The Village, in cooperation with the Solid Waste Agency of Northern Cook County (SWANCC), is resuming its weekly drop-off collection program starting Monday, April 3. This free program will last through November.

Village Hall (follow the signs)
1900 Hassell Road
Mondays: 10 a.m. to noon

Visit www.swancc.org for a full list of acceptable items.

Residents from all SWANCC communities are eligible to participate, and IDs will be checked. Do not drop off electronics other than during these posted dates and times. Electronics from businesses, churches or schools will not be accepted.

Visit www.hoffmanestates.org/garbage for additional information about recycling and waste collection.

Visible address numbers required

Address numbers are vital. First responders use them to locate homes and businesses when time is critical. The Village's Municipal Code requires that all buildings have address numbers that can be read from the street. Address numbers must be Arabic numerals that are at least four inches high with a minimum stroke width of one-half inch. Commercial buildings must also have addresses posted and visible on the rear door. Numbers that are written out as text do not meet Code. Make sure firefighters, police officers, code enforcement officers – even pizza delivery drivers – can find your home or business! For more information, call Code Enforcement at 847-781-2631.

Monet, Manet and Renoir

The Celebrations and Sister Cities commissions are pleased to present Tish Robinson and her presentation titled, "Monet, Manet, Renoir: Models, Mistresses, Muses," on Saturday, April 22, from 1 p.m. to 3 p.m. at the Village Hall.

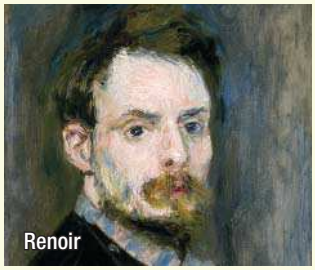
Tish Robinson's love affair with France began decades ago. Tish received a degree in French Literature from Northwestern University, and taught high school French. She specializes in the history of French gardens, the social history of the Age of Impressionism, Paris and the French provinces.

Tish brings to life the inspiration behind iconic paintings of the impressionist masters: Claude Monet, Édouard Manet and Pierre-Auguste Renoir. Their paintings feature familiar images of beautiful young women bathed in sunlight and shadow, depicted in public and private settings in Paris and the surrounding countryside. Who were these women? Their fascinating tales as models, mistresses and muses will be brought to life.

There is no charge for this event, but a donation of nonperishable food items or a monetary donation benefiting a local food pantry is appreciated. To reserve your seat, call Sue at 847-781-2606 before Wednesday, April 19.


Monet


Manet


Renoir

Charcoal, propane grill safety

Charcoal grills

- Use only charcoal starter fluid. Never add other flammable liquids, or additional starter fluid once the fire has been ignited.
- Keep charcoal starter fluid away from children.
- When you are finished grilling, let the coals completely cool before disposing in a metal container positioned outside and away from any structure.

Propane grills

Check the hoses for leaks before using it for the first time each year. Apply a light soap and water solution to the hose. A propane leak will release bubbles. If your grill has a gas leak, by smell or the soapy bubble test, and there is no flame, turn off the gas tank and grill. If the leak stops, get the grill serviced by a professional before using it again. If the leak does not stop, call the Hoffman Estates Fire Department. **If you smell gas while cooking, immediately get away from the grill and call 911.** Do not move the grill. If the flame goes out, turn the grill and gas off and wait at least 15 minutes before re-lighting it.

- Before each use, check the hoses for signs of wear, and that the connection to the tank is tight.
- Periodically check the inside gas tubes for the buildup of spider webs.
- An orange flame is an indication that there is an obstruction in the gas tubes that lead to the burners. Flames should be blue.
- Always shut off the tank after each use.
- If the grill catches fire, do not attempt to extinguish it, especially if propane is burning freely. CALL 911! Propane will reignite with explosive force.

For other fire safety tips, call the Hoffman Estates Fire Department at 847-843-4825.

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Editor: Doug Schultz
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Community briefs

Hoffman Estates is a safe city

The National Council for Home Safety and Security recently announced that the Village of Hoffman Estates is one of the top 50 "Safest Cities in Illinois." Another great reason to call Hoffman Estates home! For more information, visit www.alarms.org/the-safest-cities-in-illinois-2017.

Coffee with the Board

The next Coffee with the Board is on Saturday, April 15, at 10 a.m. at the Village Hall. Ask questions and give comments to the Village of Hoffman Estates Board of Trustees.

Garage sale permits required

Residents must obtain a free permit to hold a garage sale. The permit can be obtained at the Village Hall, or by sending an email to garagesales@hoffmanestates.org with the dates and address of the proposed sale. Garage sales are only allowed to take place on Thursdays, Fridays, Saturdays and Sundays, and a sale may not span more than four consecutive days. A maximum of three garage sales are allowed per address each calendar year, and must take place within the hours of 8 a.m. and 6 p.m. If a garage sale is conducted without a permit, a $10 "on site" permit fee will be assessed. For more information, call 847-781-2631, or visit www.hoffmanestates.org/garagesales.

Spring Luncheon for senior citizens

April showers bring May flowers, and also good food and fun! Join the Commission for Senior Citizens at their Spring Luncheon on Tuesday, April 18, at noon (doors open at 11:30 a.m.) at the Village Hall. The cost is $8 per person, which includes food and entertainment. Seating is limited, and reservations are required. For more information or to make reservations, call Sue at 847-781-2606.

Spring cleanup at Greve Cemetery

Volunteers are needed to help spruce up Greve Cemetery on Saturday, April 22 (rain date: Saturday, April 29), at 12:30 p.m. This is a great opportunity for scouts. The event is limited to 20 volunteers. For more information, call Nancy Lyons at 847-338-1589. Greve Cemetery is located off Abbey Wood Drive.


Greve Cemetery

Free Greve Cemetery tour

The Historical Sites Commission is offering a guided group tour of Greve Cemetery on Sunday, April 30, at 1 p.m., weather permitting. The free tour explores the interrelated pioneer families buried in the 19th century at the cemetery, who settled in the 1840s along what is now Higgins Road. Call Sue at 847-781-2606 for reservations after Monday, April 17. Private small group tours are also available by appointment.

Bicycle safety quiz

Do you know how to safely navigate and share the roadways with bicyclists? Ride Illinois, a nonprofit organization working statewide for better bicycling conditions, has developed a safety quiz that teaches kids and adults how to share the road safely. The interactive quiz covers safety techniques, as well as relevant state laws using images and short explanations. To take the quiz, visit www.bikesafetyquiz.com, and help Illinois work toward more bicycle-friendly roads. For more information about Ride Illinois, visit www.rideillinois.org.

Save the date: Victorian High Tea

The Arts Commission is hosting a "Victorian High Tea" on Wednesday, May 17, at 1 p.m. at the Village Hall. Tickets are $35, and reservations are required by Friday, May 5. To reserve your spot, call Sue at 847-781-2606. More info in the next Citizen!

Transition Summit – register now!

The Commission for Disabled Citizens is hosting its third annual Transition Summit on Saturday, April 8, from 9 a.m. to 3 p.m. at the Village Hall. This year's event focuses on the key pieces in the transition puzzle: housing, employment and advocacy. Register online at www.ctc2017summit.eventbrite.com. For more information, email Connect to Community at connecttocommunityinc@gmail.com.

Social for residents with disabilities

Friends, games, snacks ... all that's missing is you! A social for adults with disabilities 14 and older is being held on Friday, April 7, at 6:30 p.m. at the Village Hall. Admission free! Pizza will be served for $2 a slice, but lemonade is complimentary. Meet some new friends! Email Sue at sue.lessen@hoffmanestates.org for more information.

Computer animation class for kids

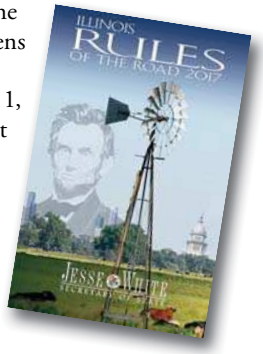
The Youth Commission is offering a free "Project Alice" computer animation class for children ages seven to 13 (beginner level) on Saturday, April 29, at 9 a.m. at the Village Hall. Registration is required as space is limited to 10 students. To reserve a spot, email Sue at sue.lessen@hoffmanestates.org (indicate the class time you are interested in). A parent or guardian is required throughout the duration of the class. Light refreshments will be served. More information of Project Alice can be found at www.alice.org.

Yard waste collection resumes April 3

Residents are reminded that grass clippings, plant material and leaves must be placed in brown paper yard waste bags. Bags cannot exceed 45 pounds, and a yard waste disposal sticker must be affixed to each bag. Yard waste stickers are available at the Village Hall, local stores, and online at both www.groot.com and www.hoffmanestates.org/yardwaste. An annual subscription for unlimited yard waste pickup is also available through Groot by calling 800-244-1977.

Rules of the Road class for senior citizens

Refresh your driving skills! The Commission for Senior Citizens will host a free "Rules of the Road" class on Monday, May 1, from 1:30 p.m. to 3:30 p.m. at the Village Hall. Review safe driving techniques, and learn what to expect when you go to renew your license. To register for the course, call Sue at 847-781-2606.



Commit to **distraction-free driving**

On your way to work, you notice a car in front of you swerving. As it slows to turn, you see that the driver holding his or her cell phone. Sound familiar?

April is Distracted Driving Awareness Month. Distracted driving takes many forms, but cell phone use is at the top. Research shows that the brain remains distracted for 27 seconds after dialing, sending a text or changing music, even when using voice commands.

Almost everyone has seen a driver distracted by a cell phone, but you may not realize that distracted driver could be you!

The Hoffman Estates Police Department urges drivers to take the following precautions to minimize distraction while driving:

- Put your cell phone down, and focus on the road
- When using electronic devices for directions, set the destination before you start driving
- If you're a passenger, offer to call or text for the driver so his or her full attention stays on the road
- Always wear your seat belt. Seat belts are the best defense against other unsafe drivers

For more information, visit www.distraction.gov.

Spring branch pickup begins April 24

Hoffman Estates' free curbside spring tree branch pickup program begins on Monday, April 24. This program is for residents covered by the Village refuse collection contract.

Only one collection pass will be made for each street. Please do not ask for exceptions.

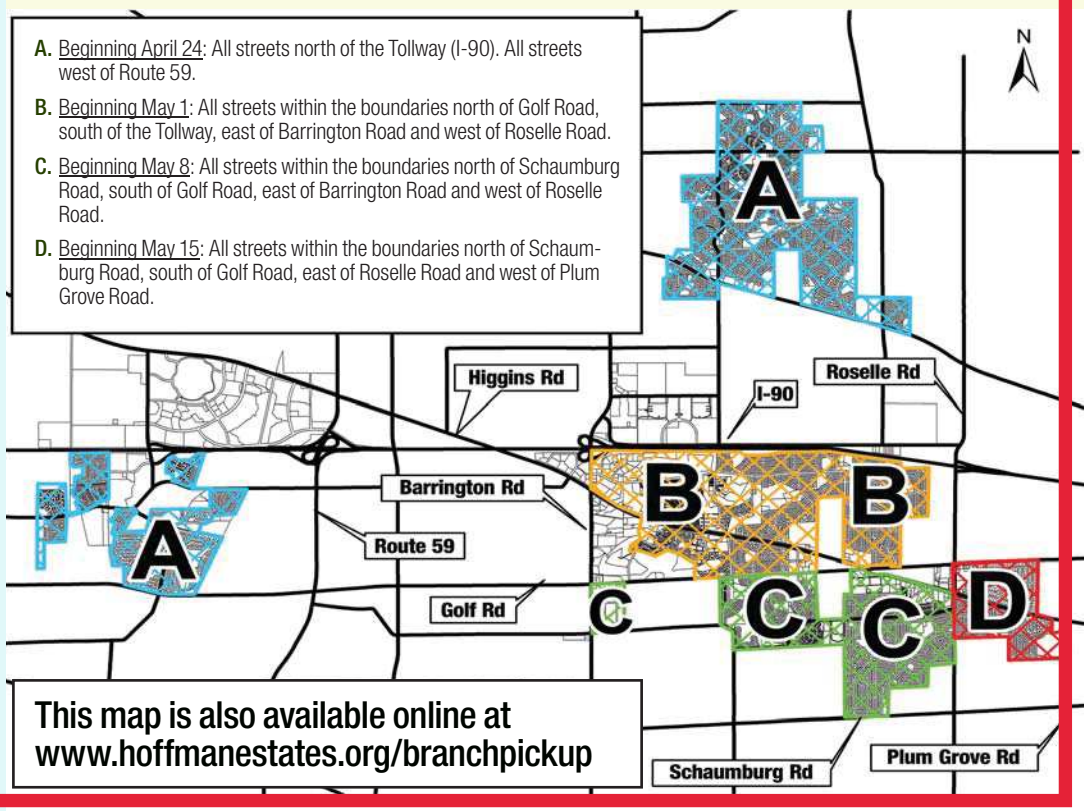
If branches are too large, are mixed with unacceptable materials or have not been prepared properly, they will **not** be picked up.

On the first date of pickup listed for your area, neatly stack branches at curbside by 7 a.m. Face the cut ends toward the street.

Do not tie branches in bundles or place in any container. Do not allow branches to protrude into the street or block sidewalks.

While supplies last, free woodchips will be available to residents at the Village's vehicle maintenance facility, 2405 Pembroke Ave., during daylight hours **after 3 p.m.**, Monday through Friday, and during daylight hours on weekends. Please bring your own containers.

If you have any questions or are interested in free large truckload deliveries of wood chips, call Public Works at 847-490-6800.



Bon Appétit **food festival returns**

The Hoffman Estates Chamber of Commerce is thrilled to host the Bon Appétit Community Food and Drink Festival. Featuring delicious cuisine and liquor samples from over 25 restaurants and distilleries, the event takes place on Thursday, April 27, from 5 p.m. to 7:30 p.m. at the Stonegate Conference & Banquet Centre, 2401 W. Higgins Road. Guests will have the opportunity to judge cupcakes prepared by culinary students from Elgin Community College and Harper College. Early bird tickets are only $25. Reserve your space today, as the price increases to $35 at the door (if space is still available). Buy your tickets online at www.hechamber.com, or in person at the Chamber of Commerce office, 2200 W. Higgins Road, #201. Bring a canned food item to donate to a local food pantry! For more information, call the Chamber of Commerce at 847-781-9100.

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Sample Brochure

WHEN IT RAINS IT DRAINS

For more information contact:

Village of Hoffman Estates
Public Works Department
2305 Pembroke Ave., Hoffman Estates, IL 60169

Report illegal dumping in storm sewers or creeks:

Call Public Works 847-490-6800 M-F 8am-4pm

Call Police Non-Emergency 847-882-1818 after work hours and on weekends

Email: publicworks@hoffmanestates.org

or visit
www.epa.gov/npdes/stormwater
www.epa.gov/nps

United States Environmental Protection Agency

EPA 833-B-03-002

January 2003

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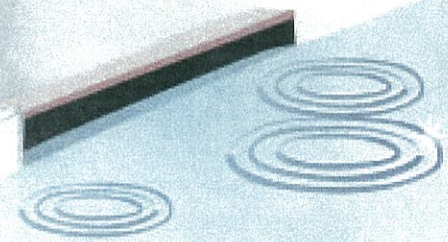
THE YEAR OF CLEAN WATER
Celebration & Recommitment

After the Storm



A Citizen's Guide to Understanding Stormwater

WHEN IT RAINS IT DRAINS

What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.

Why is stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

The effects of pollution

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.

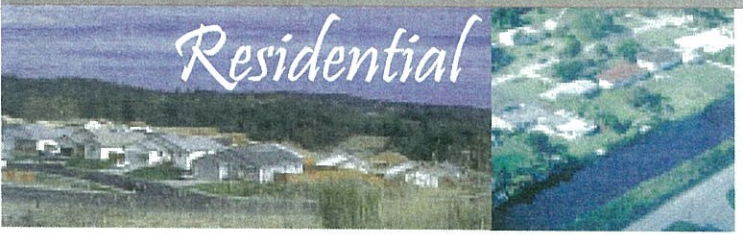
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.

- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

*** Open for Stormwater Pollution Solutions**

Stormwater Pollution Solutions

Residential



Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Auto care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Septic systems

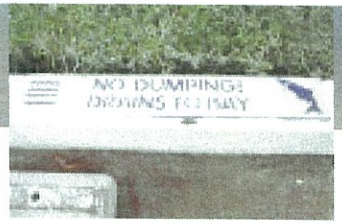
Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.



Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.

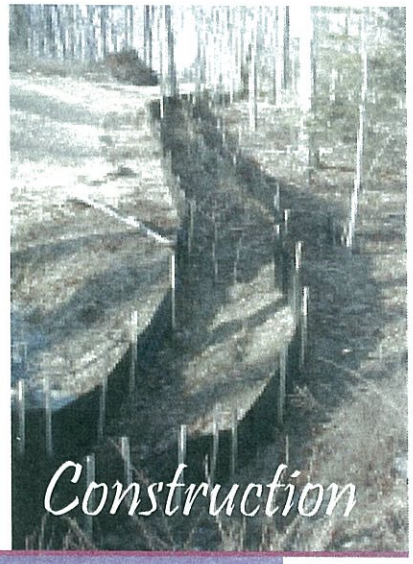
Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

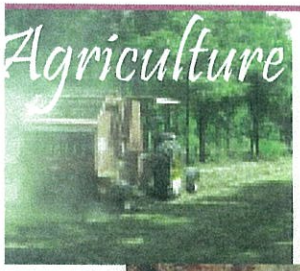
Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- Cover grease storage and dumpsters and keep them clean to avoid leaks.
- Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

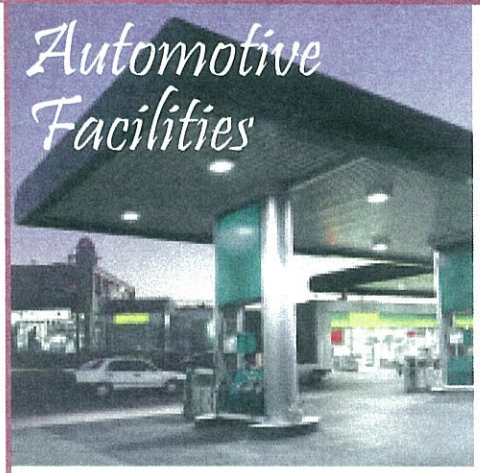
- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.





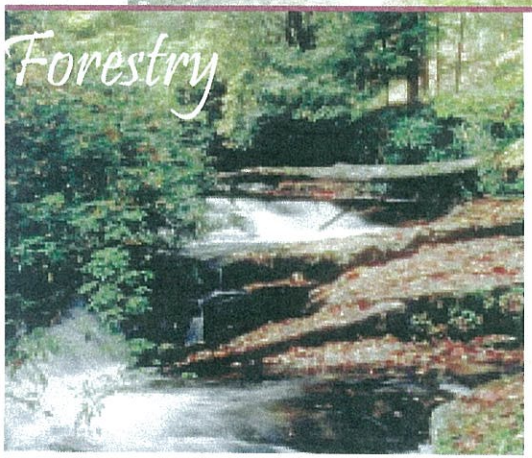
Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.

- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Vegetate riparian areas along waterways.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.



Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful fluids that can be picked up by stormwater.

- Clean up spills immediately and properly dispose of cleanup materials.
- Provide cover over fueling stations and design or retrofit facilities for spill containment.
- Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
- Install and maintain oil/water separators.



Improperly managed logging operations can result in erosion and sedimentation.

- Conduct preharvest planning to prevent erosion and lower costs.
- Use logging methods and equipment that minimize soil disturbance.
- Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- Construct stream crossings so that they minimize erosion and physical changes to streams.
- Expedite revegetation of cleared areas.

ATTACHMENT
FOR
BMP B.1

Meeting Agenda

AGENDA
STORMWATER MANAGEMENT COMMITTEE
Village of Hoffman Estates
April 5, 2017

6:30 p.m. - Regan Conference Room

Members:	**Mike Gaeta, Chairperson**	**Jim Burns**
	Anna Newell, Trustee	**Paul Matthews**
	Karen Mills, Trustee	**Eric Marscin**
		Gary Buczkowski

I. Roll Call

II. Approval of Minutes – May 10, 2016

III. Items for Discussion

A. Central Area Storm Sewer Analysis Results

B. 2016 Stormwater Projects

C. 2017 Stormwater Projects

D. Annual Drainage Improvement Project List and Village Drainage Policy

E. National Pollution Discharge Elimination System (NPDES)

F. Metropolitan Water Reclamation District of Greater Chicago (MWRD)Watershed Management Ordinance (WMO) Amendment

G. Community Rating System (CRS) Cycle Verification

IV. Committee Member Comments

V. Adjournment

The Village of Hoffman Estates complies with the Americans with Disabilities Act (ADA). For accessibility assistance call the ADA Coordinator at 847/882-9100.

ATTACHMENT
FOR
BMP B.7

Sample Articles

Hoffman Estates
Citizen

May 2017

News from the Village of Hoffman Estates

Contact number to report stormwater related issues (see red boxes)

Memorial Day **observance**

The Village of Hoffman Estates is once again partnering with the Village of Schaumburg to hold a Memorial Day celebration. The entire community is invited to attend this special observation.

This year's Memorial Day ceremony will take place on Monday, May 29. It will begin at 10 a.m. at the Hoffman Estates Veterans' Memorial site, located at 411 W. Higgins Road just outside the Police Department (at the corner of Higgins Road and Spring Mill Drive). Then, the observance will continue in Schaumburg at St. Peter Lutheran Church at 10:45 a.m.

Both Hoffman Estates Mayor William D. McLeod and Schaumburg Mayor Al Larson will say a few words. Additionally, firefighters, police officers, local veterans and others will help pay tribute to those who gave the ultimate sacrifice.

Immediately following the Schaumburg event, there will be a picnic for all guests in the St. Peter picnic grove.

Memorial Day is a special opportunity to recognize and pay tribute to the servicemen and women who have lost their lives, as well as those actively serving our nation. Join the Village as it honors all of our country's military service members who fought – and continue to fight – valiantly on our behalf.

For more information about this event, as well as dozens of other upcoming summer celebrations, visit the Village website at www.hoffmanestates.org/calendar.

In this issue

Growing to Greenness!

Village named Tree City USA

For the 26th consecutive year, the National Arbor Day Foundation has named the Village of Hoffman Estates a Tree City USA.

Last year's Arbor Day ceremony

The National Arbor Day Foundation, in cooperation with the National Association of State Foresters and the U.S. Department of Agriculture Forest Service, sponsors the Tree City USA program. To become a Tree City USA, Hoffman Estates must meet four standards annually:

- Have an established tree board or department
- Have a tree care ordinance
- Have a community forestry program with an annual budget of at least $2 per capita
- Have an Arbor Day observance and proclamation

A municipality's designation as a Tree City community is reflective of the level of stewardship necessary to build greater communities, while continuously enhancing the beauty and value of Hoffman Estates property, both public and private.

The Tree City USA program has been greening up cities and towns across America since 1976. It is a nationwide movement that provides the framework necessary for communities to manage and expand their public trees.

The Village's annual Arbor Day celebration was held on April 28 at Arbor Day Park.

Historian's notebook

By Pat Barch, Hoffman Estates Village Historian

Early residents of Hoffman Estates discovered that springtime was not what they had expected. Many of us found our houses surrounded by an inch or two of topsoil, but not one single blade of grass. And heavy spring rains brought ugly, muddy yards. Everyone was up to their elbows in dirt.

Parcel A had half-acre lots, but other nearby houses had smaller yards. When they purchased their new homes, not everyone thought of all the work that lay ahead after the winter snow melted. Everyone had to work on their landscaping throughout the entire summer.

Those first neighborhood houses didn't have trees, shrubs or lawns. That was a big undertaking for most. Parcel A didn't even have parkway trees; only a small sidewalk that went along the street.

Nothing could be done until you had the right equipment. We had only one nursery and lawn equipment store nearby – Slattery's Nursery – located in Schaumburg between Golf and Higgins roads near where Dunkin Donuts is now. They also owned land across the street on the north side of Golf Road. That's where they grew their stock of trees and shrubs.

If you needed soil, gravel, stone or some sand for the kids' sandbox, you were referred to Rose's across the street on the north side of Golf Road, just east of Valley Lake Drive. They had everything for that beautiful lawn, especially loads of black dirt.

The beauty of your lawn soon became the business of everyone on your block. The men would compare notes on how they killed dandelions, or how they got the lawn so green. But there were also those who enjoyed that beautiful sea of yellow, and let Mother Nature take care of it.

Now, landscaping materials are found at big box stores or the few local hardware stores we have in our area. Most nurseries and greenhouses moved away, but what a necessity they were for the new and inexperienced home owners.

Email Pat Barch at eagle2064@comcast.net.

Facts about **sanitary and storm sewers**

Anything poured down a drain goes to a wastewater treatment plant, right? **WRONG!** It's important to understand the difference between a sanitary sewer and a storm sewer. Knowing this distinction can prevent unnecessary environmental damage, and ensure that water taken from natural sources is safe to use and drink.

The **sanitary sewer** is a system of underground pipes that carries waste water from bathrooms, sinks, kitchens and other plumbing components to a treatment plant. There, it is treated and filtered, and then put back into the creek system.

The **storm sewer** is a drainage system designed to carry rainfall and other water runoff, but not waste water. The runoff is carried in underground pipes or open ditches, and then discharged (untreated) into Poplar Creek or Salt Creek. The inlets that drain into this system can be found on the street and other low-lying outdoor areas.

Water (both surface and subsurface) from Hoffman Estates drains into Poplar Creek or Salt Creek, which flows into the Fox River and Des Plaines River, respectively, with both eventually reaching the Mississippi River. This water may pick up pollutants along the way, which are never treated in a natural environment. Disposal of chemicals or hazardous substances via the storm sewer system is not only illegal, it also damages the environment. Pollutants that get into storm drains can poison fish, birds and other wildlife, and can find their way into drinking water supplies. In addition, silt, litter and organic matter (branches, clippings, etc.) can clog storm drains and cause flooding.

You can help by taking these simple steps:

- Don't pour ANYTHING in storm sewer drains
- Keep drains clear of leaf and lawn litter
- Scoop up after your pet, and throw it away in the trash
- Don't pour paint or oils down any sink or drain – recycle these materials
- Minimize use of pesticides and herbicides
- Report illegal dumping or spills by calling the Public Works Department at 847-490-6800, or, in the case of an emergency, call 911

The **CITIZEN** is published monthly by the Village of Hoffman Estates as a public information service for residents and businesses. Previous editions are available online at www.hoffmanestates.org/citizen. This publication may not be reprinted or reproduced as a whole or in part without written permission from the Hoffman Estates Village Manager. © 2017. All rights reserved.

Editor: Doug Schultz
doug.schultz@hoffmanestates.org

Community briefs

Memorial Day observance

The Village Hall will be closed on Saturday, May 27, and Monday, May 29. For more information on the Village's Memorial Day ceremony, please read the cover story!

Build a Birdhouse

Children are invited to "Build a Birdhouse," sponsored by the Sustainability Commission, on Saturday, May 20, at 9 a.m. at the Susan H. Kenley-Rupnow Public Works Center, 2305 Pembroke Ave. The event is free, but registration is required. Participation is limited to the first 30 Hoffman Estates children registered. To register, call 847-781-2606, or email grow2green@hoffmanestates.org.

Guests at last year's Build a Birdhouse event show off their creations

Mother's Day Luncheon for senior citizens

Join the Commission for Senior Citizens as they celebrate Mother's Day with a special luncheon on Friday, May 12, at noon (doors open at 11:30 a.m.) at the Village Hall. The cost to attend is $8, which includes food and entertainment. To register, call Sue at 847-781-2606.

Storm sewer infrastructure

The Public Works Department is responsible for the maintenance and repair of all Village-owned storm sewers. Monthly inspections are performed on drainage ways and lake/pond outfall lines to reduce the risk of flooding. You can help by keeping storm sewer inlets free of obstructions. If you see leaves, paper, branches or ice obstructing an inlet, remove the items so water from the street can flow unobstructed. Call Public Works to report any inlet that is not draining or causing a large volume of water to collect on the street. If any settlement is noticed around the structure, it may indicate a collapsed sewer or other problem that needs to be corrected. If you observe these conditions or have a question, call 847-490-6800. Working together, we can keep the Village's storm sewer infrastructure working at peak efficiency.

Cinco de Mayo for residents with disabilities

It's a fiesta! The Commission for Disabled Citizens and the Links Inc. is hosting a Cinco de Mayo-themed social for adults with disabilities 14 and older on Friday, May 5, at 6:30 p.m. at the Village Hall. Admission free! Pizza will be served for $2 a slice, and lemonade is complimentary. Meet some new friends! For more information, email comdiscitz@gmail.com.

Honoring police officers in May

National Police Week and National Peace Officers Memorial Day are observances in the United States that honor local, state, and federal police officers killed in the line of duty. This year, Police Week will be held from May 14 through May 20, and Peace Officers Memorial Day will be observed on Monday, May 15. An annual Police Week celebration in Washington, D.C., features the annual Blue Mass, candlelight vigil, wreath-laying ceremony, honor guard competition and the Emerald Society/Pipe Band Memorial March. Every year, Illinois also honors local police officers during May. For more information about Police Week, visit www.policeweek.org. For more information about Illinois' Memorial Ceremony, visit www.illinoispolicememorial.org.

Hoffman Estates' finest at last year's Fourth of July parade

Branch pickup continues through May

The Village's free curbside tree branch pickup program continues through Friday, May 19. Visit www.hoffmanestates.org/forestry for a map and the dates of pickup listed for your neighborhood. On the first date of your pick-up, neatly stack branches at your curbside by 7 a.m. Do not tie branches in bundles, or place in any container. Remember to keep branches clear of trees, mailboxes, signs and streetlight poles. Also, please avoid parking cars next to branch piles as the equipment used for pickup needs to have clear, open access. For more information, call 847-490-6800.

Welcome new businesses!

Balanced Care Chiropractic
2500 W. Higgins Road, #965

Center for Autism and Related Disorders
2500 W. Higgins Road, #870

4Everly Adorned
2500 W. Higgins Road, #360

Inspectorate America/Analysts
2450 Hassell Road

Kenneth A. Johnson, DDS
2630 N. Sutton Road

Sensient Flavors
2800 W. Higgins Road, #730

Simply Well Today
2353 Hassell Road, #103

Replenish tree canopy with a free oak tree

The Metropolitan Water Reclamation District (MWRD) is looking for residents who are interested in planting an oak tree in their yard. The agency is offering free, potted 18" oak tree saplings as part of their "Restore the Canopy" program. The initiative comes in response to our region's recent bout with the Emerald Ash Borer, which decimated the local tree population. Trees keep neighborhoods cooler, buffer noise, provide oxygen and absorb water. Saplings can be picked up at MWRD facilities, including the John E. Egan Water Reclamation Plant at 550 S. Meacham Road in Schaumburg, on Wednesdays from 9 a.m. to noon. For more information, call 312-751-5600, or visit MWRD's website at www.mwrd.org.

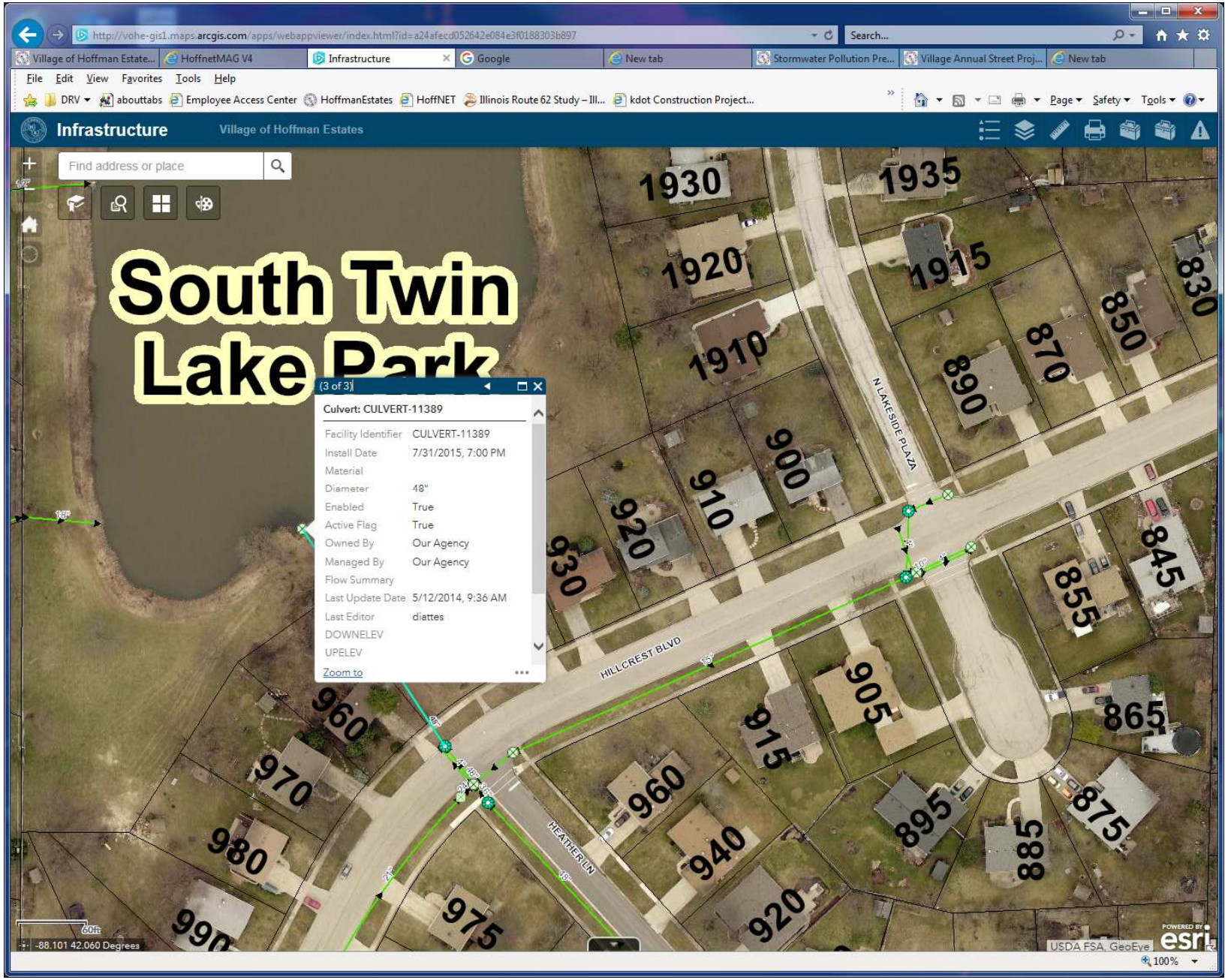
Be a nice neighbor

Please be respectful while traveling through Village neighborhoods, and while doing work outside. Keep noise levels reasonable, and be mindful of leaving waste in your wake. Your neighbors will appreciate it!

ATTACHMENT
FOR
BMP C.1

GIS Storm Sewer Map screenshot

Screen shot of Village GIS Storm Sewer System Map



ATTACHMENT
FOR
BMP C.2

Village Code

MUNICIPAL CODE OF HOFFMAN ESTATES, ILLINOIS

Published in 1955 by Order of the Village Board
Republished in 2001 by Order of the Village Board

Municipal Code Corporation | P.O. Box 2235 Tallahassee, FL 32316
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www.municode.com

CURRENT OFFICIALS
of the
VILLAGE OF
HOFFMAN ESTATES, ILLINOIS

William D. McLeod
Mayor

Karen V. Mills
Anna Newell
Gary J. Pilafas
Gary Stanton
Michael Gaeta
Gayle Vandenbergh
Village Board

Arthur L. Janura, Jr.
Corporation Counsel

Bev Romanoff
Village Clerk

James H. Norris
Village Manager

This Republication constitutes a complete codification of the general and permanent ordinances of the Village of Hoffman Estates, Illinois.

Source materials used in the preparation of the Republication was the Village Code of 1955, as updated through December, 2000. The source of each section is included in the history note appearing in parentheses at the end thereof. The absence of such a note indicates that the section is new and was adopted for the first time with the adoption of the Code. By use of the comparative table appearing in the back of this Code, the reader can locate any section of any subsequent ordinance included herein.

Chapter and Section Numbering System

The chapter and section numbering system used in this Code is the same system used in many state and local government codes. Each section number consists of two parts separated by a dash. The figure before the dash refers to the chapter number, and the figure after the dash refers to the position of the section within the chapter. Thus, the second section of chapter 1 is numbered 1-2, and the first section of chapter 6 is 6-1. Articles may be placed at the end of the chapter embracing the subject, and, in the case of divisions, may be placed at the end of the article embracing the subject. The next successive number shall be assigned to the new article or division. New chapters may be included by using one of the reserved chapter numbers. Care should be taken that the alphabetical arrangement of chapters is maintained when including new chapters.

Indexes

The indexes have been prepared with the greatest of care. Each particular item has been placed under several headings, some of which are couched in lay phraseology, others in legal terminology, and still others in language generally used by local government officials and employees. There are numerous cross references within the indexes themselves which stand as guideposts to direct the user to the particular item in which the user is interested.

Looseleaf Supplements

A special feature of this publication is the looseleaf system of binding and supplemental servicing of the publication. With this system, the publication will be kept up-to-date. Subsequent amendatory legislation will be properly edited, and the affected page or pages will be reprinted. These new pages will be distributed to holders of copies of the publication, with instructions for the manner of inserting the new pages and deleting the obsolete pages.

Keeping this publication up-to-date at all times will depend largely upon the holder of the publication. As revised pages are received, it will then become the responsibility of the holder to have the amendments inserted according to the attached instructions. It is strongly recommended by the publisher that all such amendments be inserted immediately upon receipt to avoid misplacing them and, in addition, that all deleted pages be saved and filed for historical reference purposes.

Acknowledgments

The publisher is most grateful to Mr. Christopher J. Nelson, Assistant to Village Manager, for his cooperation and assistance during the progress of the work on this publication. It is hoped that his efforts and those of the publisher have resulted in a Code of Ordinances which will make the active law of the city readily accessible to all citizens and which will be a valuable tool in the day-to-day administration of the city's affairs.

This republication was under the direct supervision of John Dombroski, Vice President for Supplements, and Janet Cramer, Editor, of the Municipal Code Corporation, Tallahassee, Florida. Credit is gratefully given to the other members of the publisher's staff for their sincere interest and able assistance throughout the project.

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CHAPTER 7 – OFFENSES AND PUNISHMENT

ARTICLE 8. - PUBLIC NUISANCES

Sec. 7-8-3. - Pollution, general.

A. *Water Pollution.* It shall be unlawful for any person to litter, pollute or cause to be polluted any waterway, stream, lake, pond, storm sewer or other body of water so as to render it unclean and dangerous to the health and well being of any person or animal fowl or fish, coming into contact with such polluted water within the Village of Hoffman Estates.

Sec. 7-8-7. - Water control.

A. *Obstructing Water Passage.* No person shall knowingly stop or obstruct the passage of water in any street, gutter, public sewer, culvert, water pipe, hydrant, drainageway or swales between houses.

B. *Stagnant Water Prohibited.* Any stagnant pool of water in the Village is hereby declared to be a nuisance. It shall be unlawful for any person, firm or corporation to permit any such nuisance to remain or exist on any property under their control. Retention ponds or approved natural water retention areas are exempted from this requirement.

C. *Catch Basins.* Catch basins are to be cleaned of all grease and sludge as often as it is necessary to prevent sewage lines from clogging. It will be the responsibility of the owner to keep catch basins and sewage lines leading from their establishment free of grease.

D. *Drainage Swales.* No person shall reconstruct or change a rear yard or side yard swale so as to adversely affect the natural drainage.

E. *Sump Pump Discharge.* Sump pump discharge may be directed to the front, rear or side yard, but if stagnant water pools from a discharge to the side yard, the discharge shall be redirected to the rear or front yard.

ATTACHMENT
FOR
BMP C.3/C.7

Sample Inspection Log

HOFFMAN ESTATES

UNDERGROUND AND CONSTRUCTION

STORM SEWER DIVISION

Storm System Checks North

NORTH OF TOLLWAY CENTRAL ROAD

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Central Rd 500' East of Ela		Jul 24, 2017	Gatts	Hawkinson	
Central Rd 500' West of Thomas Eng. Central Rd to Tollway Culvert		Jul 24, 2017	Gatts	Hawkinson	
Central Rd East side of Forest Preserve entrance by guardrail. Goes under Tollway culvert and grate		**Jul 24, 2017**	**Gatts**	**Hawkinson**	
Ela Road 200' North of Central Road by guardrail		Jul 24, 2017	Gatts	Hawkinson	

Comments	

NORTH OF TOLLWAY NA

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
3451 North Wiltshire (Well 18) Vault	18" C.M.P.	Jul 24, 2017	Gatts	Hawkinson	

Comments	

NORTH OF TOLLWAY NB

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
780 Charleston(Pine Park)	48" C.M.P.	Jul 24, 2017	Gatts	Hawkinson	
Winston and Norman(Willow Park)	18" C.M.P.	Jul 24, 2017	Gatts	Hawkinson	
Across from 920 Norman	12" C.M.P.	Jul 24, 2017	Gatts	Hawkinson	
Norman and Lexington	18" C.M.P.	Jul 24, 2017	Gatts	Hawkinson	
3660 Lexington	30" C.M.P. Into creek	Jul 24, 2017	Gatts	Hawkinson	
1100 Concord	48" C.M.P. Into creek	Jul 24, 2017	Gatts	Hawkinson	
1345 and 1355 Picardy Ct	42" C.M.P.	Jul 24, 2017	Gatts	Hawkinson	
3795 and 3805 Bordeaux(Rear Yard)	60" C.M.P.	Jul 24, 2017	Gatts	Hawkinson	
1380 Algonquin Road(Well 19)	Culvert	Jul 24, 2017	Gatts	Hawkinson	
Windemere(Brittany Park)	**Vault and Outflow**	Jul 24, 2017	Gatts	Hawkinson	

Comments	

Key

C.M.P.- Corrugated metal pipe

R.C.P.- Reinforced concrete pipe

P.V.C.- Polyvinal chloride pipe

BOLD INDICATES TROUBLE AREA AND SHOULD BE CHECKED MORE OFTEN

Updated 3/6/17 McKittrick

HOFFMAN ESTATES

UNDERGROUND AND CONSTRUCTION

STORM SEWER DIVISION

Storm System Checks North

NORTH OF TOLLWAY NC

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
1929 Alder(Douglas Park) Retention Vault					
3821 Whispering Trails(Meadow Park)					
3954 and 3960 Whispering Trails					
Whispering Lake- Seminole Culvert					
Huntington behind(White Hen) Whispering Lake Vault		**Jul 13, 2017**	**Zyburt**	**Whelan**	**Clear**

Comments	

NORTH OF TOLLWAY ND

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Freeman Rd N New Britton(South Ridge Lake) Outfalls					
885 Park Lane (Valley Park)	Outfalls into creek				
1355 Sturbridge(North and South Ridge Lake)					
4195 Mumford(North Ridge Park) Pat's Pantry vault		**Jul 13, 2017**	**Zyburt**	**Whelan**	**Smelly**
Haman and Westbury(Westbury Park vault)		**Jul 13, 2017**	**Zyburt**	**Whelan**	**Murky**

Comments	

NORTH OF TOLLWAY NE

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
1633 and 1643 Castaway Ct	24" C.M.P.				
5100 Thornbark Outfall into Lake	38" C.M.P.				
5100 and 5070 N Tamarack	**32" C.M.P. Into creek-vault**				
Parkway between 5100 and 5100 Chambers					

Comments	

Key

C.M.P.- Corrugated metal pipe

R.C.P.- Reinforced concrete pipe

P.V.C.- Polyvinal chloride pipe

BOLD INDICATES TROUBLE AREA AND SHOULD BE CHECKED MORE OFTEN

Updated 3/6/17 McKittrick

HOFFMAN ESTATES

UNDERGROUND AND CONSTRUCTION

STORM SEWER DIVISION

Storm System Checks West

NORTH OF TOLLWAY WEST

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Shoe Factory Rd by railroad tracks		**Jul 24, 2017**	**Gatts**	**Hawkinson**	**Murky**
Rohrssen Rd inlet at curves (6)		**Jul 24, 2017**	Gatts	Hawkinson	
McDonough Rd- Cannon Crossing Park District- other side of railroad tracks	Creek line	**Jul 24, 2017**	Gatts	Hawkinson	
Mallard Lane and Pheasant Trail Ct	**Culvert in creek line**	**Jul 24, 2017**	**Gatts**	**Hawkinson**	**Murky**

Comments	

NORTH OF TOLLWAY WHITE OAK

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
White Oak and Shoe Factory Retention Outflows		Jul 24, 2017	Gatts	Hawkinson	
Red Oak and Essex Retention- 2 Outflows		Jul 24, 2017	Gatts	Hawkinson	
5729 Caribou- Retention		Jul 24, 2017	Gatts	Hawkinson	
5677 and 5689 Caribou- Beehive		Jul 24, 2017	Gatts	Hawkinson	
Angouleme- Retention					

Comments	

NORTH OF TOLLWAY IVY RIDGE

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Ivy Ridge & Colchester Retention Pond		Jul 24, 2017	Gatts	Hawkinson	
5591 McDonough Retention Outflow		Jul 24, 2017	Gatts	Hawkinson	
2000 Ivy Ridge Pond Retention Outflow		Jul 24, 2017	Gatts	Hawkinson	

Comments	

Key

C.M.P.- Corrugated metal pipe

R.C.P.- Reinforced concrete pipe

P.V.C.- Polyvinal chloride pipe

BOLD INDICATES TROUBLE AREA AND SHOULD BE CHECKED MORE OFTEN

Updated 3/6/17 McKittrick

HOFFMAN ESTATES

UNDERGROUND CONSTRUCTION

STORM SEWER DIVISION

Storm System Checks West

NORTH OF TOLLWAY HUNTERS RIDGE

LOCATION AND AREA	DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Hunter Ridge E & Mallard- Retention Outflow to creek	Jul 24, 2017	Gatts	Hawkinson	
Mallard Rd- Box culvert creek	Jul 24, 2017	Gatts	Hawkinson	Murky
Mallard Rd- Retention Outflow North of box culvert-Outflow to creek	Jul 24, 2017	Gatts	Hawkinson	
Mallard Rd- Retention South of box culvert-East of creek- Outflow to creek	Jul 24, 2017	Gatts	Hawkinson	
Mallard Rd- Retention South of box culvert-West of creek- Outflow to creek	Jul 24, 2017	Gatts	Hawkinson	
1280 Mallard- Retention Outflow to Creek	Jul 24, 2017	Gatts	Hawkinson	
1380 Mallard- Retention Outflow to Creek	Jul 24, 2017	Gatts	Hawkinson	
Mallard & Pheasant Trail Ct box culvert in creekline	Jul 24, 2017	Gatts	Hawkinson	**Murky**
Hunters Ridge Wetlands behind 5465 Fox Path- Outflow to creek	Jul 24, 2017	Gatts	Hawkinson	
1297 Hunters Ridge E(Behind) Outflow to creek	Jul 24, 2017	Gatts	Hawkinson	

Comments	

NORTH OF TOLLWAY CANTERBERY FIELDS

LOCATION AND AREA	DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Maureen & Delaney- Retention Outflow S/W corner of pond	Jul 24, 2017	Gatts	Hawkinson	

Comments	

NORTH OF TOLLWAY YORKSHIRE WOODS

LOCATION AND AREA	DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
McDonough Rd Retention Pond Outflow	Jul 24, 2017	Gatts	Hawkinson	
Swan & Nicholson Retention Pond Outflow	Jul 24, 2017	Gatts	Hawkinson	
Shoe Factory- retention Outflow West of McDonough(Bridlewood)	Jul 24, 2017	Gatts	Hawkinson	
Service Road- 2 flared ends in creek line 1300 ft north of Shoe Factory	Jul 24, 2017	**Gatts**	**Hawkinson**	**Murky**

Comments	

Key

C.M.P.- Corrugated metal pipe

R.C.P.- Reinforced concrete pipe

P.V.C.- Polyvinal chloride pipe

BOLD INDICATES TROUBLE AREA AND SHOULD BE CHECKED MORE OFTEN

Updated 3/6/17 McKittrick

HOFFMAN ESTATES

UNDERGROUND AND CONSTRUCTION

STORM SEWER DIVISION

Storm System Checks South

PARCEL A

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Hilltop Professional Plaza	**2-48" C.M.P.**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
Basswood & Higgins Rd(Rt. 72)	78" C.M.P.	Jul 13, 2017	Kassal	Salas	Clear
Basswood and Hawthorn	**78" Concrete precast into creek**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
Aspen Dead End	**Creek**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
925/945 Ash	**Vault**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
1000/1005 Apricot	**48" C.M.P. Vaults into creek**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
1100 Apple	Retention	Jul 13, 2017	Kassal	Salas	Clear
960 Apple	Retention	Jul 13, 2017	Kassal	Salas	Clear
1045 Apple	48" C.M.P. into creek	Jul 13, 2017	Kassal	Salas	Clear
130 Hawthorn	78" concrete precast vault from retention into creek	Jul 13, 2017	Kassal	Salas	Clear

Comments	
	Basswood/Hawthorn Big log on Creek

PARCEL B

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Audobon and Higgins (Rt. 72)	48" C.M.P	Jul 13, 2017	Kassal	Salas	Clear
Almond and Higgins (Rt. 72)	54" C.M.P / A	Jul 13, 2017	Kassal	Salas	Clear
745 Alhambra	54" C.M.P / B	Jul 13, 2017	Kassal	Salas	Clear
325 Arizona(Fairview School)	**Culvert into creek**	**Jul 13, 2017**	**Kassal**	**Salas**	**Smelly**
Ashland Dead End	C.M.P. outflow to Golf Course	Jul 13, 2017	Kassal	Salas	Clear

Comments

Key

C.M.P.- Corrugated metal pipe

R.C.P.- Reinforced concrete pipe

P.V.C.- Polyvinal chloride pipe

BOLD INDICATES TROUBLE AREA AND SHOULD BE CHECKED MORE OFTEN

Updated 3/6/17 McKittrick

HOFFMAN ESTATES

UNDERGROUND AND CONSTRUCTION

STORM SEWER DIVISION

Storm System Checks South

PARCEL C

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Rt. 72 in front of Hoffman Lanes	Ditch line				
Grand Canyon and Higgins (Rt. 72)	**Culvert**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
Grand Canyon Retention(Community Pool)	**42" C.M.P.**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
Spring Mill Retention(Across from W Berkeley)	**54" C.M.P.**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
615 Washington(Lake view Lake/Evergreen PK)	**18" P.V.C.**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**

Comments	

PARCEL D

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Partridge Hill and Bode	21" C.M.P	Jul 13, 2017	Kassal	Salas	Clear
Behind 1245W Dexter(W Dexter Lake/Chestnut Park)	**24" R.C.P.**	**Jul 13, 2017**	**Kassal**	**Salas**	**Clear**
1144 Kingsdale (Victoria Park)	Vault	Jul 13, 2017	Kassal	Salas	Clear

July 10

Comments	

Key

C.M.P.- Corrugated metal pipe

R.C.P.- Reinforced concrete pipe

P.V.C.- Polyvinal chloride pipe

BOLD INDICATES TROUBLE AREA AND SHOULD BE CHECKED MORE OFTEN

Updated 3/6/17 McKittrick

HOFFMAN ESTATES

UNDERGROUND AND CONSTRUCTION

STORM SEWER DIVISION

Storm System Checks South

HIGHLANDS

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
340 Frederick (Locust Park)	24" C.M.P.	Jul 13, 2017	Kassal	Salas	Clear
Highland Lake (Highland Park)	18" R.C.P.	Jul 13, 2017	Kassal	Salas	Clear
290 Larchmont, Dead End	36" R.C.P.	Jul 13, 2017	Kassal	Salas	Clear

Comments	

MOON LAKE

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Moon Lake by Brookside	**54" C.M.P.**	**Jul 10, 2017**	**Salas**	**Salas**	**Clear**
1440 Brookside	**Vault**	**Jul 10, 2017**	**Salas**	**Salas**	**Clear**

Comments	

Key

C.M.P.- Corrugated metal pipe

R.C.P.- Reinforced concrete pipe

P.V.C.- Polyvinal chloride pipe

BOLD INDICATES TROUBLE AREA AND SHOULD BE CHECKED MORE OFTEN

Updated 3/6/17 McKittrick

HOFFMAN ESTATES

UNDERGROUND AND CONSTRUCTION

STORM SEWER DIVISION

Storm Sytem Checks South

HIGHPOINT

LOCATION AND AREA		DATE CLEANED	EMPLOYEE	EMPLOYEE	WATER QUALITY
Behind 845 Heather		**May 1, 2017**	**Kassal**	**Wayton**	**Clear**
Hassell and Rosedale W	Culvert	Jul 13, 2017	Kassal	Salas	Clear
Park view Cir East(Cottonwood Park)	Creek line	Jul 10, 2017	Salas	Salas	Murky
Hassell and Huntington	Culvert	Jul 13, 2017	Kassal	Salas	Clear
Hassell and Kensington(Poplar Park)	12" R.C.P.	Jul 13, 2017	Kassal	Salas	Smelly
2400 Hassell	Culvert	Jul 13, 2017	Kassal	Salas	Clear
2400 Hassell Lake	24" C.M.P.	Jul 13, 2017	Kassal	Salas	Clear
Behind Barrington Lakes Apt	Creek line	Jul 10, 2017	Salas	Salas	Clear

Comments	Brunch in the creek at cottonwood park.

HIGHPOINT PARK/ TWINS SYSTEM

LOCATION AND AREA			EMPLOYEE	EMPLOYEE	WATER QUALITY	Lake Level			
Highpoint Lake Outflow(Highpoint Park)	**18" C.M.P.**	**Jul 13, 2017**	**Kassal**	**Salas**	**Murky**	**57**			
Manhole 100' East of Outflow Headwall		**Jul 10, 2017**	**Salas**	**Salas**	**Clear**	**N/A**			
Manhole 400' East of Headwall between asphalt drive and sidewalk	**78" Concrete precast into creek**	**Jul 10, 2**							
Manhole Front SE c/o MacArthur School	**Creek**	**Jul 10, 2017**	**Salas**	**Salas**	**Clear**	**N/A**			
Manhole 1095 Hillcrest	Vault	Jul 10, 2017	Salas	Salas	Clear	**N/A**			
Inlet 995 Hillcrest	48" C.M.P. Vaults into creek	Jul 10, 2017	Salas	Salas	Clear	**N/A**			
Inlet 985 Hillcrest	Retention	Jul 10, 2017	Salas	Salas	Clear	**N/A**			
Inlet @ 960 Hillcrest and Inlet SW c/o Hillcrest and Heather	Retention	Jul 10, 2017	Salas	Salas	Clear	**N/A**			
NE c/o Lake South Twin Outflow	36" C.M.P.	Jul 13, 2017	Kassal	Salas	Clear	**22**			
NE c/o Lake beside 875 Rosedale North Twin Outflow	27" R.C.P.	Jul 13, 2017	Kassal	Salas	Murky	**Under water**			
3 Beehives by Nicor (Rosedale)		**Jul 10, 2017**	**Salas**	**Salas**	**Murky**	**N/A**			
Outflow @ Northview Dead End and under Northwest Tollway	**27" R.C.P**	**Jul 13, 2017**	**Kassal**	**Salas**	**Muddy**	**N/A**			
1040 Rosedale (Beehive in rear yard, on Nicor Property)	Beehive	Jul 10, 2017	Salas	Salas	Clear	**N/A**			

Comments	

Key

C.M.P.- Corrugated metal pipe

R.C.P.- Reinforced concrete pipe

P.V.C.- Polyvinal chloride pipe

BOLD INDICATES TROUBLE AREA AND SHOULD BE CHECKED MORE OFTEN

Updated 3/6/17 McKittrick

ATTACHMENT
FOR
BMP C.9

Village Webpage

Stormwater Pollution Prevention

Stormwater Pollution Prevention

The Village of Hoffman Estates discharges stormwater from its storm sewer system under the IEPA General National Pollutant Discharge Elimination System Permit No. ILR40.

As a condition of the permit, the Village is required to set goals for a five-year period in order to reduce pollution to the receiving waters. These goals are described in the Notice of Intent.

After each program year, the Village must document its status of compliance with and any changes to the Notice of Intent in an annual Facility Inspection Report. Below is a list of recent reports:

- Annual Report 2013-2014
- Annual Report 2015-2016
- Annual Report 2016-2017

Stormwater Management Plan

The Village of Hoffman Estates' General Permit ILR40 requires the Village to develop, implement, and enforce a stormwater management program designed to protect water quality and prevent and reduce pollution from its storm sewer system to the maximum extent practicable.

To comply with ILR40 Permit requirements, the Village's Stormwater Management Plan, along with the Notice of Intent (NOI) and Annual Facilities Reports are designed to provide the IEPA and the residents of Hoffman Estates with an understanding of the measures the Village employs to ensure public health and safety by reducing pollution into the receiving waters.

This is achieved through the implementation of six minimum control measures and related best management practices (BMPs) for each. More details are located in the Village's Stormwater Manangement Plan document.

How To Report Violations, Illegal Dumping or Pollutants

If you see someone pouring a substance into an inlet or waterway in Hoffman Estates that you suspect is a pollutant, contact the Village Public Works Department, Monday through Friday until 4:00 p.m. at (847) 490-6800 or after hours and on weekends, call the Police non-emergency line at (847) 882-1818.

ATTACHMENT
FOR
BMP C.10

Sample Grate

BMP C.10 Other Illicit Discharge Controls - Sample Grate

ATTACHMENT
FOR
BMP D.1/D.2/D.4/D.6
&
BMP E.2/E.3/E.4/E.5/E.6

Village Ordinance/Code

MUNICIPAL CODE OF HOFFMAN ESTATES, ILLINOIS

Published in 1955 by Order of the Village Board
Republished in 2001 by Order of the Village Board

Municipal Code Corporation | P.O. Box 2235 Tallahassee, FL 32316
info@municode.com | 800.262.2633
www.municode.com

CURRENT OFFICIALS
of the
VILLAGE OF
HOFFMAN ESTATES, ILLINOIS

William D. McLeod
Mayor

Karen V. Mills
Anna Newell
Gary J. Pilafas
Gary Stanton
Michael Gaeta
Gayle Vandenbergh
Village Board

Arthur L. Janura, Jr.
Corporation Counsel

Bev Romanoff
Village Clerk

James H. Norris
Village Manager

This Republication constitutes a complete codification of the general and permanent ordinances of the Village of Hoffman Estates, Illinois.

Source materials used in the preparation of the Republication was the Village Code of 1955, as updated through December, 2000. The source of each section is included in the history note appearing in parentheses at the end thereof. The absence of such a note indicates that the section is new and was adopted for the first time with the adoption of the Code. By use of the comparative table appearing in the back of this Code, the reader can locate any section of any subsequent ordinance included herein.

Chapter and Section Numbering System

The chapter and section numbering system used in this Code is the same system used in many state and local government codes. Each section number consists of two parts separated by a dash. The figure before the dash refers to the chapter number, and the figure after the dash refers to the position of the section within the chapter. Thus, the second section of chapter 1 is numbered 1-2, and the first section of chapter 6 is 6-1. Articles may be placed at the end of the chapter embracing the subject, and, in the case of divisions, may be placed at the end of the article embracing the subject. The next successive number shall be assigned to the new article or division. New chapters may be included by using one of the reserved chapter numbers. Care should be taken that the alphabetical arrangement of chapters is maintained when including new chapters.

Indexes

The indexes have been prepared with the greatest of care. Each particular item has been placed under several headings, some of which are couched in lay phraseology, others in legal terminology, and still others in language generally used by local government officials and employees. There are numerous cross references within the indexes themselves which stand as guideposts to direct the user to the particular item in which the user is interested.

Looseleaf Supplements

A special feature of this publication is the looseleaf system of binding and supplemental servicing of the publication. With this system, the publication will be kept up-to-date. Subsequent amendatory legislation will be properly edited, and the affected page or pages will be reprinted. These new pages will be distributed to holders of copies of the publication, with instructions for the manner of inserting the new pages and deleting the obsolete pages.

Keeping this publication up-to-date at all times will depend largely upon the holder of the publication. As revised pages are received, it will then become the responsibility of the holder to have the amendments inserted according to the attached instructions. It is strongly recommended by the publisher that all such amendments be inserted immediately upon receipt to avoid misplacing them and, in addition, that all deleted pages be saved and filed for historical reference purposes.

Acknowledgments

The publisher is most grateful to Mr. Christopher J. Nelson, Assistant to Village Manager, for his cooperation and assistance during the progress of the work on this publication. It is hoped that his efforts and those of the publisher have resulted in a Code of Ordinances which will make the active law of the city readily accessible to all citizens and which will be a valuable tool in the day-to-day administration of the city's affairs.

This republication was under the direct supervision of John Dombroski, Vice President for Supplements, and Janet Cramer, Editor, of the Municipal Code Corporation, Tallahassee, Florida. Credit is gratefully given to the other members of the publisher's staff for their sincere interest and able assistance throughout the project.

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CHAPTER 10 – SUBDIVISION CODE

ARTICLE 3 – LAND IMPROVEMENTS

Sec. 10-3-13. - Erosion and sedimentation control.

A. *General Principles.* It is the objective of this Section to control soil erosion and sedimentation caused by development activities in the Village. Measures taken to control erosion and sedimentation shall be adequate to assure that sediment is not transported from the site and shall be in accordance with the "Procedures and Standards for Urban Soil Erosion and Sedimentation Control" adopted by the North Cook County Soil and Water Conservation District (or Kane-DuPage Soil and Water Conservation District, where appropriate). The following principles shall apply to all development activities within the Village and to the preparation of the submissions required under Section 10-3-14[.]

1. Development should be related to the topography and soils of the site so as to create the least potential for erosion. Areas of steep slopes where high cuts and fills may be required should be avoided wherever possible, and natural contours should be followed as closely as possible.
2. Natural vegetation should be retained and protected wherever possible. Areas immediately adjacent to natural watercourses should be left undisturbed wherever possible.
3. The smallest practical area of land should be exposed for the shortest practical time during development.
4. Sediment basins, debris basins, desalting basins, silt traps or filters must be installed and maintained to remove sediment from run-off waters on land undergoing development. Soil erosion control measures must be in place prior to any construction.
5. The selection of erosion and sedimentation control measures should be based on assessment of the probable frequency of climatic and other events likely to contribute to erosion, and on evaluation of the risks, costs and benefits involved.
6. In the design of erosion control facilities and practices, aesthetics and the requirements of continuing maintenance should be considered.
7. Provision should be made to accommodate the increased run-off caused by changed soil and surface conditions during and after development. Drainageways should be designed so that their final gradients and the resultant velocities of discharges will not create additional erosion.
8. Permanent vegetation and structures should be installed as soon as practical during development. Refer to Article 4 of this Code for a listing of recommended planting seasons.

(Ord. No. 4360-2013, § 1(Exh. A), 3-18-13)

ATTACHMENT
FOR
BMP F.1

Sample Training Handouts/Information

DRSCW ILR40 Activities
March 2017 – February 2018

PART IV. STORM WATER MANAGEMENT PROGRAMS

A. Requirements

Not applicable to the work of the DRSCW.

B. Minimum Control Measure

6. Pollution Prevention/Good Housekeeping for Municipal Operations

Chloride Reduction Workshops
Two chloride reduction workshops were held during the reporting period ending March 2018.

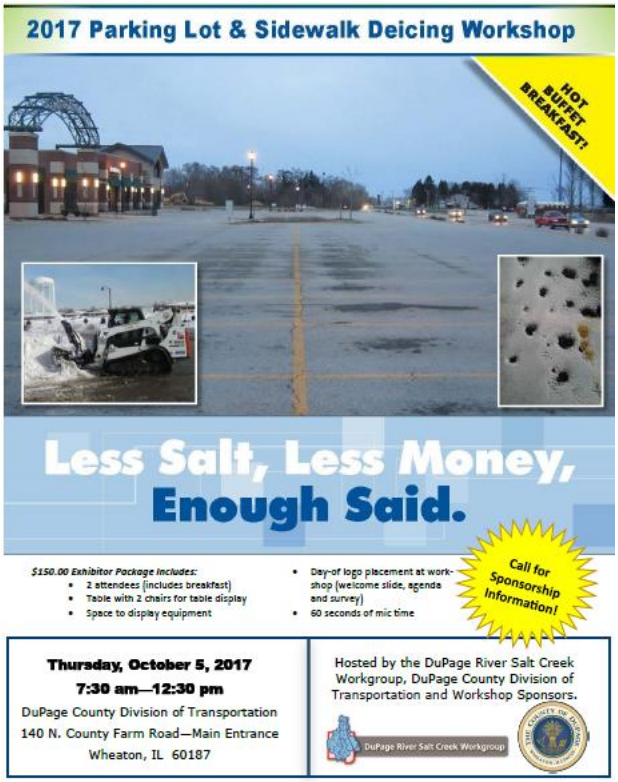
The **public roads deicing workshop** held at DuPage County DOT on October 12, 2017 with the following agenda:

- 7:00 - 7:25 Registration and Breakfast
- 7:25 -7:30 Welcome and Housekeeping- Mike Tuman, DuPage County DOT & Sponsor Recognition – Denver Preston, K-Tech Specialty Coatings
- 7:30 – 7:45 Salt Use & The Environment in the DRSCW Program Area - Stephen McCracken, The Conservation Foundation/DRSCW
- 7:45 – 8:00 MS4 Inspections for Public Works Facilities, Dan Bounds, Baxter & Woodman
- 8:00 – 8:45 Building an Award Winning Snowfighting Program, Bryan Beitzel, Village of Buffalo Grove
- 8:45 –9:00 BREAK (includes exhibitor mic time)
- 9:05 – 9:30 Automated Systems, Dave Kjederquist, Swenson
- 9:30– 10:00 Choosing the Right Blades, Gardi Willis, Kueper North America
- 10:00 – 10:30 Pavement Temperature Sensors, Mark DeVries, Vaisala
- 10:30 – 10:45 Break (includes exhibitor mic time)
- 10:50 – 11:20 Chloride Offset Program, Bryan Wagner, Illinois Tollway; Rick Radde, Village of Bensenville
- 11:20 – 11:55 Shared Services, Todd Hoppenstedt, Village of Montgomery
- 11:55 – 12:00 Wrap Up, Evaluations, Equipment Show

Attendance – 149 registered, 11 presenters/staff, 6 committee members/guests; 9 sponsors/exhibitors = 175 total. All participants received a certificate of attendance. We received 87 feedback forms from participants.

The **parking lots and sidewalks deicing workshop** was held at DuPage County DOT on October 5, 2017 with the following agenda:

- Ambient conditions and regulatory update: Stephen McCracken, The Conservation Foundation/DRSCW
- Information on developing efficient and cost-effective snow fighting operations, appropriate product selection, equipment selection, application rates, equipment calibration, ambient conditions monitoring. Presenters: Connie Fortin, Fortin Consulting and Chis Walsh, (former Public Works Director with City of Beloit, WI)
- Test on workshop materials.



Attendance - 82 registrations, 7 presenters/staff, 6 exhibitors/staff = 95 total. All participants received a training certificate and participants who successfully completed the test are recognized on DuPage County Stormwater Management's Water Quality – Pollution Prevention/Good Housekeeping web page. The DRCCW received 65 program evaluations from participants.

2017 Parking Lot & Sidewalk Deicing Workshop

Less Salt. Less Money.

Enough Said.

$150.00 Exhibitor Package Includes:

- 2 attendees (includes breakfast)
- Table with 2 chairs for table display
- Space to display equipment
- Day-of logo placement at workshop (welcome slide, agenda and survey)
- 60 seconds of mic time

Call for Sponsorship Information!

Thursday, October 5, 2017

7:30 am—12:30 pm

DuPage County Division of Transportation

140 N. County Farm Road—Main Entrance

Wheaton, IL 60187

Hosted by the DuPage River Salt Creek Workgroup, DuPage County Division of Transportation and Workshop Sponsors.

DuPage River Salt Creek Workgroup

THE COUNTY OF DUPAGE WHEATON, ILLINOIS

ATTENDED BY : CHRIS DELIORGIO

Kelly Kerr

From: Eventbrite <orders@eventbrite.com>
Sent: Monday, September 18, 2017 6:53 AM
To: Kelly Kerr
Subject: Registration Confirmation for 2017 Parking Lots & Sidewalks Deicing Workshop

Find events My Tickets

Hi Chris, this is your registration confirmation for 2017 Parking Lots & Sidewalks Deicing Workshop

Organized by DuPage River Salt Creek Workgroup

Message from DuPage River Salt Creek Workgroup

The event organizer has provided the following information:

Event Information

You are registered for the DRSCW's Parking Lots & Sidewalks Deicing Workshop. We look forward to seeing you:

Date: Thursday, October 5, 2017

Time: 7:30 AM - 12:30 PM (Check in and breakfast begin at 7:30 AM)

Location: DuPage County Division of Transportation (140 N. County Farm Rd, Wheaton, IL)

While refunds are not available, participant substitutions are accepted. Please contact Nancy Cinatl: ncinatl@theconservationfoundation.org or 630.428.4500 X120 with any questions.

Thank you and enjoy the hot buffet breakfast and program!

Have a question? Contact the organizer

Order Summary

September 18, 2017

Order #: 671513779

Name	Type	Quantity	Price
Chris DeGiorgio	Single Registration	1	$25.00
		TOTAL	$25.00

Charged to: MasterCard - XXXX-XXXXXX-3661

This charge will appear on your card statement as EB *2017 Parking Lots

Refund Policy: No Refunds

This order is subject to Eventbrite Terms of Service, Privacy Policy, and Cookie Policy

About this event

Thursday, October 5, 2017
from 7:30 AM to 12:30 PM
(CDT)

DuPage County Division of Transportation
140 N. County Farm Road
Wheaton Illinois

Add to my calendar:

Google · Outlook · iCal · Yahoo

2017 Public Roads Deicing Workshop

Less Salt, Less Money, Enough Said.

$150.00 Exhibitor Package Includes:

- 2 attendees (includes breakfast)
- Table with 2 chairs for table display
- Space to display equipment
- Day-of logo placement at workshop (welcome slide, agenda and survey)
- 60 seconds of mic time

Call for Sponsorship Information!

Thursday, October 12, 2017

7:00 am—12:00 pm

DuPage County Division of Transportation

140 N. County Farm Road—Main Entrance

Wheaton, IL 60187

Hosted by the DuPage River Salt Creek Workgroup, DuPage County Division of Transportation and Workshop Sponsors.

DuPage River Salt Creek Workgroup

THE COUNTY OF DUPAGE · WHEATON, ILLINOIS ·

ATTENDED BY: JEREMY JAHNKE, ROGER COLBACH, NICK LACKOWSKI, KEVIN McGRAW

Kelly Kerr

From: Kelly Kerr
Sent: Wednesday, September 13, 2017 7:20 AM
To: Jeremy Jahnke; Roger Golbach; Nick Lackowski; Kevin McGraw
Cc: Joseph Nebel; Paul Petrenko
Subject: De-icing Workshop
Attachments: 2017 DuPage County Roads Registration Flyer.pdf

Gents,

It is my intention to send you (4) supervisors to this workshop on October 12, 2017. Please let me know asap if you have a scheduling conflict.

Thanks,
K

Kelly Kerr
Assistant Director of Public Works
Village of Hoffman Estates
2305 Pembroke Ave
Hoffman Estates, IL 60169
847-490-6800 office
847-781-2704 direct

STORM WATER

Requirements Summary

Storm Water Pollution Prevention Plans (PPPs)

Companies and municipalities who must file general storm water permits must complete and implement storm water pollution prevention plans. Although the plans need not be submitted to the EPA, they must be on file and available to an EPA inspector.

Baseline pollution prevention plans have two major objectives — to identify potential sources of pollution and to describe the practices the company will follow to reduce pollutants in storm water discharges.

1. Pollution Source Identification. Typical source identification plan components include:
   - Mapping the drainage site;
   - Estimating the area of impervious surfaces and the total areas drained by each outfall;
   - Describing specified features that may impact the pollution potential of a discharge;
   - Listing significant spills and leaks of toxic or hazardous pollutants that occurred at the facility after the effective date of the permit;
   - Predicting the direction, rate, types, and total quantity of pollutants that may be present in discharges at your location; and
   - Summarizing existing sampling data describing pollutants in storm water discharges.
2. Best Management Practices to Reduce Pollutants. Typical pollution prevention plan components include:
   - Establishing a pollution prevention committee;
   - Identifying risks from materials present at the site;
   - Instituting a preventive maintenance program;
   - Implementing good housekeeping procedures;

STORM WATER

Requirements Summary

- Establishing spill prevention and response plans;
- Developing sediment and erosion prevention plans;
- Training employees in company plans and procedures;
- Conducting periodic inspections of the facility;
- Keeping appropriate records and reports; and
- Certifying that storm water discharges have been tested for the presence of non-storm water pollution sources.

Duty to Reapply

NPDES permits are effective for a fixed term not to exceed 5 years. Permittees who wish to continue any activity regulated by a NPDES permit after its expiration date must apply for and obtain a new permit. Permittees must submit a new application 180 days before the existing permit expires unless permission for a later date has been granted. Reapplication details are found in 40 CFR 122.21, 122.41 and 122.46.

The EPA administrators of regions 1, 2, 3, 4, 6, 9 and 10 have announced that the Agency does not intend to reissue the NPDES storm water baseline industrial general permit and is proposing to terminate this permit. As a result, all industrial facilities previously permitted under the baseline permit would be required to obtain storm water permit coverage under the multi-sector general permit (MSGP), which was finalized on September 30, 1998, or to submit an application for an individual permit. For more information, see the July 11, 1997 *Federal Register* or contact your regional EPA storm water coordinator.

Reporting

Industry-specific semi-annual monitoring and annual reporting requirements are established for storm water discharges associated with industrial activity from six classes of industries:

- Certain SARA Title III, Section 313 facilities;
- Primary metal facilities;
- Land disposal units;

ATTACHMENT

FOR

BMP F.2

Village Drainage System Maintenance SOP

VILLAGE OF HOFFMAN ESTATES
PUBLIC WORKS DEPARTMENT
DRAINAGE SYSTEM MAINTENANCE
STANDARD OPERATING PROCEDURES

I. OBJECTIVE

A. These Standard Operating Procedures (SOP) specify responsibilities and procedures for inspecting and cleaning the streams, ditches and storage basins in the Village of Hoffman Estates.

II. RESPONSIBLILITIES

A. The Director of Public Works is responsible for the administration of this Standard Operating Procedures and the performance of the Village of Hoffman Estates staff identified herein.

B. The Director of Public Works is responsible for:

1. Inspecting the streams, ditches and storage basins in accordance with this Standard Operating Procedures and in response to complaints and inquiries received by the Village of Hoffman Estates.

2. Forwarding drainage problem reports to the appropriate office for action.

3. Serving maintenance notices to private property owners.

4. Cleaning the streams, ditches and storage basins on public property, right-of-ways and easements in accordance with these Standard Operating Procedures.

5. Monitoring the streams, ditches and storage basins in the Village of Hoffman Estates parks and required cleaning in accordance with these Standard Operating Procedures.

C. The Chief of Police and/or the Building Official is responsible to enforce the Village of Hoffman Estates Municipal Code and related regulations on dumping or depositing material in the drainage system. The Chief of Police and/or the Building Official are also responsible for serving maintenance notices to private property owners.

D. All work on Illinois Department of Transportation or Cook County property shall be coordinated with the appropriate state and county offices.

E. Property owners are responsible for maintaining the streams, ditches and detention basins on their properties.

III. JURISDICTION

A. These Standard Operating Procedures cover all the public and private surface facilities delineated on the drainage system map, provided as Attachment 1.

B. Jurisdiction includes: all creeks, ditches, detention areas, and retention within the Village.

IV. IDENTIFICATION OF PROBLEMS

A. The Village Engineer or his/her designee and/or Director of Public Works or his/her designee shall inspect all the watercourses and basins in the drainage system.

B. Frequency should be at least semi-annual and during storm season.

C. When a major storm forecast is received, Director of Public Works or his/her designee shall check the outlet, flow and report the water level of the following lakes: (level in feet above the outlet elevation)

High Point Lake

North/South Twin Lakes

Ray Kessel Lake (Highland Blvd. & Jones) and contact Village of Schaumburg as needed.

Highland Lake

C. Within 24 hours of a major storm, Village Engineer or his/her designee and/or Director of Public Works or his/her designee shall inspect the “choke points” where debris has been known to accumulate.

D. See inspection log for locations.

E. The Village Engineer or his/her designee and/or Director of Public Works or his/her designee shall complete the Drainage Inspection Report after each

inspection. If an inspection finds a problem, a Drainage Problem Report shall be completed and forwarded to the appropriate office. A copy of the report shall be kept in an appropriate file.

F. The Village Engineer or his/her designee and/or Director of Public Works or his/her designee shall inspect all complaints submitted by residents, community officials or other community offices. Such complaints shall be recorded on the Drainage Problem Report form.

ATTACHMENT
FOR
BMP F.3

See BMP A.1 Sample Article

ATTACHMENT
FOR
SECTION C

Results of Information Collected/Analyzed/Monitoring

PART V. MONITORING, RECORDKEEPING, AND REPORTING

A. Monitoring

The ILR40 permit states that permit holders "must develop and implement a monitoring and assessment program to evaluate the effectiveness of the BMPs being implemented to reduce pollutant loadings and water quality impacts". The DRSCW monitoring program meets the following monitoring objectives and requirements outlined in the permit:

- Measuring pollutants over time (Part V. A. 2. b. ii)
- Sediment monitoring (Part V. A. 2. b. iii)
- Assessing physical and habitat characteristics such as stream bank erosion caused by storm water discharges ((Part V. A. 2. b. vi)
- Collaborative watershed-scape monitoring (Part V. A. 2. b. x)
- Ambient monitoring of total suspended solids, total nitrogen, total phosphorus, fecal coliform, chlorides, and oil and grease (Part V. A. 2. c.)

The DRSCW water quality monitoring program is made up of two components: 1) Bioassessment and 2) DO monitoring.

BIOASSESSMENT

Overview and Sampling Plan

A biological and water quality survey, or "biosurvey", is an interdisciplinary monitoring effort coordinated on a waterbody specific or watershed scale. This may involve a relatively simple setting focusing on one or two small streams, one or two principal stressors, and a handful of sampling sites or a much more complex effort including entire drainage basins, multiple and overlapping stressors, and tens of sites. The DRSCW bioassessment is the latter. The DRSCW bioassessment program began in 2007 with sampling in the West Branch DuPage River, East Branch DuPage River and Salt Creek watersheds. From 2009-2016, each watershed was sampled on a 3-year rotation beginning with the West Branch DuPage River watershed in 2006. Beginning in 2017, watershed will be sampled in a 5-year rotation ensuring that each watershed will be sampled during the effective period of the ILR40 permit. The bioassessment program functions under a quality assurance plan agreed on with the Illinois Environmental Protection Agency (http://drscw.org/wp/bioassessment/). Table 1 details the bioassessment sampling dates for each DRSCW watershed.

Table 1. Bioassessment sampling dates for the DRSWC watershed

Watershed	Sampling Completed (year)	Sampling Scheduled (year)
West Branch DuPage River	2007, 2009, 2012, 2015	2020
East Branch DuPage River	2007, 2011, 2014	2019
Salt Creek	2007, 2010, 2013, 2016	2021

The DRSCW bioassessment program utilizes standardized biological, chemical, and physical monitoring and assessment techniques employed to meet three major objectives:

1) determine the extent to which biological assemblages are impaired (using IEPA guidelines);
2) determine the categorical stressors and sources that are associated with those impairments; and,
3) add to the broader databases for the DuPage River and Salt Creek watersheds to track and understand changes through time in response to abatement actions or other influences.

The data collects as part of the bioassessment is processed, evaluated, and synthesized as a biological and water quality assessment of aquatic life use status. The assessments are directly comparable to previously conducted bioassessments such that trends in status can be examined and causes and sources of impairment can be confirmed, amended, or removed. A final report containing a summary of major findings and recommendations for future monitoring, follow-up investigations, and any immediate actions that are needed to resolve readily diagnosed impairments is prepared following each bioassessment. The bioassessment reports are posted on the DRSCW at http://drscw.org/wp/bioassessment/. It is not the role of the bioassessments to identify specific remedial actions on a site specific or watershed basis. However, the baseline data provided by the bioassessments contributes to the Integrated Priority System that was developed to help determine and prioritize remedial projects (http://drscw.org/wp/project-identification-and-prioritization-system/).

Sampling sites for the bioassessment were determined systematically using a geometric design supplemented by the bracketing of features likely to exude an influence over stream resource quality, such as CSOs, dams and wastewater outfalls. The geometric site selection process starts at the downstream terminus or “pour point” of the watershed (Level 1 site), then continues by deriving each subsequent “panel” at descending intervals of one-half the drainage area (D.A.) of the preceding level. Thus, the drainage area of each successive level decreases geometrically. This results in in seven drainage area levels in each of the three watersheds, starting at the largest (150 sq. mi) and continuing through successive panels of 75, 38, 19, 9, 5 and 2 sq. mi. Targeted sites are then added to fill gaps left by the geometric design and assure complete spatial coverage in order to capture all significant pollution gradients including reaches that are impacted by wastewater treatment plants (WWTPs), major stormwater sources, combined sewer overflows (CSOs) and dams. The number of sampling sites by method/protocol and watershed are listed in Table 2 and illustrated in Figure 1.

Representativeness – Reference Sites

Data is collected from selected regional reference sites in northeastern Illinois preferably to include existing Illinois EPA and Illinois DNR reference sites, potentially being supplemented with other sites that meet the Illinois EPA criteria for reference conditions. One purpose of this data will be to index the biological methods used in this study that are different from Illinois EPA

and/or DNR to the reference condition and biological index calibration as defined by Illinois EPA. In addition, the current Illinois EPA reference network does not yet include smaller headwater streams, hence reference data is needed to accomplish an assessment of that data. Presently thirteen (13) reference sites have been established.

Table 2. Number of sampling sites in the DRSCW project area.

Method/Protocol	West Branch DuPage River (2013)	East Branch DuPage River (2014)	Salt Creek (2016)	Reference Sites (2006-2016)	Total Sites
Biological sampling					
Fish	44	36	51	13	144
Macroinvertebrates	44	36	51	13	144
QHEI	44	36	51	13	144
Water Column Chemical/Physical Sampling					
Nutrients*	44	36	51	6	137
Water Quality Metals	44	36	51	6	137
Water Quality Organics	18	11	16	6	51
Sediment Sampling	18	11	16	6	51

*Also included indicators or organic enrichment and ionic strength, total suspended solids (TSS), DO, pH and temperature

The bioassessment sampling includes four (4) sampling methods/protocols: biological sampling, Qualitative Habitat Evaluation Index (QHEI), water column chemical/physical parameter sampling and sediment chemistry. The biological sampling includes two assemblages: fish and macroinvertebrates.

FISH

Methodology

Methods for the collection of fish at wadeable sites was performed using a tow-barge or longline pulsed D.C. electrofishing apparatus (MBI 2006b). A Wisconsin DNR battery powered backpack electrofishing unit was used as an alternative to the long line in the smallest streams (Ohio EPA 1989). A three-person crew carried out the sampling protocol for each type of wading equipment sampling in an upstream direction. Sampling effort was indexed to lineal distance and ranged from 150-200 meters in length. Non-wadeable sites were sampled with a raft-mounted pulsed D.C. electrofishing device in a downstream direction (MBI 2007). Sampling effort was indexed to lineal distance over 0.5 km. Sampling was conducted during a June 15-October 15 seasonal index period.

Samples from each site were processed by enumerating and recording weights by species and by life stage (y-o-y, juvenile, and adult). All captured fish were immediately placed in a live well, bucket, or live net for processing. Water was replaced and/or aerated regularly to maintain adequate D.O. levels in the water and to minimize mortality. Fish not retained for voucher or other purposes were released back into the water after they had been identified to species,

examined for external anomalies, and weighed either individually or in batches. While the majority of captured fish were identified to species in the field, any uncertainty about the field identification required their preservation for later laboratory identification. Identification was made to the species level at a minimum and to the sub-specific level if necessary. Vouchers were deposited and verified at The Ohio State University Museum of Biodiversity (OSUMB) in Columbus, OH.

Results

The fish sampling results presented in this report summarize the findings for the mainstem reaches of the East Branch DuPage River, the West Branch DuPage River and Salt Creek. Information on the tributaries and detailed analysis of all results can be found at http://drscw.org/wp/bioassessment/.

The fish and macroinvertebrate results are presented as Index of Biotic Integrity (IBI) scores. IBI is an evaluation of a waterbodies biological community in a manner that allows the identification, classification and ranking of water pollution and other stressors. IBIs allow the statistical association of various anthropogenic influences on a water body with the observed biological activity in said water body and in turn the evaluation of management interventions in a process of adaptive management. Chemical testing of water samples produce only a snapshot of chemical concentrations while an IBI allows an evaluation of the net impact of chemical, physical and flow variables on a biological community structure. Dr. James Karr formulated the IBI concept in 1981.

East Branch DuPage River

Fish assemblage conditions throughout the East Branch DuPage River watershed a in the poor and fair ranges (Figure 1). However, the mainstem assemblages show similar quality or modest improvement at nearly all sites when 2014 data is compare to 2011 and approach 2007 levels.

Prior to the modification of the Churchill Woods dam in 2001, fish assembles upstream of the dam, were essentially that of a pond and dominated by sunfish, bullheads, golden shiner, and mosquito fish. Downstream of the dam, the fish assemblage reflected more lotic, stream like conditions with populations of sand shiner, johnny darter, horneyhead chub and rock bass. Since the modification of the Churchill Woods dam, eight new species have been recorded and other populations have expanded their ranges above the former dam site. Additionally, in 2014, two new species (banded darter and round goby) were recorded in the lower reaches of the East Branch. The appearance of the banded darter, a sensitive species, is a sign of improved quality in the lower nine miles of the main stem.

West Branch DuPage River

All survey sites fell consistently in the poor or lower fair ranges with slightly higher scores downstream from RM 8.1 and the Fawell Dam (Figure 2). No West Branch sites met the 41-point criterion synonymous with a good quality assemblage.

It should be noted that the Fawell dam is a barrier to several fish species. The DRSCW in cooperation with DuPage County and Forest Preserve District of DuPage County plans to modify the Fawell Dam to allow for fish passage. This project is expected to be completed by 2018.

Figure 1. Fish IBI scores in the East Branch DuPage River, 2014, 2011-12 and 2007 in relation to municipal POTW dischargers. Bars along the x-axis depict mainstem dams or weirs (only black bars impede fish passage). The shaded area demarcates the "fair" narrative range.

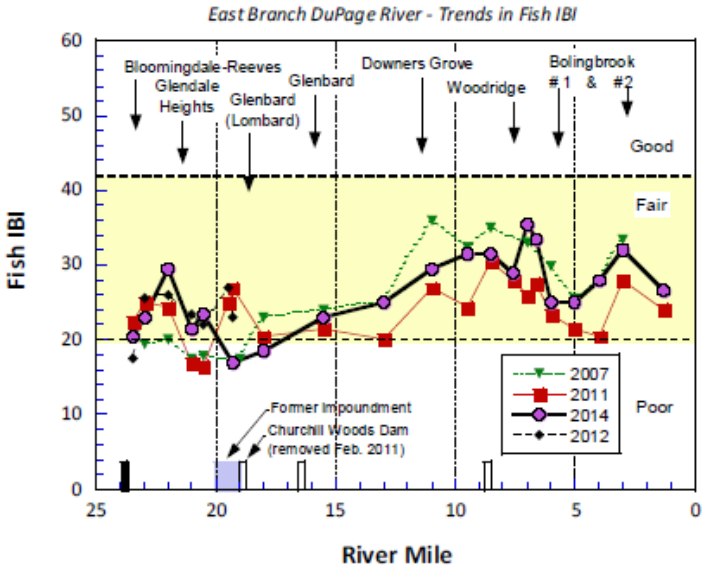
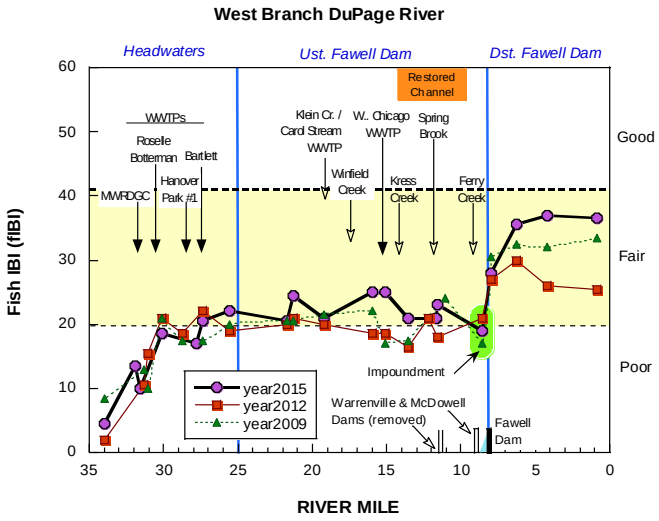


Figure 2. Fish IBI scores in the West Branch DuPage River, 2015, 2011-12 and 2007 in relation to municipal POTW dischargers. Bars along the x-axis depict mainstem dams or weirs (only black bars impede fish passage). The shaded area demarcates the "fair" narrative range.



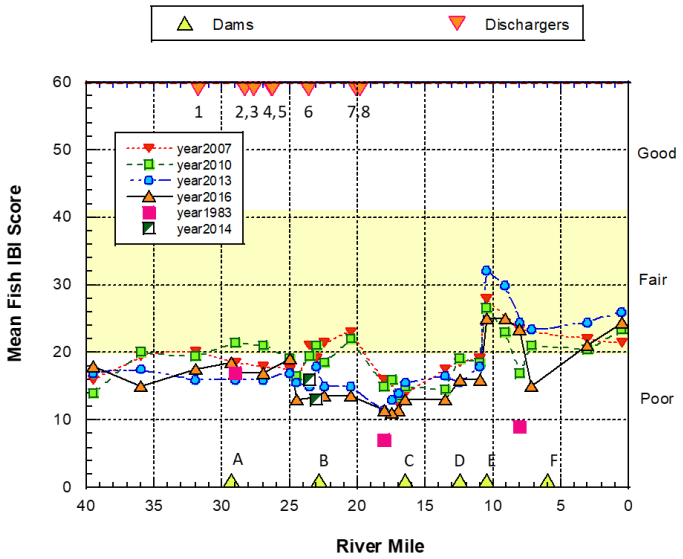
Salt Creek

Fish assemblages sampled in Salt Creek mainstem in 2016 were consistently in poor condition upstream from the Graue Mill Dam and mostly fair downstream to the confluence with the Des Plaines River (Figure 3). This was similar to the pattern observed in 2013 although fIBI scores were slightly higher than in 2016 at most sites in the lower one-half of the mainstem. In fact, the general response of the fish assemblage was similar longitudinally among all four survey periods.

The Graue Mill Dam is a barrier to upstream fish movement with 17 fish species found only downstream of the dam and only two species only found upstream (Table 18). Many of the species only found downstream should have populations that extend well upstream of the dam (johnny darter, smallmouth bass, rock bass, hornyhead chub, etc.). Thus the dam as a barrier is a key factor that limits the ability of certain species to recolonize the upper reaches of Salt Creek as other precluding stressors (e.g., D.O., siltation, organic enrichment) are resolved. The DRSCW plans to modify the Fullersburg Woods Dam to allow for fish passage. This project is expected to be completed by 2023.

There was a wide variation in fIBI scores among the tributaries with no sites meeting the General Use fIBI threshold and many sites in poor condition. Sites in the Addison Creek subwatershed had the lowest fIBI scores with most rated as poor across all years. This generally matches the pattern observed with the QHEI in Addison Creek with uniformly poor habitat. However, Addison Creek also has several water quality stressors and poor habitat condition in other tributaries did not result in the skew of fIBI scores in the poor range.

Figure 3. Fish Index of Biotic Integrity scores for samples collected from Salt Creek in 1983, 2007, 2010, 2013, 2014 and 2016 in relation to the locations of NPDES permitted facilities, combined sewer overflow (CSO) outfalls, dams and principal tributaries. The locations of dams are arrayed along the x-axis and noted as triangles. The shaded area indicates the range for a restricted fish assemblage as defined by Illinois EPA.



MACROINVERTEBRATES

Methodology

The macroinvertebrate assemblage is sampled using the Illinois EPA (IEPA) multi-habitat method (IEPA 2005). Laboratory procedures followed the IEPA (2005) methodology for processing multi-habitat samples by producing a 300-organism subsample with a scan and pre-pick of large and/or rare taxa from a gridded tray. Taxonomic resolution is performed to the lowest practicable resolution for the common macroinvertebrate assemblage groups such as mayflies, stoneflies, caddisflies, midges, and crustaceans, which goes beyond the genus level requirement of IEPA (2005). However, calculation of the macroinvertebrate IBI followed IEPA methods in using genera as the lowest level of taxonomy for mIBI calculation and scoring.

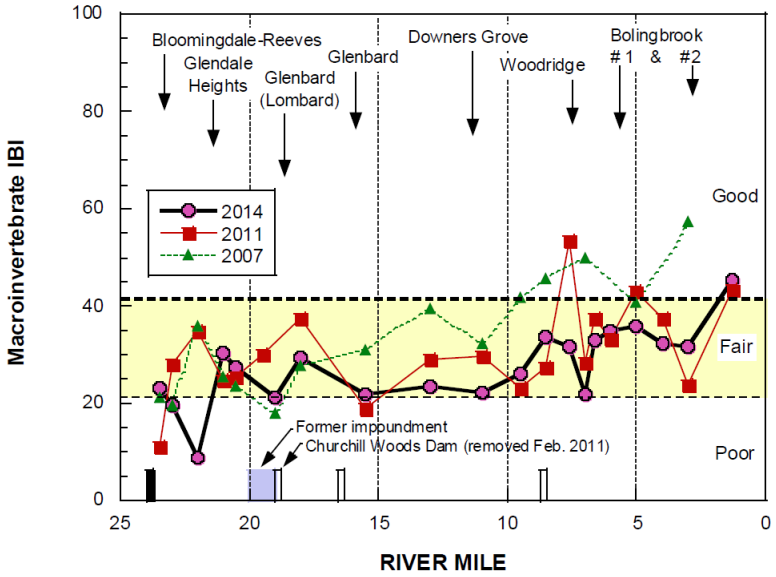
Results

The macroinvertebrate sampling results presented in this report summarize the findings for the mainstem reaches of the East Branch DuPage River, the West Branch DuPage River and Salt Creek. Information on the tributaries and detailed analysis of all results can be found at http://drscw.org/wp/bioassessment/.

East Branch DuPage River

Macroinvertebrate collections from the 2014 East Branch watershed survey fell entirely within the fair or poor quality ranges with the exception of a single "good" site on the lower mainstem (Figure 4). Assemblages throughout the study area are predominated by facultative and tolerant organisms most often associated with elevated nutrients, dissolved solids and low DO.

Figure 4. Macroinvertebrate IBI scores in the East Branch DuPage River, 2014, 2011-12 and 2007 in relation to municipal POTW dischargers. Bars along the x-axis depict mainstem dams or weirs (only black bars impede fish passage). The shaded area demarcates the "fair" narrative range.

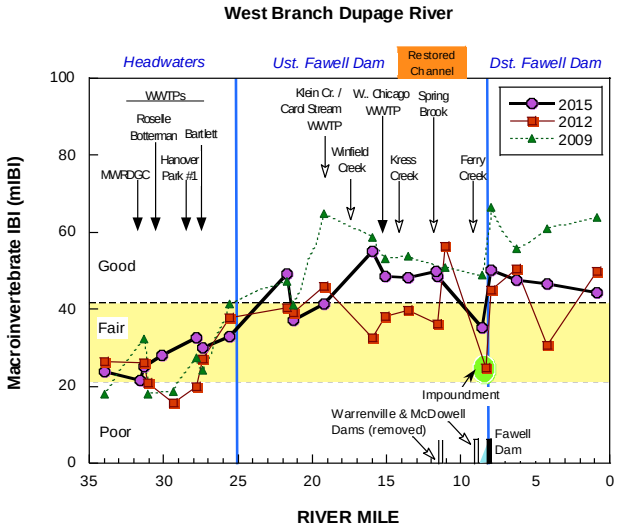


West Branch DuPage River

With few exceptions, West Branch macroinvertebrate assemblages from the upper, headwater reach reflected degraded but similar quality between 2007, 2009, 2012 and 2015 (Figure 5). The combination urban drainage, marginal habitat quality and a series of four major WWTP discharges in the small drainage were considered major contributors.

In both 2009 and 2015, major improvement in mIBI scores and clearly good mIBI ratings were detected upstream from Klein Creek and the Carol Stream WWTP (Figure 5). In 2009 and 2015, consistently good quality was maintained along the remaining length of the West Branch downstream to the mouth. In 2006, this downstream improving trend was more erratic; still 5 of the 8 sites between Klein Creek and the mouth exceeded Illinois criteria. In contrast, the 2012 trend was much less distinct as narrative ratings vacillated between a fair or lower good range status through most of the lower 20 mainstem river miles.

Figure 5. Macroinvertebrate IBI scores in the West Branch DuPage River, 2015, 2011-12 and 2007 in relation to municipal POTW dischargers. Bars along the x-axis depict mainstem dams or weirs (only black bars impede fish passage). The shaded area demarcates the "fair" narrative range.

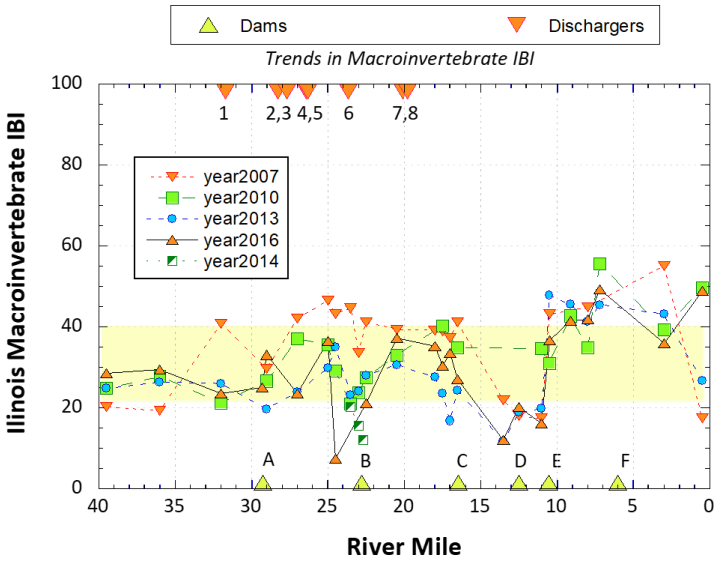


Salt Creek

In 2013 and 2016 the macroinvertebrate assemblages in the Salt Creek mainstem were rated fair at most sites upstream from the Graue Mill Dam, and good at four and fair at two of the six sites downstream from the dam (Figure 6). Longitudinally, scores decreased downstream from Spring Brook relative to those upstream. The confluence with Spring Brook marks the reach where multiple WWTPs discharge in short succession.

In the 2016, the Oak Meadows Dam (dam B on Figure 6) was removed in a project sponsored by the Forest Preserve District of DuPage County, DuPage County Stormwater Management, and the DRSCW. Post-project sampling was completed in 2017. Post-project, both mIBI and individual species taxa biodiversity improved at the site. The 2017 post-project mean mIBI (33.2) increased 9.6 points compared to the 2013 score. The project's objective is to increase the mean mIBI to 35. Post-project macroinvertebrate sampling to document the continued effects of this dam removal will occur in 2018 and 2019.

Figure 6. Macroinvertebrate IBI scores for samples collected from the Salt Creek mainstem, 2007, 2010, 2013, 2014, and 2016 in relation to publicly owned treatment works, low head dams (noted by diamond tipped bars adjoining the x-axis), and combined sewer outfalls (CSO). The shaded region demarcates the "fair" narrative range.



HABITAT

Methodology

Physical habitat was evaluated using the Qualitative Habitat Evaluation Index (QHEI) developed by the Ohio EPA for streams and rivers in Ohio (Rankin 1989, 1995; Ohio EPA 2006b) and as modified by MBI for specific attributes. Attributes of habitat are scored based on the overall importance of each to the maintenance of viable, diverse, and functional aquatic faunas. The type(s) and quality of substrates, amount and quality of instream cover, channel morphology, extent and quality of riparian vegetation, pool, run, and riffle development and quality, and gradient used to determine the QHEI score which generally ranges from 20 to less than 100. QHEI scores and physical habitat attribute were recorded in conjunction with fish collections.

Results

The QHEI data presented in this report summarize the findings for the mainstem reaches of the East Branch DuPage River, the West Branch DuPage River and Salt Creek. Information on the tributaries and detailed analysis of all results can be found at http://drscw.org/wp/bioassessment/.

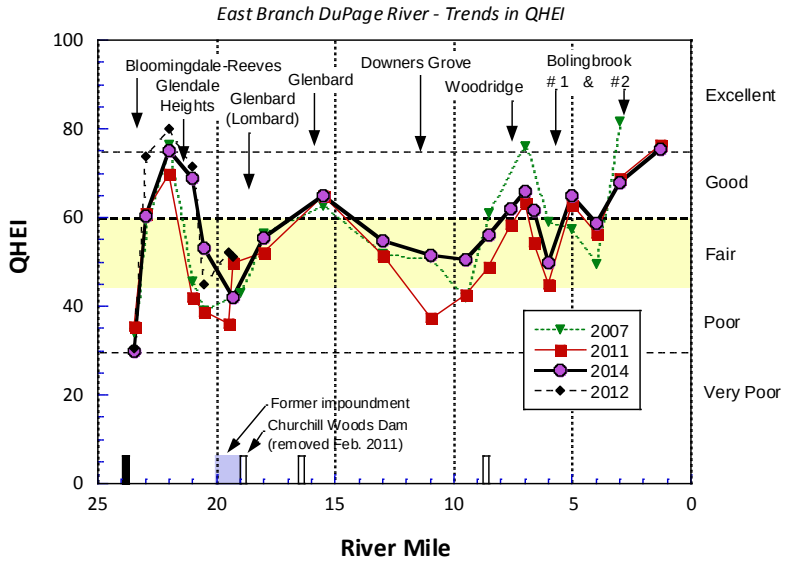
The physical habitat of a stream is a primary determinant of biological quality. Streams in the glaciated Midwest, left in their natural state, typically possess riffle-pool-run sequences, high sinuosity, and well-developed channels with deep pools, heterogeneous substrates and cover in the form of woody debris, glacial tills, and aquatic macrophytes. The QHEI categorically scores the basic components of stream habitat into ranks according to the degree to which those components are found in a natural state, or conversely, in an altered or modified state.

East Branch DuPage River

Based on QHEI scores, mainstem habitat quality fell mostly in the fair to good ranges, but varied by location (Figure 7). Substrate embeddedness was a common characteristic of the mainstem as riffle or pool embeddedness was recorded at all but one location (EB23/RM 22.0).

Since the modification of the Churchill Woods dam in 2011, QHEI scores within and upstream of the former dam have increased by reflecting the appearance of riffles and increased habitat heterogeneity.

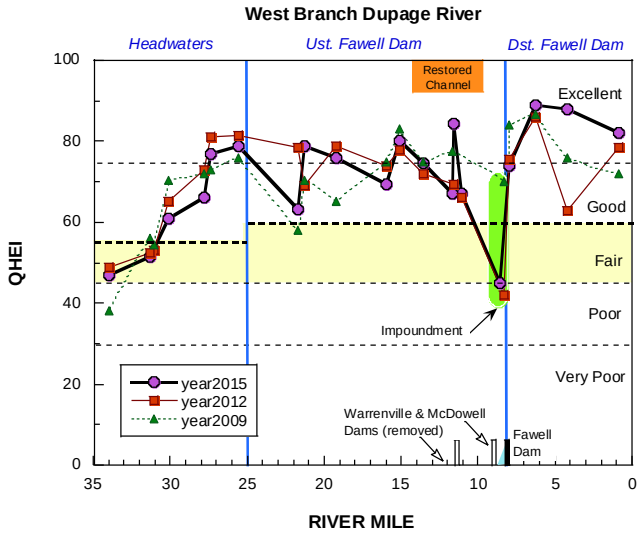
Figure 7. Qualitative Habitat Evaluation Index (QHEI) scores for the E. Branch DuPage River in 2007, 2011-12, and 2014 in relation to municipal WWTP discharges. Bars along the x-axis depict mainstem dams or weirs (black bars are dams that impede fish passage). The shaded region depicts the range of QHEI scores where habitat quality is marginal and limiting to aquatic life. QHEI scores less than 45 are typical of highly modified habitat.



West Branch DuPage River

Mainstem habitat quality in 2012 was good to excellent throughout most of its length and, with the exception of the extreme headwaters (upstream RM 30.1) and Fawell Dam pool (RM 8.3) (Figure 8).

Figure 8. Qualitative Habitat Evaluation Index (QHEI) scores for the W. Branch DuPage River in 2009, 2012, and 2015. Bars along the x-axis depict mainstem dams or weirs (black bars are dams that impede fish passage). The shaded region depicts the range of QHEI scores where habitat quality is marginal and limiting to aquatic life. QHEI scores less than 45 are typical of highly modified habitat



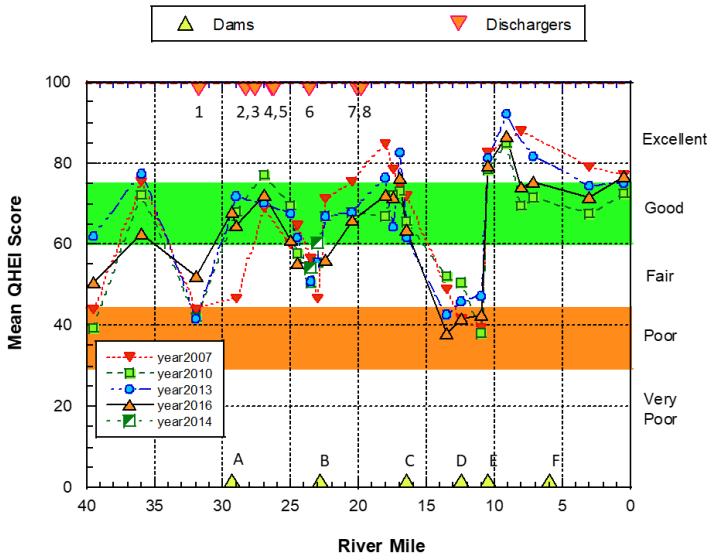
Salt Creek

In Salt Creek, most of the sites possessed the types and amounts of habitat features necessary to support aquatic life consistent with the Illinois General Use (Figure 9), with QHEI scores averaging 66.0 (range: 41.5-92.0) in 2013 and 64.3 (range: 38.0-86.5) in 2016. The longitudinal pattern in habitat quality was consistent between all years (2007, 2010, 2013 and 2016) with habitat generally improving in a downstream direction except where influenced by impoundments. Habitat was generally the poorest in the very headwaters and impoundments formed by low head dams. As in 2007 and 2010, the total number of modified quality attributes relative to the total number of good quality attributes at any given site generally did not overwhelm the capacity of a site to support aquatic life in 2013 and 2016, excepting in the impoundments formed by low head dams. The attributes of the QHEI that are most consistently potentially limiting to aquatic life are the embeddedness and siltation attributes with most sites having high silt cover and moderate to extensively embedded substrates. The prevalence of coarse substrate materials indicates the strongly biological potential if delivery of fines to the stream can be controlled.

In the 2016, the Oak Meadows Dam (dam B on Figure 9) was removed in a project sponsored by the Forest Preserve District of DuPage County, DuPage County Stormwater Management, and the DRSCW. Post-project sampling was completed in 2017. Post project QHEI increased at all sites with improvements in substrate, riparian, pool and riffle scores. Mean QHEI at the project location increased 12 points to 69.3 (or 68.5 if we discount SC35A, surveyed for QHEI post project only). All QHEI scores were within the "good" range (>60 QHEI points). The DRSCW is

optimistic its QHEI goal of >70 will be reached as riparian vegetation at the site matures. Post-project monitoring will continue in 2018 and 2019.

Figure 9. Qualitative Habitat Evaluation Index (QHEI) scores for Salt Creek plotted by river mile for data from 2007, 2010, 2013, 2014, and 2016. The orange-shaded region depicts the range of QHEI scores where habitat quality is marginal and limiting to aquatic life. QHEI scores less than 45 are typical of highly modified channels. The triangles arrayed along the x-axis in both plots show the locations of low-head dams.



WATER QUALITY CHEMISTRY

Methodology

Water column and sediment samples are collected as part of the DRSCW bioassessment programs. The total number of sites sampled is detailed in Table 2. Total number of collected samples by watershed typical for a full assessment by watershed are given in Table 3. The number of samples collected at each site is largely a function of the sites drainage area with the frequency of sampling increasing as drainage size increases (Table 4). Organics sampling is a single sample done at a subset of sites. Sediment sampling is done at a subset of 66 sites using the same procedures as IEPA.

The parameters sampled for are included in Table 6 and can be grouped into demand parameters, nutrients, demand, metals and organics. Locations of organic and sediment sites are shown on Figure 2. All sampling occurs between June and October of the sample year. The Standard Operating Procedure for water quality sampling can be found at http://drscw.org/wp/bioassessment/.

Table 3. Total number of samples by watershed typical for a full assessment by watershed

Watershed	Approximate # Sites	Demand Samples	Nutrients Samples	Metals Samples	Organics Samples
Salt Creek	51	280	280	149	16
West Branch DR	44	218	218	110	18
East Branch DR	36	196	196	100	11

Table 4. Approximate distribution of sample numbers by drainage area across the monitoring area.

Drainage Area and site numbers	>100 sq mi (n=12)	>75 sq mi (n=25)	>38 sq mi (n=11)	>19 sq mi (n=11)	>8 sq mi (n=15)	>5 sq mi (n=24)	>2 sq mi (n= 46)
Mean # Samples demand /nutrients	12	9	6	6	4	4	2
Mean # Samples metals	6	6	4	4	2	2	0

Table 6. Water Quality and sediment Parameters sampled as part of the DRSCW Bioassessment Program.

Water Quality Parameters	Sediment Parameters
Demand Parameters	**Sediment Metals**
5 Day BOD	Arsenic
Chloride	Barium
Conductivity	Cadmium
Dissolved Oxygen	Chromium
pH	Copper
Temperature	Iron
Total Dissolved Solids	Lead
Total Suspended Solids	Manganese
	Nickel
Nutrients	Potassium
Ammonia	Silver
Nitrogen/Nitrate	Zinc
Nitrogen – Total Kjeldahl	
Phosphorus, Total	
	Sediment Organics
Metals	Organochlorine Pesticides
Cadmium	PCBS
Calcium	Percent Moisture
Copper	Semivolatile Organics
Iron	Volatile Organic Compounds
Lead	
Magnesium	
Zinc	
Organics – Water	
PCBS	
Pesticides	
Semivolatile Organics	
Volatile Organics	

Results

The discussion presented below focuses on the constituents listed in the MS4 permit: total suspended solids, total nitrogen, total phosphorus, fecal coliform, chlorides, and oil and grease. Total nitrogen is presented as ammonia, nitrate, and total kjeldahl nitrogen (TKN). Prior to the 2016 sampling period, fecal coliform and oil and grease sampling was not conducted. Oil and grease sampling was added to the bioassessment sampling for Salt Creek in 2016. Fecal coliform and oil and grease sampling will be added to all future bioassessment sampling for the East Branch DuPage River (2019), West Branch DuPage River (2020), and Salt Creek (2021) ensuring that each watershed will be sampled for that parameter during the effective period of the ILR40 permit.

Detailed analysis and results for the other water quality constituents is located at http://drscw.org/wp/bioassessment/.

East Branch DuPage River

East Branch mainstem flows are effluent dominated during the late summer-early fall months. As such, chemical water quality is highly influenced by the concentration and composition of chemical constituents in WWTP effluents (Figures 10-13). The results in 2014 were consistent with 2011 during low flow periods with respect to observing no exceedances of Illinois water quality criteria for regulated parameters (i.e. TSS, NH_3-N).

West Branch DuPage River

Stream flow in the West Branch DuPage River is effluent dominated during summer months. As such, its water quality is highly influenced by the concentrations and composition of chemical constituents in the effluent as well as runoff from the urban and developed land cover in the watershed. Water quality sampling in 2012 during the summer low-flow periods suggest that the quality of treated effluent, with respect to regulated parameters (i.e., cBOD5, TSS, NH3), was generally good. Effluents did not result directly in exceedances of water quality standards for these parameters. However, increasingly elevated nutrient levels and their attendant influence on mainstem D.O. regimes remain problematic.

Salt Creek

Salt Creek drains a highly urbanized landscape with a high population density. The increase in Pollutants associated with urbanized landscapes have been documented. Given the high population density in the watershed, treated municipal effluent comprises a significant fraction of the total flow in Salt Creek and strongly influences water quality, especially with respect to nitrogen and phosphorus. The results in 2016 were similar to those in 2013 and 2010.

Figure 10. Concentrations of total suspended solids (top panel) and TKN (lower panel) from E. Branch DuPage River samples in 2007, 2011 and 2014 in relation to municipal WWTP discharges. Bars along the x-

axis depict mainstem dams or weirs (black bars are dams that impede fish passage). Red dashed lines shows the upper limits of concentrations typical for relatively unpolluted waters for TSS (McNeeley et al. 1979). Orange dashed line in TSS plot is the Ohio reference threshold for headwater (HW) and wadeable (WD) streams. For TKN, the orange dashed line represents the IPS threshold (1.0 mg/l). IPS is a tool developed by the DRSCW and MBI.

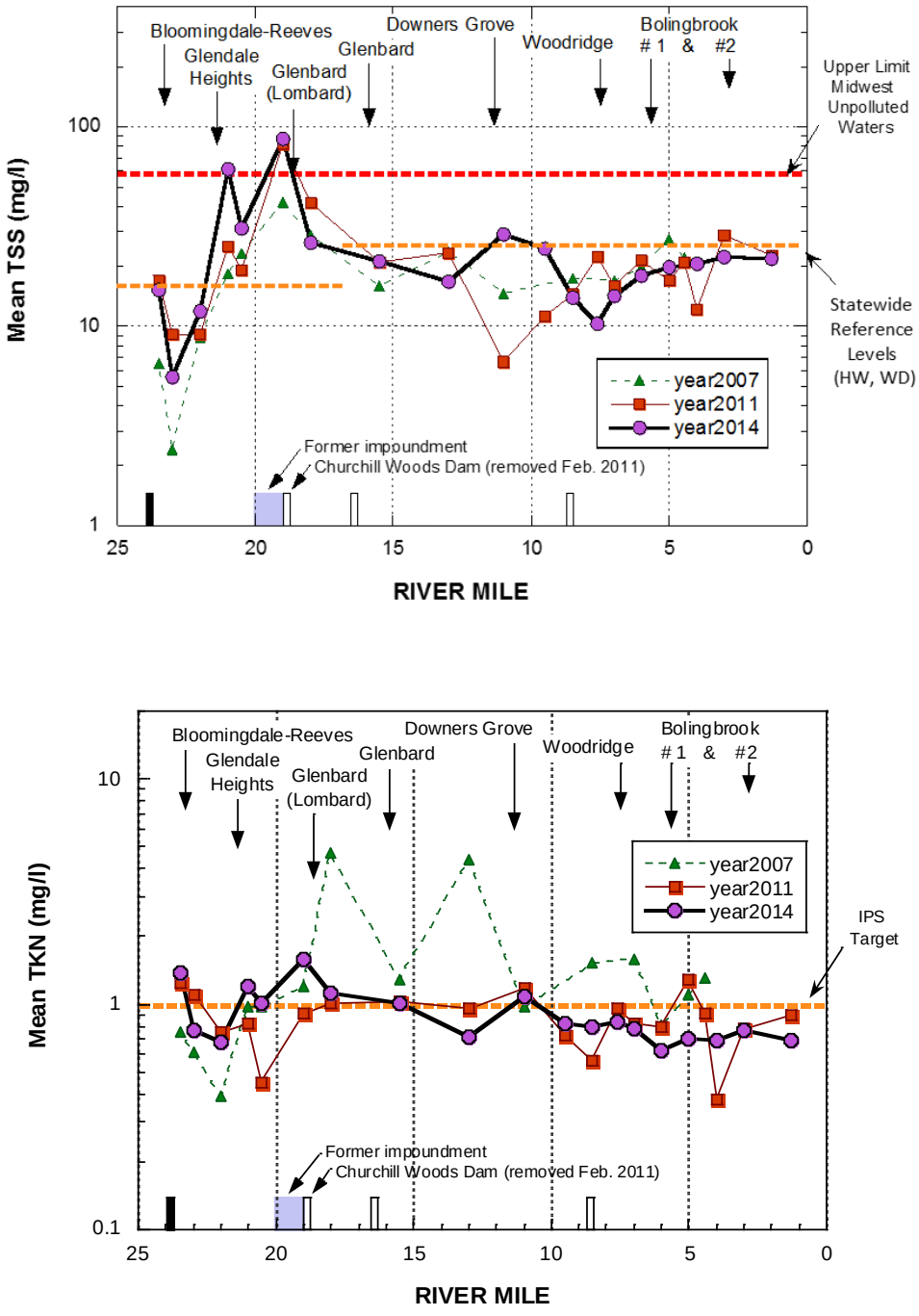
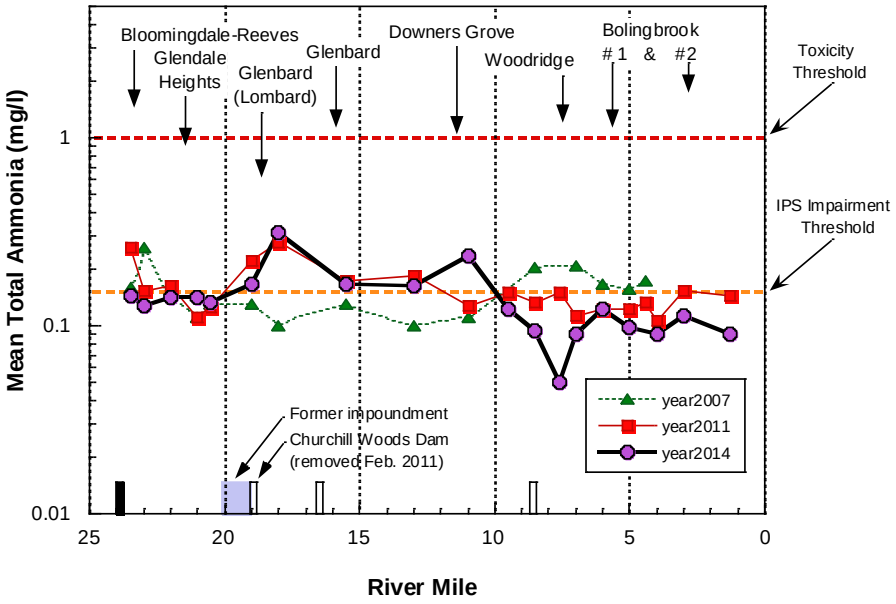


Figure 11. Concentrations of ammonia-N (top panel) and nitrate+nitrite-N (lower panel) from E. Branch

DuPage River samples in 2007, 2011 and 2014 in relation to municipal WWTP discharges. Bars along the x-axis depict mainstem dams or weirs (only black bars for dams that impede fish passage). For ammonia-N, the red dashed line (1.0 mg/l) represents a threshold concentration beyond which acute toxicity is likely; the orange dashed line (0.15 mg/l) is correlated with impaired biota in the IPS study. For nitrate+nitrite-N, orange dashed lines represent target concentrations for ecoregion 54 (1.8 mg/l) and the Illinois EPA non-standard based criteria (7.8 mg/l). The red dashed line is the Illinois water quality criterion for public water supplies (10 mg/l).



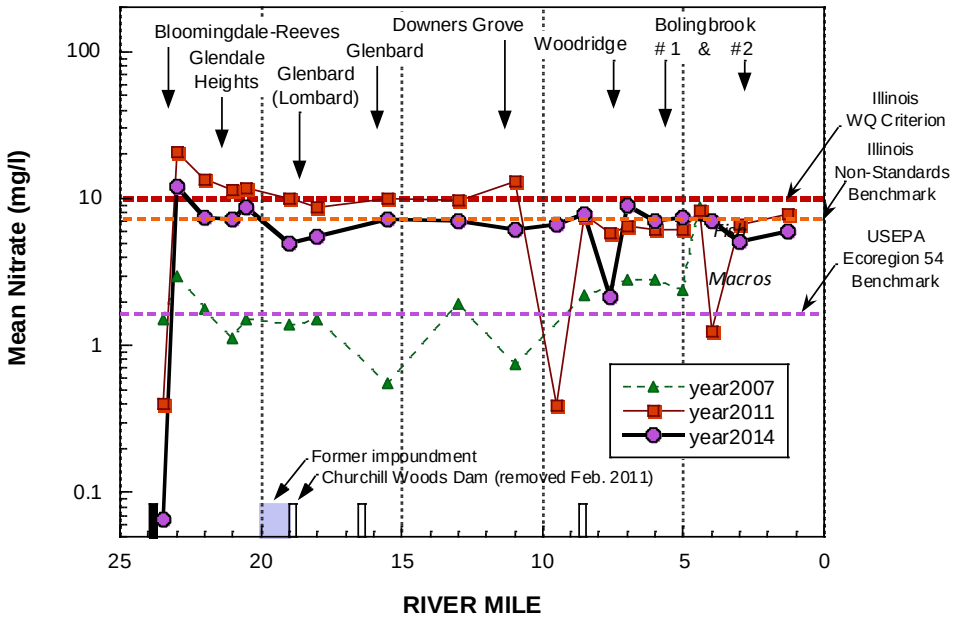


Figure 12. Concentrations total phosphorus from E. Branch DuPage River samples in 2007, 2011 and 2014 in relation to municipal WWTP discharges. Bars along the x-axis depict mainstem dams or weirs (black bars are dams that impede fish passage). For phosphorus, orange dashed lines represent target concentrations for ecoregion 54 (0.07 mg/l) and the Illinois EPA non-standard based criterion (0.61 mg/l). The 1.0 mg/l dashed red line is the suggested effluent limit.

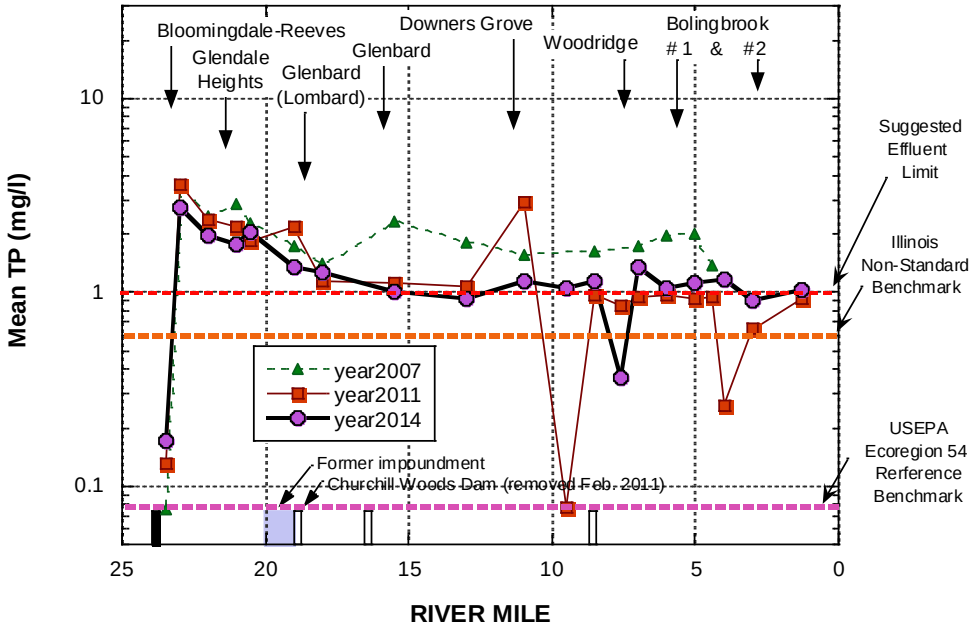


Figure 13. Chloride concentrations from the East Branch DuPage River in the summer of 2007, 2011 and 2014.

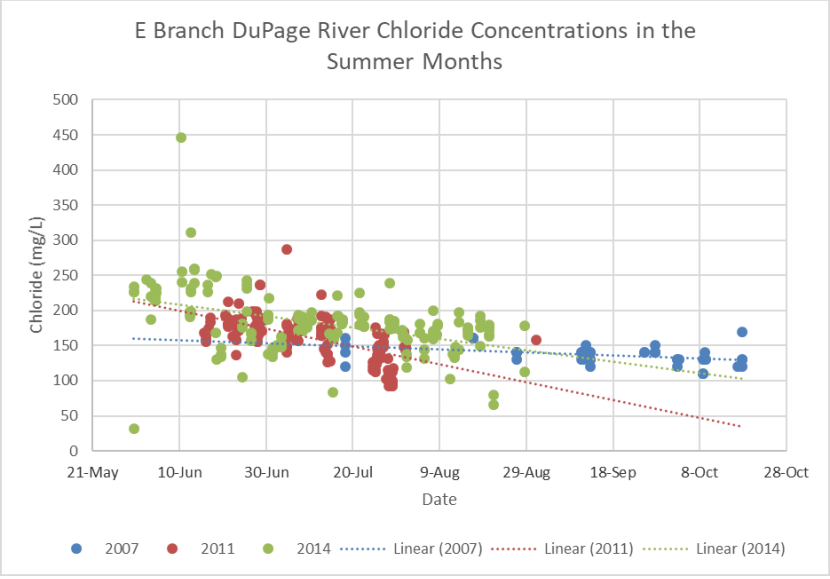
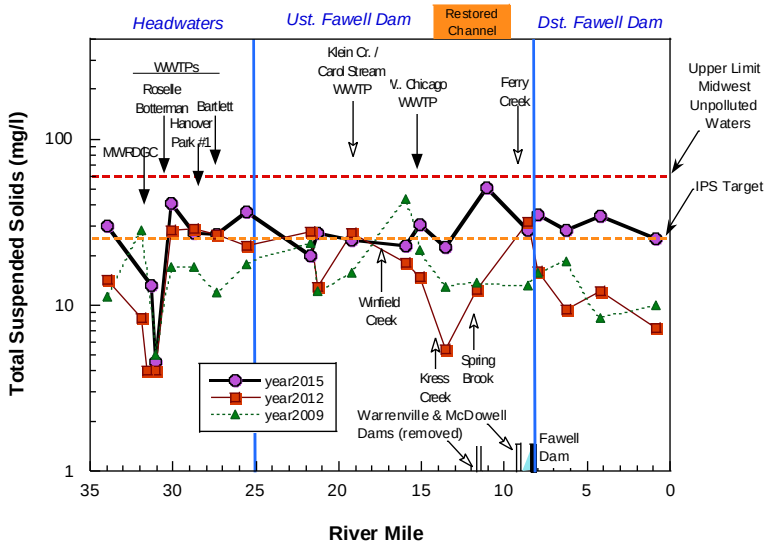


Figure 14. Concentrations of total suspended solids (top panel) and TKN (lower panel) from W. Branch DuPage River samples in 2008, 2012 and 2015 in relation to municipal WWTP discharges. Bars along the x-axis depict mainstem dams or weirs (black bars are dams that impede fish passage). Red dashed lines shows the upper limits of concentrations typical for relatively unpolluted waters for TSS (McNeeley et al. 1979). Orange dashed line in TSS plot is the Ohio reference threshold for headwater (HW) and wadeable (WD) streams. For TKN, the orange dashed line represents the IPS threshold (1.0 mg/l). IPS is a tool developed by the DRSCW and MBI.



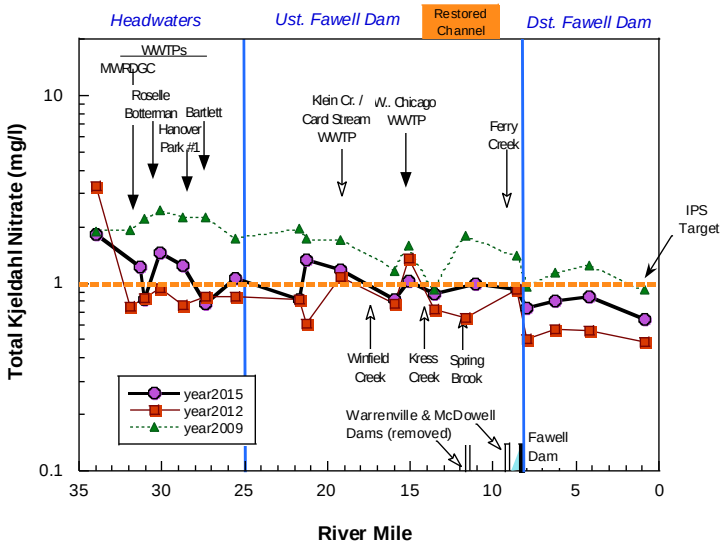


Figure 15. Concentrations of ammonia-N (top panel) and total nitrate (lower panel) from W. Branch DuPage River samples in 2008, 2012 and 2015 in relation to municipal WWTP discharges. Bars along the x-axis depict mainstem dams or weirs (only black bars for dams that impede fish passage). For ammonia-N, the red dashed line (1.0 mg/l) represents a threshold concentration beyond which acute toxicity is likely; the orange dashed line (0.15 mg/l) is correlated with impaired biota in the IPS study. For total nitrate, red line represents the Illinois Water Quality Criterion, orange dashed line represents the Illinois Non-Standards Benchmark, and purple line represents the US Ecoregion 54 Benchmark.

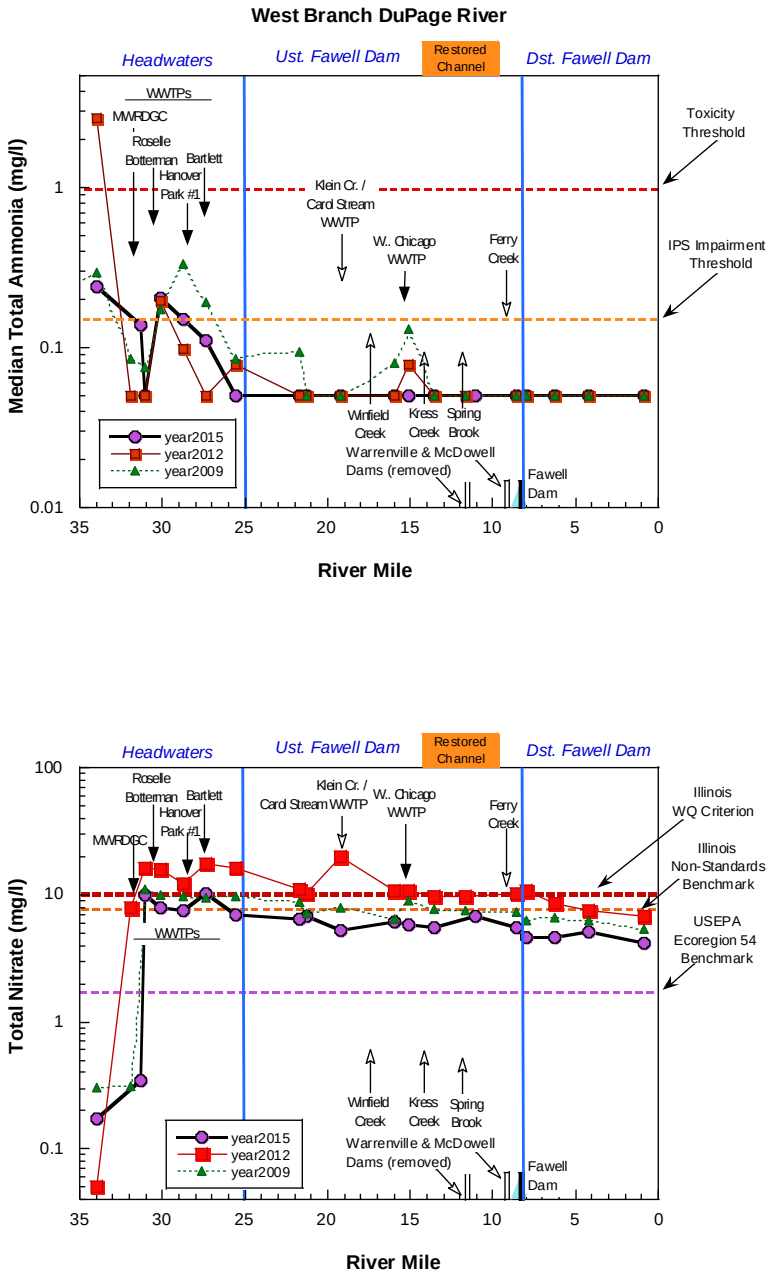
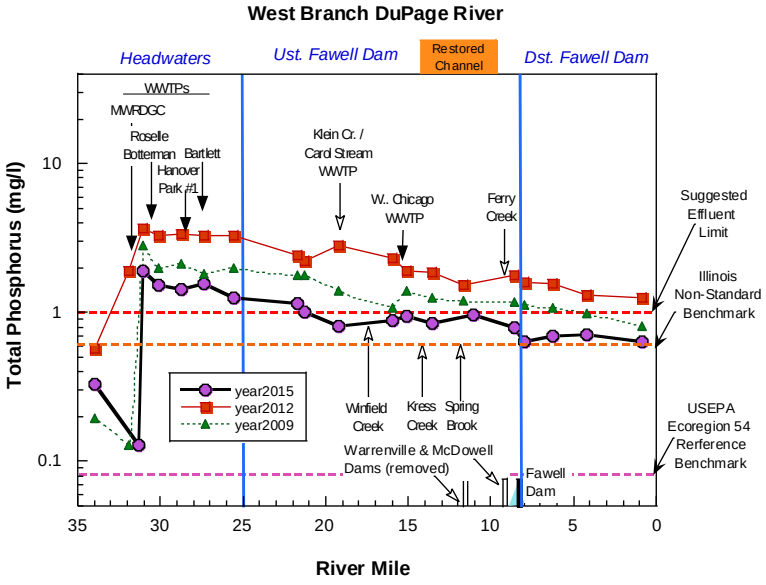


Figure 16. Concentrations total phosphorus (top panel) and chloride (lower panel) from W. Branch DuPage River samples in 2008, 2012 and 2015 in relation to municipal WWTP discharges. Bars along the x-axis depict mainstem dams or weirs (black bars are dams that impede fish passage). For phosphorus, orange dashed lines represent target concentrations for ecoregion 54 (0.07 mg/l) and the Illinois EPA non-standard based criterion (0.61 mg/l). The 1.0 mg/l dashed red line is the suggested effluent limit. For chloride, red dashed line represents the Illinois Water Quality Criterion (500 mg/L) and orange dashed lines represent the IPS threshold for fish and macroinvertebrates. IPS is a tool developed by the DRSCW and MBI.



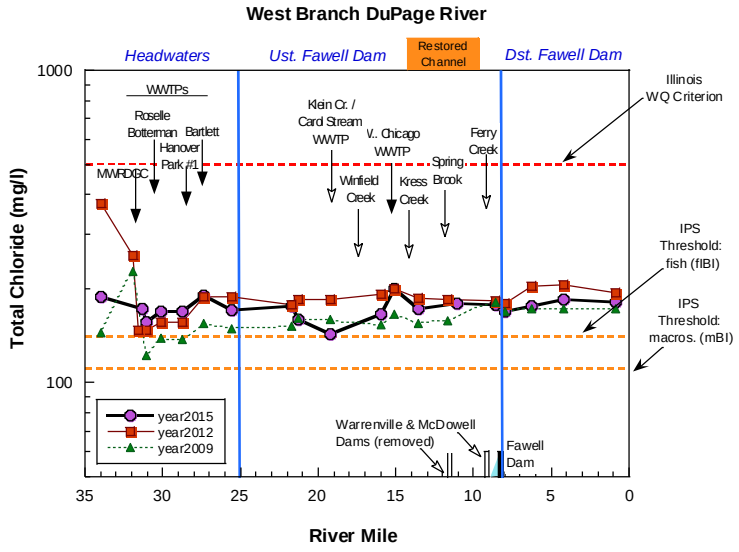
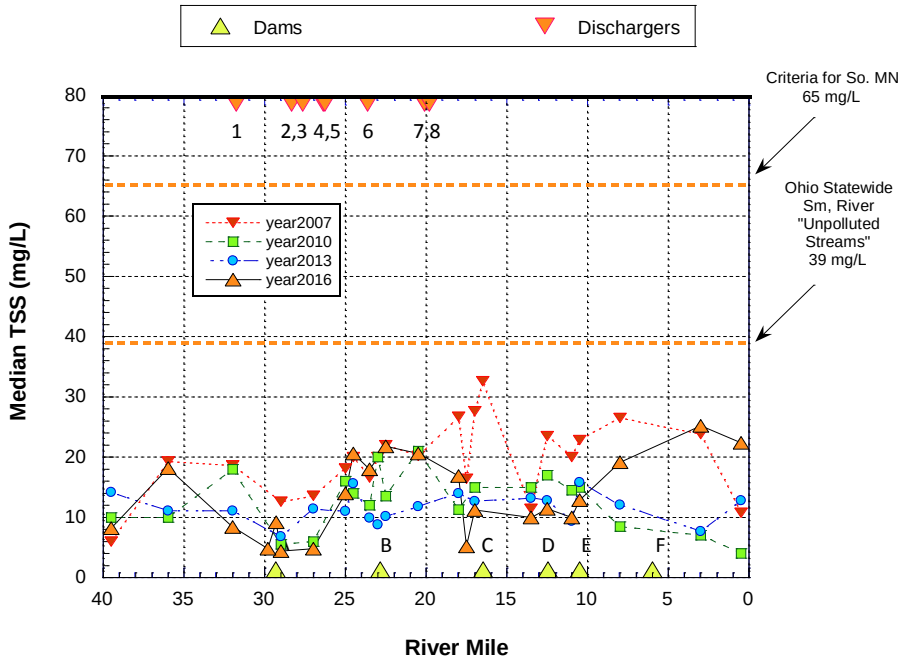


Figure 17. Concentrations of total suspended solids (top panel) and TKN (lower panel) from Salt Creek samples in 2007, 2010, 2013, and 2016 in relation to municipal WWTP discharges. Yellow triangles along the x-axis depict mainstem dams or weirs. Orange dashed lines shows the upper limits of concentrations typical for relatively unpolluted waters for TSS (McNeeley et al. 1979). Blue dashed line in TSS plot is the Ohio reference threshold for headwater (HW) and wadeable (WD) streams. For TKN, orange dashed line represents the IPS threshold (1.0 mg/l). IPS is a tool developed by the DRSCW and MBI.



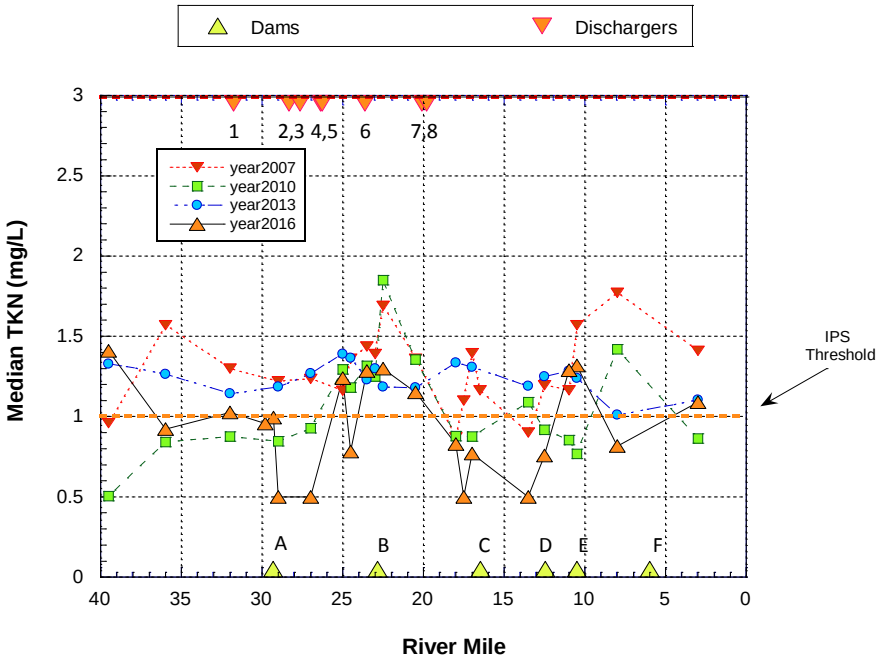


Figure 18. Concentrations of ammonia-N (top panel) and total nitrate (lower panel) from Salt Creek samples in 2007, 2010, 2013, and 2016 in relation to municipal WWTP discharges. Yellow triangles along the x-axis depict mainstem dams or weirs. For ammonia-N, the blue dashed line (1.0 mg/l) represents a threshold concentration beyond which acute toxicity is likely; the orange dashed line (0.15 mg/l) is correlated with impaired biota in the IPS study. For total nitrate, red line represents the Illinois Water Quality Criterion, orange dashed line represents the Illinois Non-Standards Benchmark, and purple line represents the US Ecoregion 54 Benchmark.

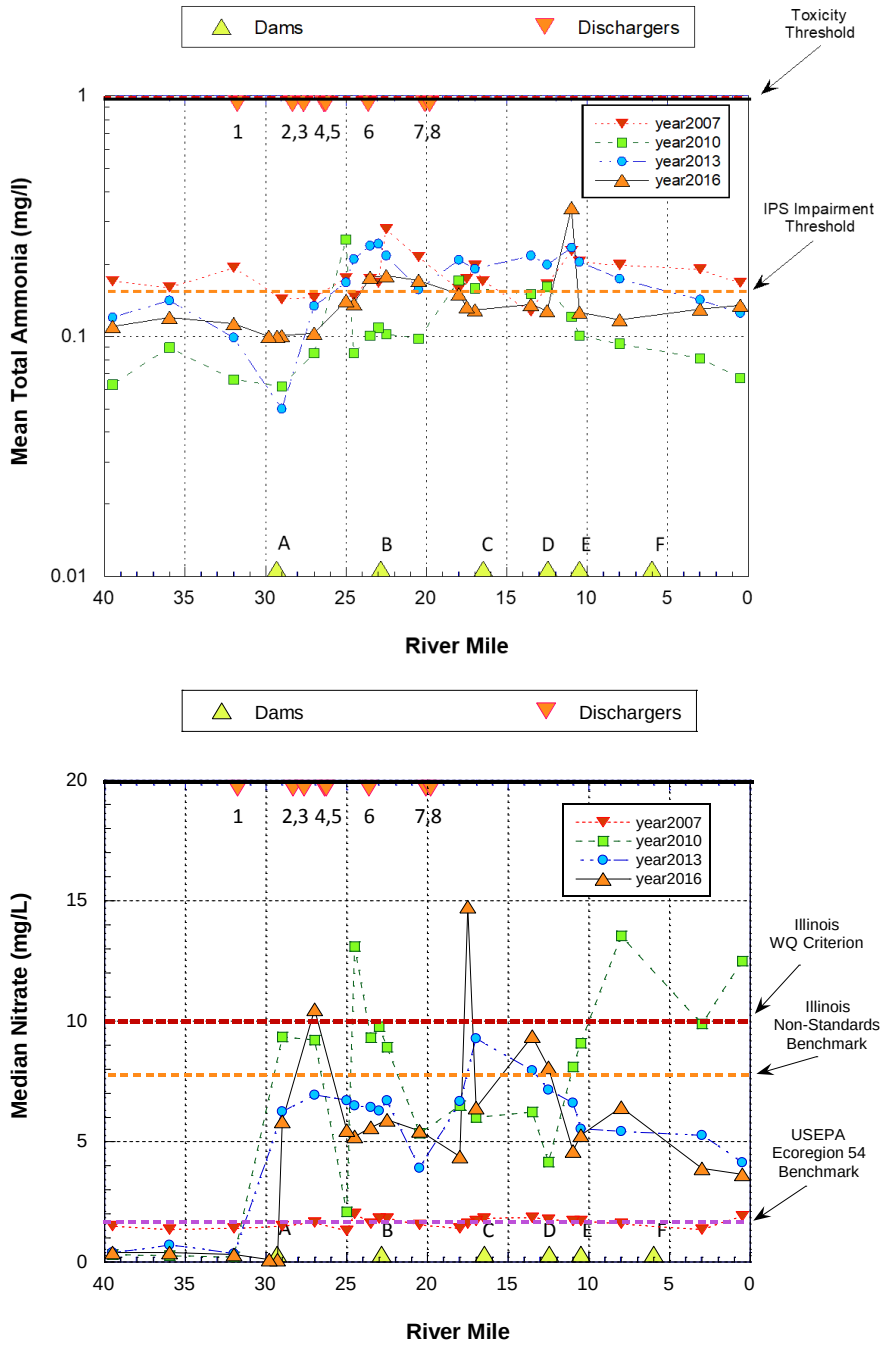
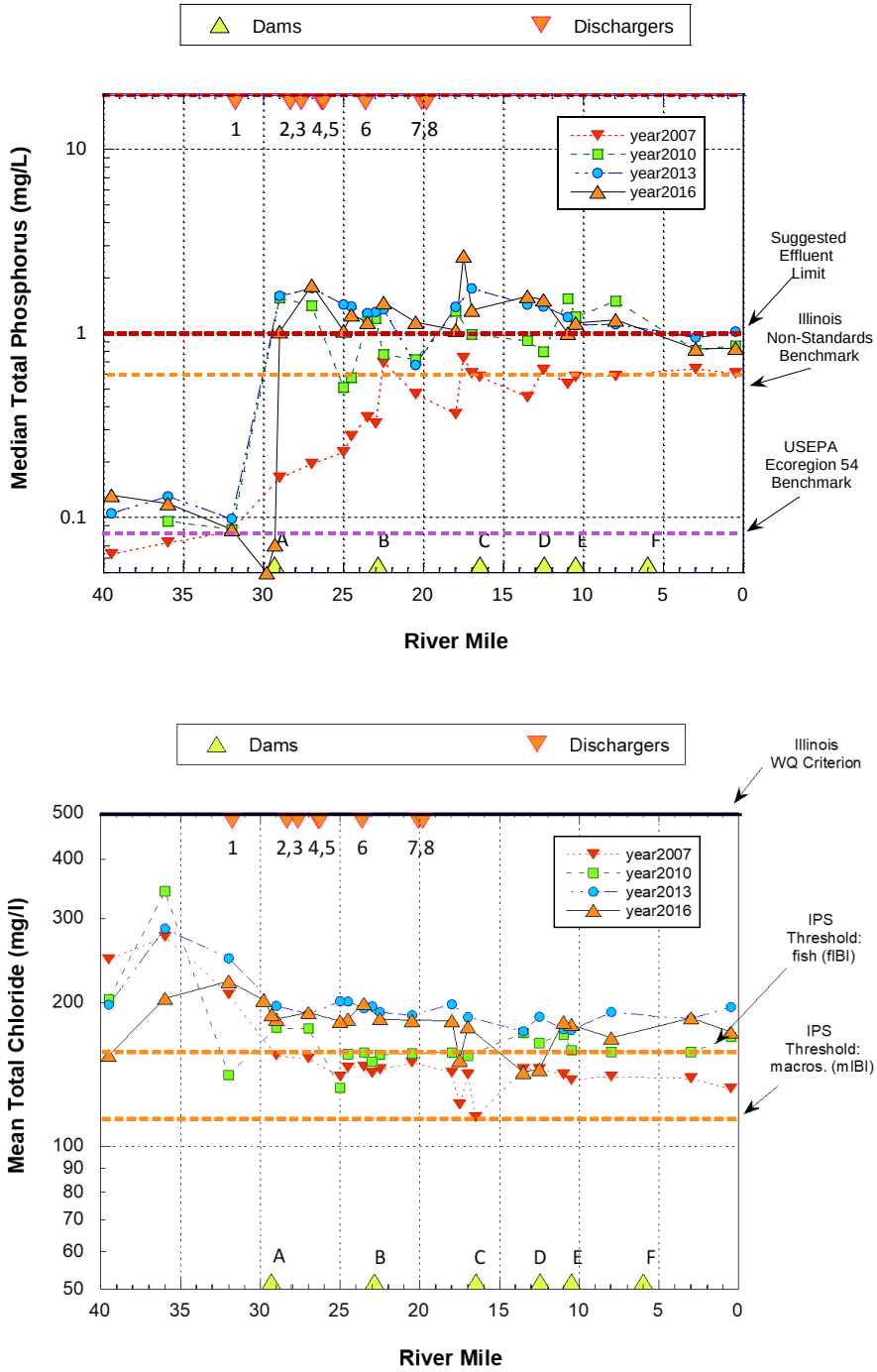


Figure 19. Concentrations total phosphorus (top panel) and chloride (lower panel) from Salt Creek samples in 2007, 2010, 2013, and 2016 in relation to municipal WWTP discharges. Yellow triangles along the x-axis depict mainstem dams or weirs. For phosphorus, purple dashed lines represent target concentrations for ecoregion 54 (0.07 mg/l) and orange dashed line represents the Illinois EPA non-standard based criterion (0.61 mg/l). The 1.0 mg/l dashed red line is the suggested effluent limit. For chloride, red dashed line represents the Illinois Water Quality Criterion (500 mg/L) and orange dashed lines represent the IPS threshold for fish and macroinvertebrates. IPS is a tool developed by the DRSCW and MBI.



In 2016, samples for Fat, Oil and Grease (FOG) was collected at six (6) sites on the mainstem Salt Creek and one (1) site on Addison Creek. The results are summarized in Table 7.

Table 7. Concentrations of Fat, Oil and Grease in 2016 in the Salt Creek watershed.

Site Number	Latitude	Longitude	River Mile	Result (mg/L)
Salt Creek				
SC44	42.01197	-88.00092	29.3	Non detect
SC41	41.9703	-87.98817	25.0	Non detect
SC23	41.93694	-87.98423	22.5	1.63
SC37	41.88378	-87.96054	17.5	Non detect
SC49	41.82576	-87.90004	8.0	Non detect
SC29	41.8183	-87.83371	0.5	Non detect
Addison Creek				
SC-28	41.86116	-87.86774	1.5	2.47

Sediment Chemistry Results

Detailed analysis and results for sediment chemistry is located at http://drscw.org/wp/bioassessment/.

DISSOLVED OXYGEN (DO) MONITORING

Background and Methodology

The Illinois Environmental Protection Agency (IEPA) report, Illinois 2004 Section 303(d) List, listed dissolved oxygen (DO) as a potential impairment in Salt Creek, and the East and West Branches of the DuPage River. The report suggested that the DO levels in selected reaches of these waterways might periodically fall to levels below those required by healthy aquatic communities.

All rivers and creeks in DuPage County are classified as General Use Waters. The present water quality standards for dissolved oxygen in General Use Waters is:

1. During the period of March through July
    a. 5.0 mg/L at any time; and
    b. 6.0 mg/L as a daily mean averaged over 7 days.

2. During the period of August through February,
    a. 3.5 mg/L at any time;
    b. 4.0 mg/L as a daily minimum averaged over 7 days; and
    c. 5.5 mg/L as a daily mean averaged over 30 days.

Following listing on the 303 (d) list three TMDLs were prepared by the IEPA for Salt Creek and the East Branch of the DuPage River. In response to the TMDLs, the DRSCW committed to develop and manage a continuous long-term DO monitoring plan for the project area in order to assess the nature and extent of the DO impairment and to allow the design of remedial projects. The continuous DO data is also used to assess the impact of DO improvement projects such as the Churchill Woods and Oak Meadow dam removals.

Typically, the continuous DO monitoring project includes two to three (2-3) sites on the West Branch DuPage River, four to five (4-5) sites of the East Branch DuPage River, and three to four (3-4) sites on Salt Creek. The program began in 2006 and data has been collected each year since. Each site is equipped with a HydroLab DS 5X which collects data on DO, pH, conductivity and water temperature. Stations have a sample interval of one hour and collect data from June through to October (the seasonal period recognized as containing the lowest annual levels of stream DO). The continuous DO monitoring program functions under a quality assurance plan agreed on with the Illinois Environmental Protection Agency (http://drscw.org/wp/dissolved-oxygen/). Details on the site location are included in Table 1 and site locations are included on Map 5.

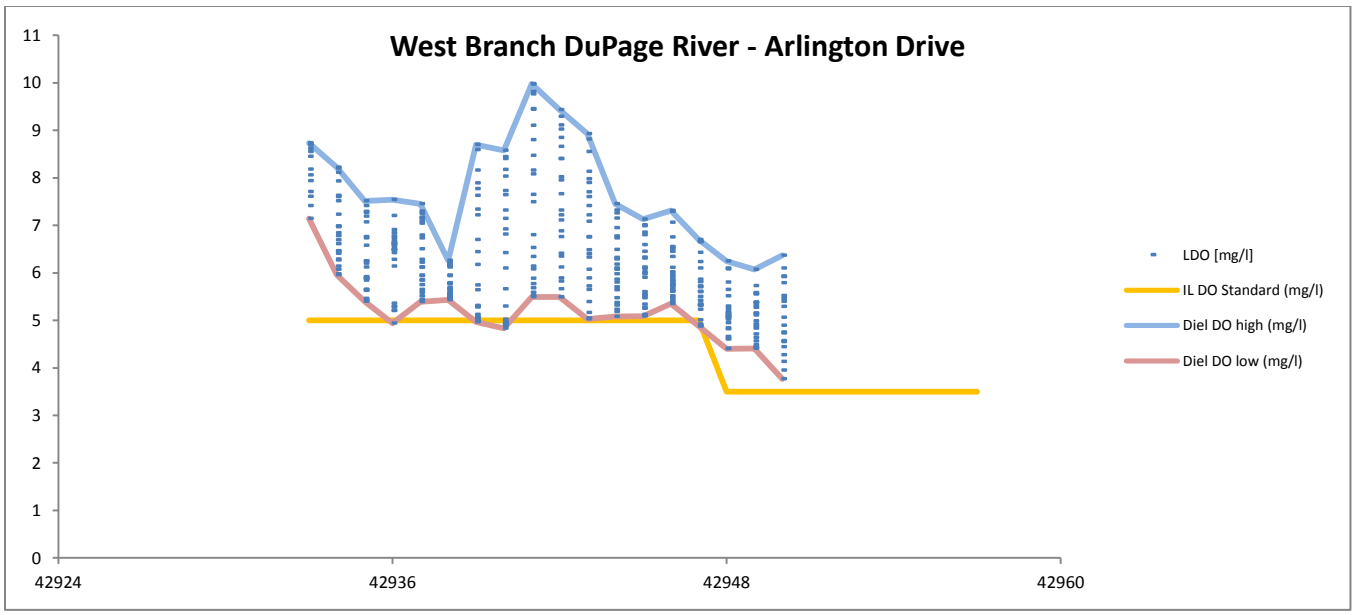
***Table 5*.** Continuous DO monitoring locations in the DRSCW watersheds

Site ID	Stream Name	River Mile	Latitude	Longitude	Location
WBAD	W. Br. DuPage R.	29.9	41.9750	-88.1386	Arlington Drive
WBBR	W. Br. DuPage R.	11.7	41.825268	-88.179456	Butterfield Road
WBWD	W. Br. DuPage R.	11.1	41.82027	-88.17212	Downstream of Warrenville Grove Dam
EBAR	E. Br. DuPage R.	23.0	41.935171	-88.05843	Army Trail Road
EBCB	E. Br. DuPage R.	18.8	41.88510	-88.04110	Former Churchill Woods pool (Crescent Blvd)
EBHL	E. Br. DuPage R.	14.0	41.82570	-88.05316	Hidden Lake Preserve
EBHR	E. Br. DuPage R.	8.5	41.76800	-88.07160	Upstream Hobson Rd
EBWL	E. Br. DuPage R.	4.0	41.71230	-88.09160	Downstream of 2nd mine discharge
SCOM			41.941279	-87.983363	Oak Meadows Golf Course upstream of former Dam
SCBR	Salt Creek	16.1	41.864686	-87.95073	Butterfield Road
SCFW	Salt Creek	11.1	41.825493	-87.93158	Fullersburg Woods upstream of Dam

Results

Results of the continuous DO monitoring conducted in the summer of 2017 is included in Figures 20-24.

Figure 20. Dissolved Oxygen plots for West Branch DuPage River sites WBAD (top panel) and WBBR (lower panel).



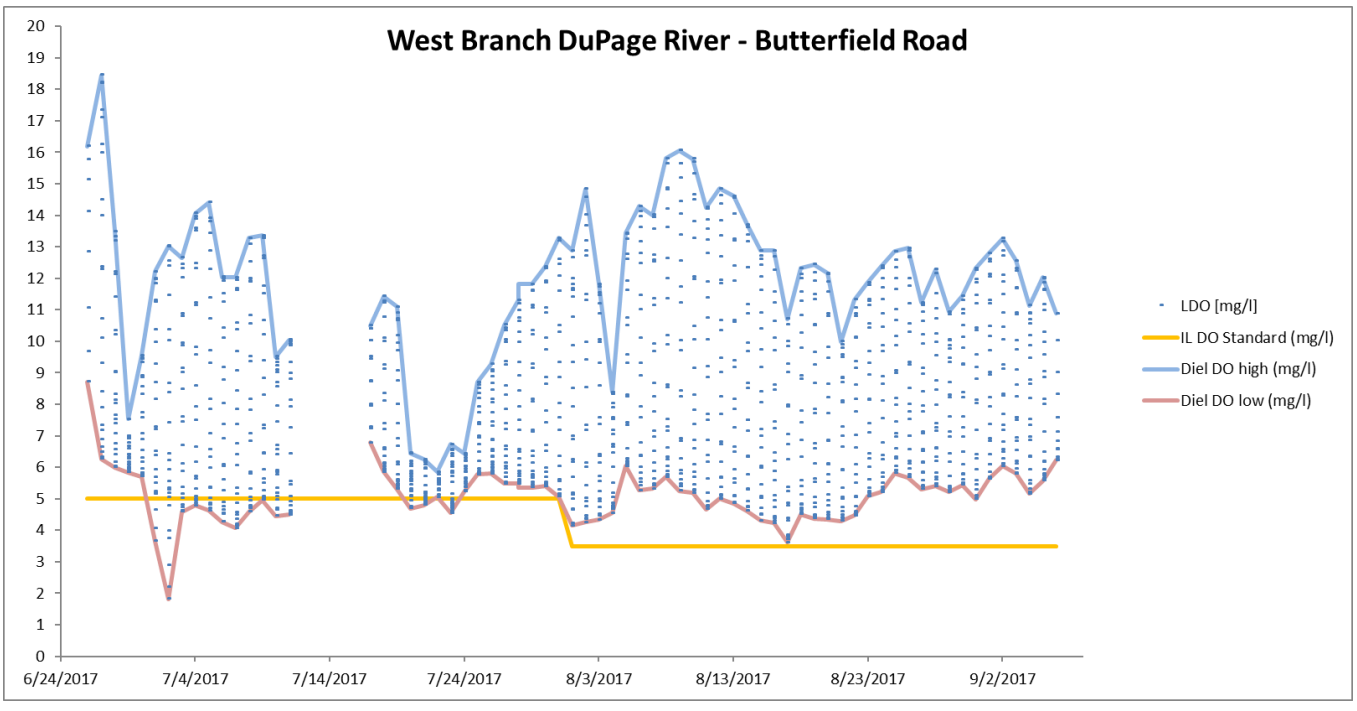
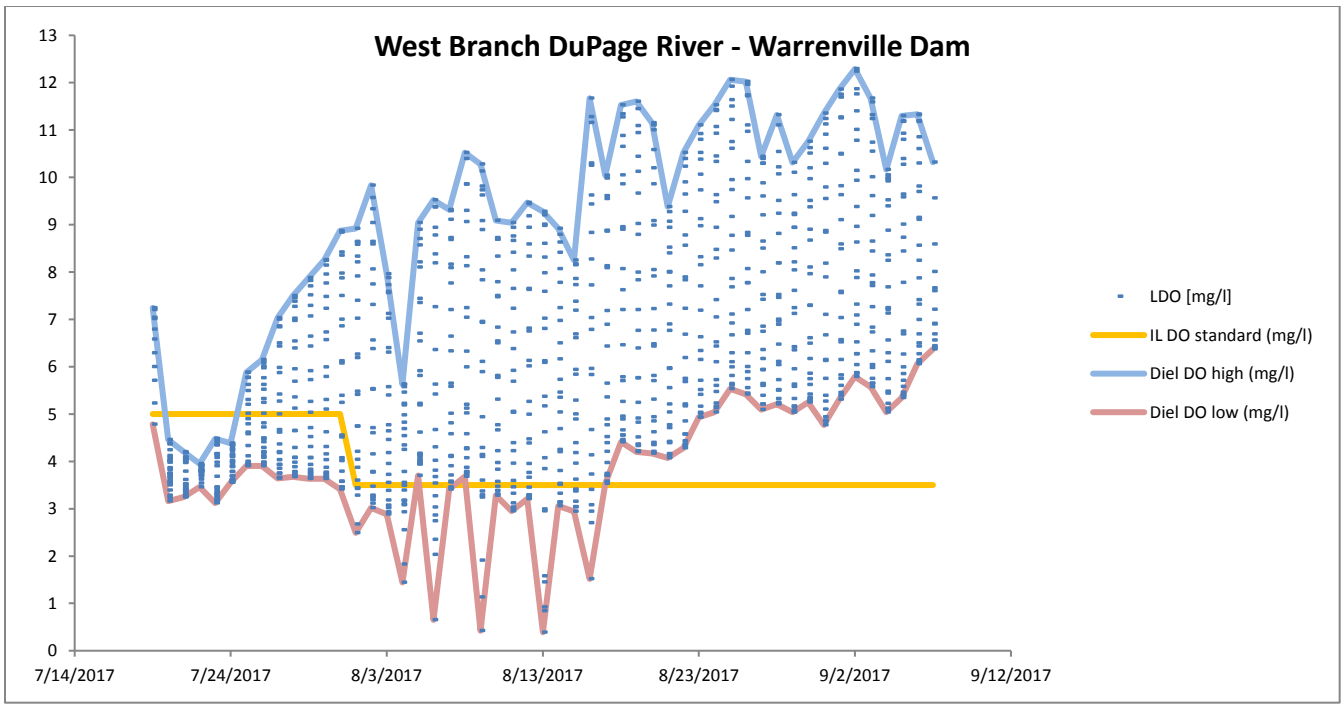


Figure 21. Dissolved Oxygen plots for West Branch DuPage River sites WBWD (top panel) and East Branch DuPage River sites EBAR (lower panel).



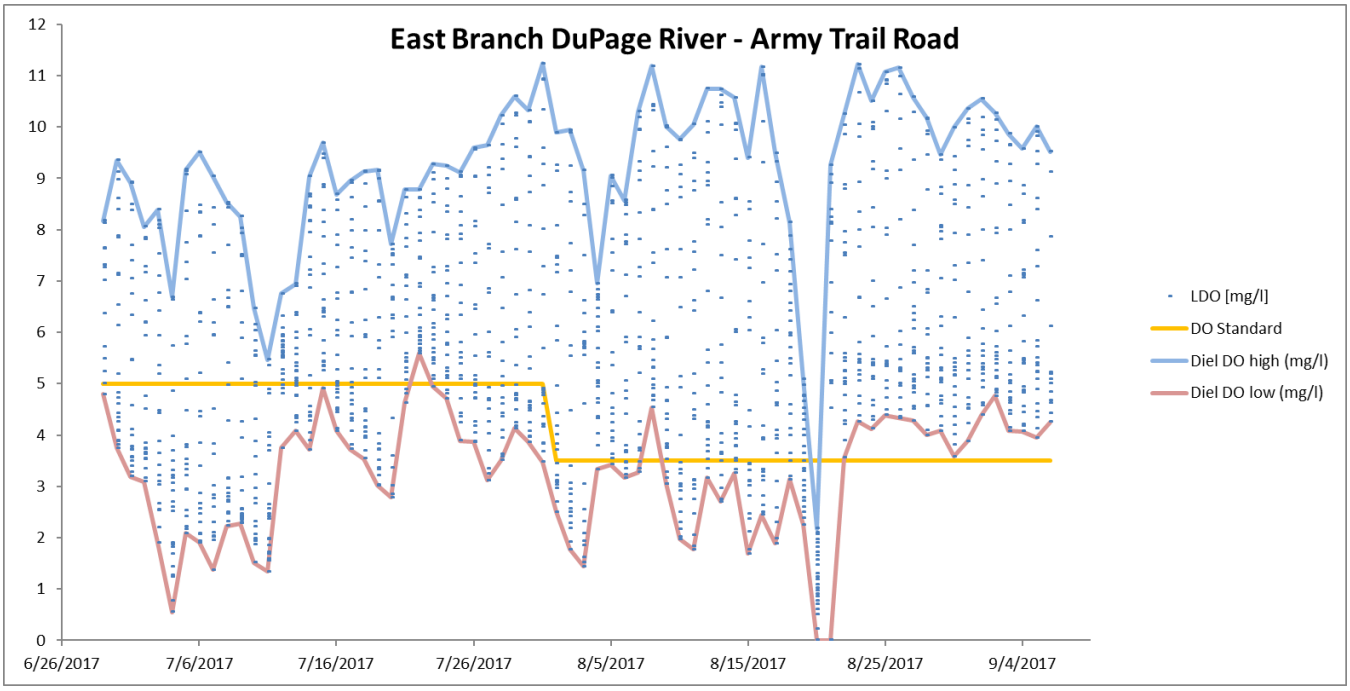
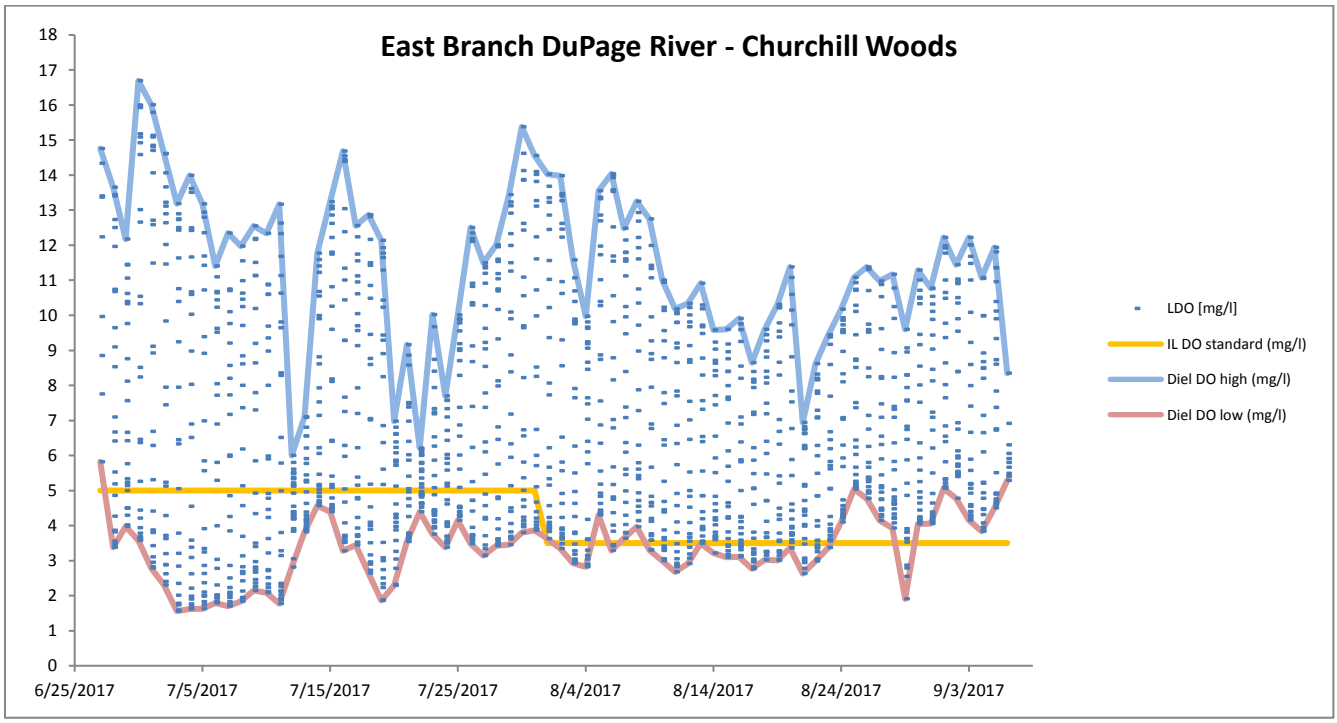


Figure 22. Dissolved Oxygen plots for East Branch DuPage River sites EBCB (top panel) and EBHL (lower panel).



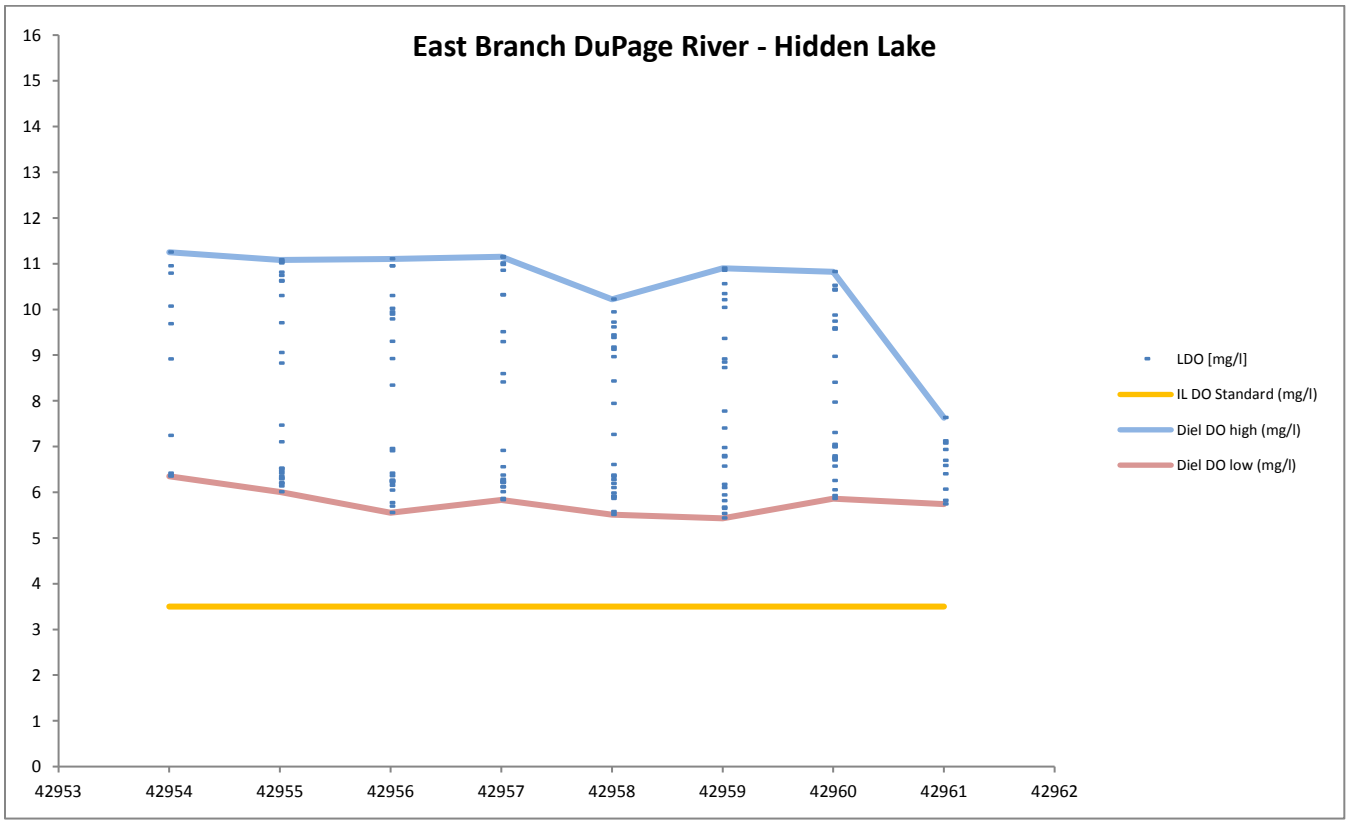
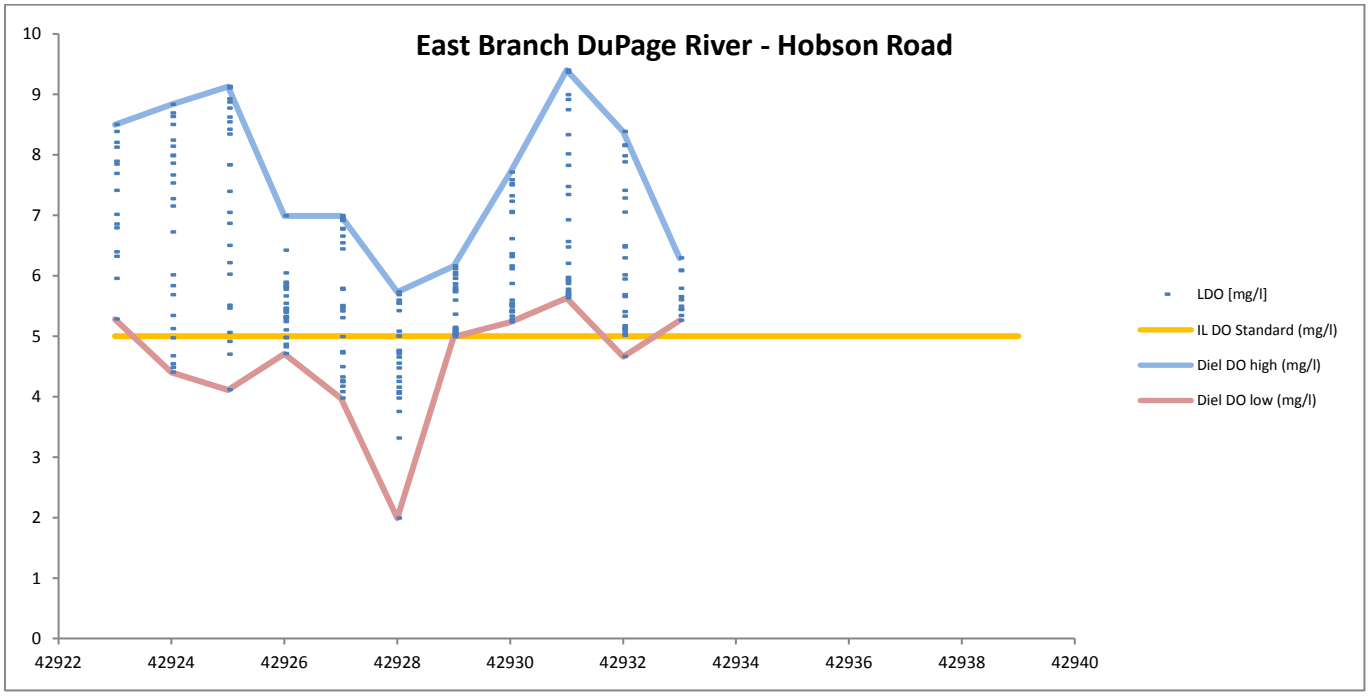


Figure 23. Dissolved Oxygen plots for East Branch DuPage River sites EBHR (top panel) and EBWL (lower panel).



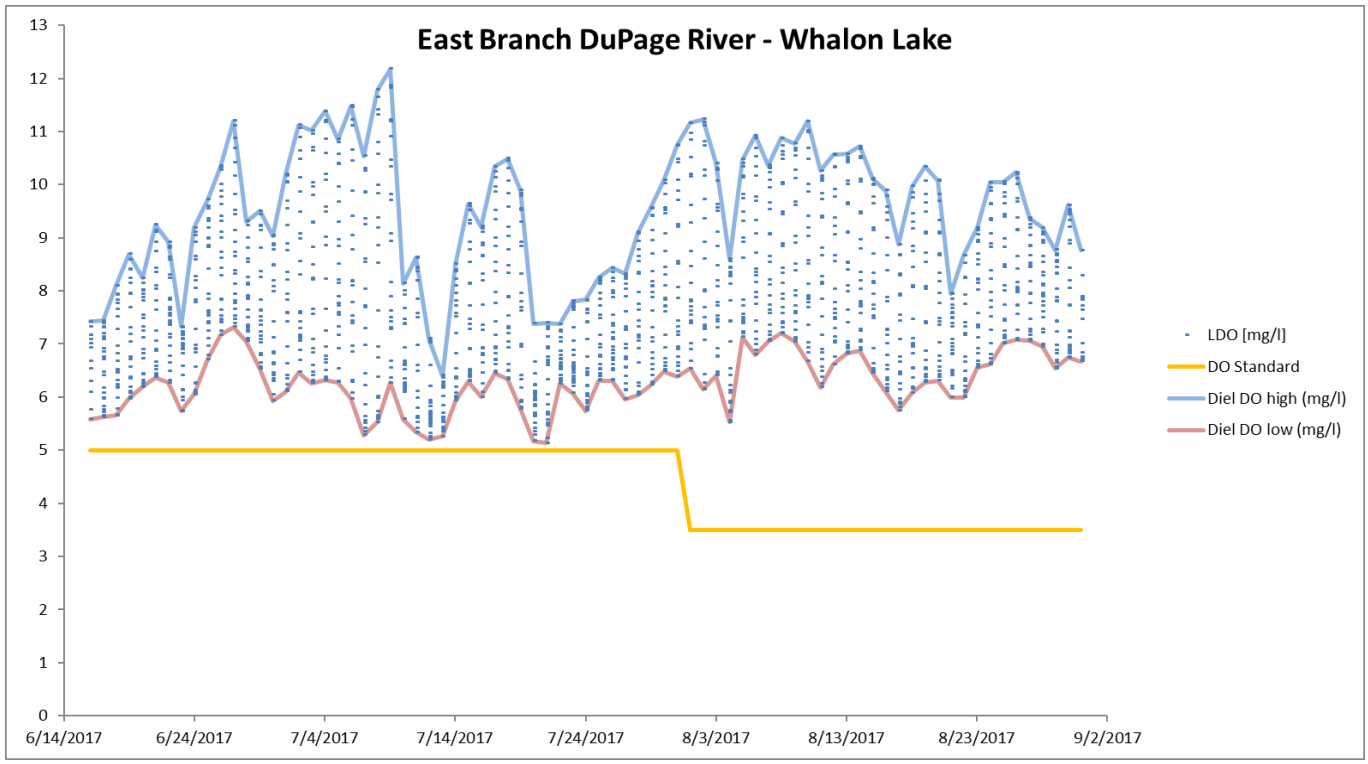
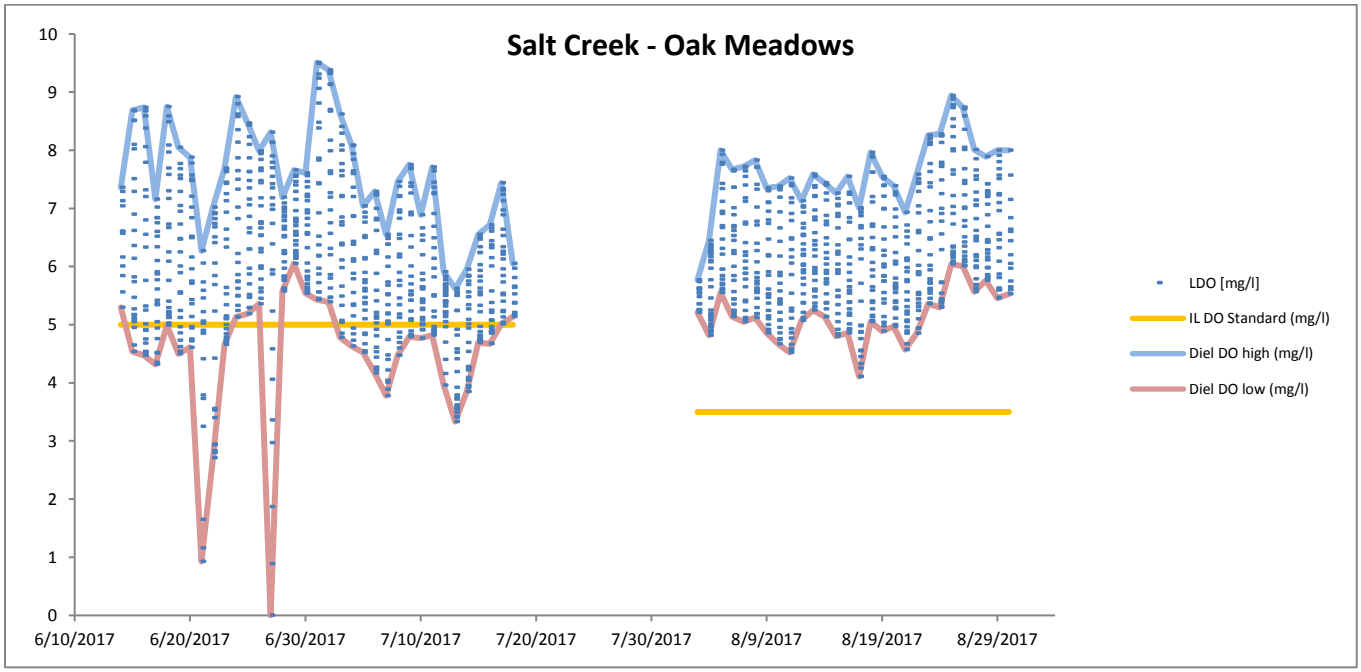


Figure 24. Dissolved Oxygen plots for Salt Creek sites SCOM (top panel) and SCBR (lower panel).



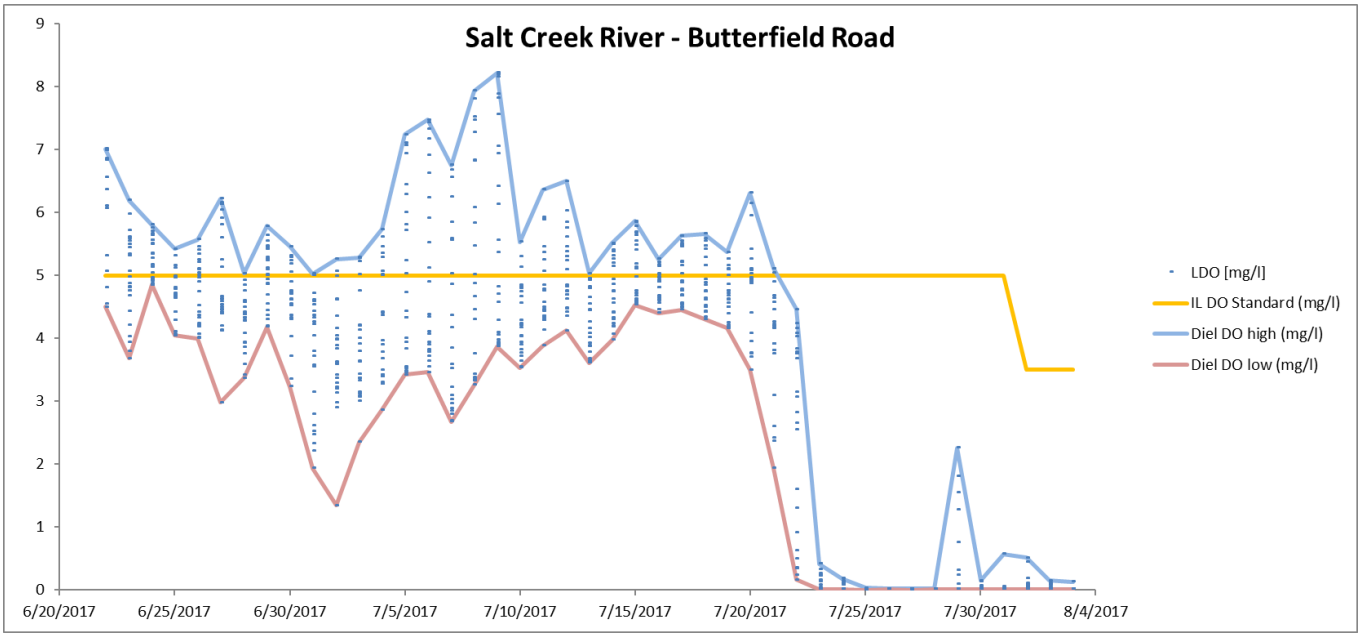
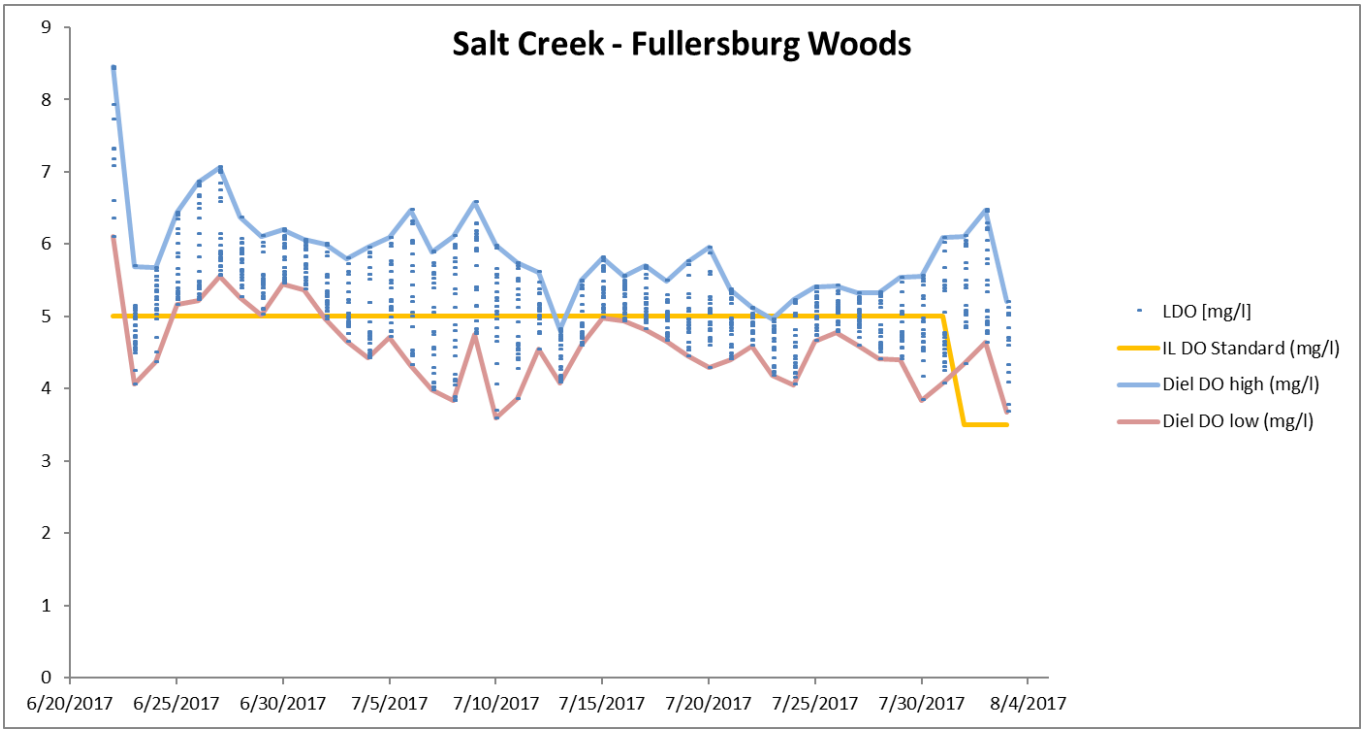


Figure 25. Dissolved Oxygen plots for Salt Creek sites SCFW.



B. Recordkeeping

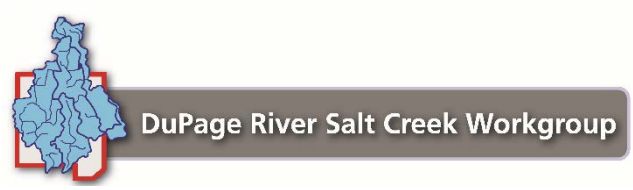
All monitoring data including by not limited to laboratory results, chain of custodies (COCs), and quality assurance protection plans (QAPP) will be maintained by the DRSCW for a minimum of 5 years after the expiration of the ILR40 (effective on 03/01/2016). The records are maintained at the DRSCW office located at The Conservation Foundation, 10S404 Knock Knolls Road, Naperville, Illinois 60656 and are accessible to the IEPA for review.

C. Reporting

The DRSCW is not responsible for preparing and submitting an Annual Report to the IEPA by the first day of June for each year that the permit is in effect. It is the responsibility of the individual ILR40 permit holders to utilize the information provided in this report to fulfill the reporting requirements outlined in the permit.

Attachment A

2016 Deicing Program Survey Results



BAXTER & WOODMAN Consulting Engineers

DuPage River Salt Creek Workgroup

Chloride Education and Reduction Program
2016 Deicing Program Survey

March 16, 2017

Section 1
Background and Purpose

The DuPage River Salt Creek Workgroup (DRSCW) is a coalition of communities, sanitary districts, environmental organizations, and professionals working to improve the ecological health of Salt Creek and the Upper DuPage River. DRSCW is responding to water quality requirements for chloride as the East and West Branch of the DuPage River and Salt Creek have been identified as having chloride related impairments. Total Maximum Daily Load (TMDL) analysis performed by the Illinois Environmental Protection Agency recommended significant reductions in chloride loading for each of the streams to meet the water quality standard for chloride (500 mg/L).

DRSCW formed a Chloride Committee and the Chloride Education and Reduction Program to develop and promote alternatives to conventional roadway deicing practices and guide the implementation of the alternatives. An element of the program is gathering information from municipal deicing programs via survey questionnaires to benchmark municipal activities and identify positive changes in protocols. This report serves to summarize the responses received from the 2016 deicing program survey.

Funding for the program and this report is provided in part by the Illinois Environmental Protection Agency through Section 319 of the Clean Water Act and DRSCW member dues.

1.1 Background Information

Municipal road salting was identified as a source of chloride loading to DRSCW watersheds. As a result, DRSCW distributed a survey questionnaire to about 80 municipalities and public works agencies in November 2006 and April 2007 to obtain baseline information about deicing practices throughout the watersheds. Thirty-nine responses to the survey were received, forming an informed baseline of the deicing programs implemented in the watersheds. A similar survey was distributed in 2010. Thirty-two public agencies responded to the 2010 survey which helped to note positive changes in local deicing practices. In 2012 and 2014, the survey generated 34 and 27 responses respectively, which further documented the chloride reduction practices. Forty-three (43) agencies responded to the 2016 survey, the most agencies ever responding to a program survey.

1.2 Goals of the Questionnaires

The 2016 Deicing Program Survey was conducted in the spring of 2016 to follow up with the agencies on any changes and/or improvements in their deicing programs, potentially because of DRSCW Chloride Reduction Program efforts, and any resulting effects on salt application rates.

The 2016 survey questionnaire asked for information about deicing practices and strategies per the following categories:

- General deicing and snow removal information
- Deicing and snow removal equipment

- Application rates
- Salt storage
- Equipment maintenance and calibration
- Management and record-keeping

The responses to the survey are summarized in Section 2 of this report. The responses are compared to those received in earlier surveys to determine if any changes or improvements have occurred. The survey and response data are included in **Appendix A**.

Section 2
Survey Responses

2.1 Survey Responses

Forty-three agencies responded to the 2016 survey. The following subsections summarize the responses in each of the categories described in Section 1. The survey and all responses are included in **Appendix A** of this report. Note that not all agencies provided responses to all questions, and some agencies answered some questions in different ways, resulting in some inconsistencies in survey results.

2.1.1 General Deicing and Snow Removal Information

The survey asked agencies for general deicing and snow removal information. All responding agencies provided some information. Survey responses indicated approximately 10,800 lane miles of road serviced by deicing programs throughout the watersheds.

2.1.1.1 Salt Application and Price

The majority of agencies indicated an average salt application rate of 200-300 pounds per lane mile (lbs/lm). **Figure 2-1 shows** the respondent's salt application rate distribution from 2010 to 2016.

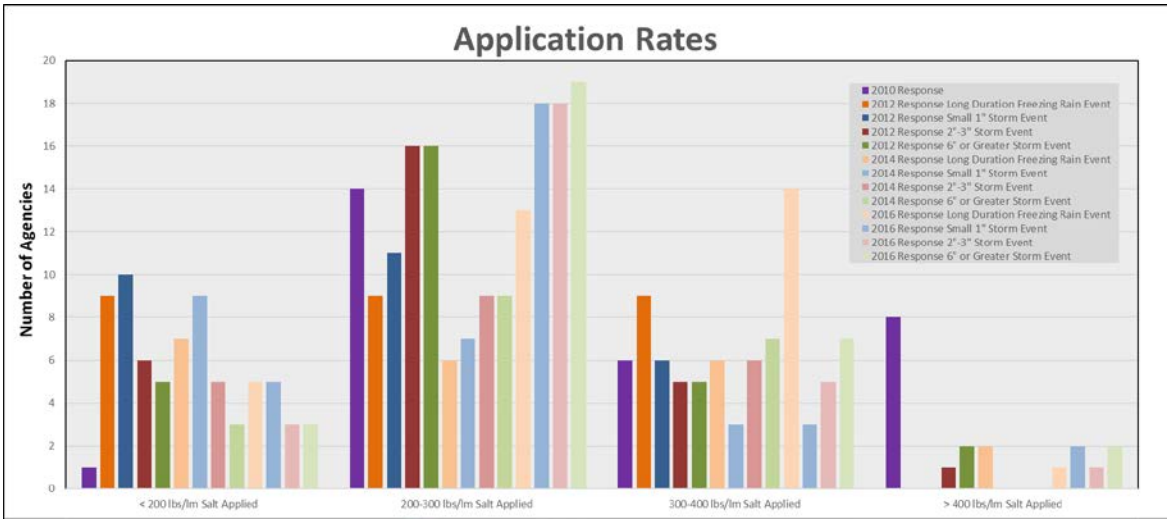


Figure 2-1 – Average Salt Application Rates

Regarding salt prices, 26 of the 43 agencies responding indicated an increase in salt or deicing product prices over the past few years. Eleven agencies reported a decrease in salt or deicing product price over the past few years. Nine agencies indicated that product prices have remained the same.

2.1.1.2 Deicing, Anti-Icing, Pre-Wetting, and Deicing Agents

Information about deicing, pre-wetting, and anti-icing practices, as well as the deicing agents used was requested by the survey. The following is a list of deicing agents used by respondents:

- Each of the 43 responding agencies reported the use of salt
- Thirty-two agencies reported the use of dry rock salt
- Twenty-two agencies used liquid calcium chloride, a significant increase from previous surveys
- Thirteen agencies reported the use of pre-manufactured liquid products

From the 43 respondents, 25 agencies indicated that they implement anti-icing practices; in most cases the anti-icing program included occasional pre-salting or liquid application in priority locations. This suggests an increase in the number of agencies implementing anti-icing practices watershed wide.

The 2016 survey asked about liquid anti-icing mixes, and in general, most respondents using liquids make a home-made mix of 70% - 90% salt brine and 10% - 30% beet juice, pre-manufactured liquid, and/or calcium chloride.

2.1.1.3 Weather and Pavement Temperature Forecasting

Out of the agencies responding, 30 agencies use a weather forecasting service (1 agency did not answer). This suggests a significant increase in the use of weather forecasting services watershed wide.

Additionally, 30 of 41 respondents are making use of a pavement temperature forecast report or similar service (2 agencies did not answer). This suggests a significant increase in the use of pavement temperature information throughout the watershed, an improvement in best management practices implementation.

2.1.2 Deicing and Snow Removal Equipment

All agencies use snow plows or similar equipment. Thirty-two agencies have mechanically controlled spreading equipment, and 33 have computer-controlled equipment. Equipment for spreading liquids is used by 25 agencies.

2.1.3 Salt Storage

The provided responses indicated the following salt storage practices:

- Forty-three responded that salt storage areas are fully enclosed storage structure or have impervious storage pads
- Forty agencies store salt on an impervious pad
- Thirty-four agencies indicated that drainage from their storage area(s) is controlled or collected

- Twenty-seven agencies indicated that they store salt in a single storage area
- Thirty-five agencies store salt in an enclosed area
- Sixteen reported that residual salt in loading areas is swept up

2.1.4 Equipment Maintenance, Cleaning, and Calibration

Forty agencies responded that equipment is washed at an indoor station draining to a sanitary sewer. Five agencies indicated outdoor washing in areas not drained to a sanitary sewer. Two respondents reported collecting and reusing wash water for brine making.

Forty-two agencies responded to the survey regarding equipment calibration. Thirty-five agencies indicated that they calibrate their de-icing equipment, an increase in the number of agencies performing calibration as a best management practice. Most of the 35 agencies providing calibration information perform calibration annually, with 1 agency calibrating 2 times per season, and 3 agencies calibrating after major maintenance or repairs.

2.1.5 Management and Record-Keeping

Twenty-one agencies indicated that operators are trained annually (or more often). Eleven of the remaining agencies train at the start of employment and one agency did not specify a training schedule.

From a management standpoint, the rate of salt application is established by the director or supervisor in 37 agencies, and solely by the operators in four agencies. This indicates a significant increase in the director or supervisor level of control over application rates from previous surveys.

During spreading, the rate of product application is controlled by the operator in 31 agencies, controlled automatically in 9 agencies and set at a fixed rate in 4 agencies.

The 2016 survey responses indicate a significant increase in record keeping best management practices in recent years. Twenty-three agencies keep records of salt usage per truck, 34 keep records for each storm event, and twenty keep records for each winter season.

2.2 Survey Analysis

The following subsections provide survey conclusions developed by comparing information from the 2016 survey to responses received from the 2014 survey or previous surveys. Forty-three (43) agencies responded to the 2016 survey, while 27 agencies responded to the 2014 survey. The number of new agencies responding to the survey is a positive for the amount of information provided for study and program participation overall, but results in some changes or inconsistencies in information trends.

2.2.1 Alternative Methods and Practices Analysis

Many of the questions in the survey focused on the use of alternative deicing agents, methods, and practices such as pre-wetting and anti-icing. **Figure 2-2** illustrates the percentage of respondents that use various deicing agents as reported on the 2007, 2010, 2012, 2014, and 2016 questionnaires.

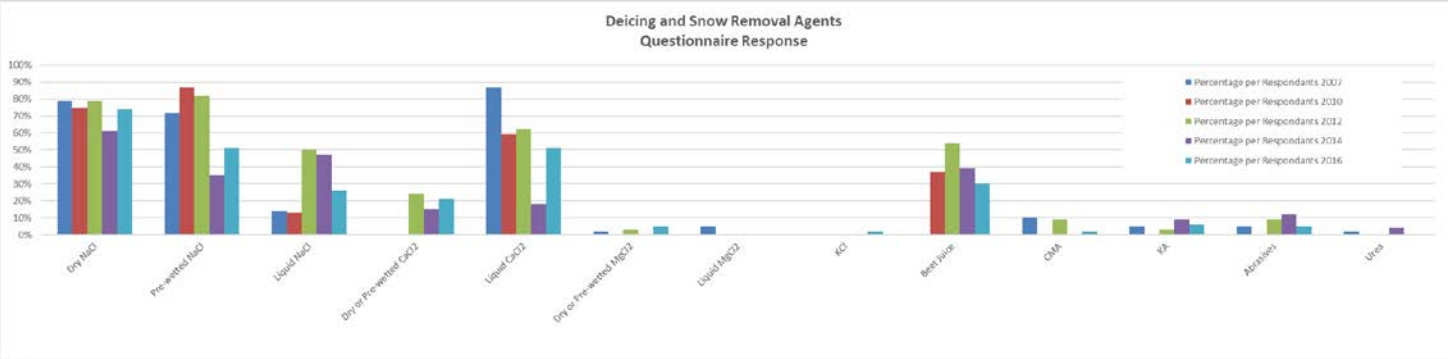


Figure 2-2 – Deicing and Snow Removal Agents

The survey results indicated that the use of dry and pre-wetted salt (NaCl) has increased. While 50% of agencies reported using pre-wetted salt, previous program information suggests that the level of pre-wetting is much higher than this throughout the watershed. The 2016 survey percentages may be skewed by the new agencies providing information this year, and inexperience with the type of information being asked by the survey. Follow up with individual agencies for future surveys may be needed.

Similarly, the 2016 survey results indicate an increase in the amount of agencies using dry salt. Previous program information suggests that fewer agencies use dry salt (not pre-wetted), and follow up with individual agencies may be needed to further detail the information being requested by the survey. The apparent decrease in the use of liquid NaCl (brine) may also be a result of the new respondent's inexperience with the survey, or may be an opportunity for the Chloride Committee to investigate further expansion of the use of brine as a BMP.

Other analysis observations include:

- Results show an increase in the use of all forms of Calcium chloride ($CaCl_2$). The increase in liquid CaCl2 is significant, roughly 30% higher.
- Results show an increase in the use of dry or prewetted Magnesium chloride ($MgCl_2$).
- No 2016 responders used liquid $MgCl_2$ and Urea.
- A few respondents used Potassium Chloride (KCl) compared to none in previous years.

- Calcium Magnesium Acetate (CMA), Potassium acetate (KA), and Abrasives have decreased since 2014.

- Beet juice as an additive continued in popularity.

Information provided about anti-icing practices that agencies may be employing indicated in 2007 that 14 agencies reported the use of anti-icing practices. In 2010, 20 agencies reported using anti-icing practices. In 2012, 20 agencies reported using anti-icing practices, and in 2014, 13 agencies used anti-icing practices. In 2016, 26 agencies used anti-icing practices. Compared to 50 percent in 2014, 60 percent of local agencies are implementing some form of anti-icing practices in 2016. This trend suggests improvement in the use of anti-icing BMPs over time, with the most widespread use in 2016.

Two of the responding agencies reuse vehicle wash-water for making brine solutions compared to none from the 2014 survey.

2.2.2 Salt Application Rates

In 2007, survey respondents were asked about their average annual salt usage. In 2012, 2014, and again in 2016, respondents were asked about annual salt usage. Respondents gave their annual usage for each winter season which provides a good benchmark for how weather has affected salt application rates. **Figure 2-3** shows an approximated annual salt usage in lbs/lane mile for each watershed in the study area reported from the 2007, 2012, 2014, and 2016 surveys. Annual salt application rates generally decreased from 2007 – 2012 in the watersheds, and increased from 2012-2014 as a result of snowfall and storm event frequency variation. The 2016 survey responses indicated that the per lane mile use of salt in the 2015-16 winter has decreased from that in most previous years. The number and type of winter storm events occurring each year and the different number of agencies providing usage information for each survey make developing direct usage trends or correlations difficult.

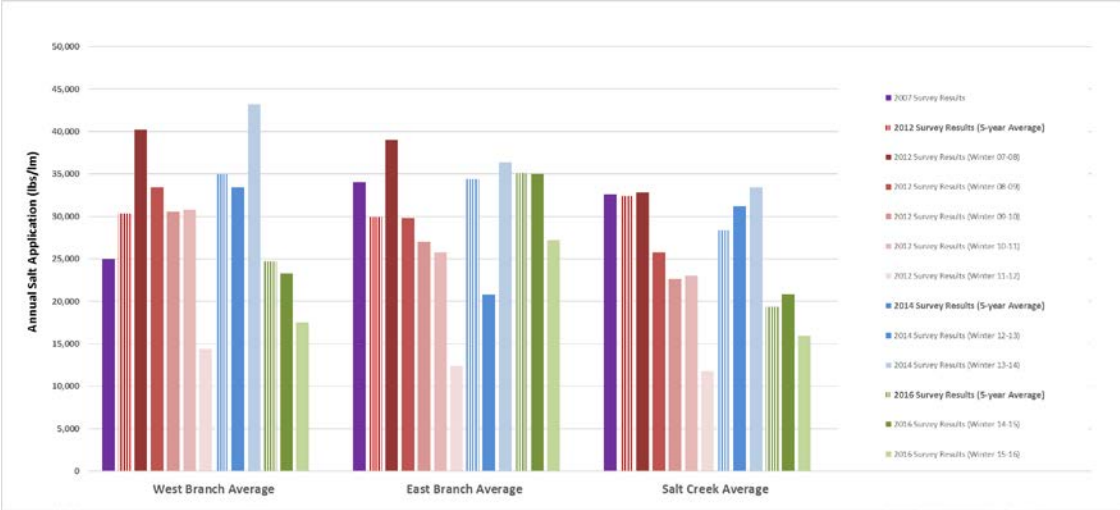


Figure 2-3 – Annual Salt Application Reported from 2007 - 2016

Survey respondents were asked about the average salt application rate per lane mile based on specific storm events. This information more comparably describes a community's salt usage, or application rate. **Figure 2-1** shows salt application rates reported from the 2010, 2012, 2014, and 2016 surveys. In general the number of agencies applying 200-300 lbs/lm has increased from 2010 to 2016. The other reported application rates have stayed relatively constant over the period. The majority of increases shown for 2016 are due to the increase in the number of agencies providing information for the 2016 survey.

Both annual salt usage data and salt application rates provide insight into individual agency programs and salt application across watersheds, as well as a valuable benchmark for future survey and Chloride Reduction Program efforts. Both of the above values will continue to be requested of agencies in future surveys to compare and report deicing program improvements, and presumed water quality improvements.

2.3 Survey Conclusions

The purpose of the 2016 survey was to gather follow-up information to determine if alternative deicing practices are being implemented in the DuPage River/Salt Creek watersheds and any resulting effects on salt application rates. Forty-three (43) agencies responded to the 2016 survey, the highest number of agencies ever responding to a program survey. As there were several new agencies providing information, the 2016 survey results may be skewed by the new agencies providing information this year, and inexperience with the type of information being asked by the survey. Follow up with individual agencies for future surveys may be needed.

Almost all agencies in the program area have covered permanent salt storage facilities; however there are still some opportunities for storage and salt handling improvements across the watersheds.

The 2016 survey shows increased implementation of best management practices for deicing program implementation for the following:

- Spreading equipment calibration
- Use of weather forecasting for deicing response decisions
- Use of pavement temperature information for deicing response decisions

The survey shows expanded use of anti-icing (pretreatment) BMPs throughout the watershed, and continued use and testing of alternative deicing materials and additives to reduce total salt usage. Agencies reporting use of more that 400 lbs of salt per lane mile are opportunity for the Chloride Reduction Program to expand outreach and BMP information.

The 2016 survey highlights significant local deicing program management oversite improvements, particularly with control over application rates. Recordkeeping improvements have been implemented throughout the watershed area to better manage the quantity of salt being used in different situations. Nine out of 42 responses reported changes made to their program due to local deicing program workshops. Common methods of informing the public of policy or local program changes include the use of city or township website, newsletter, social media, and press releases.

In order to perform a more definitive trend analysis of program improvements and reductions in salt usage, additional information will need to be collected over time. Information should continue to be collected to characterize any deicing program BMP improvements and resulting reductions in salt usage occurring within the DRSCW watersheds.