



CITY OF
Crystal Lake
ILLINOIS

May 26, 2011

VIA Email and Certified Mail, Return Receipt Requested

Illinois Environmental Protection Agency, DPWC
Compliance Assurance Section #19
1021 North Grand Avenue East
Post Office Box 19276
Springfield, IL 62794-9276

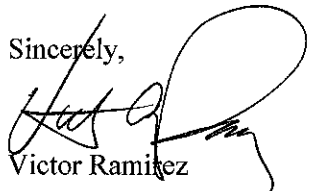
RE: Permit ILR400179 2011 Annual Report

Greetings:

Transmitted herein, please find the 2011 Annual Report for the City of Crystal Lake's MS4 Permit covering the period of March 2010 through March 2011.

Please contact me should you have and questions or require any additional information.

Sincerely,


Victor Ramirez
Director of Public Works

Attachments



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, 2010 To March, 2011

Permit No. ILR40 0179

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

Name: City of Crystal Lake Mailing Address 1: 100 W. Woodstock Street
Mailing Address 2: _____ County: McHenry
City: Crystal Lake State: IL Zip: 60014 Telephone: 815-459-2020
Contact Person: Victor Ramirez Email Address: vramirez@cystallake.org
(Person responsible for Annual Report)

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

City of Crystal Lake

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 | <input type="checkbox"/> | 4. Construction Site Runoff Control | <input type="checkbox"/> |
| 2. Public Participation/Involvement | <input checked="" type="checkbox"/> | 5. Post-Construction Runoff Control | <input type="checkbox"/> |
| 3. Illicit Discharge Detection & Elimination | <input checked="" type="checkbox"/> | 6. Pollution Prevention/Good Housekeeping | <input type="checkbox"/> |

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:
Victor Ramirez

Printed Name:

5/26/11

Date:
Director of Public Works

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

CITY OF CRYSTAL LAKE

NPDES Phase II

Annual Report

(Reporting Year March 2010 to March 2011, Permit No. ILR400179)

Prepared by The City of Crystal Lake Public Works Department

The City of Crystal Lake has been increasing its vigilance to its ever expanding Municipal Separate Storm Sewer System (MS4) Program. While the maintenance and management of the storm sewer system has been a priority of the City in the past, Crystal Lake's MS4 Program will be developed further and incorporated into more aspects of the City's operations. This report will reflect the changes made to the BMPs, the City's status of compliance with permit conditions and a history of the construction projects conducted over the last year. In addition, this document will report the City's new goals and objectives for the coming years, and the status and summary of the past year's stormwater activities among other facts and analysis. The City of Crystal Lake has worked diligently over the last year to increase the status of its MS4 Program. This document it intended to report the status of the City's program, and to establish a foundation for the future of the MS4 Program in Crystal Lake.

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Section A: Changes to Best Management Practices

A. Public Education and Outreach

B. Public Participation/Involvement

Added BMP B.2, Educational Volunteer

Added BMP B.6, Program Coordination

C. Illicit Discharge Detection and Elimination

Added BMP C.5, Illicit Source Removal Procedures

D. Construction Site Runoff Control

E. Post-Construction Runoff Control

F. Pollution Prevention/Good Housekeeping

➤ Please note the following changes to the NOI on record for the City of Crystal Lake.

- Eric Lecuyer is no longer employed with the City of Crystal Lake.
- Victor Ramirez fulfills the position Director of Public Works and holds the responsibility of Storm Sewer System Manager.
- Erik Morimoto fulfills the position Director of Engineering & Building and holds the responsibility of Construction Site Engineer.

Section B: Status of Compliance with Permit Conditions

The status of BMPs and measurable goals performed over the last year are described below.

A. Public Education and Outreach

A.1 Distributed Paper Materials

Measureable Goals –

- *Developed an educational brochure titled “The Who, What, Where, When, Why & How of Rain Barrels” to be distributed during annual Expo and are also displayed in the lobby of the City’s Municipal Complex.*
- *A brochure about the Crystal Lake Watershed is available at City Hall and other local entities (library, college, etc).*

A.3 Public Service Announcements

Measureable Goals –

- *No activity to report for 2010/11.*

A.4 Community Event

Measureable Goals –

- *The City’s Police Department sponsored a “Medication Take-Back Event” in September 2010.*
- *In October 2010, the City and its elected officials hosted a groundbreaking ceremony for the upcoming Community Rain Garden.*
- *The 2010 Annual Clean-Up Day hosted by the Chamber of Commerce and Park District organization was held in April 2010.*
- *At the March 2011 Chamber of Commerce Expo, the City’s booth handed out kid’s activity sheets as well as a copy of the new Rain Barrel Brochure, mentioned above.*

A.6 Other Public Education

Measureable Goals –

- *Ongoing improvements with respect to stormwater management have been made to the City’s website. A variety of information, links, etc. have been incorporated.*
- *Staff coordinated a bioswale native planting beautification project in the downtown district near the intersection of Grant and Brink Streets.*
- *Engineering submitted an internal memorandum to the City Manager’s office addressing potential educational outreach opportunities for the community.*
- *A rain barrel is on display in the lobby of the City’s Municipal Complex.*
- *Educational signage was added at the newly constructed Three Oaks Recreation Area, highlighting the significant use of bioswales and native plantings for*

stormwater runoff pre-treatment. Tours of the facility also focus on educating the public on the benefits of these naturalized best management practices.

- The Three Oaks Recreation Area was the recipient of the American Public Works Association (Chicago Metro Chapter) Project of the Year in the Environment category, which provided additional public education opportunities for the best management practices utilized at the facility.

B. Public Participation/Involvement

B.2 Educational Volunteer

Measureable Goals-

- Staff attended a homeowner's association meeting to educate residents on differences between sanitary and storm sewers and the negative effects misuse may have on the environment.
- In the spring of 2010, elementary school tours of City departments gave the Public Works staff an opportunity to educate students about storm sewers and proper stormwater management in their daily lives.

B.3 Stakeholder Meeting

Measureable Goals –

- Two stakeholder meetings were held on June 8, 2010 and October 12, 2010 for Flooding Areas 1 & 2 (north of the lake) to obtain comments regarding the engineering design to alleviate the flooding problems.
- A stakeholder meeting was held on November 1, 2010 for Flooding Area 4 (south of the Lake) to obtain any comments regarding the final report.

B.6 Program Coordination

Measureable Goals –

- Village of Algonquin submitted a Clean Water Act Section 319(h) Financial Assistance Application for the Woods Creek Watershed. The application requests funding for Algonquin, Lake in the Hills, and the City of Crystal Lake to complete a 319 Grant for this watershed.
- The City has designated staff to be directly involved with the Sleepy Hollow and Silver Creek Watershed taskforce.

B.7 Other Public Involvement

Measureable Goals –

- The Annual Clean-Up Day hosted by the Chamber of Commerce and Park District organization was held in April 2010.
- March 2011 once again marked the participation with the Chamber of Commerce's Annual Expo.

- *Staff often attends an event called “Green Drinks” (held monthly) which provides an opportunity for interested parties in the community to come together to discuss sustainable infrastructure events, programs, or projects.*

C. Illicit Discharge Detection and Elimination

C.5 Illicit Source Removal Procedures

Measureable Goals –

- *Staff has embarked in discussions with surrounding communities on the effects coal tar has on the environment. Elimination of sales with the adoption of an ordinance has been the focus.*
- *The Three Oaks Recreation Area opened October 2010 and implemented integrated pest management and natural lawn care programs designed to eliminate the usage of chemical treatment that can compromise the quality of ground and surface waters.*
- *Development of a salt storage ordinance for commercial and industrial properties is being reviewed.*

C.6 Program Evaluation and Assessment

Measureable Goals –

- *Two notices of violations were issued in 2010 to businesses for illicit discharges to the storm system. Both were required to develop, implement, and document preventative maintenance programs for their sanitary sewer system.*

C.8 Pollutant Field Testing

Measureable Goals –

- *Continue sampling, testing, and documenting of influent and effluent flows to various lakes and stream throughout the community have continued.*
- *Installation of 6 monitoring wells throughout the Crystal Lake Watershed was completed in August of 2010. Sampling is completed quarterly to establish a baseline for the watershed area.*
- *Once per year in the spring, a composite sample is taken where all three tile lines meet, prior to entering the lake. The sample is evaluated for priority pollutants to ensure the requirements of the EPA are met.*

C.10 Other Illicit Discharge Controls

Measureable Goals –

- *The use of non-phosphorous fertilizers throughout the community has been under review by staff.*

D. Construction Site Runoff Control

D.1 Regulatory Control Program

Measureable Goals –

- *Continued to enforce the storm water management ordinance and participate in any County-wide ordinance revision reviews.*

D.2 Erosion and Sediment Control BMPs

Measureable Goals –

- *Continued to enforce and document erosion and sediment control standards.*

D.3 Other Waste Control Programs

Measureable Goals –

D.4 Site Plan Review Procedures

Measureable Goals –

- *Continued to follow standard review procedures.*

D.5 Public Information Procedures

Measureable Goals –

- *Tracked and responded to all complaints.*

D.6 Site Inspection/Enforcement Procedures

Measureable Goals –

- *Continued to follow site review inspection procedures.*

E. Post-Construction Runoff Control

E.2 Regulatory Control Program

Measureable Goals –

- *Continued to enforce the Crystal Lake Stormwater Ordinance.*

E.3 Long Term O&M Procedures

Measureable Goals –

- *No activity to report during 2010/11.*

E.4 Pre-construction Review of BMP Designs

Measurable Goals –

- *Continued to follow standard review procedures.*

E.5 Site Inspections During Construction

Measureable Goals –

- *Tracked all site inspections.*

F. Pollution Prevention/Good Housekeeping

F.1 Employee Training Program

Measureable Goals –

- *Public Works staff attending McHenry County's "Sensible Salting" workshop. Programs like this help in educating operators on the affects winter salting operations can have on our waters as well as the surrounding environment.*
- *Engineering and Buildings staff attended seminars and workshops like*
 - *2010 Sustainable Governance Conference*
 - *Stormwater Solutions Webinar*
 - *Soil Erosion and Sediment Control Workshop*
 - *Rain Barrel Workshop*

F.2 Inspection and Maintenance Program

Measureable Goals –

- *Public Works has worked to develop a formal storm conveyance system cleaning program.*
- *The City's storm conveyance system is in the initial phase of being incorporated within the GIS mapping system. This will help in surveying for potential illicit discharges.*
- *The street sweeping has collected and discarded 3,006 cubic yards of debris from the roadways.*

F.6 Other Municipal Operations Controls

Measureable Goals –

- *Quarterly scheduling of the Spill Prevention Control and Countermeasure (SPCC) program was completed.*
- *Public Works has reviewed their dumping and waste removal procedures and its relation to the recent Clean Construction and Demolition Debris (CCDD) regulations being implemented by the EPA. In addition to this was the proper dewatering of spoil piles to controlled areas which eliminates the potential for runoff to nearby streams.*
- *Five more vehicles used for snow removal operations have been outfitted with automated spreader controls. These automated controls promote a more consistent application of the products, thus eliminating the risk of over usage.*
- *Public Works has installed GPS units in a number of vehicles used for snow removal and salting operation with the intention to maximize efficiency as well as eliminate the potential for "double" salting of roadways.*

Section C: Information and Data Collection Results

Documentation and recordkeeping supporting the many areas of this annual report are retained with the various Divisions of the organization and are available for review at any time. Below you find some samples for review.

➤ **Street Sweeping Collection Totals (in cubic yards)**

March, 2010	111
April, 2010	148
May, 2010	173
June, 2010	103
July, 2010	69
August, 2010	88
September, 2010	242
October, 2010	806
November, 2010	1,140
December, 2010	5
January, 2011	0
February, 2011	0
March, 2011	121
Total Cubic Yards	3,006

➤ **Illicit Discharge Violations**

- Old Walmart Lift Station (August 26, 2010) – The privately owned lift station west of the old Walmart malfunctioned creating a sanitary sewerage overflow into the parking lot and storm sewer basin. The Sewer & Lift Division remediated the spill by washing water through the pump’s lift station and collecting the water and raw sewerage at the storm basin with the vacator unit. The overflowing sanitary water did not discharge to the adjacent infiltration basin.

A Notice of Violation (NOV) was issued to the management company (Simon Property Group) on September 13, 2010, with an order to pay for the City clean-up services. The City also informed the building management company, to assess the operational issues with their lift station to prevent future incidents.

- McHenry and Dartmoor – small commercial mall (September 24, 2010) – This was a sanitary sewer overflow in the parking lot of the strip mall. Some raw sewerage discharged from a service line east and then north into the nearest downstream storm sewer of the parking lot. Heavy grease chunks were observed in the sanitary sewer service line that flows west to east from the businesses. The line was jetted

out by the Sewer & Lift Division, preventing any more raw sewerage from entering the storm sewer.

The management company for the strip mall was notified. The City informed the management company that the service line to the City main should be thoroughly cleaned by a professional contractor. The City visited all of the mall businesses. Locked grease traps were observed in each establishment. China House could not provide documentation for the servicing of their grease trap. After communicating by letter and phone, China House now has a service provider with a regular maintenance program for their grease trap.

➤ **Pollutant Field Testing Results**

- Crystal Lake – samples are collected every other week at the following locations:
 - Cove Pond discharge pipe into the lake off of North Shore Drive
 - Lake influent into Crystal Creek at Riverside Dr. and Lake Avenue
 - Pinewood and Honeysuckle Dr. inlet into Crystal Lake
 - Effluent discharge manhole from Lippold Park wetlands (off Thornwood Lane)
 - Influent discharge manhole adjacent to Lippold Park golf driving range and wetlands (collected quarterly)
- Cove Pond – samples are collected every other week at the following locations:
 - Influent culvert pipe into Cove Pond near Green Oaks Drive / Crystal Lake Avenue
 - Effluent discharge pipe from Cove Pond along North Shore Drive
- Groundwater Monitoring
 - Six (6) watershed wells northwest of Crystal Lake are monitored quarterly.

Note: Water elevations are recorded at the above locations during the monitoring events.

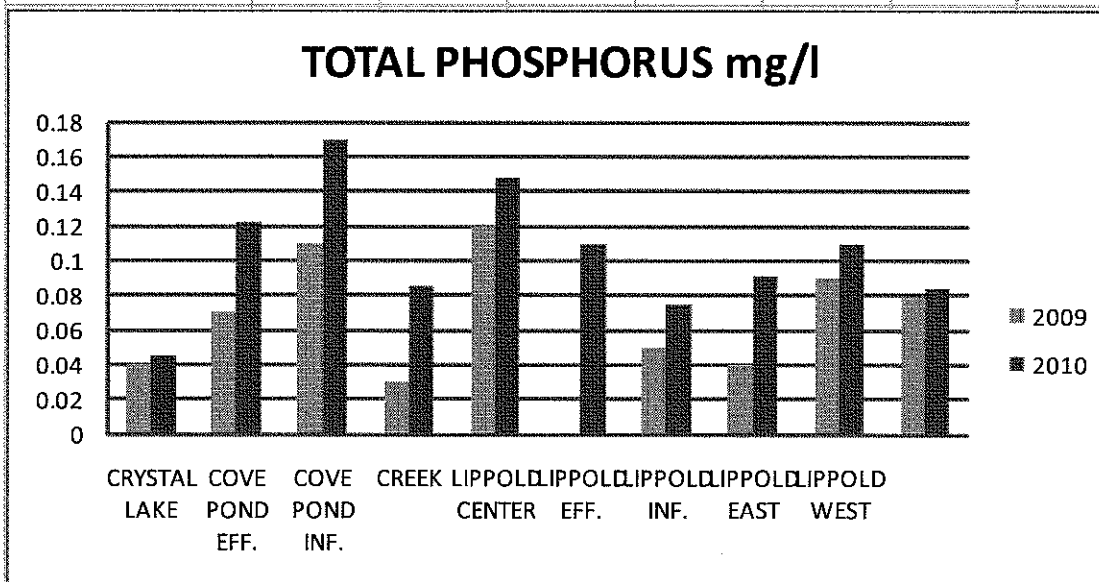
The parameters analyzed at the above locations include the following:

- Total Suspended Solids (TSS)
- Carbonaceous Biological Oxygen Demand (CBOD)
- Ammonia-N
- Total Phosphorous
- Fecal Coliform
- Total Coliform
- Chlorides
- Zinc

➤ **Wastewater Treatment Plant Monitoring**

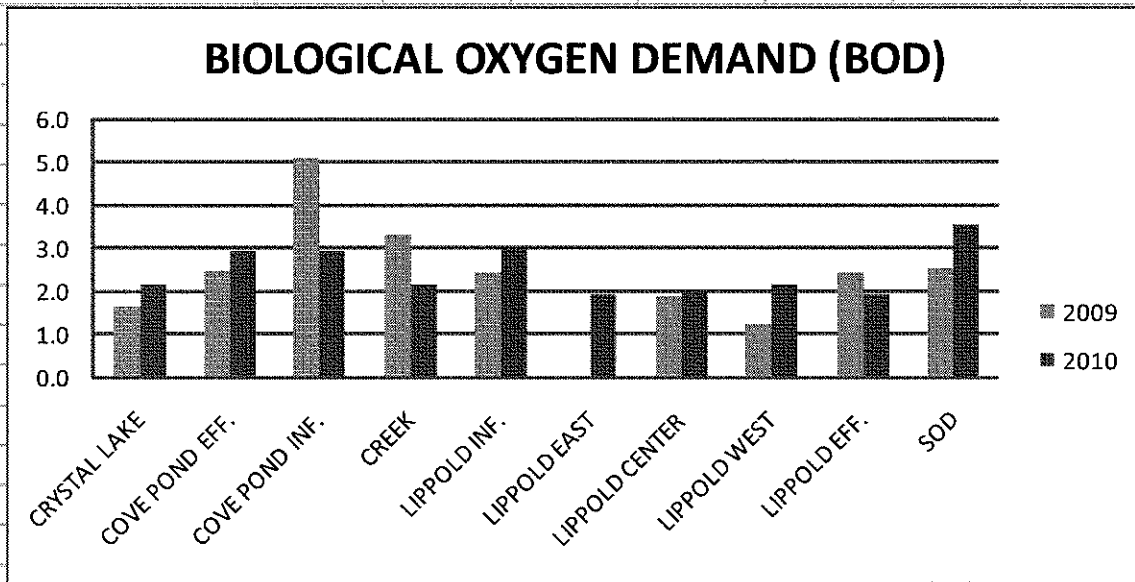
- WWTP #2 - Crystal Creek upstream and cooling pond outfall downstream.
- WWTP #3 - Drainage Ditch to Squaw Creek along railroad. Parameters include the following:
 - Temperature
 - pH

TOTAL SUSPENDED SOLIDS (TSS) (mg/L)							
2009-10							
AVERAGES							
Locations	2009	2010	2011	2012	2013	2014	2015
CRYSTAL LAKE	3.6	3.4					
COVE POND EFF.	4.1	10.5					
COVE POND INF.	6.1	5.5					
CREEK	6.7	2.1					
LIPPOLD INF.	29.6	23.1					
LIPPOLD EAST	No Data	17.6					
LIPPOLD CENTER	2.5	3.2					
LIPPOLD WEST	3.1	3.0					
LIPPOLD EFF.	27.3	17.6					
SOD	25.0	25.8					



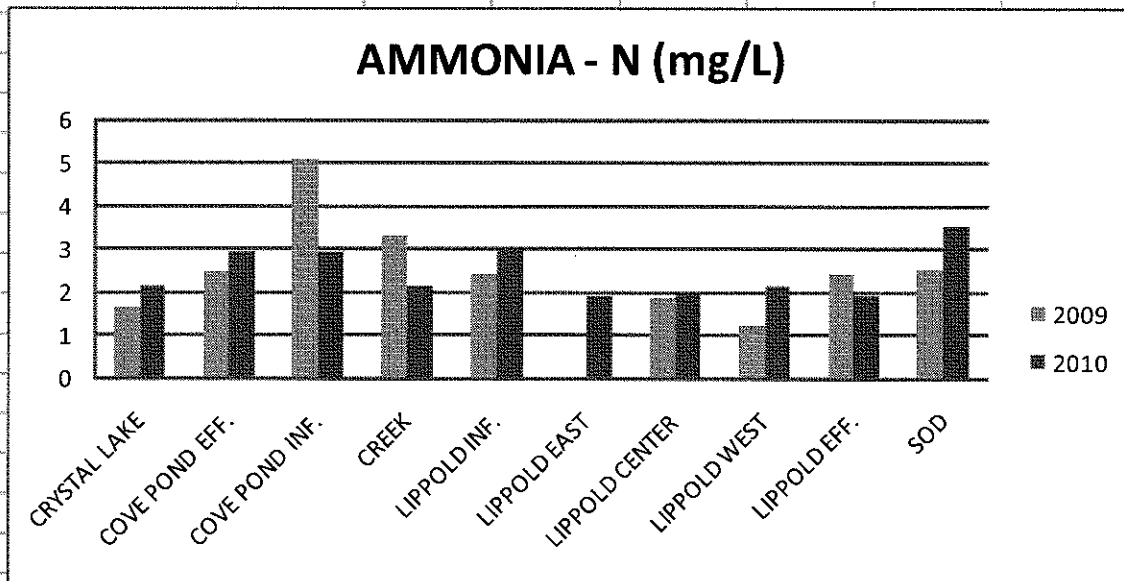
Comments: Total Suspended Solids (TSS) are solids in water that can be trapped by a filter. TSS can include a wide variety of material, such as silt, decaying plant and animal matter, industrial wastes, and sewerage. High TSS in a water body can mean higher concentrations of bacteria, nutrients, pesticides, and metals in the water. These pollutants may attach to sediment particles on the land and be carried into water bodies with storm water. The graph above would indicate that runoff from the golf driving range and the Lippold Park wetlands increase TSS at those down stream monitoring points.

BIOLOGICAL OXYGEN DEMAND (BOD) mg/l							
2009-10							
AVERAGES							
Location	2009	2010	2011	2012	2013	2014	2015
CRYSTAL LAKE	1.6	2.2					
COVE POND EFF.	2.5	2.9					
COVE POND INF.	5.1	3.0					
CREEK	3.3	2.1					
LIPPOLD INF.	2.4	3.0					
LIPPOLD EAST	No Data	1.9					
LIPPOLD CENTER	1.9	2.0					
LIPPOLD WEST	1.2	2.1					
LIPPOLD EFF.	2.4	1.9					
SOD	2.5	3.6					



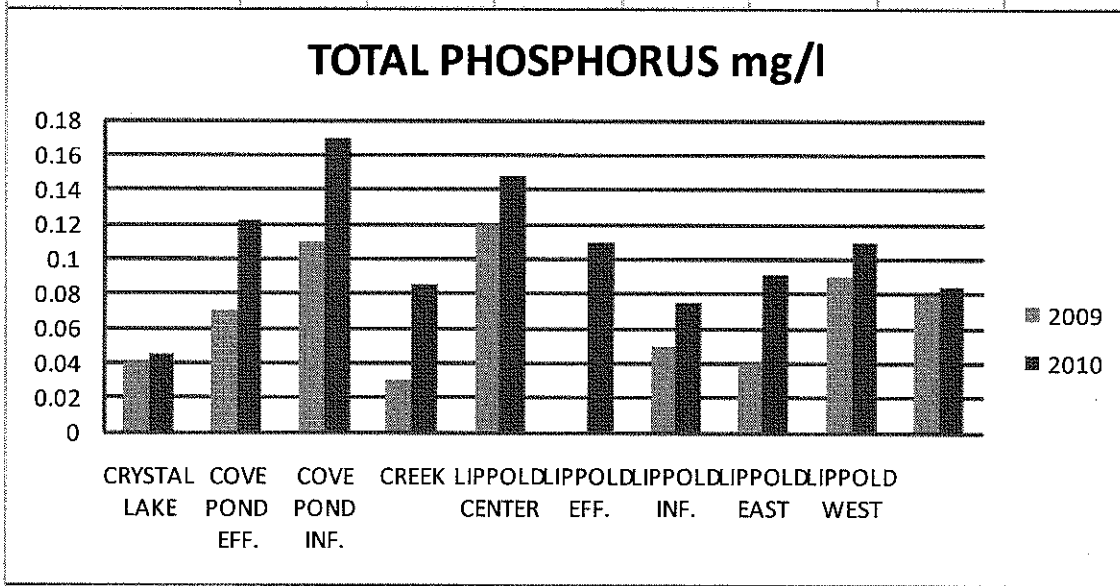
Comments: The BOD is a chemical procedure for determining how fast biological organisms use up oxygen in a body of water. It is used as a measure of the degree of water pollution. A low BOD is an indicator of good quality water. The numbers above range from very good (1-2 mg/L) to moderately clean (3-5 mg/L). The highest number at Cove Pond Influent seems logical as more urban and street runoff discharges into this location. The cleanest location appears to be Lippold West which is logical since there is mostly open fields or farmland that discharge into this location.

AMMONIA - N (mg/L)							
2009-10							
AVERAGES							
Location	2009	2010	2011	2012	2013	2014	2015
CRYSTAL LAKE	1.63	2.17					
COVE POND EFF.	2.47	2.93					
COVE POND INF.	5.06	2.96					
CREEK	3.29	2.13					
LIPPOLD INF.	2.44	3.00					
LIPPOLD EAST	No Data	1.92					
LIPPOLD CENTER	1.87	1.99					
LIPPOLD WEST	1.24	2.13					
LIPPOLD EFF.	2.43	1.92					
SOD	2.51	3.56					



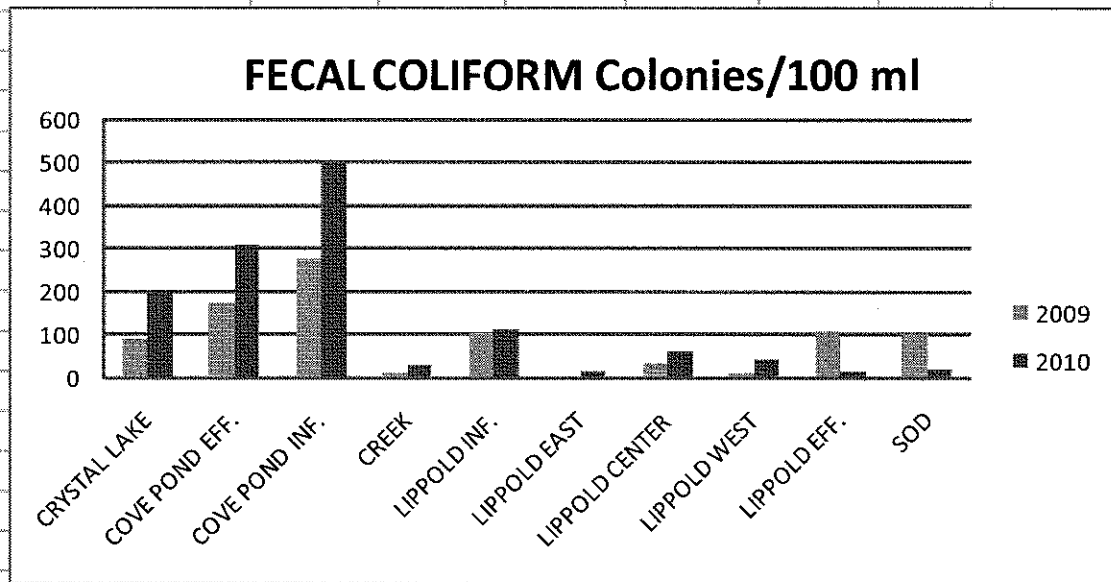
Comments: Low level ammonia nitrogen may be present in water naturally as a result of the biological decay of plant and animal matter. Ammonia is a major component of fertilizers. This is consistent with the spikes at Lippold Influent (down stream from the golf driving range); Lippold Effluent and the Sod are also down stream from the driving range and the extensive wetlands of Lippold Park.

TOTAL PHOSPHORUS (mg/L)							
2009-10							
AVERAGES							
Location	2009	2010	2011	2012	2013	2014	2015
CRYSTAL LAKE	0.04	0.05					
COVE POND EFF.	0.07	0.12					
COVE POND INF.	0.11	0.17					
CREEK	0.03	0.09					
LIPPOLD INF.	0.12	0.15					
LIPPOLD EAST	No Data	0.11					
LIPPOLD CENTER	0.05	0.08					
LIPPOLD WEST	0.04	0.09					
LIPPOLD EFF.	0.09	0.11					
SOD	0.08	0.08					



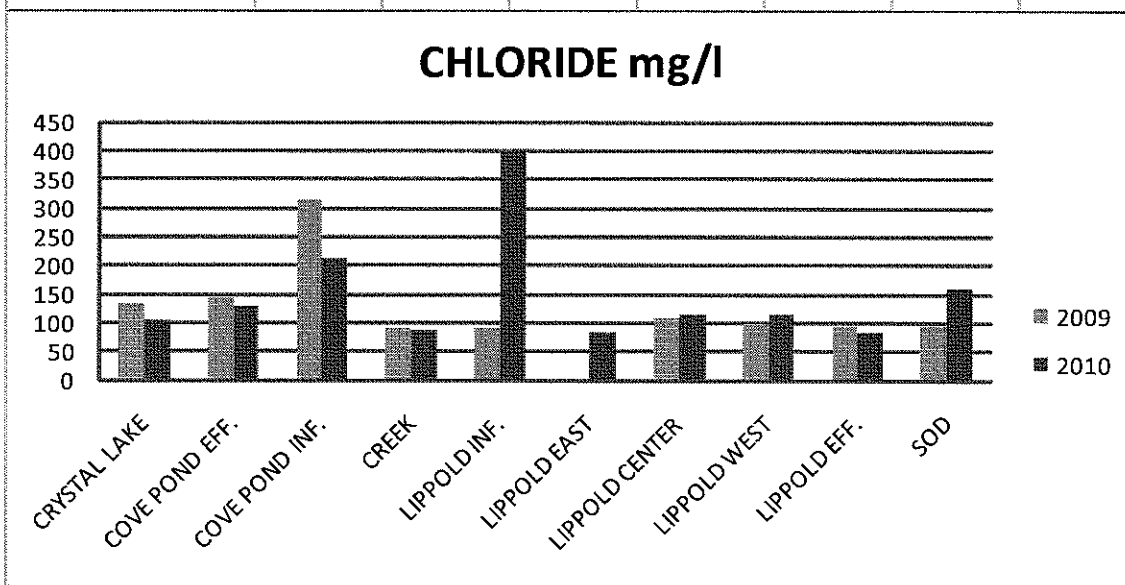
Comments: Most of the available phosphorus found in our waterways can be traced directly to human sources. Phosphorus is used in many detergents, boiler treatments, fertilizers, and in some water supply treatments. When this phosphorus reaches the environment through runoff or through wastewater discharges, accelerated eutrophication usually takes place. Eutrophication is when a body of water becomes rich in dissolved nutrients. Again the higher spikes above would be the direct result of fertilizers and street runoff (Cove Pond Influent and Lippold Influent).

FECAL COLIFORM Colonies /100 ml							
2009-10							
AVERAGES							
Location	2009	2010	2011	2012	2013	2014	2015
CRYSTAL LAKE	87	202					
COVE POND EFF.	173	310					
COVE POND INF.	276	498					
CREEK	10	30					
LIPPOLD INF.	102	114					
LIPPOLD EAST	No Data	17					
LIPPOLD CENTER	33	63					
LIPPOLD WEST	10	44					
LIPPOLD EFF.	107	17					
SOD	105	21					



Comments: Fecal Coliform bacteria are a group of bacteria (organisms) that are passed through the fecal excrement of humans, livestock and wildlife. This bacteria can enter aquatic areas through direct discharges of waste from mammals and birds, from agricultural and storm runoff, human sewerage, decaying plant material, and some industrial activity. The graph above would indicate that Cove Pond and the usual Lippold Park areas are affected by Fecal Coliform, especially during the warmer months.

CHLORIDE (mg/L)							
2009-10							
AVERAGES							
Locations	2009	2010	2011	2012	2013	2014	2015
CRYSTAL LAKE	134	105					
COVE POND EFF.	145	129					
COVE POND INF.	315	213					
CREEK	92	87					
LIPPOLD INF.	93	403					
LIPPOLD EAST	No Data	86					
LIPPOLD CENTER	108	115					
LIPPOLD WEST	98	115					
LIPPOLD EFF.	94	86					
SOD	95	163					



Comments: Chloride is a useful and reliable chemical indicator of river / groundwater fecal contamination, as chloride is a non-reactive solute and is ubiquitous to sewerage and potable water. The graph above would indicate runoff into Cove Pond Influent. Probably the main source of contamination is the use of sodium chloride as a deicing agent from the local roads, sidewalks, and nearby paved parking lots. The other sample locations are fairly consistent at lower concentrations.

Section D: Summary of Activities During Next Reporting Cycle

A. Public Education and Outreach

A.1 Distribute Paper Materials

Measureable Goals –

- *Develop a general feedback type questionnaire pertaining to stormwater management that would be distributed to the community, schools, etc.*

A.3 Public Service Announcements

Measureable Goals –

- *Publish at least one article for the quarterly City Newsletter, the City's cable access channel, or website.*

A.4 Community Event

Measureable Goals –

- *Complete installation and perform maintenance to community rain garden.*
- *Sponsor medication take-back and community clean-up programs.*
- *Continue developing ways to be involved with workshops and other community events.*

A.6 Other Public Education

Measureable Goals –

- *Update content in the Crystal Lake Watershed brochure as well as the City's website.*
- *Create a Sustainable Infrastructure page on the City webpage.*

B. Public Participation/Involvement

B.2 Educational Volunteer

Measureable Goals –

- *Continue interacting with elementary schools by conducting tours of City departments and functions.*

B.3 Stakeholder Meeting

Measureable Goals –

- *Conduct an additional stakeholder meeting for Area 2 of the 2007 Flooding Study.*

B.6 Program Coordination

Measureable Goals –

- *Continue coordination with Algonquin and Lake in the Hills with the Woods Creek Watershed assessment.*
- *Continue involvement in Sleepy Hollow and Silver Creek Watersheds taskforce.*
- *Establish a Rain Barrel Incentive Program.*

- *Establish a City Sustainable Infrastructure Program comprised of City staff from each department.*

B.7 Other Public Involvement

Measureable Goals –

- *Promote the Annual Clean-Up Day hosted by the Chamber of Commerce and Park District organizations.*
- *Participate in the Chamber of Commerce's Annual Expo.*

C. Illicit Discharge Detection and Elimination

C.5 Illicit Source Removal Procedures

Measureable Goals –

- *Continue discussions with McHenry County and surrounding communities on the effects of coal tar sealants.*
- *Development of a salt storage ordinance for commercial and industrial properties is being reviewed.*

C.6 Program Evaluation and Assessment

Measureable Goals –

- *Identify potential high-level violators and create a reoccurring inspection schedule.*

C.8 Pollutant Field Testing

Measureable Goals –

- *Continue sampling and testing of influent and effluent flows at lakes and streams.*
- *Perform priority pollutant testing of the watershed area.*

C.10 Other Illicit Discharge Controls

Measureable Goals –

- *Broaden the use of integrated pest management and naturalized lawn care programs throughout other City owned properties.*
- *Continue researching the use of non-phosphorous fertilizer products.*

D. Construction Site Runoff Control

D.1 Regulatory Control Program

Measureable Goals –

- *Continue to enforce the storm water management ordinance and recertify with McHenry County.*
- *Recertify with McHenry County*

- *Reevaluate the watershed requirements with regards to development in existing urbanized areas*
- *Work with McHenry County to establish a way to enforce the City's watershed requirements for unincorporated properties in the Crystal Lake Watershed.*

D.2 Erosion and Sediment Control BMP's

Measurable Goals –

- *Continue to enforce and document erosion and sediment control standards.*
- *Explore ways of enhancing the documentation process*

D.3 Other Waste Control Programs

Measureable Goals –

- *Adopt an ordinance that regulates waste and debris on construction sites.*

D.4 Site Plan Review Procedures

Measurable Goals –

- *Continue to follow review procedures.*
- *Encourage staff to obtain additional certification in floodplain management (CFM) or erosion control design (CPESC). One Civil Engineer is CFM certified and one Civil engineer and two Engineering Technicians are CPESC certificated.*

D.5 Public Information Procedures

Measureable Goals –

- *Track and respond to all complaints.*
- *Propose an agreement with McHenry County Soil and Water Conservation District to coordinate water quality related complaints.*
- *Engineering Division will distribute a Watershed Developer's Handbook which will summarize the requirements both before and after a development is constructed in the watershed. The goal of the handbook is to provide a concise explanation as to the requirements within the Watershed Implementation Plan.*

D.6 Site Inspection/Enforcement Procedures

Measureable Goals –

- *Continue to follow site review inspection procedures.*
- *Encourage staff to obtain additional certification in erosion control inspection (CISEC or CESSWI)*

E. Post-Construction Runoff Control

E.2 Regulatory Control Program

Measureable goals -

- *Continue to enforce the Crystal Lake Stormwater Ordinance.*

E.3 Long Term O&M Procedures

Measureable Goals -

- *Conduct annual inspections.*
- *Develop and distribute a sample maintenance plan.*

E.4 Pre-construction Review of BMP Designs

Measureable Goals -

- *Continue to follow review procedures.*

E.5 Site Inspections During Construction

Measureable Goals -

- *Track all site inspections*

F. Pollution Prevention/Good Housekeeping

F.1 Employee training Program

Measureable Goals -

- *Provide and/or attend training as available.*

F.2 Inspection and Maintenance Program

Measureable Goals -

- *Continue with annual street sweeping program.*
- *Finalize formal storm conveyance system cleaning program.*
- *Continue working with other departments in developing comprehensive storm maps in GIS.*

F.3 Municipal Operations Storm Water Control

Measureable Goals -

- *Create a rain garden ordinance and brochure, similar to the rain barrel ordinance and brochure.*

F.6 Other Municipal Operations Controls

Measureable Goals -

- *Train staff on proper dumping procedures with respect to the clean construction and demolition debris (CCDD) regulation being implemented by the EPA.*
- *Perform quarterly spill prevention inspections.*

E. Notice of Qualifying Local Program

- Collaborative efforts between Algonquin, Lake in the Hills, and Crystal Lake to utilize grant funding for an assessment of the Woods Creek Watershed.
- Collaborative efforts with the Sleepy Hollow and Silver Creek watershed taskforce.

F. Construction Projects Completed During Reporting Year

- *Three Oaks Recreation Area*
- *Crystal Lake Avenue Widening/Resurfacing, Segment II (west of Pingree Rd to Erick St)*
- *Erick Street Reconstruction*
- *Curb Extensions along Grant Street at Brink Street*
- *Traffic Signal Upgrades at 27 Intersections Including 3 which were completely modernized at: US 14/Devonshire Ln/Keith Ave; US 14/McHenry Ave; US 14/Dole Ave*

Appendix A



The City of Crystal Lake Illinois

**ORDINANCE AMENDING THE CODE
OF THE CITY OF CRYSTAL LAKE, ILLINOIS**

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF CRYSTAL LAKE as follows:

SECTION I: That Chapter 424: Resource Conservation shall be established.

SECTION II: That Article 1: Rain Barrels of Chapter 424 shall be established

SECTION III: That Article 1 of Chapter 424 of the City Code shall be read as follows:

Chapter 424, Article 1: RAIN BARRELS

§ 424-1. Definitions

As used in this article, the following terms shall have the meanings indicated:

COLLECTING STRUCTURE: Any house, garage, building, or canopy that possesses a roof drainage system utilized to collect rainwater in a rain barrel.

FRONT/CORNER SIDE YARD: For the purpose of this ordinance only, a front or corner side yard is any portion of a lot between the front or side of a structure and a street.

RAIN BARREL: A manufactured, durable resin container designed specifically to collect and disperse rainwater from a rooftop drainage system for later use on lawns, gardens and for other outdoor uses.

§ 424-2. Maximum size and number

The maximum capacity of a rain barrel shall not exceed 75 gallons. One rain barrel is allowed to be directly connected at each downspout located in the rear or interior side yard. Multiple interconnected rain barrels may be utilized at downspout locations in the rear yard only. More than two interconnected barrels must be completely screened at all times.

§ 424-3. Height

The height of the rain barrel shall not exceed six feet above the surrounding grade. An elevated platform is permitted, but the height of the rain barrel and platform together cannot exceed six feet in height.

§ 424-4. Location

- A. Rain barrels shall not be located in front yard or corner side yard (adjacent to the street).
- B. Rain barrels shall not be placed more than two feet away from the collecting structure.
- C. To prevent tipping, rain barrels shall be placed on a flat, stable surface or platform.

§ 424-5. Appearance

The rain barrel may be enclosed by landscape features; screening constructed of natural materials; or designed to appear similar to a planter, boulders, or similar natural element.

§ 424-6. Specifications

- A. Every rain barrel must be equipped with an automatic stormwater diverter or automatic overflow

system that diverts the water back into the downspout system away from the foundation and into the drainage swale. The overflow piping system must be a minimum of one inch.

- B. The rain barrel must be equipped with a mosquito-proof screen on the lid and over the flow hole. The barrel must be maintained to prevent mosquito breeding.

§ 424-7. Connections

Rain barrels shall be completely isolated from the potable water source.

§ 424-8. Maintenance

Rain barrels screens, gutters, and downspouts must be kept clear of debris and cleaned quarterly.

§ 424-9. Stormwater runoff

It is the owner's responsibility to direct the overflow runoff away from the adjoining property in accordance with Chapter 595, Stormwater Management.

§ 424-10. Underground Cisterns and Rain Barrels

A cistern or rain barrel installed below grade requires a building permit, drainage plan, and approval by the City Engineer.

§ 424-11. Alternative materials, design, and methods of construction and equipment

The provisions of this ordinance are not intended to prevent the installation of any material, or to prohibit any design or method of construction not specifically prescribed by this ordinance, provided that any such alternative has been approved. An alternative material, design, or method of construction –may–be approved, where the Building Commissioner finds that the proposed design is satisfactory and complies with the intent of the provisions of this ordinance, and that the material, method, or work offered is, for the purpose intended, at least the equivalent of that prescribed in this ordinance in quality, effectiveness, durability, and safety.

SECTION IV: That this Ordinance shall be in full force and effect from and after its passage and approval according to law.

SECTION V: That all Ordinances and parts of Ordinances in conflict herewith are hereby repealed.

DATED at Crystal Lake, Illinois, this fifteenth day of March, 2011.