

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
ANNUAL FACILITY INSPECTION REPORT  
NPDES PERMIT FOR STORM WATER DISCHARGES  
FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)**

Complete each section of this report.

REPORT PERIOD:	FROM: MARCH 2013	TO: MARCH 2014
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MS4 OPERATOR INFORMATION: (As it appears on the current permit)

NAME: City of Crystal Lake	TELEPHONE NUMBER: 815-459-2020	
MAILING ADDRESS: 100 Woodstock Street		
CITY: Crystal Lake	STATE: IL	ZIP: 60039
CONTACT PERSON: Victor Ramirez (Person responsible for Annual Report)		

NAME(S) OF GOVERNMENTAL ENTITY(IES) IN WHICH MS4 IS LOCATED: (As it appears on the current permit)

McHenry 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	<input type="checkbox"/>	4. Construction Site Runoff Control	<input type="checkbox"/>
2. Public Participation/Involvement	<input type="checkbox"/>	5. Post-Construction Runoff Control	<input type="checkbox"/>
3. Illicit Discharge Detection & Elimination	<input 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.

SIGNATURE: 	DATE: May 28, 2014
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Information required by this form must be provided to comply with 415 ILCS 5/39 (1996). Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

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## Part A. Changes to Best Management Practices

**Note:** X indicates BMPs performed that were proposed in your NPDES permit  
 ✓ indicates changes to BMPs proposed in your NPDES permit

Year 11	Year 12	Year 13	Year 14	Year 15	
<b>MS4</b>					
<b>A. Public Education and Outreach</b>					
X	X	X	X	X	A.1 Distributed Paper Material
					A.2 Speaking Engagement
X	X	X	X	X	A.3 Public Service Announcement
X	X	X	X	X	A.4 Community Event
					A.5 Classroom Education Material
X	X	X	X	X	A.6 Other Public Education
<b>B. Public Participation/Involvement</b>					
					B.1 Public Panel
X	X	X	X	X	B.2 Educational Volunteer
X	X	X	X	X	B.3 Stakeholder Meeting
					B.4 Public Hearing
					B.5 Volunteer Monitoring
X	X	X	X	X	B.6 Program Coordination
X	X	X	X	X	B.7 Other Public Involvement
<b>C. Illicit Discharge Detection and Elimination</b>					
X	X	X	X	X	C.1 Storm Sewer Map Preparation
X	X	X	X	X	C.2 Regulatory Control Program
X	X	X	X	X	C.3 Detection/Elimination Prioritization Plan
X	X	X	X	X	C.4 Illicit Discharge Tracing Procedures
X	X	X	X	X	C.5 Illicit Source Removal Procedures
X	X	X	X	X	C.6 Program Evaluation and Assessment
X	X	X	X	X	C.7 Visual Dry Weather Screening
X	X	X	X	X	C.8 Pollutant Field Testing
					C.9 Public Notification
					C.10 Other Illicit Discharge Controls

Year 11	Year 12	Year 13	Year 14	Year 15	
<b>MS4</b>					
<b>D. Construction Site Runoff Control</b>					
X	X	X	X	X	D.1 Regulatory Control Program
X	X	X	X	X	D.2 Erosion and Sediment Control BMPs
					D.3 Other Waste Control Program
X	X	X	X	X	D.4 Site Plan Review Procedures
X	X	X	X	X	D.5 Public Information Handling Procedures
X	X	X	X	X	D.6 Site Inspection/Enforcement Procedures
					D.7 Other Construction Site Runoff Controls
<b>E. Post-Construction Runoff Control</b>					
					E.1 Community Control Strategy
X	X	X	X	X	E.2 Regulatory Control Program
X	X	X	X	X	E.3 Long Term O&M Procedures
X	X	X	X	X	E.4 Pre-Const Review of BMP Designs
X	X	X	X	X	E.5 Site Inspections During Construction
					E.6 Post-Construction Inspections
					E.7 Other Post-Const Runoff Controls
<b>F. Pollution Prevention/Good Housekeeping</b>					
X	X	X	X	X	F.1 Employee Training Program
X	X	X	X	X	F.2 Inspection and Maintenance Program
X	X	X	X	X	F.3 Municipal Operations Storm Water Control
X	X	X	X	X	F.4 Municipal Operations Waste Disposal
X	X	X	X	X	F.5 Flood Management/Assess Guidelines
X	X	X	X	X	F.6 Other Municipal Operations Controls

## **Part B. Status of Compliance with Permit Conditions**

*(Provide 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 maximum extent practicable [MEP], and your identified measurable goals for each of the minimum control measures.)*

The status of BMPs and measurable goals performed in Year 11 are described below.

### **1) PUBLIC EDUCATION AND OUTREACH**

The City and McHenry County both perform a variety of activities that meet the requirements of the Public Education and Outreach minimum control measure. These activities include BMP's A.1, A.3, A.4 and A.6. A brief description and status is provided below.

#### **BMP No. A.1 – Distributed Paper Material**

##### **Brief Description of BMP:**

The City of Crystal Lake (City) and McHenry County will continue to produce and make available brochures on a variety of stormwater related topics. These brochures and informational materials are made available for the public at the City facilities and events.

#### **BMP No. A.3 – Public Service Announcement**

##### **Brief Description of BMP:**

The City will continue to include a stormwater and/or ambient water quality related articles in the City's monthly newsletter at least once a year.

#### **BMP No. A.4 – Community Event**

##### **Brief Description of BMP:**

The City has designed and constructed a rain garden with the Wildflower Preservation and Propagation Committee. The City will continue to maintain the existing rain garden as an educational and demonstration tool and seek out additional partnerships as funding allows. The City has also attended and supported the annual Drug Take Back Initiative Program sponsored by the Police Department. This provides an opportunity to engage the public on stormwater related issues. The City will also continue this outreach activity.

#### **BMP No. A.6 – Other Public Involvement**

##### **Brief Description of BMP:**

The City will continue to utilize other available outlets such as the City website, library, etc. to reach residents regarding stormwater and water quality information. The City will update and modify their approach as need to stay current and keep residents informed.

### **2) PUBLIC PARTICIPATION AND INVOLVEMENT**

The City and McHenry County both perform a variety of activities that meet the requirements of the Public Participation and Involvement minimum control measure. These activities include BMP's B.2, B.3, B.6 and B.7. A brief description and status is provided below.

**BMP No. B.2, – Educational Volunteer**

**Brief Description of BMP:**

The City regularly participates in volunteering activities that provide opportunities to interact with residents and educate them on the importance of stormwater and water quality. City staff will continue to perform these activities and work to increase participation from its staff and attendance by residents.

**BMP No. B.3 – Stakeholder Meeting**

**Brief Description of BMP:**

The City will work to conduct stakeholder meetings to connect directly with impacted residents and distribute information. The City will continue to hold the stakeholder meetings as needed with a goal of at least one per year. Recent public meetings were held with residents impacted by flooding events during Year 11.

**BMP No. B.6 – Program Involvement**

**Brief Description of BMP:**

The City has coordinated with other local municipalities and agencies on regional stormwater related issues. The City will continue to partner with the County and other agencies to coordinate efforts such as watershed studies and other regional issues impacting multiple jurisdictions.

**BMP No. B.7 – Other Public Involvement**

**Brief Description of BMP:**

The City has hosted elementary schools and other residents with tours through various City departments. These tours allow the City to educate the participants on various functions of the City, as well as educate them on issues pertaining to stormwater and water quality, such as what is the difference between stormwater and sanitary and why keeping them separate is important.

**3) ILLICIT DISCHARGE DETECTION AND ELIMINATION**

The City and McHenry County both perform a variety of activities that meet the requirements of the Illicit Discharge Detection and Elimination minimum control measure. These activities include BMP's C.1, C.2, C.3, C.4, C.5, C.6, C.7, and C.8. A brief description and status is provided below.

**BMP No. C.1 – Storm Sewer Map Preparation**

**Brief Description of BMP:**

The City has developed a storm sewer atlas map and inventory of the storm sewer system outfalls. The City will continue to update the system and inventory as needed based on development and other stormwater improvements.

**BMP No. C.2 – Regulatory Control Program**

**Brief Description of BMP:**

The City and County both have ordinances in place to allow for enforcement action if an illicit discharge is observed, reported or discovered. The City will continue to enforce the ordinance to prevent or eliminate non-stormwater discharges from the municipal separate storm sewer system.

**BMP No. C.3 – Detection/Elimination Prioritization Plan**

**Brief Description of BMP:**

The City has policies and procedures to identify, trace, and eliminate illicit discharges, as well as addressing those potential illicit discharges reported by the public. The City will continue these activities to reduce or eliminate illicit discharges to the municipal separate storm sewer system.

**BMP No. C.4 – Illicit Discharge Tracing Procedures**

**Brief Description of BMP:**

The City has existing policies and procedures in place to trace and eliminate illicit discharges to the municipal separate storm sewer system. These procedures include the utilization of the outfall mapping system, existing design plans and other available data to locate the source of potential pollutants. The City will continue these tracing activities as needed to reduce or eliminate non-stormwater discharges to the MS4.

**BMP No. C.5 – Illicit Source Removal Procedures**

**Brief Description of BMP:**

The City and County both have regulatory mechanisms in place to allow for enforcement actions to eliminate illicit discharges. The City will continue to utilize these procedures as needed to eliminate non-stormwater discharges to the MS4.

**BMP No. C.6 – Program Evaluation and Assessment**

**Brief Description of BMP:**

The City will continue to conduct the annual program evaluation and assessment for the IDDE program. The evaluation and assessment provides awareness and opportunity for improvement to the policies and procedures based on experience and staff feedback.

**BMP No. C.7 – Visual Dry Weather Screening**

**Brief Description of BMP:**

The City regularly performs dry weather screening of the municipally owned outfalls for potential stormwater concerns as part of its maintenance activities. The City will continue to perform these activities and has developed a form for formalizing this process. The City will continue to perform these activities and utilize the inspection form for future permit years.

## **BMP No. C.8 – Pollutant Field Testing**

### **Brief Description of BMP:**

The City regularly samples, tests, analyzes and documents the results of influent and effluent flow to various waterbodies throughout the community. These procedures provide a baseline condition for these natural resources in the event of a potential illicit discharge. The City will continue these procedures in future permit years as funding allows.

## **4) CONSTRUCTION SITE RUNOFF CONTROL**

The City and McHenry County both have ordinances and activities in place that meet the requirements of the Construction Site Runoff Control minimum control measure. These activities include BMP's D.1, D.2, D.4, D.5, and D.6. A brief description and status is provided below.

### **BMP No. D.1 – Regulatory Control Program**

#### **Brief Description of BMP:**

The City and County have ordinances in place to require the review, inspection and enforcement of construction site runoff controls. The City will continue with these policies/procedures and update as needed based on the impending MS4 permit.

### **BMP No. D.2 – Erosion and Sediment Control BMPs**

#### **Brief Description of BMP:**

The City and County have ordinances in place to require the review, inspection and enforcement of soil erosion and sediment control best management practices. The City will continue these procedures to reduce or prevent the discharge of soil and other potential pollutants from construction sites and amend as needed based on the impending permit.

### **BMP No. D.4 – Site Plan Review Procedures**

#### **Brief Description of BMP:**

The City has procedures that require the review of site plan for proposed developments for compliance. The City will continue the review procedures for developments to verify compliance with applicable NDPES regulations.

### **BMP No. D.5 – Public Information Handling Procedures**

#### **Brief Description of BMP:**

The City has procedures in place to receive, log and address publicly reported issues. The City will continue these procedures and respond and/or investigate as needed.

### **BMP No. D.6 – Site Inspection/Enforcement Procedures**

#### **Brief Description of BMP:**

The City and County regulatory control programs all for the inspection and enforcement for construction site runoff control. The City and County will continue the inspection and enforcement program to prevent the discharge of pollutants from construction sites.

## **5) POST-CONSTRUCTION RUNOFF CONTROL**

The City and McHenry County both have ordinances and activities in place that meet the requirements of the Post-Construction Runoff Control minimum control measure. These activities include BMP's E.2, E.3, E.4, and E.5. A brief description and status is provided below.

### **BMP No. E.2 – Regulatory Control Program**

#### **Brief Description of BMP:**

The City and County have ordinances in place that require the review, inspection and enforcement of post-construction runoff control measures. The City will continue to enforce the ordinances and verify compliance of all developments following construction to reduce or prevent the discharge of pollutants to the MS4.

### **BMP No. E.3 – Long Term O&M Procedures**

#### **Brief Description of BMP:**

The City has procedures for assisting and evaluating long term maintenance of stormwater best management practices. The City will continue to assist developers, residents and other target audiences by providing sample maintenance plans and conducting inspections as needed.

### **BMP No. E.4 – Pre-Construction Review of BMP Designs**

#### **Brief Description of BMP:**

The City's existing practices include the pre-construction review of BMP designs. These procedures include pre-application meetings for large scale developments. The City will continue the review procedures and modify as necessary to maintain compliance.

### **BMP No. E.5 – Site Inspections During Construction**

#### **Brief Description of BMP:**

The City performs site inspections during and after construction at new development and redevelopment projects to verify compliance with the runoff control requirements. The City will continue these procedures aimed at preventing the discharge of pollutants to the MS4.

## **6) POLLUTION PREVENTION AND GOOD HOUSEKEEPING**

The City and McHenry County perform a number of activities that meet the requirements of the Pollution Control and Good Housekeeping minimum control measure. These activities include BMP's F.1, F.2, F.3, F.4, F.5 and F.6. A brief description and status is provided below.

### **BMP No. F.1 – Employee Training Program**



**Brief Description of BMP:**

The City has procedures that provide guidance and training for employees to reduce or eliminate the discharge of pollutants from City owned facilities to the storm sewer system. The City will continue the training program.

**BMP No. F.2 - Inspection and Maintenance Program**

**Brief Description of BMP:**

The City has an inspection and maintenance program in place to evaluate and maintain the municipal stormwater facilities. These activities include the City's extensive street sweeping program. The City will continue this program aimed at reducing the amount of debris and other potential pollutants entering the municipal separate storm sewer system.

**BMP No. F.3 – Municipal Operations Storm Water Control**

**Brief Description of BMP:**

The City has procedures and policies to prevent the discharge of pollutants to the MS4 from municipal operations. These policies include dewatering procedures, pumping activities and waste disposal. The City will continue these operations and re-evaluate and/or modify as needed to prevent the discharge of pollutants to the MS4.

**BMP No. F.4 – Municipal Operations Waste Disposal**

**Brief Description of BMP:**

The City has procedures that require the appropriate disposal of all wastes generated during municipal operations. The City will continue these procedures as needed to maintain compliance with the disposal program.

**BMP No. F.5 – Flood Management/Assess Guidelines**

**Brief Description of BMP:**

The City, County, and State have development procedures related to floodplain management and the evaluation of potential development in these areas. The City will continue to enforce these requirements in special flood hazard areas and update as needed to maintain compliance.

**BMP No. F.6 – Other Municipal Operations Controls**

**Brief Description of BMP:**

The City has all required components of the ILR40 Stormwater Management Program Plan (SMPP) and as part of this program, they regularly evaluate their municipal activities for additional ways to reduce or eliminate pollutants from entering the stormwater system including salt reduction, additional de-icing techniques and other actions. The City will continue to analyze their existing practices and methods for potential alternatives that may reduce or eliminate potential pollutants.

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## Part C. Information and Data Collection Results

*(Provide information and water quality sampling/monitoring data related to illicit discharge detection and elimination collected during the reporting period.)*

Illicit Discharge Detection and Elimination:

### 1) Businesses and Commercial Areas

- Storm Water Detention – SSO at Pingree Rd. and Cog Circle (October 24, 2013)

City personnel observed a sanitary sewer blockage at Pingree Road and Cog Circle. This did not result in a sewer backup, but sanitary sewerage did discharge into the storm water detention basin at this location. The material was cleaned up preventing any discharge into waterways from the basin. The City later sent letters to several businesses that may contribute to the discharge of grease and solids to the sanitary line that overflowed. The letter informed these businesses that such discharges are prohibited. The City documented housekeeping and Best Management Practices (BMP) to prevent similar incidents and violations in the future.

- Private Lift Station Discharge at Old Walmart on Route 14 (September 16, 2013)

The City's Underground Division was notified that the private lift station located in the parking lot west of the old Walmart Store was overflowing (surcharging) into the parking lot and storm drains that discharge into the filtration basin adjacent to the Three Oaks Recreation Area. City personnel with the help of a contractor were able to manually control the pump at the lift station. The excess grease and sanitary wastewater were pumped out of the storm drain with a vac-truck. This included other surface waste that was hosed down into the adjacent storm drain, and blocked from entering the filtration basin. The adjacent pond works as an infiltration basin, but has no direct discharge into the nearby Three Oaks Recreation Area.

### 2) Storm Water Receiving Bodies – Monitoring

- Crystal Lake – samples were 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)
  - Lippold Park – East, Center, and West (all are adjacent to Route 176)
- 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 some of the above locations during the monitoring events. Water volumes and depths are recorded at each well location.

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

The following locations from the wastewater plants are sampled weekly.

- 1) Drainage Ditch to Squaw Creek /unnamed ditch to Sleepy Hollow along railroad tracks, downstream from Sanitary Treatment Plant #3 (collected once per week). Parameters include the following:

- Temperature
- pH

- 2) Sanitary Treatment Plant #2 (collected once per week) – Crystal Creek (Upstream), (Cooling Pond Outfall to Crystal Creek), and Downstream

The parameters analyzed in the receiving stream include the following:

- Dissolved Oxygen (DO)
- Ammonia-N
- Total Phosphorous
- Total Suspended Solids (TSS)
- TKN (Monthly)

The following locations into Sleepy Hollow Creek from Wastewater Plant #3 are sampled once per month.

- 1) Effluent to Drainage Ditch (Squaw Creek / unnamed ditch to Sleepy Hollow)
- 2) Terra Cotta Road downstream of drainage pond
- 3) Illinois Route 31 north of east Brighton Lane
- 4) Illinois Route 31 between Squaw Creek Road and Half Mile Road
- 5) Along Ames Road downstream of Thunderbird Lake
- 6) Where Sleepy Hollow crosses on Colby Point Road

The parameters analyzed for Sleepy Hollow Creek include the following:

- Total Phosphorous

- Sulfate
- Chloride
- Total Dissolved Solids (TDS)
- Total Suspended Solids (TSS)
- Hardness
- pH
- Temperature

The following location is sampled from Silver Creek once per month as part of the Fox River Study and managed by the Friends of the Fox.

- 1) Lake Shore Drive and East Park Lane

Three Oaks Recreation Area (TORA)

- ❖ Three samples are collected from the South Lake for clarity (Secchi Disks) and analyzed for the same parameters as the Crystal Lake samples.
- ❖ Three samples are collected from the North Lake for clarity (Secchi Disks) and analyzed for the same parameters as the Crystal Lake samples.

*Note: the monitoring at TORA is part of the Volunteer Lake Management Program (VLMP), which is managed through the Illinois Environmental Protection Agency (IEPA)*

Other Receiving Waters with no Documented Monitoring

- Kishwaukee River
- Hampton Hills Unnamed Wetlands
- Woods Creek – North & South Branches
- Veterans Acres Pond

Pollution Prevention /Good Housekeeping  
(March 2013 thru March 2014)

- 1) The City has a Storm Water Management Ordinance (No. 6535). The Storm Water Ordinance documents an illicit discharge and connection section.
- 2) All public works divisions have prepared and implemented Spill Prevention Control and Countermeasure Plans (SPCC). As a requirement of the SPCC Plan, quarterly inspections are conducted and documented at each of the facility divisions.
- 3) All employees in Public Works are trained in spill and clean-up procedures. This includes storm water control and flood management practices.
- 4) Chemicals and waste products in each division are stored following the SPCC guidelines.
- 5) Crystal Lake businesses with the potential for accidental or illicit discharges are required at a minimum to fill out a Wastewater Discharge Questionnaire, and in some cases a Slug Control

Plan or Accidental Spill Plan. The Plans document the potential for spills and the prevention of pollutants into both sanitary and storm water sources.

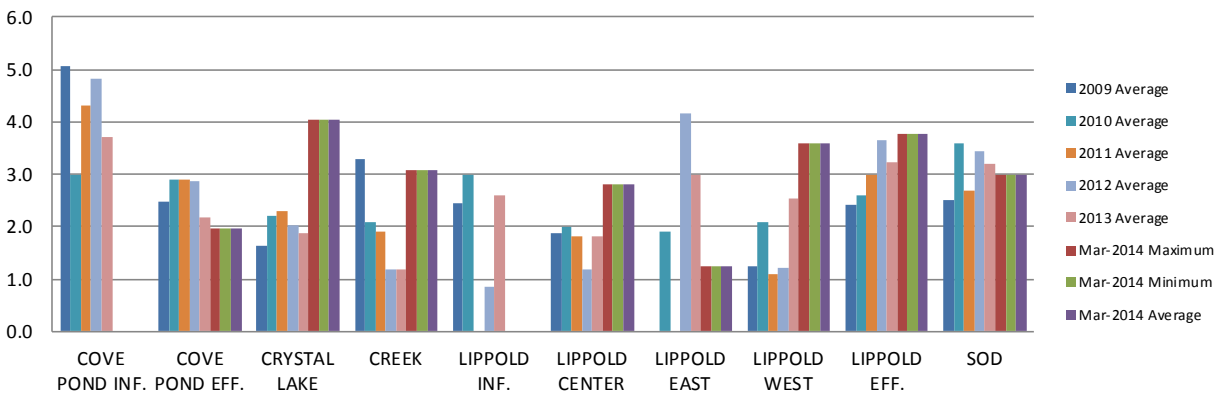
6) All employees are trained in observing the potential for illicit discharges from industrial, commercial, and residential sources.

Education and Outreach The City has been attending and participating in the Silver Creek and Sleepy Hollow Creek Watershed planning coalition meetings, which are held semi-monthly. School groups are also given tours and conduct water monitoring for their science classes at Sanitary Treatment Plant #2 in the receiving stream (Crystal Creek).

### BIOLOGICAL OXYGEN DEMAND (BOD) mg/l

	2009	2010	2011	2012	2013	Mar-2014	Mar-2014	Mar-2014
Location	Average	Average	Average	Average	Average	Maximum	Minimum	Average
COVE POND INF.	5.1	3.0	4.3	4.8	3.7	0.0	0.0	
COVE POND EFF.	2.5	2.9	2.9	2.9	2.2	2.0	2.0	2.0
CRYSTAL LAKE	1.6	2.2	2.3	2.0	1.9	4.0	4.0	4.0
CREEK	3.3	2.1	1.9	1.2	1.2	3.1	3.1	3.1
LIPPOLD INF.	2.4	3.0	No Data	0.8	2.6	0.0	0.0	
LIPPOLD CENTER	1.9	2.0	1.8	1.2	1.8	2.8	2.8	2.8
LIPPOLD EAST	No Data	1.9	No Data	4.2	3.0	1.2	1.2	1.2
LIPPOLD WEST	1.2	2.1	1.1	1.2	2.5	3.6	3.6	3.6
LIPPOLD EFF.	2.4	2.6	3.0	3.6	3.2	3.8	3.8	3.8
SOD	2.5	3.6	2.7	3.4	3.2	3.0	3.0	3.0

### BIOLOGICAL OXYGEN DEMAND (BOD) mg/l

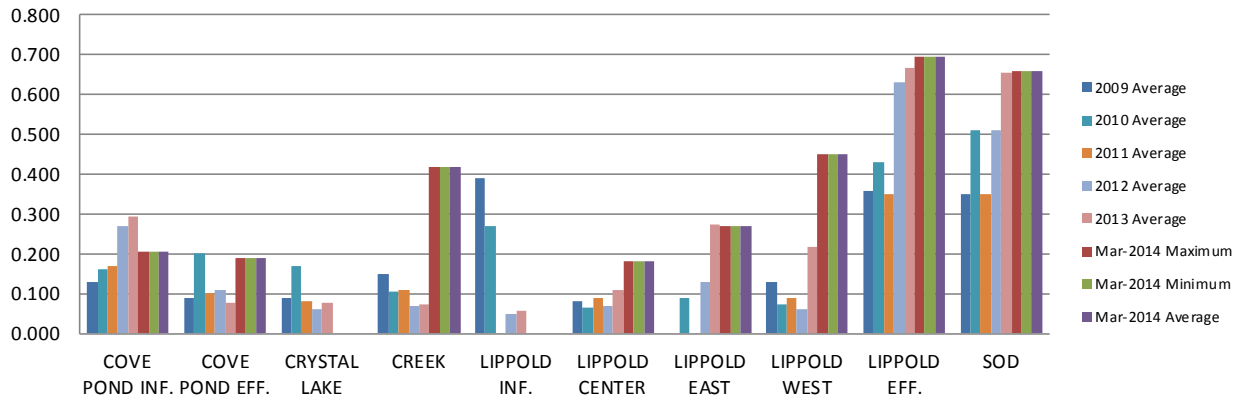


Comments: The BOD is a chemical procedure for determining how fast biological organisms use up oxygen in a body of water. It is used as a measure of the degree of water pollution. A low BOD is an indicator of good quality water. The numbers above range from very good (1-2 mg/L) to moderately clean (3-5 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	2010	2011	2012	2013	Mar-2014	Mar-2014	Mar-2014
Location	Average	Average	Average	Average	Average	Maximum	Minimum	Average
COVE POND INF.	0.13	0.16	0.17	0.27	0.29	0.20	0.20	0.20
COVE POND EFF.	0.09	0.20	0.10	0.11	0.08	0.19	0.19	0.19
CRYSTAL LAKE	0.09	0.17	0.08	0.06	0.08			
CREEK	0.15	0.11	0.11	0.07	0.07	0.42	0.42	0.42
LIPPOLD INF.	0.39	0.27	No Data	0.05	0.06			
LIPPOLD CENTER	0.08	0.07	0.09	0.07	0.11	0.18	0.18	0.18
LIPPOLD EAST	No Data	0.09	No Data	0.13	0.28	0.27	0.27	0.27
LIPPOLD WEST	0.13	0.07	0.09	0.06	0.22	0.45	0.45	0.45
LIPPOLD EFF.	0.36	0.43	0.35	0.63	0.67	0.70	0.70	0.70
SOD	0.35	0.51	0.35	0.51	0.65	0.66	0.66	0.66

### AMMONIA - N (mg/L)



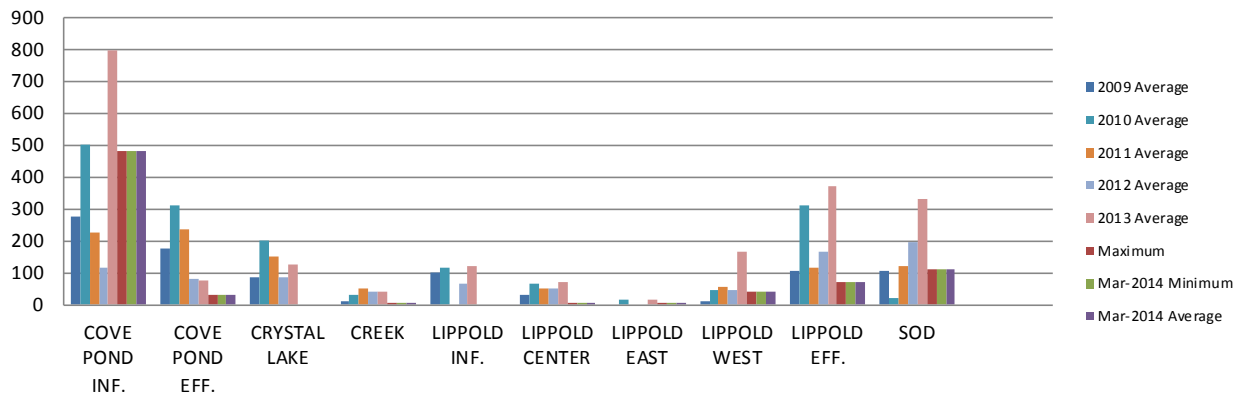
Comments: Low level ammonia nitrogen may be present in water naturally as a result of the biological decay of plant and animal matter. Ammonia is a major component of fertilizers. This is consistent with the spikes at Lippold Influent (down stream from the golf driving range); Lippold Effluent and the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



### FECAL COLIFORM colonies/100ml

Location	2009 Average	2010 Average	2011 Average	2012 Average	2013 Average	Mar-2014 Maximum	Mar-2014 Minimum	Mar-2014 Average
COVE POND INF.	276.0	498	226	114	795	482	482	482
COVE POND EFF.	173.3	310	233	78	76	32	32	32
CRYSTAL LAKE	87.0	202	149	85	124			
CREEK	10.4	30	51	38	38	1	1	1
LIPPOLD INF.	101.8	114	No Data	64	122			
LIPPOLD CENTER	32.6	63	50	51	70	6	6	6
LIPPOLD EAST	No Data	17	No Data	0	14	1	1	1
LIPPOLD WEST	10.3	44	53	44	168	41	41	41
LIPPOLD EFF.	107.4	308	114	167	368	70	70	70
SOD	104.7	21	118	196	333	110	110	110

### FECAL COLIFORM colonies/100ml

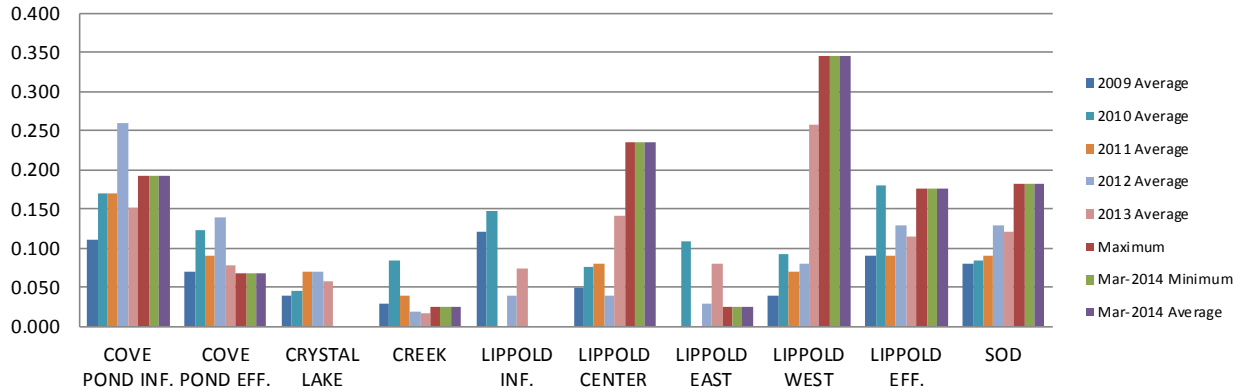


Comments: Fecal Coliform bacteria are a group of bacteria (organisms) that are passed through the fecal excrement of humans, livestock and wildlife. This bacteria can enter aquatic areas through direct discharges of waste from mammals and birds, from agricultural and storm runoff, human sewerage, decaying 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.

### TOTAL PHOSPHORUS (mg/L)

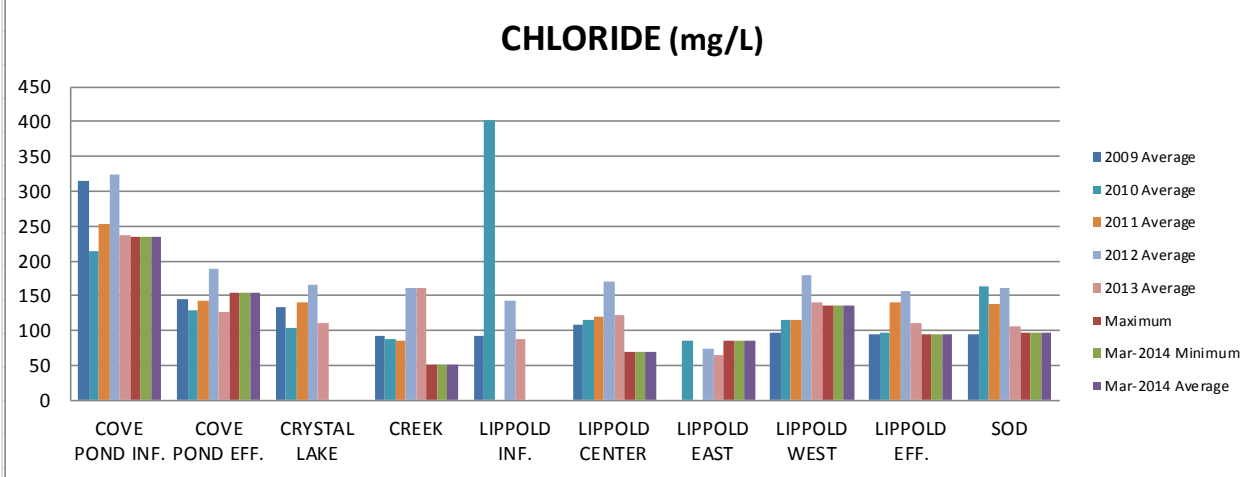
	2009	2010	2011	2012	2013	Mar-2014	Mar-2014	Mar-2014
Location	Average	Average	Average	Average	Average	Maximum	Minimum	Average
COVE POND INF.	0.11	0.17	0.17	0.26	0.15	0.19	0.19	0.19
COVE POND EFF.	0.07	0.12	0.09	0.14	0.08	0.07	0.07	0.07
CRYSTAL LAKE	0.04	0.05	0.07	0.07	0.06			
CREEK	0.03	0.09	0.04	0.02	0.02	0.03	0.03	0.03
LIPPOLD INF.	0.12	0.15	No Data	0.04	0.07			
LIPPOLD CENTER	0.05	0.08	0.08	0.04	0.14	0.24	0.24	0.24
LIPPOLD EAST	No Data	0.11	No Data	0.03	0.08	0.03	0.03	0.03
LIPPOLD WEST	0.04	0.09	0.07	0.08	0.26	0.35	0.35	0.35
LIPPOLD EFF.	0.09	0.18	0.09	0.13	0.11	0.18	0.18	0.18
SOD	0.08	0.08	0.09	0.13	0.12	0.18	0.18	0.18

### TOTAL PHOSPHORUS (mg/L)



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).

CHLORIDE (mg/L)								
Location	2009 Average	2010 Average	2011 Average	2012 Average	2013 Average	Mar-2014 Maximum	Mar-2014 Minimum	Mar-2014 Average
COVE POND INF.	314.5	213	252	325	238	234	234	234
COVE POND EFF.	144.7	129	144	188	126	154	154	154
CRYSTAL LAKE	134.0	105	140	165	110			
CREEK	92.3	87	85	161	161	50	50	50
LIPPOLD INF.	92.7	403	No Data	143	88			
LIPPOLD CENTER	107.9	115	121	170	121	69	69	69
LIPPOLD EAST	No Data	86	No Data	75	64	86	86	86
LIPPOLD WEST	98.2	115	115	180	141	136	136	136
LIPPOLD EFF.	94.4	98	140	157	111	95	95	95
SOD	95.3	163	138	161	107	96	96	96

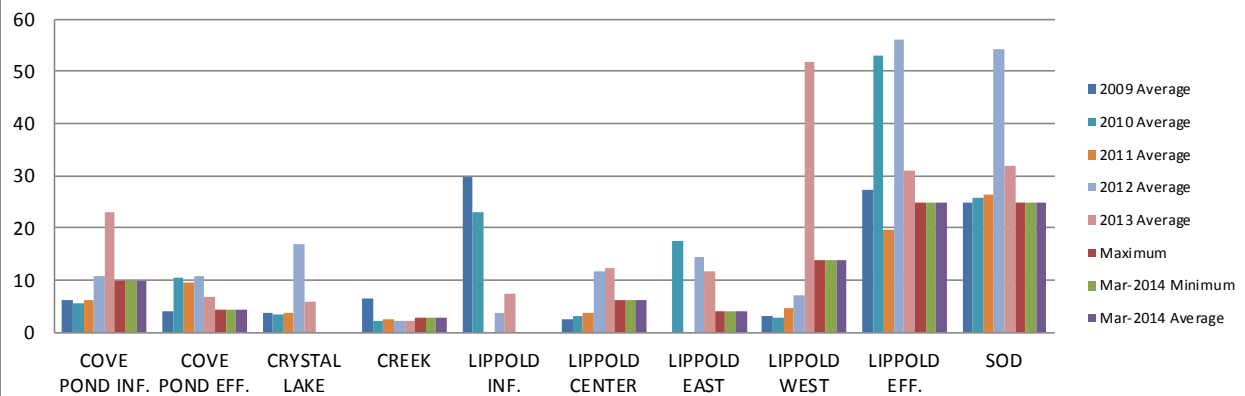


Comments: Chloride is a useful and reliable chemical indicator of river / groundwater fecal contamination, as chloride is a non-reactive solute and is ubiquitous to sewerage and potable water. The graph above would indicate runoff into Cove Pond Influent. Probably the main source of contamination is 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.

### TOTAL SUSPENDED SOLIDS (TSS) (mg/L)

Location	2009	2010	2011	2012	2013	Mar-2014	Mar-2014	Mar-2014
	Average	Average	Average	Average	Average	Maximum	Minimum	Average
COVE POND INF.	6.1	5.5	6.2	10.7	23.0	10.0	10.0	10.0
COVE POND EFF.	4.1	10.5	9.6	10.9	6.8	4.3	4.3	4.3
CRYSTAL LAKE	3.6	3.4	3.9	17.0	6.0			
CREEK	6.7	2.1	2.5	2.2	2.2	3.0	3.0	3.0
LIPPOLD INF.	29.6	23.1	No Data	3.7	7.4			
LIPPOLD CENTER	2.5	3.2	3.8	11.8	12.5	6.3	6.3	6.3
LIPPOLD EAST	No Data	17.6	No Data	14.6	11.7	4.0	4.0	4.0
LIPPOLD WEST	3.1	3.0	4.6	7.2	51.7	14.0	14.0	14.0
LIPPOLD EFF.	27.3	52.9	19.8	56.2	30.9	25.0	25.0	25.0
SOD	25.0	25.8	26.5	54.2	31.8	25.0	25.0	25.0

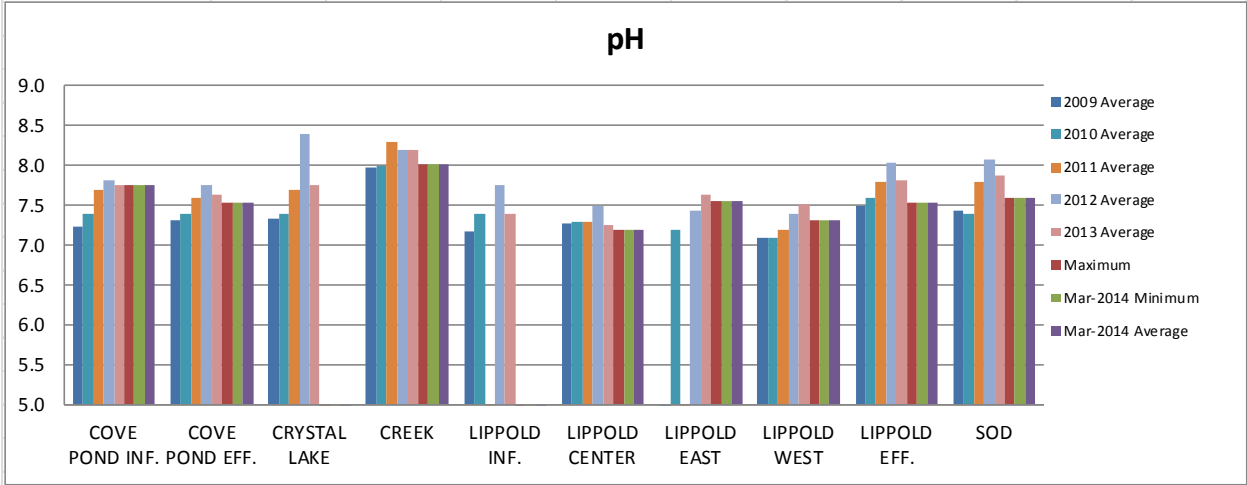
### TOTAL SUSPENDED SOLIDS (TSS) (mg/L)



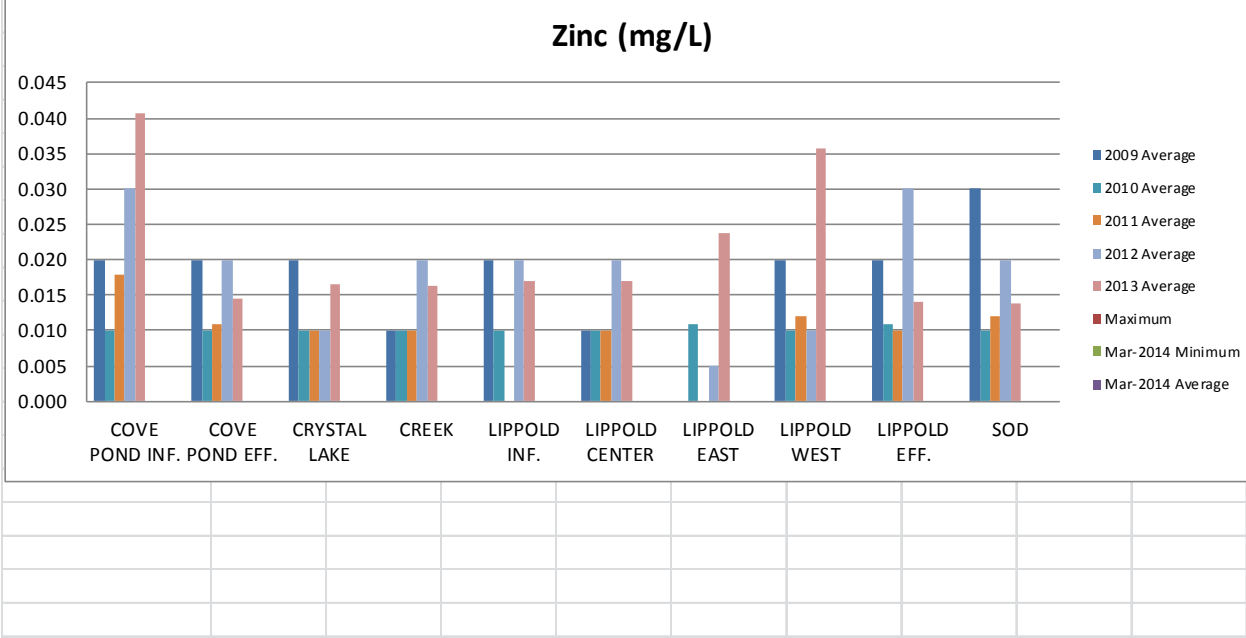
Comments: Total Suspended Solids (TSS) are solids in water that can be trapped by a filter. TSS can include a wide variety of material, such as silt, decaying plant and animal matter, industrial wastes, and sewerage. High TSS in a water body can mean higher concentrations of bacteria, nutrients, pesticides, 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.

**pH**

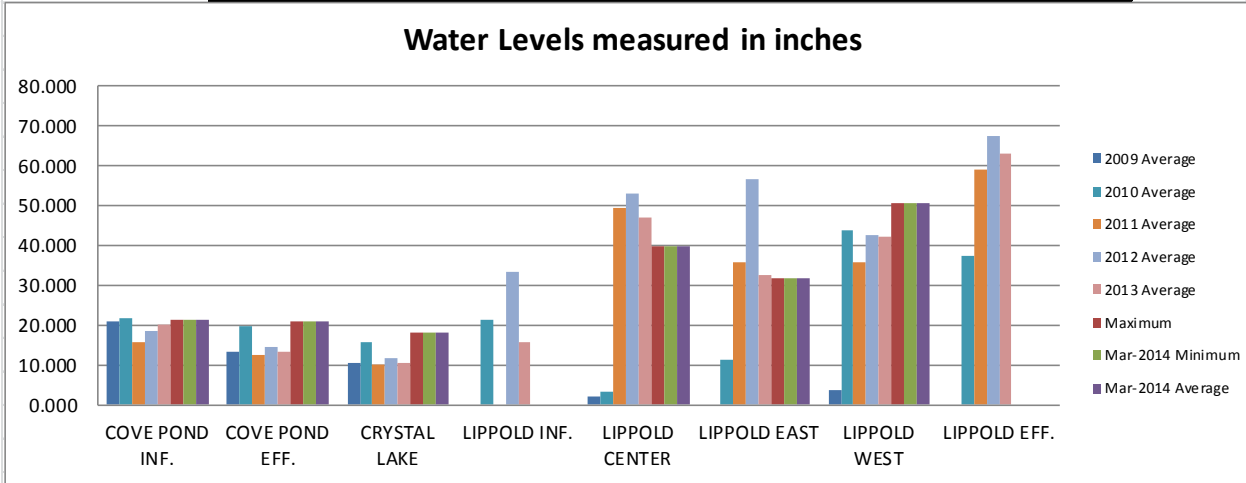
Location	2009 Average	2010 Average	2011 Average	2012 Average	2013 Average	Mar-2014 Maximum	Mar-2014 Minimum	Mar-2014 Average
COVE POND INF.	7.2	7.4	7.7	7.8	7.8	7.8	7.8	7.8
COVE POND EFF.	7.3	7.4	7.6	7.8	7.6	7.5	7.5	7.5
CRYSTAL LAKE	7.3	7.4	7.7	8.4	7.8			
CREEK	8.0	8.0	8.3	8.2	8.2	8.0	8.0	8.0
LIPPOLD INF.	7.2	7.4	No Data	7.8	7.4			
LIPPOLD CENTER	7.3	7.3	7.3	7.5	7.3	7.2	7.2	7.2
LIPPOLD EAST	No Data	7.2	No Data	7.4	7.6	7.6	7.6	7.6
LIPPOLD WEST	7.1	7.1	7.2	7.4	7.5	7.3	7.3	7.3
LIPPOLD EFF.	7.5	7.6	7.8	8.0	7.8	7.5	7.5	7.5
SOD	7.4	7.4	7.8	8.1	7.9	7.6	7.6	7.6



Zinc (mg/L)								
Location	2009 Average	2010 Average	2011 Average	2012 Average	2013 Average	Mar-2014 Maximum	Mar-2014 Minimum	Mar-2014 Average
COVE POND INF.	0.020	0.010	0.018	0.030	0.041			
COVE POND EFF.	0.020	0.010	0.011	0.020	0.015			
CRYSTAL LAKE	0.020	0.010	0.010	0.010	0.017			
CREEK	0.010	0.010	0.010	0.020	0.016			
LIPPOLD INF.	0.020	0.010	No Data	0.020	0.017			
LIPPOLD CENTER	0.010	0.010	0.010	0.020	0.017			
LIPPOLD EAST	No Data	0.011	No Data	0.005	0.024			
LIPPOLD WEST	0.020	0.010	0.012	0.010	0.036			
LIPPOLD EFF.	0.020	0.011	0.010	0.030	0.014			
SOD	0.030	0.010	0.012	0.020	0.014			

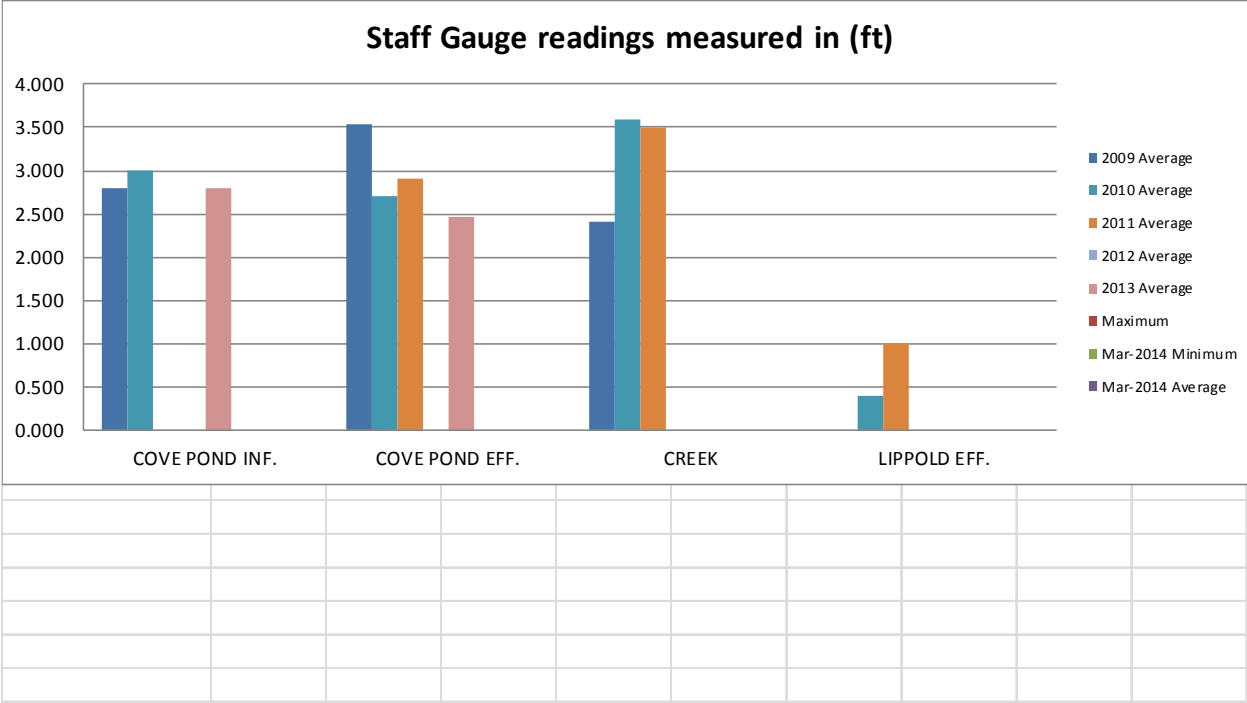


Water Levels measured in inches								
Location	2009 Average	2010 Average	2011 Average	2012 Average	2013 Average	Mar-2014 Maximum	Mar-2014 Minimum	Mar-2014 Average
COVE POND INF.	21.1	21.8	15.9	18.7	20.3	21.5	21.5	21.5
COVE POND EFF.	13.4	19.9	12.5	14.7	13.5	21.0	21.0	21.0
CRYSTAL LAKE	10.7	15.6	10.2	11.8	10.4	18.0	18.0	18.0
LIPPOLD INF.	No Data	21.3	No Data	33.3	15.8			
LIPPOLD CENTER	2.0	3.4	49.6	53.1	46.9	40.0	40.0	40.0
LIPPOLD EAST	No Data	11.2	35.8	56.5	32.5	32.0	32.0	32.0
LIPPOLD WEST	3.8	43.7	35.8	42.6	42.3	50.5	50.5	50.5
LIPPOLD EFF.	No Data	37.4	59.2	67.4	63.0	56.0	56.0	56.0



<b>Note:</b>	<b>The lower number indicates higher levels of water at the water surface to the top of the culvert.</b>
<b>Note:</b>	<b>Measured in feet from the top of the surface water in the manhole to the top of the manhole. Lower values indicate higher water volumes.</b>

Staff Gauge readings measured in (ft)								
Location	2009 Average	2010 Average	2011 Average	2012 Average	2013 Average	Mar-2014 Maximum	Mar-2014 Minimum	Mar-2014 Average
COVE POND INF.	No Data	3.0	No Data	No Data	2.8			
COVE POND EFF.	2.8	2.7	2.9	No Data	2.5			
CREEK	3.5	3.6	3.5	No Data	0.0			
LIPPOLD EFF.	2.4	0.4	1.0	No Data	0.0			





## Part D. Summary of Year 12 Stormwater Activities

*(Present a summary of the storm water activities you plan to undertake during the next reporting cycle, including an implementation schedule in the sections following the table.)*

The table shown below summarizes the BMPs committed to for Year 12. Specific BMPs and measurable goals for Year 12 program development activities are presented in the sections following the table.

**Note: X indicates BMPs committed to for Year 12.**

Year 12	
MS4	
<b>A. Public Education and Outreach</b>	
X	A.1 Distributed Paper Material
	A.2 Speaking Engagement
X	A.3 Public Service Announcement
X	A.4 Community Event
	A.5 Classroom Education Material
X	A.6 Other Public Education
<b>B. Public Participation/Involvement</b>	
	B.1 Public Panel
X	B.2 Educational Volunteer
X	B.3 Stakeholder Meeting
	B.4 Public Hearing
	B.5 Volunteer Monitoring
X	B.6 Program Coordination
X	B.7 Other Public Involvement
<b>C. Illicit Discharge Detection and Elimination</b>	
X	C.1 Storm Sewer Map Preparation
X	C.2 Regulatory Control Program
X	C.3 Detection/Elimination Prioritization Plan
X	C.4 Illicit Discharge Tracing Procedures
X	C.5 Illicit Source Removal Procedures
X	C.6 Program Evaluation and Assessment
X	C.7 Visual Dry Weather Screening
X	C.8 Pollutant Field Testing
	C.9 Public Notification
	C.10 Other Illicit Discharge Controls

Year 12	
MS4	
<b>D. Construction Site Runoff Control</b>	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
	D.7 Other Construction Site Runoff Controls
<b>E. Post-Construction Runoff Control</b>	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
	E.6 Post-Construction Inspections
	E.7 Other Post-Const Runoff Controls
<b>F. Pollution Prevention/Good Housekeeping</b>	
X	F.1 Employee Training Program
X	F.2 Inspection and Maintenance Program
X	F.3 Municipal Operations Storm Water Control
X	F.4 Municipal Operations Waste Disposal
X	F.5 Flood Management/Assess Guidelines
X	F.6 Other Municipal Operations Controls

## 1. Public Education and Outreach

The City is committing to conduct Public Education and Outreach as part of its permit. Public Education and Outreach requires implementation of a program to distribute educational material to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants to stormwater runoff. The City commits to implementation of BMPs related to A.1, A.3, A.4 and A.6 as described below.

### **BMP No. A.1**

#### **Brief Description of BMP:**

The City and McHenry County distribute a variety of paper materials from a number of sources informing the public about stormwater or water quality and why they are important.

#### **Measurable Goal(s), including frequencies:**

The materials chosen will be targeted toward residents, businesses and other potential pollutant sources to create better awareness and knowledge of the issue.

**Milestones:**           **Years 12:** The City will continue to distribute the educational materials and will work to increase distribution by 10%.

### **BMP No. A.3**

#### **Brief Description of BMP:**

The City publishes information about stormwater or water quality in the City newsletter.

#### **Measurable Goal(s), including frequencies:**

The articles chosen will be selected increase the resident's knowledge and awareness regarding stormwater and water quality.

**Milestones:**           **Year 12:** Publish information articles in the City newsletter at least once a year.

### **BMP No. A.4**

#### **Brief Description of BMP:**

The City has designed and constructed a rain garden with the Wildflower Preservation and Propagation Committee (WPPC). The City will also continue its presence and support for the annual Drug Take Back Initiative Program sponsored by the Police Department. This activity provides another opportunity to engage the public on stormwater related issues and why they are important to all residents and businesses.

#### **Measurable Goal(s), including frequencies:**

The City will continue to maintain and enhance the rain garden as an education tool for residents and to demonstrate their value for managing stormwater runoff.

**Milestones:**           **Year 12:** Maintain existing rain garden and seek additional partnerships as funding allows.

**BMP No. A.6**

**Brief Description of BMP:**

The City will utilize other means such as the City website, library, etc. as conduits for reaching additional residents.

**Measurable Goal(s), including frequencies:**

The City will provide specific information to the targeted residents on stormwater and water quality issues.

**Milestones:**           **Year 12:** The City will update and modify the information provided as needed to stay current and informative.

**2. Public Participation/Involvement**

The City will perform activities and services related to the Public Participation/Involvement minimum control measure. BMPs will be implemented under BMP numbers B.2, B.3, B.6 and B.7 as described below.

**BMP No. B.2**

**Brief Description of BMP:**

City staff regularly participates in volunteering activities that provide opportunities to interact with residents and educate them on the importance of stormwater and water quality.

**Measurable Goal(s), including frequencies:**

City staff will continue to perform these activities and work to increase participation from its staff and attendance by residents.

**Milestones:**           **Year 12:** The City will participate in at least one volunteering activity each year and work to increase attendance by 5%.

**BMP No. B.3**

**Brief Description of BMP:**

The City will work to conduct stakeholder meetings as needed to connect directly with impacted residents and to distribute information.

**Measurable Goal(s), including frequencies:**

Stakeholder meetings offer direct input on issues impacting residents and provide an opportunity to gather feedback as well as disseminate stormwater related information.

**Milestones:**           **Year 12:** The City will work to hold one stakeholder meeting.

**BMP No. B.6**

**Brief Description of BMP:**

The City has coordinated with other local municipalities and agencies on regional stormwater related issues.

**Measurable Goal(s), including frequencies:**

The City will continue to partner with the County and other agencies to coordinate efforts such as watershed studies and other issues that impact more than one individual municipality.

**Milestones:**           **Year 12:** The City will work to coordinate with other local agencies regarding stormwater related issues.

**BMP No. B.7**

**Brief Description of BMP:**

The City has hosted elementary schools and other residents with tours through various departments of the City.

**Measurable Goal(s), including frequencies:**

The tours allow the City to educate the participants on the various functions of the City, as well as specifically provide them with knowledge of stormwater vs sanitary, why we treat sanitary and why keeping stormwater is important.

**Milestones:**           **Year 12:** The City will continue with the education tour program for elementary schools.

**3. Illicit Discharge Detection and Elimination**

The City commits to performing some activities related to the Illicit Discharge Detection and Elimination minimum control. BMPs will be implemented under BMP numbers C.1, C.2, C.3, C.4, C.5, C.6, C.7 and C.8 as described below.

**BMP No. C.1**

**Brief Description of BMP:**

The City has developed a mapping system of the receiving streams and outfalls. As funding allows, the City may evaluate upgrading the system and incorporating it into their GIS database.

**Measurable Goal(s), including frequencies:**

The City will evaluate and update the mapping system and outfall inventory as needed based on development and stormwater improvements.

**Milestones:**           **Year 12:** The City will evaluate 20% more of the mapping and outfall inventory.

**BMP No. C.2**

**Brief Description of BMP:**

The City and County have ordinances in place to allow for regulatory action if an illicit discharge is observed, reported or discovered.

**Measurable Goal(s), including frequencies:**

The City will continue to enforce the existing ordinances that prevent non-stormwater discharges to reduce or eliminate pollutants from entering the municipal separate storm sewer system.

**Milestones:**           **Year 12:** The City will continue to enforce the existing ordinances.

**BMP No. C.3**

**Brief Description of BMP:**

The City utilizes various departments to identify and report potential illicit discharges. The City also investigates reports of illicit discharges.

**Measurable Goal(s), including frequencies:**

The City will continue to identify and investigate potential illicit discharges to reduce or eliminate the impact on local stormwater systems and receiving streams.

**Milestones:**           **Year 12:** The City will continue to identify and investigate potential illicit discharges.

**BMP No. C.4**

**Brief Description of BMP:**

The City uses all information available including development plans and the outfall mapping system to trace and eliminate illicit discharges.

**Measurable Goal(s), including frequencies:**

The City will track, investigate and eliminate illicit discharges as reported, observed or identified

**Milestones:**           **Year 12:** The City will trace and eliminate illicit discharges as needed.

**BMP No. C.5**

**Brief Description of BMP:**

The City and County both have enforcement procedures in place to assist with the removal of an identified illicit discharge.

**Measurable Goal(s), including frequencies:**

The City will utilize enforcement procedures as needed to eliminate illicit discharges to reduce or eliminate the amount of pollutants entering the municipal separate storm sewer system.

**Milestones:**           **Year 12:** The City will utilize enforcement procedures as needed to eliminate illicit discharges.

**BMP No. C.6**

**Brief Description of BMP:**

The City will evaluate the illicit discharge and detection program for effectiveness and possible improvements.

**Measurable Goal(s), including frequencies:**

Regular evaluation of the program can provide valuable input and opportunity for improvement.

**Milestones:**           **Year 12:** The City will evaluate the program at least once a year.

**BMP No. C.7**

**Brief Description of BMP:**

The City regularly performs dry weather screening as part of its maintenance activities.

**Measurable Goal(s), including frequencies:**

The City will work to utilize inspection forms while performing the dry weather screening inspections.

**Milestones:**           **Year 12:** The City will evaluate its dry weather inspection form and procedures.

**BMP No. C.8**

**Brief Description of BMP:**

The City regularly samples, test and documents the results of influent and effluent flow to various lakes and streams throughout the community.

**Measurable Goal(s), including frequencies:**

The City analyzes the stormwater quality to determine acceptable levels of water quality of its lakes and streams.

**Milestones:**           **Year 12:** The City will continue the testing program and expand by 5% or as funding allows.

**4. Construction Site Runoff Control**

The City will perform activities and services related to the Construction Site Runoff Control minimum control measure. BMPs will be implemented under BMP numbers D.1, D.2, D.4, D.5 and D.6 as described below.

**BMP No. D.1**

**Brief Description of BMP:**

The City and County have ordinances in place to allow for review, inspection, and enforcement of construction site runoff controls.

**Measurable Goal(s), including frequencies:**

The City will continue to review, inspect and enforce the ordinance regulations to prevent or reduce the discharge of sediment or other pollutants from construction sites.

**Milestones:**           **Year 12:** The City will enforce the regulatory procedures.

**BMP No. D.2**

**Brief Description of BMP:**

The City and County have ordinances in place to allow for review, inspection, and enforcement of construction site runoff control BMP's.

**Measurable Goal(s), including frequencies:**

The City will continue to review, inspect and enforce the ordinance regulations to prevent or reduce the discharge of sediment or other pollutants from construction sites as it relates to BMP's.

**Milestones:**           **Year 12:** The City will enforce the regulatory procedures.

**BMP No. D.4**

**Brief Description of BMP:**

The City has procedures that proposed development plans to be reviewed for compliance.

**Measurable Goal(s), including frequencies:**

The City will continue to require all developments to be reviewed for compliance with NPDES regulations and other City ordinance standards.

**Milestones:**           **Year 12:** The City will enforce the review procedures.

**BMP No. D.5**

**Brief Description of BMP:**

The City has produces in place for receiving, logging and addressing publicly reported issues.

**Measurable Goal(s), including frequencies:**

The City will continue to respond to publicly reported issues in a timely manner and investigate as needed to address them.

**Milestones:**           **Year 12:** The City will respond accordingly.

**BMP No. D.6**

**Brief Description of BMP:**

The City and County regulatory programs allow for inspection and enforcement procedures for construction site runoff control.

**Measurable Goal(s), including frequencies:**

The City will continue to inspect all new developments for compliance with the City and County ordinances.

**Milestones:**           **Year 12:** The City will enforce the ordinance.

**5. Post-Construction Runoff Control**

The City will perform activities and services related to the Post-Construction Site Runoff Control minimum control measure. BMPs will be implemented under BMP number E.2, E.3, E.4, and E.5 as described below.

**BMP No. E.2**

**Brief Description of BMP:**

The City and County have ordinances in place that allow for the review, inspection and enforcement of post-construction runoff control measures.

**Measurable Goal(s), including frequencies:**

The City will continue to enforce the ordinances for compliance with post construction runoff controls to prevent or reduce the discharge of contaminants from construction sites.

**Milestones:**           **Year 12:** The City will enforce the ordinances.

**BMP No. E.3**

**Brief Description of BMP:**

The City has procedures in place for assisting and evaluating the long term maintenance of stormwater best management practices.

**Measurable Goal(s), including frequencies:**

The City will continue to assist developers, residents and other target audiences by providing sample maintenance plans and conducting inspections.



**Milestones:**        **Year 12:** The City will increase distribution of the sample maintenance by 10% and conduct approximately 20% of the inspections.

**BMP No. E.4**

**Brief Description of BMP:**

The City has procedures in place for the pre-construction review of BMP designs. These procedures include pre-application meetings for large scale developments.

**Measurable Goal(s), including frequencies:**

The City will continue the review procedures and modify or evaluate as needed to maintain compliance.

**Milestones:**        **Year 12:** The City will continue the BMP review procedures.

**BMP No. E.5**

**Brief Description of BMP:**

The City has procedures in place to perform site inspections during construction by qualified personnel.

**Measurable Goal(s), including frequencies:**

The City will continue with the site inspections procedures to verify compliance of BMP's in reducing and/or preventing the discharge of contaminants to local waterways and storm sewers.

**Milestones:**        **Year 12:** The City will continue with the site inspection procedures.

**6. Pollution Prevention/Good Housekeeping**

This minimum control measure involves the development and implementation of an operation and maintenance program to reduce the discharge of pollutants from municipal operations. This program must include a training program for municipal employees. The City will perform BMPs under BMP numbers F.1, F.2, F.3, F.4, F.5 and F.6 as described below.

**BMP No. F.1**

**Brief Description of BMP:**

The City regularly provides training to staff regarding a variety of topics aimed at reducing or preventing the discharge of contaminants from municipal operations.

**Measurable Goal(s), including frequencies:**

The City will continue with the training program aimed at educating City staff on ways to reduce or prevent stormwater pollution from City activities.

**Milestones:**        **Year 12:** The City will continue with the training program..

**BMP No. F.2**

**Brief Description of BMP:**

The City has an inspection and maintenance program in place to evaluate and maintain stormwater facilities. These activities include the City's extensive street sweeping program.

**Measurable Goal(s), including frequencies:**

The City will continue the inspection and maintenance program of stormwater facilities to reduce the amount of debris and pollutants that enter the stormwater system.

**Milestones:**           **Year 12:** The City will continue the inspection program and evaluate approximately 20% of the stormwater system.

**BMP No. F.3**

**Brief Description of BMP:**

The City has procedures in place to reduce or prevent the discharge of contaminants to the stormwater system from municipal operations

**Measurable Goal(s), including frequencies:**

The City will continue to be proactive in evaluating municipal activities that could potentially introduce pollutants to the stormwater system and develop methods to reduce or prevent them.

**Milestones:**           **Year 12:** The City will continue with the municipal control measures and evaluate additional methods as needed.

**BMP No. F.4**

**Brief Description of BMP:**

The City has procedures that require appropriate disposal of all wastes generated during municipal operations.

**Measurable Goal(s), including frequencies:**

The City will continue with the disposal program and requirements to reduce or eliminate the release of pollutants from municipal operations.

**Milestones:**           **Year 12:** The City will continue with the municipal operations disposal program.

**BMP No. F.5**

**Brief Description of BMP:**

The City, County and State have strict development regulations related to floodplain management and the evaluation of potential development in these areas.

**Measurable Goal(s), including frequencies:**

The City will continue to enforce the requirements for potential development in special flood hazard areas.

**Milestones:**           **Year 12:** The City will continue to enforce the flood management requirements.

**BMP No. F.6**

**Brief Description of BMP:**

The City regularly evaluates their SMPP and municipal activities for additional ways to reduce or eliminate pollutants from entering the stormwater system including salt reduction, additional de-icing alternatives and other actions.

**Measurable Goal(s), including frequencies:**

The City will continue to evaluate and develop methods or changes to existing practices, including formalizing the SMPP, to help reduce or eliminate pollutants from entering the stormwater system from municipal activities.

**Milestones:**           **Year 12:** The City will continue the evaluation and monitoring program.

## **Part E. Notice of Qualifying Local Program**

**The City of Crystal Lake established an efficient and effective stormwater management program that is well beyond the minimum requirements of the federally mandated NPDES Phase II program during the previous 10-year permit period. The City will continue to monitor the existing program and modify it as necessary to continue to maintain compliance with the NPDES requirements.**

### **1. Public Education and Outreach:**

The City of Crystal Lake developed a comprehensive program during the previous 10 year NOI permit period that provides Public Education and Outreach resources to its residents through printed materials and the City website. The City will continue this program and the associated activities.

This program relates to BMP numbers A.1, A.3, A.4 and A.6.

### **2. Public Participation/Involvement:**

The City and McHenry County developed a comprehensive program to address the Public Participation/Involvement requirement developed during the initial 10 years of the NPDES Phase II permit. The details are outlined in the previous sections of this annual report.

These programs relate to BMP numbers B.2, B.3, B.6 and B.7.

### **3. Illicit Discharge Detection and Elimination:**

The City developed a comprehensive program during the previous 10 year NOI permit period that addresses the Illicit Discharge Detection and Elimination requirements of the NPDES Phase II program. The applicable program details are outlined in the previous sections of this report.

These programs relate to BMP numbers C.1, C.2, C.3, C.4, C.5, C.6, C.7 and C.8.

### **4. Construction Site Runoff Control:**

The City developed a comprehensive program during the previous 10 year NOI permit period that addresses the Construction Site Runoff Control requirements of the NPDES Phase II program. The applicable program details are outlined in the previous sections of this report.

These programs relate to BMP numbers D.1, D.2, D.4, D.5 and D.6.

### **5. Post-Construction Runoff Control:**

The City developed a comprehensive program during the previous 10 year NOI permit period that addresses the Post-Construction Runoff Control requirements of the NPDES Phase II program. The applicable program details are outlined in the previous sections of this report.

These programs relate to BMP numbers E.2, E.3, E.4, and E.5.

### **6. Pollution Prevention/Good Housekeeping:**

The City developed a comprehensive program during the previous 10 year NOI permit period that addresses the Pollution Prevention/Good Housekeeping requirements of the NPDES Phase II program. This program includes all the ILR40 permit required components of the Stormwater Management Program Plan (SMPP). The goal of this BMP is to identify current practices that contribute to stormwater pollution and implement programs and procedures for municipal activities that curtail the discharge of pollutants to storm sewer systems. The applicable program details are outlined in the previous sections of this report.

These programs relate to BMP number F.1, F.2, F.3, F.4, F.5 and F.6.

**Part F. Construction Projects Conducted During Year 11**

*(Provide a list of construction projects your entity has paid for during the reporting period.)*

Project Name	Project Size (acres)	Construction Start Date	Construction End Date
McHenry Avenue Improvements	1.4	7/2013	10/2013