

# **STORM WATER MANAGEMENT PLAN**

**FOR**



**PREPARED IN COMPLIANCE WITH  
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY**

**PHASE II STORM WATER REGULATIONS**

**GENERAL STORM WATER PERMIT  
MIS049000**

**and**

**CERTIFICATE OF COVERAGE  
MIS040051**

**March 2011**

# ***Table of Contents***

---

<b><i>Section I - Introduction and Background</i></b>	<b><i>II-1</i></b>
<b><i>Section II - Public Education Plan</i></b>	<b><i>II-7</i></b>
<b><i>Section III - Public Involvement and Participation Plan</i></b>	<b><i>III-1</i></b>
<b><i>Section IV - Illicit Discharge Elimination Plan</i></b>	<b><i>IV-1</i></b>
<b><i>Section V - Post-Construction Storm Water Management Program</i></b>	<b><i>V-1</i></b>
<b><i>Section VI - Construction Site Storm Water Runoff Control Program</i></b>	<b><i>VI-1</i></b>
<b><i>Section VII - Pollution Prevention and Good Housekeeping Plan</i></b>	<b><i>VII-1</i></b>
<b><i>Section VIII - Summary Tables</i></b>	<b><i>VIII-1</i></b>
<b>Table 8-1: Summary of Public Education Plan</b>	<b>VIII-2</b>
<b>Table 8-2: Summary of Public Involvement and Participation Plan</b>	<b>VIII-5</b>
<b>Table 8-3: Summary of Illicit Discharge Elimination Plan</b>	<b>VIII-7</b>
<b>Table 8-4: Summary of Post-Construction Storm Water Management Program</b>	<b>VIII-9</b>
<b>Table 8-5: Summary of Construction Site Storm Water Runoff Control Program</b>	<b>VIII-10</b>
<b>Table 8-6: Summary of Pollution Prevention and Good Housekeeping Plan</b>	<b>VIII-11</b>
<b>Table 8-7: SWMP Implementation Schedule by Minimum Measure Plan</b>	<b>VIII-13</b>
<b>Table 8-8: SWMP Implementation Schedule by Year</b>	<b>VIII-18</b>

## ***APPENDICES***

*Included in July 2010 submittal*

# ***Section I - Introduction and Background***

---

## **1.1 Purpose of the Storm Water Management Plan (SWMP)**

The City of South Lyon has developed a SWMP which is designed to reduce the discharge of pollutants from the storm water drainage system to the maximum extent practicable (MEP), to protect the designated uses of the waters of the State, to protect water quality, and to satisfy the appropriate water quality requirements of the Federal and Michigan Water Pollution Control Acts. The SWMP consists of a discussion of each of the “six minimum measures” along with an outline of the tasks, best management practices (BMPs), measurable goals and schedules that the City must fulfill for meeting the permit requirements of each measure. A summary of that information, along with measures to determine the success of the program, is presented in Section VIII of this SWMP.

The “six minimum measures” include a Public Education Plan (PEP), a Public Involvement/Participation Plan (PIPP), an Illicit Discharge Elimination Plan (IDEP), a Post-Construction Storm Water Management Program (P-CMP), a Construction Site Storm Water Runoff Control Program (CRCP), and a Pollution Prevention and Good Housekeeping Plan (PPGHP).

## **1.2 The Federal Storm Water and Phase II Regulations**

In the late 1980’s, the U.S. Environmental Protection Agency (EPA) promulgated regulations addressing storm water discharges. Phase I regulations took effect in 1990 and required separate storm sewer communities with populations greater than 100,000 to obtain National Pollutant Discharge Elimination System (NPDES) permits and to implement storm water control practices. On December 8, 1999, the USEPA published Phase II storm water regulations. These Phase II regulations apply to smaller communities that are part of a contiguous urban area.

The Phase II regulation specifically identifies Oakland County as one of the “Incorporated Places and Counties Proposed To Be Automatically Designated Under The Storm Water Phase II Proposed Rule.” The regulation applies to the City of South Lyon as a community which is not specifically designated, but which meets the population criteria and is contiguous to an urbanized area. It is the Federal regulations which require regulated storm water communities to obtain an NPDES permit and to develop plans for implementation of the six minimum measures for storm water management.

## **1.3 The State General Storm Water Permit**

To facilitate addressing nonpoint sources of pollution commonly associated with storm water runoff, the Michigan Department of Natural Resources and Environment (MDNRE) developed a General Wastewater Discharge Permit for Storm Water Discharges from Separate Storm Water Drainage Systems (MIS040000; Jurisdictional Option). MDNRE’s general permit is consistent with the Phase II federal regulations and also requires permittees to develop and implement plans for the six minimum measures. The City applied for their permit on July 28, 2008, and was issued their Certificate of Coverage (COC), No. MIS040051, on March 10, 2009 which authorized the City to discharge storm water to the separate storm sewer systems under their jurisdiction. The certificate expires on April 1, 2013, at which time the certificate may be modified, terminated, reissued or revoked as allowed for in General Permit No. MIS049000.

Per the City's COC, a final approvable SWMP was submitted on December 1, 2004 with the City's first annual report. This SWMP was the first of its kind in Michigan based on the Jurisdictional permit.

#### **1.4 MDNRE Reporting**

As outlined in the City's COC, the first Progress Report is due March 1, 2011. The first progress report will document the progress made since the last report was submitted to MDNRE in 2008 and progress in compliance of the new permit. The second progress report is due March 1, 2013. The City of South Lyon developed a documentation and tracking system to evaluate the six minimum measures on an annual basis to determine progress made towards meeting the objectives described in the following sections, as well as to make changes in objectives, as warranted. They will prepare progress reports for the MDNRE of activities completed and proposed revisions. The two (2) progress reports will be submitted to the MDNRE's Water Division Southeast Michigan District Environmental Analyst.

#### **1.5 Review and Modification**

This SWMP is a living document, meaning it will likely be modified many times as a result of public input and as program successes and failures are realized over time. Any modifications, additions, or deletions of tasks to be completed by the City must be documented to the MDNRE. Any changes, unless noted otherwise by the Department, are approved within 60 days of notification to the MDNRE.

#### **1.6 City Contact for SWMP**

*Staff Contact:* Mr. Steve Renwick  
*Title:* Superintendent, Department of Public Works  
*Telephone:* 248.437.6914

#### **1.7 Background on the City**

The City of South Lyon covers approximately 3.7 square miles in southwestern Oakland County. Originally established as an agricultural center built around two railroads, the City was incorporated in 1930. The center of its business district is at Ten Mile Road and Pontiac Trail. Appendix A provides an updated storm sewer map for the entire City. The City has a total population of 10,036 as determined in the 2000 census. The entire City falls within the "urbanized area" and thus the storm water regulations apply to all the public municipal separate storm sewer systems (MS4s) within the City limits. The 2000 census indicated that 97% of the population was Caucasian and that 27.1% of the population has a high school diploma and 38% have a college degree. It is interesting to note that 64% of the population has moved at least once since 1995, so many of the residents may be new to the area and unfamiliar with the water resources in the area—an ideal target group for the City's public education and involvement efforts. The City is a community that is fairly homogeneous economically, ethnically, socially, and culturally.

The major employers in the City are the South Lyon School District, Michigan Seamless Tube, Sun Steel Treating, and Busch.

Some of the organizations active in the community are the South Lyon Chamber of Commerce, the South Lyon Area Recreation Council, the Center for Active Adults, Active Faith, Kiwanis, Lions Club and the Salem-South Lyon District Library.

### **1.8 The Nested Jurisdictions**

There are three nested jurisdictions within the City of South Lyon. They are the South Lyon Community Schools, the Oakland County Water Resources Commissioner (OCWRC) and the Road Commission of Oakland County (RCOC). All three have applied for Phase II Certificates of Coverage. The school district consists of two high schools, two middle schools, seven elementary schools, an early childhood center, and an administration building. South Lyon High School, Centennial Middle School, Millennium Middle School, Bartlett Elementary, Sayre Elementary, the Early Childhood Center, and administration building are within the City limits of South Lyon. The other three elementary schools are located in Green Oak Township, Salem, and New Hudson. The high schools and middle schools have campus-type layouts with separate storm sewers that meet the criteria of a “system” as discussed in the federal and state regulations and thus are subject to the Phase II regulations. Both campuses have potential for contamination of storm water runoff from large parking lots and from maintenance operations at the facilities, grounds, and athletic fields.

The OCWRC and the RCOC have a number of storm drains within the City and the City is committed to working with these agencies and the schools to coordinate and integrate efforts, where applicable, to implement the minimum measures.

### **1.9 The Storm Sewer Systems within the City**

The Yerkes Drain, Sayre Drain, South Lyon Drain No. 1, Lyon No.1 Drain and the Underhill Drain are the main watercourses that flow through the City (Appendix A). They are part of the Huron River Watershed and are tributary to Limekiln Lake and then Strawberry Lake. The City does not maintain any detention/retention basins. There are over 45 private retention/detention facilities. The City recently developed a database of all these basins and keeps records of known problems, complaints, and repairs.

The City of South Lyon has separate sanitary and storm sewer systems with less than 1% of the City’s residences being served by on-site sewage disposal systems (OSDS). A few of the City’s storm conveyances are open drains.

The separate storm sewer system in the City consists of storm sewers under the ownership and/or jurisdiction of several different entities, namely, the RCOC, the OCWRC, private entities, the City of South Lyon, and the South Lyon Community School District. For example, approximately 2.66 miles of primary roads and 0.99 miles of secondary roads in the City, and associated right-of-way drainage systems, are under the jurisdiction of the RCOC.

### **1.10 City-Owned Properties/Facilities**

The table below illustrates all City-owned and operated properties and associated addresses. Note – City Hall is owned by the South Lyon School District, but maintained by the City. City storm sewer maps were provided with the March 2010 SWMP submittal.

<b>Facility/Property</b>	<b>Location</b>
City Hall	335 S. Warren St.
Fire Dept.	215 Whipple
Police Dept.	217 Whipple
Police Admin.	214 W. Lake
Parking Lot	Whipple
Vacant Lot	Whipple west of parking lot
Vacant Lot	Chester St
Vacant Lot	Detroit St.
Vacant	S. Lafayette - Abuts McHattie Park
Water Tower	N. Mill St
Cemetery	Stryker St
Parking Lot	Wells St
Parking Lot	Veterans - S. of Liberty
Parking Lot	N. side of Liberty
Park	Paul Baker - Reynold Sweet Pkwy
Park	McHattie - Washington St & Dorothy St.
Park	Clark's Crossing
Park	Volunteer Park
Park	Oak Creek - Oak Creek Sub
Park	Bike Trail-Variou locations
DPW	520-530 Ada
Wastewater Plant	23500 N. Dixboro
Residential	S. Lafayette St - Abuts McHattie Park
0 Vegetated Swales	
159 Discharge Points	Located throughout City
1876 Catch Basins	Located throughout City
0 Retention/Detention Basins	

### 1.11 Water Quality Status within the City

Strawberry Lake has a Total Maximum Daily Load (TMDL) for phosphorus. The TMDL is currently being met as the in-lake concentration (0.025 mg/l), loading capacity (17,100 lbs/yr) and point source load (5,877 lbs/yr) are below the TMDL goals (in parentheses). The May 2000 TMDL report recommends a 15% reduction in the nonpoint source load, which is currently about 13,781 lbs/yr. The report indicates that much of the reduction will occur through activities being done by the Huron River Watershed Council (HRWC) in the Kent Lake and Limekiln Lake watersheds. The City of South Lyon's SWMP is designed to reduce pollutants, including phosphorus, to the MEP and thus will contribute to the continued attainment of the TMDL.

While mean monthly stream flows have not changed dramatically, human impacts and development have generally increased daily fluctuations in the Huron's stream flow. Land drainage for urban or

agricultural use has degraded the original, fairly stable flow regime. Draining wetlands, channelizing streams, and creating new drainage channels have decreased slow stability by increasing peak flows and diminishing recharge in groundwater tables. All tributaries to the Huron River suffer from comprehensive channelization, lack of cover, and large flow fluctuations as a result of efforts to accelerate drainage through these streams. Summer water temperatures have become warmer and more variable due to lower base flows, channel widening and clearing of shading stream-side vegetation. Landscape alterations and increased peak flows have accelerated erosion within the basin and increased the sediment load to the river. Additional factors important in reviewing and understanding the hydrology of the watershed are direct drainage, depth to groundwater, soil permeability, and groundwater recharge that indicate the infiltration potential of groundwater.

In early December 2004 an inventory of physical instream and riparian conditions at several road stream crossings in the Huron Chain of Lakes Watershed was conducted by HRWC staff and trained volunteers with the Livingston County Road Commission. Goals of the Survey include: 1) increasing available information on the water quality of surface waters and sources of pollutants; and 2) serving as a quick screening tool to identify issues of concern and the need for more in-depth investigations.

A narrative summary of survey results by drainage area (within the City of South Lyon) is presented below:

#### **Underhill Drain**

Four sites were selected for assessment along the Underhill Drain. The stream had both recovering and natural channels, and all the road crossings were over culverts. Although there were no culvert problems reported, the culvert at the 9 Mile Rd. near Dixboro Rd. was buried, which prevented assessment. One site (Pontiac Rd.) had erosion noted for the road ditches at the site. The stream had clear water and low to medium water flows. The stream was <10 feet wide and <1 foot deep at each site. There were aquatic plants and overhanging vegetation present at every site. Three sites had logs or woody debris in the stream and one site had floating algae. Channel substrates consisted of cobble/gravel, sand or unknown material. Bank erosion was low and there were good stream canopies (25-50+%) at all the sites. Streamside cover was listed as trees for each of the sites. Stream buffer zones ranged from fair to good (10-100 feet wide). Land use along the stream corridor was wetlands, old field and shrubs, forest and maintained lawn. Nonpoint source pollution inputs were identified as transportation, channelization, riparian vegetation removal, streambank erosion, bridge and development construction, recreational, and unknown sources.

#### **Yerkes Drain**

The South Lyon Wastewater Treatment Plant is located upstream of the Dixboro Rd. site. McHattie Park and the City of South Lyon are downstream of the Lafayette St site. This area often displays low levels of dissolved oxygen in a small segment of Yerkes Drain between the South Lyon Wastewater Treatment Plant and Nichwagh Lake. The stream segments were considered to be recovering channels, and it was unknown if they are designated drains. Stream widths varied from <10 – 25 feet and depths ranged from 1-3 feet. There was brown water at the Dixboro Rd. site; the other two sites had clear water. Stream flows were low to moderate. At the Dixboro Rd. site, there was floating algae, oil sheens and abundant trash. Total nitrogen, phosphorus and TSS concentrations remain high in this area. There was no physical appearance data recorded in the surveys for the other 2 sites. Overhanging vegetation and woody debris was observed at each site and deep pools were present at 2 of the sites. Stream buffers varied from <10 – 100 feet and bank erosion was generally low. The upstream segment of the Lafayette St. crossing had moderate bank erosion. Streamside cover was noted as trees and grasses with stream canopies generally <25%. There were 2 culvert problems observed at the Dixboro Rd. stream crossing: poor culvert alignment and impounding water.

There was also ditch erosion found at this site. This stream crossing area was ranked as poor, and was flagged for follow-up investigation in the survey. Land use adjacent to the stream crossings were old fields, wetlands, some forest, maintained lawn, and disturbed ground (at Dixboro Rd.). Potential sources of nonpoint source pollution were cited as streambank erosion, stream impoundment, bridge construction, development construction, urban runoff, septic systems, recreation, municipal and industrial point sources, instream debris, and natural/unknown sources of nonpoint source pollution.

Additional information can be found in the 2003 Davis Creek Report, found on the HRWC website.

### **1.12 Water Quality Stresses within the City**

Water quality concerns in the City and throughout the Huron Chain of Lakes Subwatershed range from nutrient and bacterial loading issues, to issues of water clarity and toxicity. Additional water quality concerns include turbidity (sedimentation and soil erosion), conductivity, pesticides, failing septic systems, and pollutants such as PCBs and mercury.

Some of the high priority stresses include:

- Nutrient Loadings (Total Phosphorus and Nitrogen)
- *E.coli* from septic systems and other sources
- Low dissolved oxygen levels
- Soil erosion and sedimentation control

## ***Section II - Public Education Plan***

---

### **2.1 Public Education Plan (PEP) Objectives**

The purpose of the PEP is to inform the City residents, public employees, businesses, industries, visitors to the area, and construction contractors and developers about their water resources and instill in them a sense of stewardship concerning those resources. The primary objective of the plan is to promote, publicize, and facilitate watershed education and, in doing so, encourage the public to reduce the discharge of pollutants in storm water to the MEP.

The general objectives of the PEP are to:

1. Increase the general awareness among residents, local businesses, and agency officials of the City storm sewer system and the Huron River Watershed and how their daily activities impact this resource.
2. Inform the public and interested parties of the storm water permit, the Storm Water Management Plan, and the objectives of the program.
3. Meet the required elements of an education plan as outlined in the permit.
4. Develop and implement public involvement and education programs, materials, and activities for the citizens in the community to build awareness and foster stewardship of their water resources. The City will utilize existing programs and materials where appropriate.
5. Support the students, groups, or individuals in the community that are participating in existing educational efforts and encourage the development of and participation in additional efforts.
6. Support SEMCOG's "Seven Simple Steps for Clean Water" campaign by displaying informational boards/posters at local events; provide brochures/tip cards at City Hall and local events; and include a link to SEMCOG on the City's website.

The land use in the City in part dictates the focus of the education program. According to the Southeast Michigan Council of Government's (SEMCOG's) 2000 land use data, the City is primarily a residential community (50%), but it does have a commercial strip along Pontiac Trail (4%) and there is some industry within the City (4%). 19% of the land use is woodland, wetland, grassland, or shrub, and approximately 4% remains as agriculture. Sanitary sewer serves most of the City, but there are four small areas where residents are known to have septic tank/tile field systems. There is limited undeveloped land available within the City limits.

Given the land uses, the primary concerns for storm water contamination would be residential and commercial sources. Some of the residential sources of contaminants would be illicit connections, new construction or reconstruction, yard maintenance and landscaping, and household hazardous waste disposal. Commercial sources would include waste automotive fluids, restaurant waste and grease, and car wash and laundry wastes. The City's public education is geared to address these potential sources. The following page provides a list of educational topics and target audiences that the City currently addresses.

<b>Educational Topics</b>	<b>Target Audience</b>
Yard Wastes	Residential and City staff
Landscaping/Native Vegetation	Residential, Commercial, Developers, Schools and City staff
Low-Impact Development	Residential, Commercial, Developers and City staff
Pet Wastes	Residential, Commercial and City staff
Detention/Retention Basins	Developers and City staff
Household Hazardous Waste	Residential and City staff
Restaurant Wastes	Commercial, Schools
Automotive Wastes & Car Care	Commercial, Residential, and City staff
Illicit Discharges and Connections	All
Pesticide, Herbicide and Fertilizer Use	Residential, Commercial, Schools and City staff
Pollution Prevention for Business	Commercial and City staff
Pollution Prevention for Households	Residential
Septic Tank/Tile Field Maintenance	Residential
Storm Water Management & Riparian Management	Residential
Stewardship	All
Sedimentation and Erosion Control	Commercial, Developers, Schools and City staff
SEMCOG's "7 Simple Steps to Clean Water Initiative"	Residential
Wetland Protection	All

The City currently has a public education program for their Wellhead Protection and Storm Water Programs, and the City does have some existing means and avenues of providing information to the residents and business owners within the community. The delivery mechanisms listed below will continue to be utilized to the fullest extent possible when implementing this PEP.

<b>Type</b>	<b>Size</b>	<b>Frequency</b>	<b>Delivery</b>	<b>Comments</b>
Water Quality Report	4-6 pgs	1/year	Mailed to homeowners	
Cable TV		As-needed		Several PSAs, videos are aired periodically
City Website		Continuous updating		<a href="http://www.southlyonmi.org">www.southlyonmi.org</a>
South Lyon Herald		Weekly Publication	Mail; Purchase	Several City residents publish articles as-needed
Hometown Weekly		Weekly Publication	Mailed to homeowners	Several City residents publish articles as-needed
Buyer's Guide		Monthly Publication	Mailed to 3,000 residents	Several City residents publish articles as-needed
Portable Display Information Shelf (City Hall)		1/year		Depot Days event
RRRASOC Newsletter	4 pgs	1/year	Internet; Mailed to homeowners	<a href="http://www.rrrasoc.org">www.rrrasoc.org</a>

The City will continue to work with other organizations and agencies in the public education effort and utilize or modify existing materials where possible. Some of the potential partners and/or sources of information include: Huron River Watershed Council (HRWC), Southeast Michigan Council of Governments (SEMCOG), Resource Recovery and Recycling Authority of Southwest Oakland County (RRRASOC), Michigan Department of Natural Resources and Environment (MDNRE), Wayne County Rouge Program Office (RPO), Department of Environment (DOE), and the Michigan State University Extension Office – Oakland County (MSU-Ext).

## 2.2 Planned Efforts

South Lyon is located in the headwaters of the Huron River Watershed. Small streams and drains that are tributary to the river flow through the City. Many people may not be familiar with their connection to the watershed due to the nature and size of these tributaries. To overcome this, the City will continue to focus education efforts on conveying basic concepts of “watershed awareness” and “individual actions affecting the watershed.” These efforts will be targeted at City staff, home, and business owners, as well as commercial operations and developers.

The following are the City’s priorities:

- Meeting the required elements of the permit.
- Educating the public and City staff on the watershed and on the impacts of illicit connections.
- Develop partnerships with other community organizations, groups, or agencies involved in educating the public regarding storm water management and provide general information to the public.
- Formation of a focus group or utilization of an existing group such as the focus group for the Wellhead Protection Program to advise the City on their public education efforts and storm water management program.
- Measuring the overall effectiveness of the PEP and all minimum measures of the Permit.

The following paragraphs summarize the twelve (12) required elements of a PEP as specified in Part I.B.1.a of the MDNRE’s General Storm Water Permit and the City’s plan for addressing each element. The information and actions encouraged by the PEP will be consistent with the regulations and City objectives. The tasks, measurable goals, and implementation schedules are presented in Table 8.1 (Section VIII).

1. *Encourage public reporting of the presence of illicit discharges or improper disposal of materials into the drainage system, and develop and publicize a hotline for public reporting.*

<b>Task II-1.1:</b>	<b>Design and implement an education program for City field staff on illicit discharge and illicit connection elimination.</b>
<b>Target Audience:</b>	Field crews and facility maintenance staff of the City
<b>Messages:</b>	Recognition of illicit connections and discharges, methods to detect them, their impact on water bodies, and methods to eliminate them.
<b>Description:</b>	PowerPoint and/or video training with some hands on recognition.
<b>Responsibility:</b>	Department of Public Works
<b>Measurable Goal:</b>	Documentation of training program and records. Number of illicit connections detected and eliminated. Training provided to all relevant field employees.
<b>Schedule:</b>	Annually; Ongoing

Existing Effort: Two staff members were trained in 2006 and two were trained in 2007.

Future Effort: The City will continue its existing efforts.

**Task II-1.2: Use and encourage public use of the existing OCWRC complaint receipt and response system.**

**Target Audience:** General public

**Messages:** How to recognize and report suspected illicit connections and discharges.

**Description:** The City utilizes the existing County-wide complaint hotline that is operated and maintained by OCWRC. The City advertises the complaint system telephone number (248-858-0931) and e-mail address ([http://www.co.oakland.mi.us/drain/program\\_service/env\\_hotline.html](http://www.co.oakland.mi.us/drain/program_service/env_hotline.html)) through various means such as newspapers, posters, mailings, website, and cable station. Any complaints that it receives directly is recorded and referred or investigated as appropriate. City staff are trained to recognize and respond to illicit discharges and developed a strategy for informing the public about the impact that illicit discharges have on the water resources. In conjunction with IDEP and construction programs, the City developed an improved complaint tracking and response system for the reporting of illicit discharge complaints. (See **Task IV-3.4**) They will investigate the use of a computer database system. The City uses existing educational information on the reporting of improper disposal from sources such as the HRWC, RPO, DOE, MSU-Ext, MDNRE, RRRASOC, SEMCOG, SOCWA, and the EPA. They publicize information on illicit connections and the reporting system in the City website, City Hall information shelf, newspaper articles, cable TV spots, flyers, and posters.

**Responsibility:** City Administration

**Measurable Goal:** Tracking records. Copies of publications. Number of complaints received and their resolution. All calls to be addressed.

**Schedule:** Annually; Ongoing

Existing Effort: The City has an informal system of receiving complaints. Complaints are received by the various departments through telephone, walk-ins, email, and in-field contacts. The complaints are forwarded to the appropriate department for follow-up.

The 2005 and 2006 Annual Drinking and Water Quality report contained contact information to report illegal dumping. This report is mailed to all City residents.

A web link to the OCWRC 24-hour environmental complaint hotline is posted on the City website.

Two videos, "Prevention of Illicit Discharges in the City of South Lyon" and "South Lyon Sewer Tour" were produced and are aired periodically on the local cable station. These videos were also converted to YouTube format. Over 100 hits were received to date.

Future Effort: The City will continue its existing efforts.

**Task II-1.3: Provide the public with information on how storm and sanitary sewer systems function and their effects on water bodies.**

**Target Audience:** General public

**Messages:** How storm and sanitary systems work; how storm sewers are connected to water bodies; define what an “illicit discharge” and “illicit connection” is; what can and cannot be discharged into storm sewers.

**Description:** Articles that include information regarding the above mentioned items will be published in the City’s newspapers and available on the City’s website.

**Responsibility:** City Administration

**Measurable Goal:** Copy of articles; number or website hits. Media outlets utilized. Inquiries received.

**Schedule:** Quarterly; Ongoing

Existing Effort: Two videos, “Prevention of Illicit Discharges in the City of South Lyon’ and ‘South Lyon Sewer Tour’ were produced and are aired periodically on the local cable station. These videos were also converted to YouTube format. Over 100 hits were received to date. The WEF ‘Liquid Assets’ video featuring information on drinking, waste, and stormwater is periodically broadcast on PBS. The City is considering airing this video on their cable station.

HRWC Storm Drains and Illegal Dumping tip cards are displayed at City Hall.

South Lyon Wellhead Protection/Storm Water Committee member, Bob Martin gives several tours to students at the Clean Water Plant throughout the year.

Various articles regarding drinking water, stormwater, and wastewater are featured periodically in the *South Lyon Herald*.

Future Effort: The City will continue its existing efforts.

**Task II-1.4:** **Provide information to the public on how to recognize an illicit discharge.**

**Target Audience:** General Public/City Staff

**Messages:** Educate the general public on how to recognize an illicit discharge and the possible adverse impacts illicit discharges may have on water bodies.

**Description:** Air various videos on the local cable station. Distribute information at City Hall that illustrates what an illicit connection/discharge is and how to recognize it.

**Responsibility:** City Administration

**Measurable Goal:** Number of times videos are aired. Tip cards displayed at City Hall.

**Schedule:** Quarterly; Ongoing

Existing Effort: Two videos, “Prevention of Illicit Discharges in the City of South Lyon’ and ‘South Lyon Sewer Tour’ were produced and are aired periodically on the local cable station. These videos were also converted to YouTube format. Over 100 hits were received to date. The WEF ‘Liquid Assets’ video featuring information on drinking, waste, and stormwater is periodically broadcast on PBS. The City is considering airing this video on their cable station.

HRWC Storm Drains and Illegal Dumping tip cards are displayed at City Hall.

Future Effort: The City will continue its existing efforts.

**Task II-1.5:** **Promote MDNRE’s Pollution Prevention and Waste Reduction Programs to local commercial food service entities.**

**Target Audience:** Food Service/Restaurants  
**Messages:** Waste reduction/Practicing Pollution Prevention  
**Description:** The City promotes existing MDNRE restaurant industry pollution prevention and waste reduction programs. Facilities such as restaurants, supermarkets, and school cafeterias can save money, improve operation efficiency, and protect the environment by practicing pollution prevention. Information will be made available on the information shelf at City Hall, fact sheets and posters will be distributed to food service entities, and the City will provide content and/or link to MDNRE's website.

**Responsibility:** City Administration  
**Measurable Goal:** Copies of publications/Number of flyers and/or mailings distributed; number of website hits. Post information on website.  
**Schedule:** By October 2010; Ongoing

Existing Effort: The City promoted the MDNRE Michigan Sustainable Business Seminar (April 2007) for the restaurant industry by posting flyers in City Hall and adding a web link on the City website.

Future Effort: By October 2010, the City will add the MDNRE P2 web link on their site. The City will consider publishing information in future newspaper editions.

**2. *Identifying the water body that would be potentially impacted by improper actions at or near a person's home.***

**Task II-2.1:** Promote storm drain awareness by supporting SEMCOG's "Our water. Our future. Ours to protect." campaign.

**Target Audience:** General Public, public employees, businesses, industries, construction contractors, and developers

**Messages:** Storm drain awareness/ pollution prevention  
**Description:** Storm drain awareness is included as one of SEMCOG's "Seven Simple Steps to Clean Water" campaign topics. The City distributes/displays brochures, tip cards, posters, and other materials pertaining to storm drain awareness that were developed by SEMCOG. The materials include information explaining what storm drains are and how they connect to our rivers and streams, and provides tips on what individuals can do to keep pollutants from entering storm drains. (See Task III-3.6) The information is available on the information shelf at City Hall and at City events. The City provided a web link to the SEMCOG, "Our water. Our future. Ours to protect." website.

**Responsibility:** City Administration  
**Measurable Goal:** Number of materials distributed; Number of events that materials are displayed or distributed; Number of website hits. Post SEMCOG tip cards at City Hall and various City events.  
**Schedule:** Annually; Ongoing

Existing Effort: A web link to the SEMCOG 'Ours to Protect' website is posted on the City website.

As part of Water Week 2010, the City set up a display at City Hall with various brochures, pamphlets, and 'Storm Drains Aren't Garbage Cans' bags. Information regarding healthy lawn

care and native plant coloring pages were also provided.

The City provided information on water conservation and rain barrels on their website. The 2009 HRWC Rain Barrel Sale flyer was also displayed at City Hall.

SEMCOG's 'Seven Simple Steps' tip cards are posted at City Hall and are distributed at various City events (Pumpkinfest, Taste of South Lyon, Depot Days). The City purchased the 'Seven Simple Steps' table display for use at these events.

Each June, Boy Scouts and other volunteers participate in the storm drain clean-up/stenciling event.

Future Effort: The City will continue its existing efforts.

**Task II-2.2:** Storm drain awareness training for the focus group, which represents residents, business owners, and the public.

**Target Audience:** Focus Group

**Messages:** General awareness of storm drainage systems in the City and how they impact the watershed.

**Description:** Explain how the different types of drainage systems work and where they discharge. Review the City storm drainage system. Explain the watershed concept and give an overview of the Huron River Watershed. Discuss what each person can do to improve the watershed.

**Responsibility:** City Administration

**Measurable Goal:** Copy of training materials; attendance sheets; and meeting minutes from focus group meetings.

**Schedule:** Annually; Ongoing

Existing Effort: The Wellhead Protection/Storm Water Focus Group meets quarterly.

The DPW Superintendent and Focus Group member attends various SEMCOG Municipal Training and IDEP Training workshops as they become available. Other members attend various training opportunities throughout the year.

Future Effort: The City will continue its existing efforts.

3. *The availability, location, and requirements of facilities for collection and/or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, grass clippings, leaf litter, animal wastes, and motor vehicle fluids.*

**Task II-3.1:** Provide the public with information on the disposal of household hazardous, travel trailer, yard, motor vehicle wastes, and pet waste.

**Target Audience:** General public

**Messages:** Disposal and/or reuse of these wastes.

**Description:** The City utilizes existing SEMCOG, HRWC, and RRRASOC materials that cover information regarding the proper storage, handling and disposal of hazardous household and pet wastes, etc. Information is available on the City website and information shelf. Information may be sent in some type of mass mailing.

**Responsibility:** City Administration

**Measurable Goal:** Copies of publications/flyers and number distributed; number of website hits;  
Total number of HHW materials taken to RRRASOC from City residents.  
**Schedule:** Annually; Ongoing

Existing Effort: The City encourages residents to utilize the RRRASOC sites that are located in Wixom, Walled Lake, Farmington, Farmington Hills, Southfield, Lyon Township, and Novi. The RRRASOC web link is posted on the City website.

As part of Water Week 2010, the City set up a display at City Hall with various brochures, pamphlets, and ‘Storm Drains Aren’t Garbage Cans’ bags. Information regarding healthy lawn care and native plant coloring pages were also provided.

“The Recycling Authority” annual newsletter is available at City Hall and is mailed to all City residents.

The City provides a drop-off location for recycling (non-hazardous) at its Public Works yard for residents or apartment complexes that don’t receive curbside service.

The City provides leaf pick-up in the Fall and brush pick-up year round. Duncan Disposal is the contractor for trash, yard waste and recyclables. Yard wastes are separated from general refuse, as are the recyclables. Yard waste and fall leaf collection information is available on the City website. Composting, recycling, and garbage information is also available on the website.

The SEMCOG HHW, Pet Care, and Car Care tip cards are available at City Hall and are distributed at various City events. A web link to the SEMCOG ‘Ours to Protect’ site is available on the City website.

Future Effort: Information on boat care, RV, and pet waste will be made available on the City website and brochures will be distributed at City Hall. The City will continue its existing efforts.

**Task II-3.2:** Provide the public with information regarding proper car care.  
**Target Audience:** General public, City maintenance staff  
**Messages:** Proper car care/reduce pollution generated from vehicle maintenance  
**Description:** Practicing good car care is included as one of SEMCOG’s “Seven Simple Steps to Clean Water” campaign topics. The City promotes watershed friendly car care by obtaining and distributing information (via, brochures, tip cards and other materials) developed by SEMCOG. The materials include information on how car maintenance can lead to pollution of waterways, and provide tips on what individuals can do to keep pollutants from entering storm drains. The information is available on the information shelf at City Hall. In addition, the City provided a web link to the SEMCOG, “Our water. Our future. Ours to protect.” website.  
**Responsibility:** City Administration  
**Measurable Goal:** Copies of the information/publications and number distributed; Number of website hits.  
**Schedule:** Annually; Ongoing

Existing Effort: HRWC and SEMCOG car care tip cards are available at City Hall.

A web link to the SEMCOG ‘Ours to Protect’ web page is available on the City website.

Future Effort: The City will consider publishing articles in the *South Lyon Herald* regarding car care. The City will continue its existing efforts.

4. ***Public education concerning acceptable application and disposal of pesticides, herbicides, and fertilizers, including the use of phosphorus-free fertilizer alternatives.***

**Task II-4.1:** Provide the public with information on the application and disposal of yard chemicals.

**Target Audience:** General public and City maintenance staff

**Messages:** Proper use, storage, and disposal of yard chemicals.

**Description:** The City distributes existing materials from SEMCOG, HRWC, MSU-Extension, and SOCWA that cover the proper use, storage, and disposal of yard chemicals and fertilizer and pesticide use and provide suggestions for alternatives. Lawn care information is available on the City website. HRWC and SEMCOG lawn care tip cards are distributed at various events and are available at City Hall.

**Responsibility:** City Administration

**Measurable Goal:** Copies of the information/publications and number distributed; Number of website hits.

**Schedule:** Annually; Ongoing

Existing Effort: Lawn care information is available on the City website. A web link to the SEMCOG 'Ours to Protect' web page is also available on the City website.

As part of Water Week 2010, the City set up a display at City Hall with various brochures, pamphlets, and 'Storm Drains Aren't Garbage Cans' bags. Information regarding healthy lawn care and native plant coloring pages were also provided.

In 2008 and 2009 an article on proper fertilizing and lawn care was published in the *South Lyon Herald*. In 2010 a fertilizing article was featured in the *Buyer's Guide*, which is mailed to 3,000 residents.

Three local hardware stores in the City carry earth-friendly fertilizers; two of these businesses have promoted these fertilizers through 'Go Green for Watershed Protection and Zero Phosphorus Fertilizer Use' flyers at their stores.

MSU Soil Test Program flyers are available at City Hall. A web link to the MSU-Extension web page is available on the City website. The SOCWA 'Guide to Selecting a Lawn Services' flyer is also on the website. HRWC and SEMCOG lawn care tip cards are also on display.

In March 2008, Wellhead Protection/Storm Water Focus Group member and lawn care provider, George Jackson, gave presentations regarding fertilizer use, native plants, and watershed protection to South Lyon Garden Club, South Lyon Ridge Condos, Lafayette Woods Condos, and the lawn fertilizer industry. The presentations were well attended and well received.

In 2008, SEMCOG ran several Fall fertilizing advertisements in the *Hometown* newspaper.

Future Effort: The City will continue its existing efforts.

**Task II-4.2:** Provide Homeowners Associations and local lawn care businesses with information from Southeastern Oakland County Water Authority (SOCWA) and Michigan Green Industry Association (MGIA).

**Target Audience:** Homeowners Associations, Local businesses, Lawn care businesses

**Messages:** Acceptable application and disposal of yard chemicals and healthy lawn care.

**Description:** Provide information and materials on healthy lawn care developed by SOCWA and MGIA. Materials include information such as: healthy lawn care tips, fertilizer selection and application, and recommended lawn fertilizers. The City utilizes its website, information shelf and direct mailings to broadcast the information.

**Responsibility:** City Administration

**Measurable Goal:** Copies of the information/publications and numbers distributed. Report amount of waste delivered to RRRASOC; Number of website hits. Post MGIA web link on City website.

**Schedule:** By October 2010; Ongoing

Existing Effort: In March 2008, the City sent out letters to 17 local lawn care companies, providing recommendations on earth-friendly fertilizers and proper application guidelines. Most lawn care companies have responded positively.

In 2006 and 2008, George Jackson (D & G Nature's Way), gave presentations regarding fertilizer use, native plants, and watershed protection to South Lyon Garden Club, South Lyon Ridge Condos, Lafayette Woods Condos, and the lawn fertilizer industry. The presentations were well attended and well received. In January 2010, George authored an article in the *Buyer's Guide*, which is mailed to 3,000 residents.

MSU Soil Test Program flyers are available at City Hall. Web links to the MSU-Extension and SOCWA web pages are available on the City website. The SOCWA 'Guide to Selecting a Lawn Services' flyer is also on the website. HRWC and SEMCOG lawn care tip cards are also on display.

SOCWA and MGIA flyers are available at City Hall.

Future Effort: A web link to the MGIA site will be posted on the City website by October 2010. The City will continue its existing efforts.

**5. *Public education concerning preferred car cleaning agents and procedures for non-commercial car washing.***

**Task II-5.1:** Provide the public with information on non-commercial car washing and preferred car cleaning agents, including those activities related to community fund raising or 'school' car washes.

**Target Audience:** General public, City maintenance staff and local schools.

**Messages:** Alternative materials and methods for residential/fund raising car washing.

**Description:** Promote watershed-friendly car care by obtaining and distributing information and educational materials from the RPO, SEMCOG, HRWC and other organizations. Encourage residents to utilize professional car wash facilities that are discharging waste water to the sanitary sewer. Promotion will be through the website, information shelf, and mailings such as billings.

**Responsibility:** City Administration

**Measurable Goal:** Copies of information and number distributed; Number of website hits.  
Distribute car care tip cards at City Hall and City various events.  
**Schedule:** Annually; Ongoing

Existing Effort: Car care information was posted on the City website in 2006. SEMCOG Car Care tip cards are distributed at City Hall and various events throughout the year.

Future Effort: The City will continue its existing efforts.

6. *Public education concerning proper maintenance of septic systems and how to recognize system failure.*

**Task II-6.1:** Provide the public with information on proper septic system maintenance.

**Target Audience:** Residents with OSDS

**Messages:** Proper septic system maintenance.

**Description:** Provide information and materials on proper septic system maintenance developed by MSU-Extension, Oakland County Health Department (OCHD) and the Rouge River Project. The City compiled a list of all septic systems within the City and will distribute information to those residents through direct mailings. The City will also post the information on its website and information shelf at City Hall.

**Responsibility:** City Administration

**Measurable Goal:** List of residents with septic systems/Copy of information distributed to those with septic systems; Number of website hits.

**Schedule:** By October 2010; Ongoing

Existing Effort: The City has a current list of all OSDS owners in the City. The City is considering sending out mailers to them.

The City advertised the 2008 Septic System Workshop in Novi via cable station.

Future Effort: The City will post OSDS information on their website by October 2010.

**Task II-6.2:** Support existing City ordinances and County efforts to have OSDS inspection ordinances.

**Target Audience:** Residents with OSDS, City maintenance staff, City officials

**Messages:** Awareness of Local/County OSDS ordinances

**Description:** Continue enforcement of existing City sewer connection ordinance. Any violations will be handled in coordination with the OCHD. Information regarding City ordinances or County efforts will be posted and/or a link will be provided on the City's web site.

**Responsibility:** City Administration/Public Works Department

**Measurable Goal:** Report number of connections of an existing OSDS made to the sanitary sewer system; Report number of OSDS complaints during permit cycle. Update on progress made towards the adoption of an OSDS ordinance.

**Schedule:** Annually; Ongoing

Existing Effort: The City currently does not have an OSDS inspection program. The County inspects OSDS as needed.

The City posts updates on OSDS connections, complaints, and inspections in their progress reports to MDNRE.

Future Effort: The City will continue its existing efforts.

**7. *Public education concerning management of riparian lands to protect water quality.***

**Task II-7.1:** Provide flyers/information on riparian land management and support related workshop(s).

**Target Audience:** Riparian landowners and residents.

**Messages:** Watershed-friendly land management for riparian owners

**Description:** The City utilizes existing materials from OCWRC, SEMCOG, HRWC, MSU Extension, and other entities that promote watershed-friendly land management. The City will consider partnering with other communities and groups to put on workshops on responsible riparian land management for the range of target audiences.

**Responsibility:** City Administration

**Measurable Goal:** Copies of flyers and number distributed. Workshops provided and number of attendees. Post riparian information on the City website.

**Schedule:** By October 2010; Ongoing

Existing Effort: In 2008, an article on lawn care and riparian management was featured in the *South Lyon Herald*.

Future Effort: By October 2010, riparian management information will be posted on the website. The City will continue its existing efforts.

**8. *Providing information regarding the public's responsibilities and stewardship in their watershed.***

**Task II-8.1:** Provide information on watershed stewardship.

**Target Audience:** All residents

**Messages:** Publish Newspaper Articles on storm water management and clean-up events;

**Description:** ¼ to ½ page article with clip art targeting “The Huron River and its Local Tributaries” with different actions emphasized in each article. The City purchased the SEMCOG ‘Ours to Protect’ table top display for various City events.

**Responsibility:** Department of Public Works

**Measurable Goal:** Copies of materials distributed; Number and type of video aired; Number of website hits. Continue to host an annual River Clean-Up event.

**Schedule:** Annually; Ongoing

Existing Effort: Boy scouts and other volunteers participate in the annual City-wide storm drain clean-up/stenciling event. Articles seeking volunteers for the event are published in the *South Lyon Herald*.

In 2009, a local Eagle Scout and other volunteers posted 10 wooden signs along the streams throughout the City, which identifies the name of the drain.

In 2007, a South Lyon resident and Eagle Scout, along with a group of volunteers, installed 200 feet of native vegetation along the stream at McHattie Park.

In 2008, an article on watershed stewardship was published in the *South Lyon Herald*.

In 2008, South Lyon High School students produced a video on storm water management that is aired periodically on the cable station.

To promote Drinking Water week, in 2007 several Girl Scouts were given a tour of the Clean Water Plant and participated in a poster contest. In 2008, various South Lyon High School students participated in an art exhibit relating to water issues.

Future Effort: The City will continue its existing efforts.

**Task II-8.2:** Form a focus group of interested groups and citizens within the City to advise and assist the City in designing and implementing public education and storm water management (See Task III-2.3).

**Target Audience:** Business, industry, agencies, non-profits, schools, churches and citizens-at-large.

**Messages:** Community buy-in and action.

**Description:** A group of about 12 people were formed to discuss the objectives of the City's SWMP and provide input and feedback on the education program. The group provides avenues by which the education program can reach the spectrum of interested parties. In 2008, the Storm Water Focus Group merged with the existing Wellhead Protection Group.

**Responsibility:** City Administration

**Measurable Goal:** Successful formation of group. Copies of meeting minutes and attendance sheets. Continue to meet quarterly to discuss group progress.

**Schedule:** Completed; Ongoing

Existing Effort: The Focus Group meets quarterly.

Several Focus Group members have authored various articles in the South Lyon Herald regarding wellhead protection, storm water pollution prevention, earth-friendly landscaping, etc.

The Focus Group has collaborated with several high school students to produce three videos relating to storm water management, which are aired periodically on the cable station.

Future Effort: The Focus Group has begun posting blurbs/advertisements in the South Lyon Herald regarding wellhead protection, and storm water management issues. The City will continue its existing efforts.

**Task II-8.3:** Provide the public with website links to information on the Huron River Watershed, local water quality data, and information on local watershed groups and activities.

**Target Audience:** General public

**Messages:** Watershed awareness/Citizen involvement

**Description:** Provided a link to the HRWC website and Davis Creek Report, authored by the HRWC, on the City's storm water website. The report describes current water quality within the Davis Creek Watershed (a subwatershed of the

Huron River Watershed) which is part of the watershed that the City's storm water runoff drains to. The report also provides background information on watershed awareness and how citizens can get involved in protecting their watershed.

**Responsibility:** City Administration

**Measurable Goal:** Copies of material distributed. Number of website hits. Number and types of activities sponsored by the City.

**Schedule:** Completed; Ongoing; Provide updates by October 2010

Existing Effort: SEMCOG, HRWC, RRASOC, MSU Extension, and the Davis Creek Report web links are provided on the City website.

Future Effort: By October 2010, additional links (MDNRE P2 Program, SOCWA, etc.) will be posted on the website. The City will continue its existing efforts.

9. *Provide information on the water quality impacts of residential de-icer use and how to minimize the impacts.*

**Task II-9.1: Provide information on the impacts of de-icers and snow removal.**

**Target Audience:** General Public

**Messages:** Alternative methods of snow removal/impacts of excess salt application.

**Description:** Publish newspaper articles, provide brochures, and place information on the City's website regarding how de-icers impact water bodies and what the benefits are of using alternative methods of snow removal, deicing alternatives, and reducing road salt.

**Responsibility:** Department of Public Works

**Measurable Goal:** Number and type of articles, brochures distributed. Number of website hits. Distribute information at City Hall.

**Schedule:** By October 2010; Ongoing

Existing Effort: The CRWC 'A Citizen's Guide to Cold Weather Practices' brochures is distributed at City Hall.

Deicing alternatives and proper application information was provided in the *Lyon's Tale* in 2005. This newsletter has been discontinued.

Future Effort: By October 2010, deicing practices and alternatives information will be posted on the City website and in newspaper articles. The City will continue its existing efforts.

**Task II-9.2: Provide information on Winter Storm Water Practices.**

**Target Audience:** General Public, Area Businesses, Businesses that offer snow removal services, and Commercial Applicators

**Messages:** Salt reduction/Pollution prevention

**Description:** Distribute information and materials on Winter Storm Water Practices developed by the Clinton River Watershed Council (CRWC). The materials include information on de-icing alternatives and tips on how to reduce pollution caused by the use of de-icers such as salt. The information was made available on the information shelf at City Hall will be posted on the City's website. Information may also be sent to businesses that offer snow removal services or commercial applicators.

**Responsibility:** City Administration  
**Measurable Goal:** Copy of materials distributed. Number of website hits.  
**Schedule:** By December 2010; Ongoing

Existing Effort: See Activity 9.1.

Future Effort: By December 2010, the City will consider publishing articles and advertisements in the *South Lyon Herald* regarding proper cold weather practices for water quality, to target local businesses and residents. The City will continue its existing efforts.

**10. Provide information on the role of native vegetation on residential properties as a ground cover alternative to turf grass.**

**Task II-10.1: Provide information on River-friendly landscaping and the benefits of using native vegetation.**

**Target Audience:** Riparian owners and residents.

**Messages:** Using native vegetation to improve water quality.

**Description:** The City promotes river-friendly landscaping and the use of native vegetation on residential properties by obtaining and distributing information (via, brochures and pamphlets) developed by SEMCOG, MSU Ext., and SOCWA. The materials include information on improving water quality through landscaping practices (focusing on the use of native vegetation) and the importance of implementing vegetative buffers along rivers, streams and lakes. The information is published in the *South Lyon Herald* and will be made available on the City website.

**Responsibility:** City Administration

**Measurable Goal:** Copy of materials distributed. Number of website hits. Provide native plant information at City Hall and various events.

**Schedule:** By October 2010; Ongoing

Existing Effort: The SEMCOG Earth Friendly Landscaping tip cards are available at City Hall. 'Landscaping for Water Quality' brochures are also available at City Hall.

As part of Water Week 2010, the City set up a display at City Hall with various brochures, pamphlets, and 'Storm Drains Aren't Garbage Cans' bags. Information regarding healthy lawn care and native plant coloring pages were also provided.

In 2006 and 2008, George Jackson (D & G Nature's Way), gave presentations regarding fertilizer use, native plants, and watershed protection to South Lyon Garden Club, South Lyon Ridge Condos, Lafayette Woods Condos, and the lawn fertilizer industry. The presentations were well attended and well received.

In 2006 and 2007, the City was awarded MDNR Grant funding to plant over 320 trees throughout the City.

In 2007, a South Lyon resident and Eagle Scout, along with a group of volunteers, installed 200 feet of native vegetation along the stream at McHattie Park.

Future Effort: By October 2010, native planting information will be posted on the website. The City will continue its existing efforts.

11. *Educate commercial, industrial, and institutional entities likely to have significant storm water impacts. At a minimum, commercial food services, primarily restaurants, shall be educated to prevent grease and litter discharges to MS4s.*

**REMOVE TASK**

**Task II-11.1:** **Provide information to commercial food services and other entities that can potentially impact storm water.**

**Target Audience:** Commercial Food Services. Vehicle Service Stations.

**Messages:** Pollution Prevention

**Description:** The City will promote pollution prevention through the EPA P2 website and other existing materials and avenues. Information will be posted on the City website and in the *South Lyon Herald*.

**Responsibility:** City Administration

**Measurable Goal:** Number and type of materials distributed. Number of website hits. Provide information on the City website.

**Schedule:** By June 2011

Existing Effort: None.

Future Effort: By June 2011, the City will post the MDNRE and EPA P2 web links on their website.

12. *Determine the overall effectiveness of the implemented PEP based on established measurable goals.*

**Task II-11.1:** **Determine, collectively as part of the Focus Group efforts, the best way at measuring effectiveness of the PEP.**

**Target Audience:** General Public

**Messages:** Increasing overall public knowledge of water quality issues and behavioral changes.

**Description:** The Focus Group will work collaboratively to determine the methods of measuring effectiveness and report on these efforts in the City's Progress Reports.

**Responsibility:** Focus Group, City Administration

**Measurable Goal:** Updates in Progress Report.

**Schedule:** By March 2011

Existing Effort: None.

Future Effort: By March 2011, the Wellhead Protection/Storm Water Focus Group will determine the best methods for measuring effectiveness of the PEP.

**Task II-11.2:** **Provide updates in Progress Report on the overall PEP effectiveness.**

**Target Audience:** General Public

**Messages:** See Task II-12.1

**Description:** Updates on PEP measurement of effectiveness will be provided in the City's Progress Reports.

**Responsibility:** City Administration, City Consultant

**Measurable Goal:** Updates in Progress Report.

**Schedule:** By March 2011

Existing Effort: None.

Future Effort: By March 2011, with the submittal of the City's Progress Report, the City will provided updates on measurement.

The tasks, measures, and implementation schedule of the PEP are summarized in Table 8-1 (Section VIII).

## ***Section III - Public Involvement and Participation Plan***

---

### **3.1 Public Involvement and Participation Plan (PIPP) Objectives**

The purpose of the PIPP is to involve the City residents, community officials, local business representatives and other interested parties in the development and implementation of the storm water management program.

The general objectives of the PIPP are to:

1. Meet the required elements of a PIPP as outlined in the permit.
2. Involve a cross-section of the citizenry of the City in the decision-making, review and implementation of the SWMP.
3. Utilize the resources of the public, local businesses and existing community groups in the implementation of the management plan.
4. Engage local environmental groups and seek their input and support on the SWMP. In turn, encourage students, organizations, and individuals in the community to participate in existing environmental groups and programs.

The population of the City is ethnically, economically, socially, and culturally homogeneous. As such, there is no need to make special efforts to ensure the participation of various ethnic or socioeconomic groups. The City will, however, make every effort to involve all age groups and local interest groups and to get input from as diverse a cross-section of the population as possible. The City will seek out and draw on people from existing community organizations and groups to assist them in their storm water management efforts. The organizations that may be contacted include local church groups, local sporting and environmental groups including the HRWC, the Board of Education, City Council, Downtown Development Authority, Parks and Recreation Commission, the Wellhead Protection and Storm Water Focus Groups, the Chamber of Commerce, the District Library, Four Seasons Garden Club, and other business and civic organizations. The City plans to utilize their existing avenues to publicize the management program and seek participation and input. Those existing avenues are listed in the table on the following page.

Type	Size	Frequency	Delivery	Comments
Water Quality Report	4-6 pgs	1/year	Mailed to homeowners	
Cable TV		As-needed		Several PSAs, videos are aired periodically
City Website		Continuous updating		<a href="http://www.southlyonmi.org">www.southlyonmi.org</a>
South Lyon Herald		Weekly Publication	Mail; Purchase	Several City residents publish articles as-needed
Hometown Weekly		Weekly Publication	Mailed to homeowners	Several City residents publish articles as-needed
Buyer's Guide		Monthly Publication	Mailed to 3,000 residents	Several City residents publish articles as-needed
Portable Display		1/year		Depot Days event
Information Shelf (City Hall)		Continuous updating	Pickup	
RRRASOC Newsletter	4 pgs	1/year	Internet; Mailed to homeowners	<a href="http://www.rrrasoc.org">www.rrrasoc.org</a>

### 3.2 Planned Efforts

The following paragraphs summarize the three (3) required elements of a PIPP as specified in the MDNRE General Storm Water Permit (MIS040051) and the City's plan for addressing each. The City is committed to continuing implementation of the activities in all three of the required elements within five years of COC issuance. Potential future efforts are listed under each element, as well. The information and actions encouraged by the PIPP will be consistent with the regulations and plan objectives. A summary of the implementation schedule and the tasks and measures for the PIPP are given in Table 8-2 (Section VIII).

1. *Follow local public notice requirements, as appropriate, when notifying the public that the City must implement a storm water management plan. Make copies of draft and final management plans available to the public for comment and inform them as to when and where copies are available.*

**Task III-1.1:** Provide copies of the draft and the final revised SWMP to the public and interested groups.

**Target Audience:** The citizens of South Lyon, City employees, and local businesses.

**Description:** The target audience will be advised of the significance of the SWMP and informed as to when and where they can obtain copies of the final SWMP and provide comment by the following means:

- 1) An article will be placed in the *South Lyon Herald* and on the City website that covers the highlights and tasks of the SWMP, gives the City's web address and other locations where copies can be obtained and asks for public comment;

- 2) A link to the revised SWMP will be placed on the website and a means of making comments via email will be provided;
- 3) If possible, a notice will be included on the utility bills that will tell recipients about the revised SWMP and where to obtain copies;
- 4) A spot will be placed on the local cable TV channel that tells viewers about the revised SWMP and where to obtain copies;
- 6) The revised SWMP will be discussed at a City Council meeting and copies will be provided to the council members; and
- 7) Copies of the revised SWMP will be placed on the Information Shelf at City Hall.

**Responsibility:** City Administration

**Measurable Goal:** Completion of all sub-tasks and copies of all documents. The number of copies distributed, comments received, and hits on the website.

**Schedule:** September 2010; Ongoing

Existing Effort: The existing SWMP is currently on the City website.

Various Focus Group members have reviewed the SWMP and are providing comment on the revised draft.

Future Effort: The revised SWMP will be on the website once it's finalized and approved by MDNRE.

An article will be published in the *South Lyon Herald* regarding revisions made to the SWMP and the Phase II Storm Water Program.

**Task III-1.2:** **Hold an informational meeting to discuss the draft revised SWMP and seek input.**

**Target Audience:** City administrators, DPW staff, other field staff, and the public.

**Description:** A public meeting will be held where an overview of the SWMP and its significance to the community will be discussed. The meeting will be announced through personal contact. Comments will be solicited.

**Responsibility:** City Administration, DPW staff, Consultant

**Measurable Goal:** Meeting minutes and comments received.

**Schedule:** Completed; Ongoing

Existing Effort: The existing SWMP is currently on the City website once it's finalized and approved by MDNRE.

Various Focus Group members have reviewed the SWMP and are providing comment on the revised draft.

In February 2010, an informal meeting was held with the City's consultant, City Administration, and DPW staff to review the draft revised SWMP.

Future Effort: The revised SWMP will be on the website.

- 2. *Participate in a citizen advisory committee for the purpose of encouraging public involvement in all aspects of the storm water management program.*

**Task III-2.1:** Continue to participate in the existing citizen advisory committee for the purpose of providing input on the specifics of the plan, providing resources for the implementation of the program, and assisting in the public involvement and education efforts (See Task II-6.1).

**Target Audience:** Members represent a cross-section of the citizens and businesses in the City so all view points will be heard.

**Description:** A group of about 12 people were formed to discuss the objectives of the City's SWMP and provide input and feedback on the education program. The group provides avenues by which the education program can reach the spectrum of interested parties. In 2008, the Storm Water Focus Group merged with the existing Wellhead Protection Group.

**Measurable Goal:** Successful formation of group. Copies of meeting minutes and attendance sheets.

**Schedule:** Quarterly; Ongoing

Existing Effort: The Focus Group meets quarterly.

Several Focus Group members have authored various articles in the *South Lyon Herald* and *Buyer's Guide* regarding wellhead protection, storm water pollution prevention, earth-friendly landscaping, etc.

The Focus Group has collaborated with several high school students to produce three videos relating to storm water management, which are aired periodically on the cable station.

Future Effort: The Focus Group has begun posting blurbs/ advertisements in the *South Lyon Herald* regarding wellhead protection, and storm water management issues. The City will continue its existing efforts.

**Task III-2.2:** Develop and distribute a survey form to the citizens of South Lyon to determine their awareness and opinion of storm water and watershed issues.

**Target Audience:** General public and students.

**Description:** A questionnaire/survey will be developed that will provide insight into:  
1) The extent of the public awareness of storm water and watershed issues and their ideas on possible water quality improvements;  
2) What they know about the SWMP and their opinions on the effort;  
3) What they know about the water bodies in the community.  
The survey content and format will be reviewed and approved by the Advisory Committee. Responses to the survey will be tabulated and the committee will use the data to help them in their oversight of the program.

**Responsibility:** City Administration

**Measurable Goal:** Copy of the survey distributed the number and type of responses, a summary of the responses and documentation of use by the committee.

**Schedule:** By September 2010

Existing Effort: A watershed survey was conducted by SEMCOG in 2004 that was statistically significant for the Huron Chain of Lakes watershed.

Future Effort: By September 2010, the City will coordinate efforts with CRWC, SEMCOG, and other entities to develop and distribute a survey. The purpose of the survey will be to seek input

on specific interests regarding water quality among the stakeholders.

3. *Continue cooperation with local stream or watershed protection organizations by informing them of the City's program, providing them with copies of draft and final plans and seeking their input on the plans and program. Solicit volunteer assistance from the groups in the implementation of the program and associated activities. Satisfy permit requirements where possible by assisting the organizations with their efforts.*

**Task III-3.1:**        **Develop a mailing and contact list for local stream and watershed protection organizations and local sporting and environmental groups.**

**Target Audience:** Local stream and watershed protection groups and local sportsman and environmental groups.

**Description:**        Develop a contact list for these organizations so they can be contacted about the SWMP. The list will be developed from the phone book, the internet and personal contacts.

**Responsibility:**     City Administration

**Measurable Goal:**   Copy of the list.

**Schedule:**            Ongoing

Existing Effort: The City maintains in contact with HRWC regarding the SWMP and watershed events. The City often collaborates with the Milford Wellhead Protection Group, local Boy Scouts, Girl Scouts, Eagle Scouts, and high schools on various activities.

Future Effort: The City will continue its existing efforts.

**Task III-3.2:**        **Provide the target groups with draft copies of the SWMP using the mailing list and solicit comment on the plan.**

**Target Audience:** Local stream and watershed protection groups and local sporting and environmental groups.

**Description:**        Email the groups copies of the draft and final approved plans and give them the City website address so they can review updates and print out additional copies. The email will ask for their comments on the draft plan and will provide them an e-mail address to which to send comment. Comment can also be received via the storm water link on the City's website.

**Responsibility:**     City Administration

**Measurable Goal:**   Documentation of mailing. Number of comments received and volunteers recruited.

**Schedule:**            By September 2010

Existing Effort: The existing SWMP is posted on the City website. Drafts were submitted to City Council and the general public at a public meeting held in 2003.

Draft revisions were submitted to the Wellhead Protection/Storm Water Focus Group in November 2009.

Future Effort: Draft revisions will be distributed to the general public via email and at City Council meetings. The revised SWMP will also be made available on the website for comment once it is finalized and approved by MDNRE.

The City is considering partnering with other local subwatershed groups to develop an online and

paper survey in relation to the SWMP.

**Task III-3.3:**        **Contact the target groups to determine what programs they sponsor that may satisfy SWMP or permit requirements. Evaluate those qualifying programs to determine those in which the City will participate or encourage participation.**

**Target Audience:** Local stream and watershed protection groups and local sportsman and environmental groups.

**Description:** Personal contacts or mailings to determine what programs exist that the City or its citizens may participate in to satisfy requirements of the SWMP and the permit. Evaluate those programs, and if appropriate, solicit volunteers for participation.

**Responsibility:** City Administration

**Measurable Goal:** Number of programs evaluated. Number of programs in which the City or citizens participated.

**Schedule:** Annually; Ongoing

Existing Effort: Several Boy Scouts and other volunteers participate in the annual storm drain cleanup/stenciling event each June.

See Activity II-8.1 for more details.

Future Effort: The City will continue its existing efforts.

**Task III-3.4:**        **Investigate the formation of a volunteer group that would assist the City with its current water quality monitoring program. The volunteer group would help collect and report data on the major water bodies in the area.**

**Target Audience:** Citizens, City staff, and school students.

**Description:** The City will continue to work on involving community groups, the School District, the HRWC or a similar group to assist with the water quality monitoring program. Data collected will be tabulated, interpreted and reported as part of the City's annual report.

**Responsibility:** City Administration

**Measurable Goal:** Data reported. Documentation of long-term water quality improvement.

**Schedule:** Annually; Ongoing

Existing Effort: The City has begun water quality sampling of the Yerkes Drain. Samples are taken at three locations along the Drain and tested at the Water Department's Lab facilities for Total Suspended Solids (TSS), Ammonia Nitrogen, Total Phosphorus and Biological Oxygen Demand (BOD).

Various City residents have participated in the HRWC Adopt-A-Stream Program.

Future Effort: The City will continue its existing efforts.

**Task III-3.5:**        **Co-sponsor a stream clean-up with the School District, the HRWC or a similar group.**

**Target Audience:** Citizens, City staff, and school students.

**Description:** Local Boy Scout troops, citizens and City staff volunteer annually to perform storm drain cleaning (trash, litter and debris removal) along three major drains in the City – the Yerkes, Sayre and Lyon No. 1 Drain. The scouts are also provided with a number of educational materials regarding storm drain awareness, household hazardous waste disposal and proper fertilizer practices.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of materials removed (i.e. cubic yards of debris/waste removed). Number of volunteers and comments received. Copy of newspaper articles printed regarding the clean-up events. Increased participation annually.

**Schedule:** Annually; Ongoing

Existing Effort: The City will continue to encourage volunteers to participate in the annual stream clean-up/storm drain stenciling event. Event flyers are distributed to various local Boy Scout troops, and at least one article is published in the *South Lyon Herald*. Over 100 storm drains have been stenciled to date.

Various City residents have participated in the HRWC Adopt-A-Stream Program.

Future Effort: The City will continue its existing efforts.

**Task III-3.6: Co-sponsor a storm drain stenciling/marker program with a local community group.**

**Target Audience:** General public, local businesses, industries, construction contractors and developers

**Description:** A citizen advisory committee member has volunteered to organize a number of local Boy Scout troops and packs to label storm drains at various locations throughout the City. The intent of the storm drain stenciling/marking program is to add to the awareness of citizens/students on local storm water drainage and to prevent locals and visitors from dumping in storm drains. The markers read, “Don’t Pollute-Flows to Waterways.”

**Responsibility:** City administration

**Measurable Goal:** Number of drains labeled. Increased participation annually.

**Schedule:** Annually; Ongoing

Existing Effort: The City will continue to encourage volunteers to participate in the annual stream clean-up/storm drain stenciling event. Event flyers are distributed to various local Boy Scout troops, and at least one article is published in the *South Lyon Herald*. Over 100 storm drains have been stenciled to date.

In 2009, a local Eagle Scout and other volunteers posted 10 wooden signs along the streams throughout the City, which identifies the name of the drain.

Future Effort: The City will continue its existing efforts.

**Task III-3.7: Co-sponsor a wetland planting or native landscape project on City property with a community group, the HRWC or a similar group.**

**Target Audience:** Citizens, City Staff

**Description:** Design and implement a wetland planting or native landscape planting that can be used as an example/showcase for citizens. In addition, the project can be used in various nature studies (i.e. observing/studying flora and fauna; studying habitats, etc.).

**Responsibility:** City Administration

**Measurable Goal:** Copies of announcements, publications and notifications (newsletter, newspapers, etc.). Location and number/type of plantings established.

**Schedule:** Completed; Ongoing

Existing Effort: In 2007, a South Lyon resident and Eagle Scout, along with a group of volunteers, installed 200 feet of native vegetation along the stream at McHattie Park.

Future Effort: The City will consider additional projects in the coming years.

The City will continue its existing efforts.

A summary of the tasks, measures, and the implementation schedule for the PIPP are shown in Table 8-2 (Section VIII).

## ***Section IV - Illicit Discharge Elimination Plan***

---

### **4.1 Illicit Connection and Discharge Elimination Plan (IDEP) Objectives**

The purpose of the IDEP is to develop a program to prohibit and effectively eliminate illicit discharges to the storm sewer system. The federal law defines “illicit discharge” and “illicit connection” as follows:

Illicit discharge - the discharge of untreated sanitary wastewater (including industrial and commercial wastewater) or other polluting materials into a river, stream or other water body from: improper sewage connections - such as sources of sanitary sewage which should be connected to the sanitary sewer but are inappropriately connected to the storm sewer; effluent from improperly designed and/or operated septic systems; sanitary sewer overflows; improper disposal of waste products – such as emptying a mobile home holding tank into a catch basin or pouring used motor oil into a catch basin; Other discharges not composed entirely of storm water (except as specified in the permit).

Illicit connection – an improper physical connection of illicit discharges to the storm water drainage system, or other connections not authorized by the local authority (where required), to the storm water drainage system. Examples of illicit connections are: a) a floor drain in an automobile repair shop that is connected to the storm sewer rather than the sanitary sewer; and b) a septic tank discharge line that has been connected to the storm sewer. An improper connection of a source of storm water to the sanitary sewer would also be considered an illicit connection, for example, a parking lot catch basin that is tapped into the sanitary sewer. Illicit connections refer to a physical connection to the drainage system that either: primarily conveys illicit discharges into the storm sewer system, or is not authorized or permitted by the local authority, if required.

For the purposes of this plan, “outfall” and “point source” are defined as a location where the storm water from a separate storm water conveyance under the jurisdiction of the City passes into a water body, wetland, upland or into a conveyance or property under the ownership or jurisdiction of an entity other than the City. “Significant Illicit Discharge” is a discharge that shows evidence of impairing water quality in the receiving water. During visual observations or sampling, in instances where the storm water outfall is submerged or the outfall is connected to another enclosed sewer, the City will inspect the nearest upstream manhole or access point.

### **4.2 City of South Lyon Storm Sewer System**

The City of South Lyon covers approximately 3.7 square miles. It has separate sanitary and storm sewers under its jurisdiction. There are currently 14 septic systems remaining within the City. The separate storm sewer system in the City of South Lyon consists of storm sewers under the ownership and/or jurisdiction of several different entities, namely, the RCOC, the OCWRC, private entities, the City of South Lyon, and the South Lyon Community School District. For example, approximately 2.66 miles of primary roads and 0.99 miles of secondary roads in the City, and their associated right-of-way drainage systems, are under the jurisdiction of the RCOC (data from RCOC).

The City of South Lyon's separate storm sewer system and the locations of known storm sewer outfalls are listed in Appendix C. There are five (5) Oakland County drains within the City of South Lyon. The drains are the South Lyon No. 1 Drain, the Lyon Drain No. 1, Yerkes Drain, Sayre Drain and the Underhill Drain. The City currently knows of 159 outfalls under their jurisdiction. They discharge to various receiving sites including the OCWRC drains, land owned by the City of South Lyon, the South Lyon Community School District and other privately owned property within the City of South Lyon. All storm water from the City ultimately drains to the Huron River.

#### 4.3 Planned Efforts

The following subsections summarize the five (5) required elements of an IDEP as specified in the MDNRE Jurisdictional General Storm Water Permit and the City's plans for addressing each element. The City is committed to beginning the IDEP within 90 days of final submittal of the SWMP and to completing activities in each of the three required elements within 5 years of COC issuance. The actions completed will comply with the regulations and plan objectives and are summarized in Table 8-3 (Section VIII).

**1. *Develop adequate legal authority and enforcement capability to implement its illicit connection and discharge elimination program within its jurisdiction.***

**Task IV-1.1: Review existing City ordinances.**

**Description:** The City of South Lyon has adequate legal authority and enforcement capability to implement its IDEP. The City conducted a thorough review of its existing ordinance to determine if:

- The ordinance adequately defines illicit connections and discharges;
- The ordinance prohibits illicit connections and discharges;
- The City has adequate legal authority to investigate suspected illicit connections and discharges;
- The City has adequate legal authority to require elimination of illicit connections and discharges;
- The City has adequate enforcement capability.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of review.

**Schedule:** Completed; Ongoing

Existing Effort: In March 2007, the City's consultant reviewed the City's existing ordinances and provided recommendations. The existing ordinances currently allow the City to implement the basic requirements of the SWMP.

Future Effort: The City will continue its existing efforts.

**Task IV-1.2: Amend and adopt City ordinance as needed.**

**Description:** If needed, the ordinance will be modified to ensure that the City has the legal authority to implement the IDEP. Model ordinances will be utilized to provide wording for any amendments that may be necessary to give the City adequate legal authority and enforcement capability.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of adoption of amendments.

**Schedule:** Ongoing

Existing Effort: See Activity 1.1.

Future Effort: See Activity 1.1.

2. *Prepare a drainage system map showing all known City-operated outfalls.*

**Task IV-2.1: Evaluate the use of Global Positioning System (GPS) equipment in mapping efforts.**

**Description:** The City has updated its storm sewer maps in GIS format. No new outfalls have been identified. Updates include storm sewers, catch basins, and manholes for new developments that have been completed within the last reporting period.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of evaluation and decision.

**Schedule:** Completed; Ongoing

Existing Effort: All utility maps have been updated with the most current drawings. City outfalls were inspected for GIS quality control.

Future Effort: The City will update its map as needed.

**Task IV-2.2: Field verify storm sewer outfalls.**

**Description:** The City performs an ongoing field verification of the storm conveyance outfalls within the City based on the existing maps.

**Responsibility:** City Administration

**Measurable Goal:** Outfall map and table updated.

**Schedule:** Annually; Ongoing

Existing Effort: See Activity 2.1.

Future Effort: The City will continue its existing efforts.

**Task IV-2.3: Develop procedures to identify and record outfalls from new construction.**

**Description:** All utility maps have been updated in 2009 to include new developments.

**Responsibility:** City Administration

**Measurable Goal:** Procedure documented and implemented. New outfalls were mapped and inspected.

**Schedule:** Completed; Ongoing

Existing Effort: See Activity 2.1.

Future Effort: See Activity 2.1.

3. *Develop and implement a program to find and eliminate illicit connections and discharges.*

**Task IV-3.1: Perform visual inspections and dry weather screenings of all City operated storm sewer outfalls.**

**Description:** Ongoing visual inspections are performed at each of the City-operated outfalls within the City during dry weather. All 159 outfalls have been

inspected to date. A priority method will not be necessary due to the moderate numbers of outfall structures and no known problems at this time. A priority method may be added at some point in the future based on the number of illicit connections/discharges found.

Dry weather discharges are sometimes indicative of illicit connections. Dry weather inspections are conducted if no rain/precipitation event has occurred for a minimum of 48 hours. If flow is observed in the sewer at that time, it may be attributed to sewage, cooling water, sump pump discharge, infiltration from ground water sources, or runoff from potable water sources such as lawn sprinklers.

The City may be able to locate the source of an illicit connection/discharge solely through visual observation of flow in the storm sewer at manholes. Odor, color, turbidity, bacteria growth, quantity of flow, etc., may lead to the source of a problem without additional sampling.

All storm outfalls that are discharging during dry weather will be investigated further by upstream visual inspection or with televising, as-built pipe schematic review, dye and/or smoke testing, sampling, or other investigation as needed to determine the nature and source of the flow.

Most illicit connections/discharges within the City have been identified by City staff while out in the field, or by City residents.

1. Televising - The City may elect to televise those storm sewers that have suspicious flows to identify pollutant sources that cannot be located through simple visual observation and/or sampling. For example, the City may determine through visual observation and/or sampling that an illicit connection exists between two specific manholes. Video inspection of the stretch of storm sewer between these two manholes could be used to isolate the exact source of the connection/discharge.
2. As-built pipe schematic review - Where available, the City will utilize as-built pipe schematic drawings as a tool to determine the source of an illicit connection/discharge.
3. Dye or smoke testing - The City will conduct physical inspection of commercial and/or residential facilities as needed to verify suspected illicit connections that are detected through visual observations/sampling of yards, outfalls and manholes. As necessary, facility inspections will include dye or smoke testing of suspect facility plumbing fixtures to determine if the fixture discharges to the sanitary sewer or to the storm sewer. All facility inspections will be documented.
4. Sampling - Investigation of dry weather discharges will be prioritized based on the number of discharges identified as well as other factors including location, volume of flow, and suspected contaminants based on color, turbidity, or odor. If flow is observed during the dry weather outfall inspections and visual observations do not lead to a source, the City may decide to sample the flow for pollutant parameters typically found in illicit connections. Sampling can rule out some dry weather discharges such as groundwater. The sampling will typically begin at the outfall and continue upstream from manhole to manhole until a source is found. The choice of sampling parameters will depend on several factors including:

- Location of the storm outfall (i.e., in residential or commercial area);
- Turbidity and color of discharge which could distinguish between an illicit discharge from a commercial establishment versus a residence;
- Odor associated with discharge such as petroleum odor, or raw sewage odor.

The City will analyze the samples for some or all of the following parameters:

Parameters	Found In	Potential Source(s)
<i>Escherichia coli</i>	Sewage	<b>Human or Animal Waste</b>
Surfactants	Soap, Emulsifiers	<b>Industrial/Commercial/ Residential</b>
Ammonia	Sewage, Fertilizers, Industrial Chemicals	<b>Industrial/Residential/ Agricultural</b>
Nitrates	Sewage, Fertilizers, Industrial Chemicals	<b>Fertilizers/ Industrial/ Residential/Agricultural</b>
Nitrites	Sewage, Fertilizers, Industrial Chemicals	<b>Fertilizers/ Industrial/ Residential/Agricultural</b>
Conductivity	Industrial Waste, Sewage, Salt	<b>Industrial/ Residential/ Agricultural</b>
Total Dissolved Solids	Industrial Waste, Sewage, Salt	<b>Industrial/Residential/ Agricultural</b>
Temperature	Cooling Water, Sewage	<b>Industrial/ Residential</b>
pH	Acids and Bases	<b>Industrial/ Residential</b>

**Responsibility:** City Administration

**Measurable Goal:** Number of outfalls inspected. Documentation of findings. Number of illicit discharges discovered. Inspect all outfalls every 5 years.

**Schedule:** Ongoing; Every five (5) years.

Existing Effort: All 156 outfalls were inspected in 2007-08. No illicit discharges or corrections were found.

Future Effort: The City will continue its existing efforts and inspect all outfalls every five (5) years.

**Task IV-3.2: Trace Illicits and Owner Notification.**

**Description:** Trace illicit discharges to their source and notify the owner in writing and direct them to eliminate the illicit connection/discharge within a specified timeframe. The notification requires the owner to inform the City when the connection

has been eliminated. The timeframe for eliminating the connection/discharge will depend on the type of illicit connection/discharge, expense, and difficulty in repair. The goal of the plan is to have most illicit connections/discharges eliminated within 60 days of notification. Illicit connections/discharges that are more complex may take longer than 60 days to eliminate. Follow-up inspections will be done to verify corrections.

- Responsibility:** City Administration  
**Measurable Goal:** Number of illicit connections and documentation of notification and elimination. Illicit discharges/connections eliminated within 60 days of notification.  
**Schedule:** Ongoing

Existing Effort: Illicit discharge/connections complaints, tracking methods, and corrections are noted in the progress report. Illicit discharges/connections eliminated within 60 days of notification.

Future Effort: The City will continue its existing efforts.

- Task IV-3.3: Follow-up Enforcement for Non-correction**  
**Description:** When a potential illicit discharge/connection is found, the City follows up with the owner to ensure that the connection/discharge has been eliminated. If the illicit has not been eliminated, the City will enforce its ordinances to obtain compliance.  
**Responsibility:** City Administration  
**Measurable Goal:** Documentation of enforcement actions. Number of illicit connections found vs. number eliminated.  
**Schedule:** Ongoing

Existing Effort: See Activity 3.2.

Future Effort: See Activity 3.2.

- Task IV-3.4: Provide training to appropriate City staff on illicit connections and discharges, failed OSDS, safety issues and natural occurring phenomenon.**  
**Description:** City staff periodically attend training on illicit connections and discharges, failed OSDS safety issues, procedures for responding to spills and emergency situations, methods for eliminating illicit discharges and proper enforcement, and natural occurring phenomenon to appropriate City staff. Various staff members from the City have been trained to date.  
**Responsibility:** Department of Public Works  
**Measurable Goal:** Number of illicit connections/discharges found, refined, and/or corrected. Train all relevant field employees every 3 years and new employees within 1 year of employment. Updates provided in Progress Report.  
**Schedule:** Annually; Ongoing

Existing Effort: Various DPW staff have attended the OCWRC IDEP Training workshops that are offered annually.

Future Effort: The City will continue its existing efforts.

4. *Develop and implement a program to minimize seepage from sanitary sewers and on-site sewage disposal systems (OSDS) into the separate storm water drainage system.*

**Task IV-4.1: Identify and record all OSDS within the City.**

**Description:** The City has located and recorded all OSDS within the City limits. To date, there are 14 OSDS within the City.

- Citizen complaints are recorded and then referred to the OCHD.
- City field employees are trained to identify failed OSDS so in their daily routine they can assist in locating these areas of concern and advise OCHD.

**Responsibility:** City Administration

**Measurable Goal:** A list/map of the locations of all OSDS. Updated lists of OSDS locations with progress report if necessary.

**Schedule:** Completed; Ongoing

Existing Effort: 14 OSDS have been identified to date; 13 OSDS were connected to sanitary sewer in 2006.

Future Effort: Any new connections will be noted in the progress report.

**Task IV-4.2: Enforcement of Existing and Revised City Ordinance.**

**Description:** Currently, the City identifies failing OSDS through complaints from residents and/or observations made by City field personnel. When failing OSDS are identified, the City notifies the OCHD. A review of the City's ordinance indicates that the Section 94 of the City Code requires connection to the sanitary sewer system where the OSDS is determined to be failing if the service is available. Any OSDS found to be failing are sent a notice to connect to the sanitary sewer, if it is available, in accordance with City Code. If the ordinance is revised, it will be enforced accordingly.

**Responsibility:** City Administration

**Measurable Goal:** Number of notice letters sent and failed OSDS connected to the sewer.

**Schedule:** Ongoing; As-Needed

Existing Effort: Currently, the City identifies failing OSDS through complaints from residents and/or observations made by City field personnel. When failing OSDS are identified, the City notifies the OCHD. A review of the City's ordinance indicates that Section 94 of the City Code requires connection to the sanitary sewer system where the OSDS is determined to be failing if the service is available. Any OSDS found to be failing are sent a notice to connect to the sanitary sewer, if it is available, in accordance with City Code.

Future Effort: Any failing OSDS and/or connections to the sanitary sewer will be noted in the progress report.

**Task IV-4.3: Review OCHD Program and Ordinance.**

**Description:** The City will review the OCHD program and evaluate for compliance with Phase II. The City of South Lyon recognizes the authority and expertise of the OCHD in overseeing issues related to failing septic systems. Currently, all new construction and repairs for OSDS are permitted through the OCHD.

Oakland County is currently pursuing a county-wide OSDS inspection ordinance. The City will support the county and state efforts to develop a program for periodic, mandatory inspection/repair of failing OSDS. If a county-wide ordinance is not enacted, the City will evaluate its ordinances and if found to be inadequate will revise them to require owners of failing OSDS to connect to a sanitary sewer system if one is available.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of review of OCHD program. Documentation of adoption.

**Schedule:** Completed; Ongoing

Existing Effort: In March 2007, the City's consultant reviewed the City's existing ordinances and provided recommendations. The existing allowances currently allow the City to implement the basic requirements of the SWMP.

Future Effort: The City will continue its existing efforts.

**Task IV-4.4: OSDS Complaint Tracking, Response, and Investigation (See Task II-1.2).**

**Description:** Citizens and business owners are often an excellent source of information regarding illicit connections and discharges. The City currently has a complaint response system in place that forwards complaints to the OCHD. However, improvements to the system can be made. The City has established a reliable system to receive and investigate citizen reports regarding suspicious discharges from storm sewer outfalls, failed OSDS, waste dumping, construction sites, etc. The reporting system includes:

- Telephone complaint system with emergency number for non-business hours;
- Complaint documentation and tracking system;
- Follow-up notification to reporting citizen to inform them what corrective actions have been or are being taken.

When the City of South Lyon receives complaints regarding illicit discharges, the City investigates each suspected connection as outlined above and take appropriate action(s).

**Responsibility:** City Administration

**Measurable Goal:** Documentation of complaint receipt, response and follow-up to complaint. Provide updates in Progress Report.

**Schedule:** Ongoing; As-Needed

Existing Effort: See Activity 4.2.

Future Effort: See Activity 4.2.

**Task IV-4.5: Evaluate the integrity of the separate sanitary sewer system in the City.**

**Description:** Evaluate the sanitary sewer system to ensure that seepage into the groundwater and surface water is minimized. The evaluation includes visual observation, flow, other record review, sewer televising, and other means as appropriate.

**Responsibility:** DPW

**Measurable Goal:** Report of evaluation and recommendations. Records of repairs.

**Schedule:** Ongoing; As-Needed

Existing Effort: Televising of the storm and sanitary systems are performed as needed.

Future Effort: The City will continue its existing efforts.

**Task IV-4.6: Provide training to appropriate City staff on failed OSDS. (See Task IV-3.4)**

**Description:** Various City staff have attended training workshops on the recognition and reporting of failed OSDS to appropriate City staff.

**Responsibility:** Department of Public Works

**Measurable Goal:** Training records. Number of illicit connections/discharges found, referred, and/or corrected. Number of staff trained annually. Train all relevant field employees every 3 years and new employees within 1 year of employment. Updates in Progress Report.

**Schedule:** Annually; Ongoing

Existing Effort: Various City staff have attended the IDEP training workshops offered by Oakland County. Information is provided in the progress reports.

Future Effort: The City will continue its existing efforts.

**5. Coordinate the implementation of IDEP efforts with other government agencies.**

**Task IV-5.1: Coordination with the OCWRC and OCHD.**

**Description:** The OCWRC has developed its own illicit connection and discharge elimination program. OCWRC periodically inspects and samples its storm drain outfalls to surface waters. When County sampling and inspection results suggest that illicit connections to County storm drains exist, OCWRC investigates further to determine where the suspected illicit discharge is coming from. OCWRC notifies the City of all illicit connections/discharges suspected to originate in the City of South Lyon. The City investigates each suspected connection and takes appropriate action(s) in accordance with the investigative techniques described earlier.

OCWRC maintains a 24-hour, 7-days-per-week Safety Dispatch complaint telephone "hotline" (248-858-0931). OCWRC refers complaints to the City of South Lyon as appropriate. The City investigates all complaints received through the OCWRC hotline and residents and takes remedial actions as appropriate. The City coordinates OSDS and IDEP complaint responses with the OCHD as needed.

**Responsibility:** City Administration

**Measurable Goal:** Number of illicit referred.

**Schedule:** Ongoing; As-Needed

Existing Effort: The OCWRC hotline and information are posted on the City website. The City coordinates with Oakland County as needed. All IDEP and OSDS complaints from OCWRC or City residents are further investigated by City and OCHD staff. IDEP and OSDS complaint/investigation updates are provided in the progress report.

Future Effort: The City will continue its existing efforts.

**Task IV-5.2:**

**Coordination with the MDNRE.**

**Description:**

The City notifies MDNRE of illicit connections/discharges discovered and of corrective actions being taken to eliminate the connection/discharge in the annual report or immediately if appropriate. Progress reports summarize the following:

- Illicit connections/discharges identified through citizen complaints, OCWRC referral, inspections, sampling and/or sewer television and the corrective actions taken, including follow up inspections and sampling;
- Dry/wet weather storm water outfall inspections conducted;
- Storm sewers televised in the past year, if any, and the findings;
- Corrective actions taken as a result of storm sewer televising;
- The anticipated schedule for televising storm sewers in the upcoming year;
- Sanitary sewers televised in the past year, as well as the findings;
- Corrective actions taken as a result of sanitary sewer televising;
- The anticipated schedule for televising the sanitary sewers in the upcoming year;
- On-site sewage disposal systems found to be improperly functioning and the actions taken to correct the problems.

For significant illicit discharges, the City lists the pollutant(s) of concern, the estimated load and volume discharged, and the locations of the discharge into the system and to the waters of the state. For unresolved sewage discharges that are the responsibility of the City, the report will follow the reporting requirements of Section 324.112a of Part 31 of Public Act 451 of 1994, as amended.

**Responsibility:** City Administration

**Measurable Goal:** Copy of the progress report.

**Schedule:** Ongoing; As-Needed

Existing Effort: See Activity 5.1.

Future Effort: See Activity 5.1.

The tasks, measures, and implementation schedule of the IDEP are summarized in Table 8-3 (Section VIII).

# ***Section V - Post-Construction Storm Water Management Program***

---

## **5.1 Post-Construction Storm Water Management Program (P-CMP) Objectives**

The City of South Lyon will address storm water management issues for new development and redevelopment at various levels—from City mandates to specific controls for individual projects—by developing and implementing a comprehensive storm water master plan. The objectives of the P-CMP are to minimize the effects of urbanization by addressing storm water runoff from new development and redevelopment projects that disturb one acre or greater, including projects less than one acre that are part of a larger common plan of development, that discharge to the storm sewer system. The storm water master plan is a comprehensive document which describes policies, standards, and requirements for preventing storm water impacts and protecting sensitive areas. The plan details methods of inspection, enforcement, and levels of responsibility for long-term maintenance.

## **5.2 Planned Efforts**

The following subsections summarize the three (3) required elements of a P-CMP as specified in the MDNRE General Storm Water Permit and the City’s plan for addressing each requirement. The City is committed to the comprehensive management of storm water issues. The plans and actions implemented by the P-CMP will be consistent with the regulations and plan objectives. Table 8-4 in Section VIII is a summary of the tasks, measures, and the implementation schedule of the P-CMP.

### ***1. Develop a storm water master plan for development, implementation, and enforcement of jurisdiction-wide controls to protect the designated uses of State receiving waters.***

- |                     |  |
|---------------------|--|
| <b>Task V-1.1:</b>  | <b>Prepare and adopt a storm water master plan.</b>  |
| <b>Description:</b> | <p>Develop a comprehensive storm water master plan which emphasizes controlling impacts of storm water runoff from new construction and redevelopment sites. The storm water master plan includes development guidelines, discharge construction regulations and design standards that will regulate the quantity and quality of storm water. Examples of comprehensive management plan controls for prevention of impacts from urbanization include the following:</p> <ul style="list-style-type: none"><li>• Policies and ordinances that provide requirements and standards for directing growth to identified areas;</li><li>• Protecting sensitive areas such as wetlands and riparian areas;</li><li>• Maintaining and/or increasing open space;</li><li>• Encouraging infill development in higher density urban areas and areas with existing infrastructure;</li><li>• Establishing in-stream maximum flow targets designed to minimize stream bank erosion and maintain healthy fish populations;</li><li>• Coordinating release volumes and rates from detention basins to achieve in-stream maximum flow targets.</li></ul> |

Adopt the plan as City-wide policy and use it to guide plan review, inspections, upgrades to infrastructure, and enforcement.

**Responsibility:** City administration  
**Measurable Goal:** Documentation of adoption.  
**Schedule:** Completed By May 2010

Existing Effort: The Storm Water Master Plan is scheduled to be finalized by May 2010.

Future Effort: Once completed, a copy of the Plan will be posted on the City website.

2. *Develop the legal authority to address post-construction storm water runoff from new development or redevelopment to the extent allowable.*

**Task V-2.1:** **Adopt policies and ordinances or other regulatory mechanisms to require appropriate post-construction BMPs.**

**Description:** The City reviewed its existing regulatory mechanisms and MDNRE have determined that the existing ordinances and policies are sufficient and meet the minimum requirements of the General Storm Water Permit.

In addition, appropriate non-structural and/or structural BMPs will be encouraged. Examples of non-structural and structural BMPs to be included are:

Non-structural BMPs:

- Buffer protection along water bodies;
- Establishment of easements for vegetative filter strips and infiltration, BMPs;
- Minimum disturbance of soils and vegetation;
- Planting native vegetation;
- Incentives for reducing imperviousness.

Structural BMPs:

- Wet ponds and extended detention facilities;
- Vegetative buffers;
- Filtration practices such as grassed swales, sand filters and filter strips;
- Infiltration practices such as infiltration basins, bioinfiltration, infiltration trenches, rain gardens and infiltration islands in parking lots.

The City is currently following the OCWRC standards for Retention/Detention.

**Responsibility:** City Administration  
**Measurable Goal:** Report on updated ordinance and/or procedures to comply with the permit.  
**Schedule:** Ongoing; As-Needed

Existing Effort: A copy of the existing policies and ordinances was submitted with the permit application. These policies and procedures were deemed acceptable by MDRNE and found to meet the minimum requirements of the permit.

Future Effort: The City will continue to enforce its existing ordinances and procedures and will encourage the use of structural and non-structural BMPs.

**Task V-2.2: Provide training for City field staff.**  
**Description:** The P-CMP is assigned to the City's Department of Public Works and Building Department, as they issue the general permits for sites. The personnel needed to implement this program include plan review staff that are knowledgeable of the permitting process, and site inspectors that are trained in overseeing the implementation and maintenance of BMPs during and after construction. The following types of training are essential to the success of the post-construction program:

- Recommended Best Management Practices (BMPs);
- Training of staff responsible for plan reviews and permit issuance in the design and application of BMPs and post-construction controls;
- Training of inspection staff in the proper methods and installation techniques of BMPs and post-construction controls.

**Responsibility:** City Administration; DPW  
**Measurable Goal:** Copy of the training program and employee attendance records.  
**Schedule:** Annually; Ongoing

Existing Effort: Various City staff have attended SEMCOG and MDNRE workshops regarding PP & GH and P-CMP. This information is provided in the progress reports.

Future Effort: The City will continue its existing efforts.

**Task V-2.3 Prepare informational materials and conduct outreach for the development community.**  
**Description:** In conjunction with its PEP and Construction Site Runoff Control Program, the City has provided informational and educational materials to the construction/development community for both structural and non-structural BMPs. The materials are in the form of brochures/handouts that are available at City Hall for developers at the time of the construction permit application. The informational brochures/handouts will cover subjects such as:

- Low-impact development/Landscaping for storm water control
- Minimization of impervious surfaces
- Maximization of infiltration
- On-site storm water detention
- On-going inspection and maintenance
- Site planning measures that avoid or reduce disturbance of sensitive areas and limit addition of impervious surfaces
- Pollution prevention/source control measures that reduce or eliminate potential future sources of pollutants
- Treatment control measures that treat polluted runoff from new development/redevelopment sites
- Capturing sediment
- Good housekeeping

**Responsibility:** City Administration; DPW  
**Measurable Goal:** Copies of the information and numbers distributed. Calculations of nonpoint source pollutant loading reductions based on the number and types of BMPs implemented within the City.  
**Schedule:** By September 2010; Ongoing

Existing Effort: The City utilized a document developed by Wayne County and began distributing it to local contractors and developers. The SEMCOG LID Brochures are available at City Hall.

Future Effort: A web link to the SEMCOG LID Manual will be posted on the City website by September 2010. LID Brochures for Developers will also be available at City Hall.

**Task V-2.4: Inspection Program.**

**Description:** From construction drawings submitted by the developer and site inspections, the City's engineering and building departments will determine the proper installation of post-construction controls and BMPs implemented on the project. The checklist will be developed to reflect the proper implementation of post-construction controls and BMPs and inspection programs will ensure that storm drains/inlets are adequately isolated from pollutant sources.

**Responsibility:** City Administration

**Measurable Goal:** Inspection and enforcement records. Records of # and type of BMPs installed.

**Schedule:** By August 2007; Ongoing

Existing Effort: The City began working on a BMP database in August 2007.

Future Effort: The City will continue its existing efforts.

**Task V-2.5 Long-Term Maintenance and Operations Program.**

**Description:** A major problem with many new development and redevelopment runoff controls is the proper long-term maintenance and operations of post-construction controls. The problem has many facets:

- Post-construction runoff controls require proper maintenance and become less effective or fail when maintenance is inadequate;
- Projects are often built by one entity and then occupied/owned by another entity. Several ownership changes make it difficult to delegate maintenance procedures and responsibilities to subsequent owners;
- Occupants/owners may not wish to take on maintenance responsibilities or costs or may be ignorant of such responsibilities or costs.

To avoid these problems, the City has mechanisms in place to ensure that the controls are properly maintained. The City has an inventory and Operations and Maintenance system in place for all retention and detention basins (either commercially or owned by a Homeowner's Association) located within the City.

- For single-family residential developments where homes or lots are sold by the developer to individuals, and maintenance functions cannot be assigned to any one entity, the City will enter into a long-term maintenance agreement with the homeowners association. The City would then charge the property owners for the service provided through a user fee or an assessment. The City will inform the developer that this requirement must be conveyed to the Homeowners Association/property owner when the project is handed over;
- For projects involving multi-family residential units, the maintenance of the controls can be ensured through covenants, conditions, and restrictions adopted for the development. The City will inform the

developer that this requirement must be conveyed to the Homeowners Association/property owner when the project is handed over;

- For commercial/industrial developments, the maintenance aspects can be ensured through conditions in lease agreements. The City will inform the developer that the lease agreements must note the maintenance requirements for post-construction runoff controls at the site.
- For public projects, maintenance of post-construction controls will be ensured by: (1) establishing a maintenance and monitoring plan for each City project, (2) assigning the task to the department responsible for the general maintenance of the site, and (3) providing adequate funding.

**Responsibility:** City Administration

**Measurable Goal:** A copy of the program, Copies of maintenance agreements; Copies of services rendered for operations and maintenance completed by the City.

**Schedule:** Completed; Ongoing

Existing Effort: The City currently has an O&M system in place for all retention and detention basins (owned either commercially or by a Homeowner's Association) located within the City.

The City Ordinances allow the City to maintain or rehabilitate retention/detention basins as needed.

Future Effort: The City will continue its existing efforts.

**Task V-2.6: Coordinate with other government agencies.**

**Description:** The City coordinates with OCWRC as needed regarding jurisdictional issues and ensures that the County will accept responsibility for long-term maintenance of their BMPs associated with County drains. The City reviews cases that are referred to them by the MDNRE. The City will update MDNRE on the status of the cases that were referred in addition to the progress reports.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of coordination efforts.

**Schedule:** Ongoing; As-Needed

Existing Effort: The City coordinates with the County regarding County-owned drains.

Future Effort: The City will continue its existing efforts.

### **3. Review and revise plan review procedures and requirements.**

**TaskV-3.1: Revise plan review procedures for new development or redevelopment to ensure the appropriate installation of BMPs, minimize illicit discharges, and ensure adequate long-term maintenance.**

**Description:** Prior to receiving a construction permit from the City for a new development or redevelopment project, the applicant or developer must secure and submit all required approvals and permits from State and County agencies (MDNRE, MDOT, OCWRC, RCOC) and others as required. This process provides the City the opportunity to review the project during the planning

stage and to direct its design and development in regards to storm water runoff issues through the City's Building Department.

The City may, at this stage, require a developer to have in place a particular structural and/or non-structural BMP(s) that would reduce the potential for discharge of pollutants into the storm sewer system and the appropriate long-term maintenance of such controls. Upon ordinance review, the City may choose to revise current procedures and specifications to the City's Standard Engineering Specifications Manual or to adopt an ordinance that will allow for the proper implementation of post-construction controls and BMPs.

The City will also ensure that spills and illicit discharges are minimized by reviewing the location of drainage inlets in relation to pollutant sources for commercial sites and ensuring that requirements are met for regulating the rate at which storm water flows into the drainage system.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of review and a copy of the review procedure.

**Schedule:** By October 2011

Existing Effort: The City reviewed its Engineering Design Standards in Winter 2007-08. No revisions have been made at this time. The existing Engineering Standards and Ordinances were submitted with the Permit Application. According to the City's CoC, no necessary revisions are needed at this time.

Future Effort: By October 2011, the City will consider revising its standards to ensure appropriate installation of BMPs, minimize illicit discharges, and ensure adequate long-term maintenance.

The tasks, measures, and implementation schedule of the P-CMP are summarized in Table 8-4 (Section VII).

# ***Section VI - Construction Site Storm Water Runoff Control Program***

---

## **6.1 Construction Site Storm Water Runoff Control Program (CRCP) Objectives**

Storm water runoff from construction sites is currently regulated by the OCWRC and the MDNRE. OCWRC reviews site plans, inspects sites, and enforces the Part 91 regulations within the City limits. The City wishes to continue this arrangement and will request documentation from the County stating that it will provide these services to the City in a manner that will comply with the MS4 Phase II requirements.

At this time, the City's CRCP mainly involves ordinance and plan review policy revisions, contractor and City staff training, and ensures that the above regulatory programs meet the MS4 Phase II Permit requirements. If neither of these programs proves to be adequate, the City will research additional regulatory mechanisms that will enable Phase II Permit compliance. This may include becoming a Municipal Enforcing Agency (MEA) for Part 91 of Public Act 451 in order to regulate construction site storm water runoff at the local level.

## **6.2 Planned Efforts**

The following subsections summarize the required elements of a CRCP as specified in the MDNRE Jurisdictional General Storm Water Permit and the City's plans for addressing each element. The City is committed to ensuring that the activities of each of the required elements are properly implemented. The plans and actions completed by the CRCP will comply with the regulations and plan objectives. The implementation schedule, tasks, and measures for the CRCP are outlined in Table 8-5 (Section VIII).

- 1. The permittee shall prohibit storm water discharge into MS4s from construction activities that are not in compliance with the requirements included in the State of Michigan's Permit by Rule (Rule 323.2190).***

**Task VI-1.1: Coordinate with OCWRC.**

**Description:** OCWRC presently is the County Enforcing Agent (CEA) for the City under Part 91 of Public Act 451, as such it issues soil erosion and sedimentation control (SESC) permits, reviews site plans, inspects sites, and enforces the County ordinance within the corporate limits of the City. The City inspects construction activities to ensure compliance with the local building and grading permits. Current City policy is to report SESC violations to the County that are observed during City inspection activities or as a result of citizen complaints. The City works with OCWRC to implement the City's new complaint tracking system and refers complaints to the OCWRC when appropriate. The City notifies the OCWRC verbally, within 24 hours, if a construction activity results in a deposit or imminent threat to deposit solids or other waste materials into the drainage system that may endanger health or the environment. The City works with the OCWRC to implement the

complaint tracking system and when appropriate refer complaints to the OCWRC.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of referrals and other issues. Continue to coordinate with OCWRC.

**Schedule:** Ongoing; As-Needed

Existing Effort: A letter of commitment from the OCWRC was submitted with the 2006 progress report. The County notifies the City as needed of any SESC issues.

Future Effort: The City will continue its existing efforts.

**Task VI-1.2: Coordinate with MDNRE.**

**Description:** If the MDNRE is the enforcing agency for a particular site under Part 91, then the City will report SESC violations and citizen complaints to the appropriate MDNRE personnel. The contact information for the appropriate MDNRE staff in charge of the regional SESC Program will be updated as part of the City's complaint tracking system. MDNRE currently regulates storm water discharge from construction activities greater than one (1) acre or which directly discharge to waters of the State (including separate storm sewers) under NPDES permits through a Permit-by-Rule. Although it is the responsibility of the permittee to notify MDNRE within 5 days of becoming aware of an NPDES permit violation, the City may also notify the appropriate MDNRE personnel of such a violation. The City will also review and follow-up on any cases referred to them by MDNRE and update MDNRE on the status of these cases during regular progress reports. The City notifies the MDNRE verbally, within 24 hours, if a construction activity results in a deposit or imminent threat to deposit solids or other waste materials into the drainage system that may endanger health or the environment.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of referrals and other issues. Provide updates in Progress Report.

**Schedule:** Ongoing; As-Needed

Existing Effort: MDNRE notifies the City of any issues of noncompliance regarding projects within their jurisdiction. This information is noted in the progress report.

Future Effort: The City will continue its existing efforts.

**2. Review preliminary construction site plans to ensure adequate soil erosion and sediment controls.**

**Task VI-2.1: Review the existing SESC Program administered by OCWRC.**

**Description:** OCWRC presently is the County Enforcing Agent (CEA) for the City under Part 91 of Public Act 451, as such it issues SESC permits, reviews site plans, inspects sites, and enforces the County ordinance within the corporate limits of the City. The City wishes to continue this arrangement as long as the OCWRC program meets the construction requirements of the general permit and the objectives of the SWMP. The City of South Lyon obtained a letter of

commitment from the County stating that it intends to continue to provide this service to the City in a manner that will comply with the MS4 Phase II Permit.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of review of the OCWRC's SESC.

**Schedule:** Completed; Ongoing

Existing Effort: The City has deemed the OCWRC SESC Program sufficient and meets the minimum Phase II Permit requirements.

Updates on the SESC Program (number of sites inspected; number of closeouts; etc.) are provided in the progress report.

Future Effort: The City will continue its existing efforts.

**Task VI-2.2: Review and revise existing City ordinances as necessary to implement the CRCP.**

**Description:** The City's CRCP consists predominantly of documenting that the County and State regulatory programs for construction activities meet the City's MS4 Phase II Permit requirements in order to avoid duplicate permitting. Storm water, grading, and other related ordinances were reviewed to allow tracking of the CRCP and adequate plan review to meet the MS4 Phase II Permit requirements.

MDNRE currently regulates storm water discharge from NPDES permitted construction activities through its Permit by Rule. The NPDES regulations for construction sites necessitate the permittee to comply with the following:

- Requirements for construction site operators to implement appropriate SESC BMPs;
- Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste that may cause adverse impacts to water quality;
- Requirements for construction site operators to develop and implement storm water pollution prevention plans;
- Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts and ensures that the site is adequately sized for the placement of appropriate SESC BMPs.

The City prohibits storm water discharges into MS4s from construction activities that are not in compliance with these four (4) requirements of the Permit by Rule.

**Responsibility:** City Administration

**Measurable Goal:** Documentation of review and changes to ordinance.

**Schedule:** Completed; Ongoing

Existing Effort: The City reviewed its ordinances in September 2007. No revisions are necessary at this time.

Future Effort: The City will revise its ordinances as needed.

**Task VI-2.3: Review and revise the City’s plan review process.**  
**Description:** The City’s site plan review process was reviewed to ensure that construction site runoff issues are addressed. As the County Enforcing Agency, OCWRC provides plan review for adequate construction site controls under Part 91. Although SESC plan review is the responsibility of the County, the City reviews preliminary site plans on a case-by-case basis to ensure that SESCOs are appropriate. The City may elect to review plans for adequate controls based on site location, size, proximity to waterways and sensitive areas, steep slopes, erosive soils, or randomly.  
**Responsibility:** City Administration  
**Measurable Goal:** Documentation of changes to site plan review process.  
**Schedule:** Completed; Ongoing

Existing Effort: The City reviews all building/site plans as they come in. The City reviews plans to address CRCP and BMP implementation.

Future Effort: The City will continue its existing efforts.

**3. Develop and implement a procedure to receive complaints and other information submitted by the public regarding construction site storm water runoff.**

**Task VI-3.1: Complaint response and investigation (See Task II-1.2).**  
**Description:** Citizens and business owners are often an excellent source of information regarding runoff from construction sites. The City has a reliable system to receive and investigate citizen reports regarding complaints of storm water runoff from construction activities, and the other concerns addressed by the six minimum measures. The reporting system includes a telephone complaint system and documentation tracking system. When the City receives complaints regarding runoff from construction activities, the City investigates each site and takes appropriate action. Very little development or redevelopment occurs within the City, as it is nearly built-out.  
**Responsibility:** City Administration  
**Measurable Goal:** Documentation of complaint receipt and response.  
**Schedule:** Ongoing; As-Needed

Existing Effort: Currently, complaints are received through phone calls, emails, walk-ins, or in-field contacts and referred to the appropriate department for follow-up.

Future Effort: The City will continue its existing efforts.

**4. Provide education materials and outreach.**

**Task 4.1: Provide outreach and distribute educational materials to the construction community.**  
**Description:** In conjunction with its PEP, the City has provided informational and educational materials to the construction/development community to consider when planning projects or filing for permits. The following materials will be developed and used in the construction site permit process:

- Handout/brochure explaining the permitting process for Part 91 and the NPDES Permit-By-Rule;
- Handout/brochure explaining the guiding principles for controlling runoff from construction sites (site planning, minimize soil movement, capture of sediment, good housekeeping practices, and minimization of post-construction activities);
- Handout/brochure on BMPs for smaller, un-permitted sites providing information on good housekeeping and storm drain protection to minimize the entrance of construction site pollutants into storm drains;

**Responsibility:** City Administration

**Measurable Goal:** Copies and numbers of materials distributed. Improved SESC compliance (documentation of a reduction in non-compliance records).

**Schedule:** By May 2010; Ongoing

Existing Effort: The City is utilizing the Wayne County SESC document and has begun distributing it to developers and contractors.

Future Effort: By May 2010, the City will distribute the SEMCOG LID brochure for developers.

Table 8-5 (Section VIII) summarizes the implementation schedule, the tasks, and measures of the CRCP.

# ***Section VII - Pollution Prevention and Good Housekeeping Plan***

---

## **7.1 Pollution Prevention and Good Housekeeping Plan (PPGHP) Objectives**

The purpose of the PPGHP is to monitor, evaluate, and improve pollution prevention measures at municipally-owned facilities. The evaluation includes, but is not limited to, the use and maintenance of: structural controls, roadways, vehicles, storm sewers, flood control mechanisms, pesticides and fertilizers.

The general objectives of the PPGHP are to:

1. Meet the required elements of a PPGHP as outlined in the permit;
2. Involve the municipal operations personnel in the decision-making, review, and implementation of the management plan;
3. Educate the municipal operations personnel in pollution prevention and good housekeeping and in the implementation of the management plan.

## **7.2 Current and Planned Efforts**

The following paragraphs summarize the six (6) required elements of a PPGHP as specified in the MDNRE General Storm Water Permit (MIS040051) and the City's plan for addressing each. Existing and future scheduled activities and potential activities are listed under each element, as well. The information and actions encouraged by the PPGHP will be consistent with the regulations and plan objectives. Table 8-6 is a summary of the tasks, measures, and implementation schedule of the PPGHP.

Currently, the City performs several general maintenance activities to address storm water management and safety procedures. In the implementation of this plan, these activities will either be continued or augmented to correlate with Phase II regulations to ensure compliance.

### **Current Activities**

<b>Street Sweeping:</b>	Major Streets – weekly Local Streets – twice or more annually
<b>Leaf Pickup:</b>	Performed September through December Advertised through the local newspaper and City website
<b>Brush Pickup:</b>	The City receives complaints from residents All brush is piled and chipped
<b>Curbside Garbage and Recycling:</b>	Garbage and recycling is picked up weekly by a contractor Recycling information is advertised through the City website and informational flyers at City Hall

**Battery and Cell Phone Recycling:**

Items can be dropped off at City Hall during office hours  
Information is provided on the City and RRRASOC websites

**Tree Removal:**

Performed on an as-needed basis  
The City receives complaints, and/or acts upon storm damage  
Work is performed either by a contractor, or in-house

**Tree Trimming:**

Performed on an as-needed basis  
The City receives complaints, and/or acts upon storm damage  
Work is performed either by a contractor, or in-house

**Sanitary Sewer Cleaning:** The City televises sanitary sewers and service leads on an as-needed basis. If damage is found, (within City easement), repairs are made. All sanitary mains are cleaned once per year.

**Storm Sewer Cleaning:** Complaints are received by the City for maintenance issues  
All work is performed in-house

**Street Maintenance:** Annual reviews of potential resurfacing & upgrades of roads  
Work is performed if City budget and Council have approved

**Snow Removal:** Removal performed on an as-needed basis  
Police & staff monitor snow. It is removed at once, if necessary.  
All work is performed in-house  
Information is available on the City website

**Planned Activities**

*1. Routine maintenance, maintenance schedules, and long-term inspection procedures of structural controls (i.e. storm drain catch basins, vegetated swales, infiltration basins, sedimentation basins, etc.).*

**Task 1.1: Inventory of all storm water basins owned by the City.**

**Description:** Inventory of all storm water basins owned by the City to determine their location, design criteria, effectiveness and condition.

**Responsibility:** City Administration/Facilities Management

**Measurable Goal:** Map with locations of all basins, an indication of the estimated size, condition of inlets and/or outlets, condition of basin, and photos of basins.

**Schedule:** Completed; Ongoing

Existing Effort: Based on GIS data, 1876 catch basins have been located within the City. The City is now conducting follow-up to verify that number.

Future Effort: The City will update MDNRE of any new catch basins and/or outfalls. Information will be provided in the progress report.

**Task 1.2:** Continue inspection/cleanout/maintenance program for all City storm water BMPs.

**Description:** Develop an inspection, clean-out and maintenance program for City storm water BMPs including, routine maintenance, maintenance schedules, and long-term inspection procedures for any controls installed or operated by the City such as vegetated swales, infiltration basins and sedimentation basins. The City transports maintenance waste (dredge spoil, accumulated sediments, floatables, etc.) to their municipally owned wastewater treatment plant for storage classification and disposal. The City ensures that all procedures are in accordance with Part 111 (Hazardous Waste Management), Part 115 (Solid Waste Management), and Part 121 (Liquid Industrial Waste).

**Responsibility:** City Administration/Facilities Management

**Measurable Goal:** Copy of the program. Maintenance records of BMPs. Location of disposed material (i.e. landfill, etc.). Documentation of all complaints and reports of damaged catch basins. Documented corrective action for any complaints. Updated map. Volumes and location of disposed materials. Inspect all BMPs annually.

**Schedule:** Annually; Ongoing

Existing Effort: Updates on the number of catch basins cleaned and rehabilitated; streets cleaned; and the amount of material removed are provided in the progress report.

Future Effort: The City will continue its existing efforts.

**Task 1.3:** Televising portions of the storm water system that is underground as appropriate.

**Description:** Video inspection of underground storm sewers where problems are suspected.

**Responsibility:** City Administration/Facilities Management

**Measurable Goal:** Video records of sewers. Provide updates in Progress Reports.

**Schedule:** Ongoing; As-Needed

Existing Effort: Updates on televising storm sewers are provided in the progress report.

Future Effort: The City will continue its existing efforts.

**Task 1.4:** Evaluate the use of vegetated swales and infiltration islands in new construction by the City.

**Description:** Evaluate the feasibility of the use of vegetated swales, infiltration islands and other innovations to control storm water in new construction by the City.

**Responsibility:** City Administration/Facilities Management

**Measurable Goal:** Documentation of evaluation and conclusions and recommendations. Eliminate/reduce turf grass as needed for new construction projects.

**Schedule:** Ongoing; As-Needed

Existing Effort: The City reviews all building/site plans as they come in. The City reviews plans to address CRCP and BMP implementation.

Future Effort: The City will continue its existing efforts.

**2. *Municipal and municipally-owned roadway management to prevent pollution. This includes street sweeping, catch basin maintenance, and salt and sand management. In addition, concrete and asphalt wastewater cannot be discharged to the storm water system.***

**Task 2.1: Review, update, and implement a street sweeping program.**  
**Description:** Review existing program, update as appropriate and implement changes.  
**Responsibility:** Department of Public Works  
**Measurable Goal:** Documentation of review and implementation. Sweeping records. Volumes and location of disposed materials.  
**Schedule:** Completed; Ongoing

Existing Effort: All curbed areas within the downtown area are swept twice per week at a minimum. Other developments within the City are swept 2-4 times per year. The City currently stores all materials collected at the City's DPW yard.

Updates on the number of catch basins cleaned and rehabilitated; streets cleaned; and the amount of material removed are provided in the progress report.

Future Effort: The City will continue its existing efforts.

**Task 2.2: Evaluate storage, containment, and application of materials (sand, gravel, salt, oil, etc.) at the DPW Yard.**  
**Description:** Evaluate storage, containment and application materials (i.e. sand, gravel, salt, oil, etc.) storage at the DPW. Ensure that runoff from these areas is handled and treated appropriately to reduce soil erosion, sedimentation and contamination. To help prevent salt and sand that is applied for improved traction from entering receiving water ways, the City will implement the following activities: a street sweeping program (Task VII-2.1), catch basin cleaning program, and ensure proper calibration of salt spreaders.  
**Responsibility:** Department of Public Works  
**Measurable Goal:** Documentation of evaluation and plan for improvements. Continue to utilize less salt annually and road salt alternatives as funding allows.  
**Schedule:** Completed; Ongoing

Existing Effort: In Spring 2007, the City utilized RETAP for an environmental assessment of their DPW facility.

A salt storage and application assessment was completed by the City's consultant in 2006.

The City is currently utilizing deicing alternatives (beet juice) in conjunction with road salt, which is less toxic to the environment and requires less road salt than when used alone; and prewetting salt as it is distributed.

Updates on the amount of salt used per winter season is provided in the progress report.

Future Effort: By Spring 2010, the City will distribute the SEMCOG LID brochure for developers.

**REMOVE TASK**

**Task VII-2.3: Evaluate reductions in runoff of Total Suspended Solids (TSS) from all City-owned paved surfaces to the maximum extent practicable.**

**Description:** Evaluate the TSS reductions achieved by evaluating pollution prevention activities (improved materials handling, street sweeping, catch basin cleaning, etc.).

**Measurable Goal:** Documentation of evaluation, conclusions, and recommendations. Examine the potential of reducing TSS loading into the Huron River.

**Schedule:** Begin by October 2011

Existing Efforts: None.

Future Efforts: The City will coordinate efforts with SEMCOG and other entities to estimate TSS levels from roadways. Information will be provided in the progress report.

3. *Ensure that all vehicle maintenance procedures do not impact storm water runoff. This includes attention paid to fuel handling, parts lubrication, parts degreasers, repairs and vehicle washing.*

**Task VII-3.1: Evaluation and correction of maintenance procedures and wash water management, including the use of floor drains, at all City facilities.**

**Description:** Evaluation of the vehicle maintenance procedures and wash water management, including the use of floor drains, at all City facilities. Correction or revision of policies and procedures as needed to protect surface and ground waters.

**Responsibility:** City Administration/Facilities Management

**Measurable Goal:** Documentation of evaluations and corrections. Ensure that all vehicles procedures do not impact storm water runoff.

**Schedule:** Completed; Ongoing

Existing Effort: In Spring 2007, the City utilized RETAP for an environmental assessment of their DPW facility.

All fleet maintenance vehicles are washed at the DPW facility. Police vehicles are washed at a commercial facility, and fire station vehicles are washed at the fire station. All wash water waste is sent to the sanitary sewer system. Vehicle maintenance is performed at the Clean Water Plant.

Various City staff have attended the SEMCOG Municipal Good Housekeeping Training workshops regarding pollution prevention and good housekeeping practices.

Future Effort: A SWPPP will be developed and implemented by September 2010 which will help identify potential areas for improvement regarding maintenance procedures.

**Task VII-3.2: Develop and implement a Storm Water Pollution Prevention Plan (SWPPP).**

**Description:** A SWPPP will be developed for the DPW facility, fire stations, police stations, and public parks and be signed by a certified storm water operator. The SWPPP will include locations of all these facilities; site maps for each facility; list of significant spills; routine inspection programs; housekeeping procedures, etc.

**Responsibility:** City Departments of Engineering and Public Works, City's Consultant

**Measurable Goal:** Provide updates in Progress Reports.  
**Schedule:** Begin development and implementation by September 2010.

Existing Efforts: None.

Future Efforts: A SWPPP will be developed and implemented by September 2010.

**Task VII-3.3: Train DPW, other field staff, and Contractors in pollution prevention, good housekeeping and storm water management,**

**Description:** Develop and provide training to DPW staff and contractors on pollution prevention and good housekeeping at City facilities, the PPGHP and storm water management in general.

**Responsibility:** City Administration/DPW, Contractors

**Measurable Goal:** A copy of the training manual and attendance records. Train all relevant employees every 3 year and new employees within 1 year of employment.

**Schedule:** Annually; Ongoing

Existing Effort: Various DPW staff have attended the SEMCOG Municipal Good Housekeeping Training workshops regarding pollution prevention and good housekeeping practices. Staff attend these workshops hosted by SEMCOG, MDNRE, etc. as they are offered.

Future Effort: The City will continue its existing efforts.

**4. Locate and label all storm sewers within the City properties.**

**Task VII-4.1: Inventory of all catch basins and manholes in the City's storm conveyance system (See Task VII-1.1).**

Existing Effort: See Activity 1.1.

Future Effort: See Activity 1.1.

**Task VII-4.2: Label existing manholes and catch basins.**

**Description:** Label the existing manholes and catch basins in the City storm conveyance system to increase citizen awareness of the system and to minimize improper disposal.

**Responsibility:** City Administration/DPW

**Measurable Goal:** Documentation of labeling. Label all existing manholes and catch basins by 2013.

**Schedule:** Annually; Ongoing

Existing Effort: As part of the annual clean-up event, boy scouts and other volunteers participate in the City-wide storm drain clean-up/stenciling event. Articles seeking volunteers for the event are published in the *South Lyon Herald*. Over 100 catch basins have been stenciled to date.

No new discharge points (after March 10, 2004) have been identified, but if new points are identified, they will be permanently labeled.

Future Effort: The City will continue its existing efforts.

**Task VII-4.3: Labeling of catch basin and manhole covers in new construction.**  
**Description:** Catch basin and manhole cover labeling in accordance with OCWRC's Office, utilizing imprinting and raised lettering on all new construction.  
**Responsibility:** DPW/City Administration  
**Measurable Goal:** Documentation of labeling. Continue to utilize storm drains lids as needed.  
**Schedule:** Completed; Ongoing

Existing Effort: New storm lids have been installed in all new developments that have been built within the last 3-4 years.

Future Effort: The City will continue its existing efforts.

5. *Assess the impacts on water quality of any new construction and flood management projects within the City Properties.*

**Task VII-5.1: Evaluate the feasibility of reducing impervious surfaces in new construction by the City.**  
**Description:** Evaluate the feasibility of reducing impervious surfaces in new construction by the City including the use of pervious paving, green roofs, etc.  
**Responsibility:** City Administration  
**Measurable Goal:** Records of the evaluation, conclusions, and recommendations.  
**Schedule:** Ongoing; As-Needed

Existing Effort: The City reviews all building/site plans as they come in. The City reviews plans to address CRCP and BMP implementation.

Future Effort: The City will continue its existing efforts.

**VII-Task 5.2: Encourage the use of vegetated swales and infiltration islands in all new construction by the City (See Task VII-1.4).**

Existing Effort: The City reviews all building/site plans as they come in. The City reviews plans to address CRCP and BMP implementation.

The City maintains a 10 foot buffer along all City drains.

Future Effort: The City will continue its existing efforts.

**Task VII-5.3: Update building/construction project design procedures to consider innovative storm water design in new construction by the City.**  
**Description:** Modify the City's procedures for building/construction project design to ensure that innovative storm water controls are considered for every new project.  
**Responsibility:** City Administration  
**Measurable Goal:** Copy of new procedures and documentation of considerations.  
**Schedule:** Completed; Ongoing

Existing Effort: The City reviews all building/site plans as they come in. The City reviews plans to address CRCP and BMP implementation.

Future Effort: The City will continue its existing efforts.

**Task VII-5.4: Evaluate all City ordinances for their impact in protecting water quality.**  
**Description:** Evaluate all City ordinances for their impact in protecting water quality with the aid of the SEMCOG handbook, "*Opportunities for Water Resource Protection in Local Plans, Ordinances, and Program.,*"  
**Responsibility:** City Administration  
**Measurable Goal:** Records of the evaluations, reviews and changes.  
**Schedule:** Completed; Ongoing

Existing Effort: A copy of the existing policies and ordinances was submitted with the permit application. These policies and procedures were deemed acceptable by MDRNE and found to meet the minimum requirements of the permit.

The City is considering adopting a fertilizer ordinance.

Future Effort: The City will continue to enforce its existing ordinances and procedures and will encourage the use of structural and non-structural BMPs.

6. *Minimize the discharge of pollutants related to the storage, handling and use of pesticides and fertilizers. This includes employee training and soil testing for the proper application of any soil amendments.*

**Task VII-6.1: Employee and contractor training regarding the storage, handling, use and disposal of fertilizers and pesticides.**  
**Description:** Train DPW employees on the storage, handling, use and disposal of fertilizers and pesticides.  
**Responsibility:** DPW; City Administration; Contractors  
**Measurable Goal:** Copy of training manual and employee attendance records. Train all relevant employees every 3 year and new employees within 1 year of employment.  
**Schedule:** Annually; Ongoing

Existing Effort: Various DPW staff have attended the SEMCOG Municipal Good Housekeeping Training workshops regarding pollution prevention and good housekeeping practices (lawn care, fleet maintenance, etc.). Staff attend these workshops hosted by SEMCOG, MDNRE, etc. as they are offered.

Future Effort: The City will continue its existing efforts.

**Task VII-6.2: Require the use of zero-phosphorus fertilizers on all City property.**  
**Description:** The City requires the use of zero-phosphorus fertilizers on all properties owned or managed by the City.  
**Responsibility:** City Administration/Facilities Management  
**Measurable Goal:** Documented purchase and use of zero-phosphorus fertilizer.  
**Schedule:** Completed; Ongoing

Existing Effort: In March 2008, the City sent out letters to 17 local lawn care companies, providing recommendations on earth-friendly fertilizers and proper application guidelines. Most lawn care companies have responded positively.

The City utilizes an MGIA-endorsed lawn care provider for all fertilizing and pesticide applications at the City-owned properties. Zero phosphorus, slow-release nitrogen fertilizers are

used on all properties.

In March 2008, a City resident and MGIA-endorsed lawn care provider gave several lawn care/fertilizing presentations to the South Lyon Garden Club and other homeowner associations throughout the City.

Three local hardware stores located in the City carry earth-friendly fertilizers. This information is periodically advertised in the local newspapers.

Future Effort: The City will continue its existing efforts.

**Task VII-6.3: Require soil testing of all City-owned or managed properties prior to the application of any fertilizer.**

**Description:** The City's contractor performs soil testing of all City-owned or managed properties prior to the application of any fertilizer.

**Responsibility:** DPW

**Measurable Goal:** Records of all tests and applications.

**Schedule:** Ongoing; As-Needed

Existing Effort: The City utilizes an MGIA-endorsed lawn care provider for all fertilizing and pesticide applications at the City-owned properties. Low phosphorus, slow-release nitrogen fertilizers are used on all properties. Through this healthy lawn care program, soils are tested at least once per year.

Future Effort: The City will continue its existing efforts.

**Task VII-6.4: Evaluate the implementation of Integrated Pest Management (IPM) on City-owned or operated property**

**Description:** Evaluate the implementation of IPM, as tested and proven by the Michigan State University Turfgrass Management Program, to reduce the use of pesticides on City properties.

**Responsibility:** DPW

**Measurable Goal:** Feasibility report and recommendations.

**Schedule:** Completed; Ongoing

Existing Effort: The City utilizes an MGIA-endorsed lawn care provider for all fertilizing and pesticide applications at the City-owned properties. Zero-phosphorus, slow-release nitrogen fertilizers are used on all properties. Through this healthy lawn care program, soils are tested at least once per year.

Pesticides are only used on City properties when absolutely necessary and areas are spot treated.

Future Effort: The City will continue its existing efforts.

Table 8-6 (Section VIII) summarizes the implementation schedule, the tasks, and measures of the PPGHP.

## ***Section VIII - Summary Tables***

---

The City of South Lyon's comprehensive SWMP compiles the aspects of each of the six (6) minimum measures of MDNRE's Jurisdictional MS4 Phase II Permit as described in Sections II through VII. The following tables summarize the tasks, measurable goals, and implementation schedules of each of the six (6) minimum measure programs.

**Table 8-1: Summary of Public Education Plan**

<b>REQUIREMENT</b>	<b>SCHEDULE</b> Yr. After COC Issued	<b>TASK</b>	<b>MEASURABLE GOAL</b>
Encourage public reporting of the presence of illicit discharges or improper disposal of materials into the drainage system, and develop and publicize a hotline for public reporting.	Annually; Ongoing	II-1.1 Design and implement a training program for City field staff on illicit discharge and illicit connection elimination.	Documentation of content of program. Training records. Number of illicit connections detected and eliminated. Training provided to all relevant employees
	Annually; Ongoing	II-1.2 Create an improved complaint tracking and response system.	Implementation of complaint system. Number of complaints received. All calls to be addressed.
	Quarterly; Ongoing	II-1.3 Provide the public with information on how storm and sanitary sewer systems function and their effects on water bodies.	Copy of articles; number of website hits. Media outlets utilized. Inquiries received.
	Quarterly; Ongoing	II-1.4 Provide information to the public on how to recognize an illicit discharge.	Number of times video is aired. Tip cards displayed at City Hall.
	October 2010; Ongoing	II-1.5 Promote MDNRE's Pollution Prevention and Waste Reduction Programs to local commercial food service entities.	Copies of publications/number of flyers and/or mailings distributed; number of website hits. Post information on City website.
Identifying the water body that would be potentially impacted by improper actions at or near a person's home.	Annually; Ongoing	II-2.1 Promote storm drain awareness by supporting SEMCOG's "Our water. Our future. Ours to protect." campaign.	Number of materials distributed number of events that materials are displayed or distributed; number of website hits. Distribute tip cards at City Hall and various events.
	Annually; Ongoing	II-2.2 Storm drain awareness training for the focus group, which represents residents, business owners, and the public.	Copy of training materials; attendance sheets; and meeting minutes from focus group.
The availability, location and requirements of facilities for collection and/or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, grass clippings, leaf litter, animal wastes, and motor vehicle fluids.	Annually; Ongoing	II-3.1 Provide the public with information on household hazardous wastes and yard, travel trailer and vehicle maintenance wastes.	Copies of flyers and number distributed. Number of website hits.
	Annually; Ongoing	II-3.2 Provide the public with information regarding proper car care.	Copies of the information/publications and numbers distributed.

**Table 8-1 (cont.): Summary of Public Education Plan**

<b>REQUIREMENT</b>	<b>SCHEDULE Yr. After COC Issued</b>	<b>TASK</b>	<b>MEASURABLE GOAL</b>
Public education concerning application and disposal of pesticides, herbicides, and fertilizers.	Annually; Ongoing	II-4.1 Provide the public with information on the application and disposal of yard chemicals.	Copies of the information/publications and numbers distributed. Number of website hits.
Public education concerning preferred cleaning materials and procedures for non-commercial car washing.	October 2010; Ongoing	II-4.2 Provide Homeowners Associations and local lawn care businesses with information from Southeastern Oakland County Water Authority (SOCWA) and Michigan Green Industry Association (MGIA).	Copies of the information/publications and numbers distributed. Report amount of waste delivered to RRRASOC. Number of website hits. Post MGIA web link on City website.
Public education concerning proper maintenance of septic systems.	Annually; Ongoing	II-5.1 Provide the public with information on community or 'school' car washes.	Copies of flyers and number distributed; number of website hits. Distribute car care tip cards at City Hall and various events.
Public education concerning proper maintenance of septic systems.	October 2010; Ongoing	II-6.1 Provide the public with information on proper septic system maintenance.	List of residence with septic systems/Copy of information distributed to those with septic systems; number of website hits.
Public education concerning management of riparian lands to protect water quality.	Annually; Ongoing	II-6.2 Support existing City ordinances and County efforts to have OSDS inspection ordinances.	Report number of connections of an existing OSDS made to the sanitary sewer system; Report number of OSDS complaints during permit cycle. Update on adoption of an OSDC ordinance.
Public education concerning management of riparian lands to protect water quality.	October 2010; Ongoing	II-7.1 Provide the public with information on riparian land management and support related workshops.	Copies of flyers and number distributed. Workshop feasibility report. Post riparian information on website.

**Table 8-1 (cont.): Summary of Public Education Plan**

REQUIREMENT	SCHEDULE Yr. After COC Issued	TASK	MEASURABLE GOAL
Providing information regarding the Public's responsibilities and stewardship in their watershed.	Annually; Ongoing	II-8.1 Provide information on watershed stewardship.	Copies of materials distributed; #/type of video aired; website hits. Continue to host an annual River Cleanup Event.
	Completed; Ongoing	II-8.2 Form a focus group of interested groups and citizens within the City in designing and implementing public education and storm water management.	Successful formation of group. Meeting minutes. Attendance lists.
	Completed; Ongoing	II-8.3 Provide the public with links to information on the Huron River Watershed; the impact of the City on the watershed; and on watershed groups and activities.	Copies of materials distributed. Number of website hits. Number and types of activities sponsored by the City. Provide updates by October 2010.
Provide information on the water quality impacts of residential de-icer use and how to minimize the impacts.	October 2010; Ongoing	II-9.1 Provide information on the impacts of de-icers and snow removal.	Number and type of articles, brochures distributed. Number of website hits. Distribute information at City Hall.
Provide information on the role of native vegetation on residential properties as a ground cover alternative to turf grass.	December 2010; Ongoing	II-9.2 Provide information on Winter Storm Water Practices.	Copy of materials distributed. Number of web site hits.
Educate commercial, industrial, and institutional entities likely to have significant storm water impacts. At a minimum, commercial food services, primarily restaurants, shall be educated to prevent grease and litter discharges to MS4s.	October 2010; Ongoing	II-10.1 Provide information on River-friendly landscaping and the benefits of using native vegetation.	Number and type of materials distributed. Provide native plant information at City Hall and various events.
	By June 2011	II-11.1 Provide information to commercial food services and other entities that can potentially impact storm water.	Number of materials distributed. Number of website hits.
Determine the overall effectiveness of the implemented PEP based on established measurable goals.	By May 2011	II-12.1 Determine collectively as part of the Focus Group efforts, the best way at measuring effectiveness of the PEP.	Updates in Progress Report.
	By March 2011	II-12.2 Provide updates in the Progress Report on overall PEP effectiveness	Updates in Progress Report.

**Table 8-2: Summary of Public Involvement and Participation Plan**

<b>REQUIREMENT</b>	<b>SCHEDULE</b> Yr. After COC Issued	<b>TASK</b>	<b>MEASURABLE GOAL</b>
Follow local public notice requirements, as appropriate, when notifying the public that the City must implement a storm water management plan. Make copies of draft and final management plans available to the public for comment and inform them as to when and where copies are available.	By September 2010; Ongoing	III-1.1 Provide copies of the draft and the final SWMP to the public and interested groups.	Completion of all subtasks. Copies of all delivered documents. Number of copies distributed. Number of comments received. Number of hits on web site.
Establish and implement a citizen advisory committee for the purpose of encouraging public involvement in all aspects of the storm water management program.	Completed; Ongoing	III-1.2 Hold an informational meeting to discuss the draft SWMP and seek input.	Copies of announcement. Meeting held. Number of attendees. Comments received.
	Quarterly; Ongoing	III-2.1 Form a SWMP citizen's advisory committee of about 12 members to provide input on the specifics of the plan, etc., (See Task II-6.1).	Creation and implementation of the committee. Meeting minutes and attendance sheets.
	By September 2010	III-2.2 Develop and distribute a survey form to the citizens of South Lyon to determine the awareness and opinion of storm water and watershed issues. The survey content and format will be reviewed and approved by the Citizens Advisory Committee. Responses to the survey will be tabulated and the Advisory Committee will use the data to help them in their oversight of the program.	Distribution of the survey. Number and quality of the responses. Summary of responses. Documentation of use by Advisory Committee.

**Table 8-2 (cont.): Summary of Public Involvement and Participation Plan**

<b>REQUIREMENT</b>	<b>SCHEDULE</b> Yr. After COC Issued	<b>TASK</b>	<b>MEASURABLE GOAL</b>
Pursue cooperation with local stream or watershed protection organizations by informing them of the City's program, providing them with copies of draft and final plans and seeking their input on the plans and program. Solicit volunteer assistance from the groups in the implementation of the program and associated activities. Satisfy permit requirements were possible by assisting the organizations with their efforts.	Ongoing	III-3.1 Develop a mailing and contact list for local stream and watershed protection organizations and local sporting and environmental groups.	Creation of list.
	By September 2010	III-3.2 Provide the target groups with draft copies of the SWMP using the mailing list and solicit comments on the Plan. Evaluate any comments received and incorporate as appropriate. Provide them with the final MDNRE approved version of the SWMP and solicit their participation in the future tasks and activities.	Completion of the mailing of the plans. Number of copies sent. Number of comments received. Number of volunteers recruited.
	Annually; Ongoing	III-3.3 Contact the target groups to determine what programs they sponsor that may satisfy SWMP or permit requirements. Evaluate qualifying programs to determine those in which the City will participate or encourage participation.	Number of programs evaluated. Number of programs in which the City participated. Number of citizens of South Lyon that participated.
	Annually; Ongoing	III-3.4 Investigate forming a volunteer group that would assist the City with its current water quality monitoring program. The volunteer group would help collect and report data on the major water bodies in the area.	Data reported. Documentation of long-term water quality improvement.
	Annually; Ongoing	III-3.5 Co-sponsor a stream clean-up with the School District, the HRWC or a similar group.	Documentation of materials removed; number of volunteers and comments received. Copy of newspaper articles regarding clean-up events. Increased participation annually.
	Annually; Ongoing	III-3.6 Co-sponsor a storm drain stenciling/program with a local community group.	Number of drains labeled. Increased participation annually.
	Ongoing	III-3.7 Co-sponsor a wetland planting or native landscape project on City property with a community group, the HRWC or a similar group.	Copies of announcements, publications and notifications. Location and number/type of plantings established.

**Table 8-3: Summary of Illicit Discharge Elimination Plan**

<b>REQUIREMENT</b>	<b>SCHEDULE</b> Yr. After COC Issued	<b>TASK</b>	<b>MEASURABLE GOAL</b>
Develop the legal authority to allow monitoring and inspections, prohibit illicit connections and discharges, and require compliance.	Completed; Ongoing	IV-1.1 Review City's legal authority to implement IDEP program.	Documentation of ordinance review.
Prepare a drainage system map of all known City outfalls.	Completed; Ongoing	IV-1.2 Amend and adopt ordinance.	Documentation of adoption. Copy of ordinance.
	Completed; Ongoing	IV-2.1 Investigate the use of GPS during inspections to aid in mapping.	Documentation of decision.
	Annually; Ongoing	IV-2.2 Field verification of known outfalls and update maps and outfall table.	Map & table updated.
	Completed; Ongoing	IV-2.3 Develop procedure to identify and record outfalls from new construction.	Procedure documented and implemented. New outfalls identified & mapped.
Develop a program to identify and eliminate illicit connections and discharges.	Every 5 years; Ongoing	IV-3.1 Perform visual inspection and dry weather screening of all City storm outfalls.	Documentation of findings. Number of illicit found. Inspect all outfalls every 5 years.
	Ongoing	IV-3.2 Trace illicit discharges and notify responsible party to correct.	Number of illicit traced. Documentation of notification and elimination. Illicit connections/discharges eliminated 60 days after notification.
	Ongoing	IV-3.3 Follow-up enforcement action for non-correction.	Number of illicit found vs. eliminated. Documentation of actions. Illicit connections/discharges eliminated 60 days after notification.
	Annually; Ongoing	IV-3.4 Provide training to appropriate City staff on illicit connections and discharges, failed OSDS, safety issues and natural occurring phenomenon.	Number of illicit connections/discharges found, referred, and/or corrected. Train all relevant field employees every 3 years and new employees within 1 year. Updates provided in Progress Report.

**Table 8-3 (cont): Summary of Illicit Discharge Elimination Plan**

<b>REQUIREMENTS</b>	<b>SCHEDULE Yr. After COC Issued</b>	<b>TASK</b>	<b>MEASURABLE GOAL</b>
Develop a program to minimize seepage from sanitary sewers and OSDS into the MS4.	Completed; Ongoing	IV-4.1 Identify and record all OSDS sites.	List/map of location of all OSDS sites. Updated lists of OSDS locations with annual report.
	Ongoing; As-Needed	IV-4.2 Enforce existing sewer connection ordinance and any new ordinances.	Number of OSDS sites connected to the sanitary sewer.
	Completed; Ongoing	IV-4.3 Review OCHD OSDS program. Amend and adopt a local ordinance, if necessary.	Documentation of County program/ordinance review. Local ordinance revised and adopted, if needed
	Ongoing; As-Needed	IV-4.4 Establish OSDS complaint reporting and tracking system for suspicious discharges. (See Task II-1.2)	Documentation of complaints, investigation, resolution and follow-up to reporting citizen. Provide updates in Progress Report.
	Ongoing; As-Needed	IV-4.5 Evaluate the integrity of the sanitary sewers in the City.	Report of evaluation and recommendations.
	Annually; Ongoing	IV-4.6 Provide training to appropriate City staff on failed OSDS.	Number of illicit connections/discharges and found, referred, and/or corrected. Number of staff trained annually. Train all relevant field employees every 3 years and new employees within 1 year of employment.
Coordinate program.	Ongoing; As-Needed	IV-5.1 Coordinate with OCWRC and OCHD to address complaint response, etc.	Implement procedure. Number of illicit referrals.
	Ongoing; As Needed	IV-5.2 Coordinate with MDNRE to meet regulatory requirements.	Annual report and documentation of other referrals.

**Table 8-4: Summary of Post-Construction Storm Water Management Program**

<b>REQUIREMENT</b>	<b>SCHEDULE</b> Yr. After COC Issued	<b>TASK</b>	<b>MEASURABLE GOAL</b>
Develop a storm water master plan.	Completed by May 2010	V-1.1 Prepare and adopt a storm water master plan.	Documentation of adoption.
Develop legal authority to address post-construction storm water runoff.	Ongoing; As-Needed	V-2.1 Adopt policies and ordinances or other regulatory mechanism to require appropriate post-construction BMPs.	Report on updated ordinance/procedure to comply with permit needs.
	Annually; Ongoing	V-2.2 Provide training for City field staff on P-CMP	Copy of training program. Training records.
	September 2010; Ongoing	V-2.3 Provide information on P-CMP to the development community.	Copies of information. Number distributed. Documented changes in construction. Calculations of nonpoint source pollutants loading reductions based on the number and types of BMPs implemented within the City.
	August 2007; Ongoing	V-2.4 Implement a post-construction inspection program	Inspection and enforcement records. Records of number and type of BMPs installed.
	Completed; Ongoing	V-2.5 Develop a Long-Term Maintenance and Operations program.	Copy of the program.
	Ongoing	V-2.6 Coordinate with other government agencies.	Documentation of efforts.
Review and revise plan review procedures and requirements.	By October 2011	V-3.1 Revise plan review procedures to include P-CMP for new development and redevelopment.	Documentation of review and copy of review procedure.

**Table 8-5: Summary of Construction Storm Water Runoff Control Program**

REQUIREMENT	SCHEDULE Yr. After COC Issued	TASK	MEASURABLE GOAL
Notify appropriate regulatory agency if construction results in the deposition of solids, etc. into MS4.	Ongoing; As-Needed	VI-1.1 Coordinate SESC with the OCWRC.	Documentation of referrals and other issues. Continue to coordinate with OCWRC.
	Ongoing; As-Needed	VI-1.2 Coordinate SESC with the MDNRE	Documentation of contacts with the MDNRE. Provide updates in Progress Report.
Review preliminary construction plans to ensure adequate SESC.	Completed; Ongoing	VI-2.1 Review the OCWRC SESC program.	Documentation of review and compliance with Phase II.
	Completed; Ongoing	VI-2.2 Review and revise City ordinances as needed to implement the CRCP.	Documentation of review and changes.
	Completed; Ongoing	VI-2.3 Review and revise the City's site plan review to include CRCP.	Documentation of changes to site plan review process.
Develop and implement a procedure to receive complaints regarding construction.	Ongoing; As-Needed	VI-3.1 Establish and use a complaint tracking, response and investigation system (See Task II-1.2)	Documentation of complaint receipt and response.
Provide educational materials and outreach.	By May 2010; Ongoing	VI-4.1 Provide outreach and education to the construction community on SESC and CRCP.	Copies of materials distributed. Number distributed. Improved SESC compliance.

**Table 8-6: Summary of Pollution Prevention and Good Housekeeping Plan**

REQUIREMENT	SCHEDULE Yr. After COC Issued	TASK	MEASURABLE GOAL
Routine maintenance, maintenance schedules, and long-term inspection procedures of structural controls.	Completed; Ongoing	VII-1.1 Inventory of all storm water basins within the City properties.	Map showing location of basins. Provide recommendations for improvement as needed.
	Annually; Ongoing	VII-1.2 Develop inspection/cleanout/maintenance program for all City storm water BMPs.	Copy of program. Clean-out records. Inspect BMPs at least annually.
	Ongoing; As-Needed	VII-1.3 Televising underground storm sewer system as appropriate.	Video records. Provide updates in Progress Reports.
	Ongoing; As-Needed	VII-1.4 Evaluate the use of vegetated swales, etc., in new construction by the City.	Documentation of evaluation. Eliminate/reduce turf grass as needed for new construction projects.
Municipal and municipally-owned roadway management to prevent pollution.	Completed; Ongoing	VII-2.1 Update street sweeping program.	Sweeping records. Spoils testing results.
	Completed; Ongoing	VII-2.2 Evaluation of storage and containment of materials at City DPW yard.	Documentation of evaluation, conclusions, and recommendations. Continue to utilize less salt annually and road salt alternatives as funding allows.
Ensure that all vehicle maintenance procedures do not impact storm water runoff.	By October 2011	VII-2.3 Evaluate reductions in runoff of TSS from all City-owned paved surfaces to the maximum extent practicable.	Records of evaluations and planned changes. Examine the potential of reducing TSS loading into the Huron River.
	Completed; Ongoing	VII-3.1 Evaluation and correction of maintenance procedures and wash water management at all City-owned facilities.	Documentation of evaluations and corrective actions. Ensure that all vehicle maintenance procedures don't impact stormwater runoff.
	By September 2010	VII-3.2 Develop and implement a SWPPP	Documentation of evaluation, conclusions, and recommendations. Provide updates in Progress Reports.
	Annually; Ongoing	VII-3.3 Employee and contractor training on PPGH	Copy of training manual. Training records. All relevant employees will be trained every 3 years and new employees will be trained within 1 year of employment.

**Table 8-6 (cont.): Summary of Pollution Prevention and Good Housekeeping Plan**

REQUIREMENT	SCHEDULE Yr. After COC Issued	TASK	MEASURABLE GOAL
Locate and label all storm sewers within the City properties.	Completed; Ongoing	VII-4.1 Catch Basin and manhole inventory (See Task VII-1.1).	Documented records of labeling. Photo documentation. Provide recommendations for improvement as needed.
	Annually; Ongoing	VII-4.2 Label existing manholes and catch basins.	Documentation of labeling. Label all existing manholes/catch basins by 2013.
	Completed; Ongoing	VII-4.3 Imprinted labeling on new catch basins and curb stops.	Documentation of labeling. Continue to utilize 'storm drain' lids as needed.
Assess the impacts on water quality of any new construction and flood management projects within the City properties.	Ongoing; As-Needed	VII-5.1 Evaluate the reduction of impervious surfaces in all new City construction.	Documentation of evaluation.
	Completed; Ongoing	VII-5.2 Evaluate the use of vegetated swales and infiltration islands in all new City construction (See Task VII-1.4).	Documentation of evaluation.
	Completed; Ongoing	VII-5.3 Update City building design procedures to consider innovative storm water controls.	Copy of new procedures. Documentation of considerations.
	Completed; Ongoing	VII-5.4 Evaluate City procedures and ordinances utilizing the SEMCOG handbook.	Documentation of review and changes.
Minimize the discharge of pollutants related to the storage, handling, and use of pesticides and fertilizers.	Annually; Ongoing	VII-6.1 Training of City field staff and contractors that addresses fertilizers and pesticides.	Copy of training materials. Training records. Train all relevant employees every 3 years and new employees within 1 year of employment.
	Completed; Ongoing	VII-6.2 Require the use of zero-phosphorus fertilizers on all City-owned properties.	Documented purchase and use.
	Ongoing; As-Needed	VII-6.3 Require soil testing of all City-owned properties before fertilizer application.	Records of all tests and applications.
	Completed; Ongoing	VII-6.4 Evaluate use of Integrated Pest Management on City properties.	Feasibility report and recommendations.

**Table 8-7: SWMP Implementation Schedule by Minimum Measure Plan**

Task #	Plan/Task	Time to Start & Completion Following COC Issuance (yrs.)					
		Ongoing	1 to 2	2 to 3	3 to 4	4 to 5	5 +
	<b>SWMP</b>						
	Review the minimum measure plans and report progress and changes twice within the permitting period.						
	<b>PEP</b>						
II-1.1	Design and implement a training program for City field staff on IDEP.	Annually					
II-1.2	Use and encourage public use of the existing OCWRC complaint receipt and response system.	Annually					
II-1.3	Provide the public with information on how storm and sanitary sewer systems function and their effects on water bodies.	Quarterly					
II-1.4	Provide information to the public on how to recognize an illicit discharge.	Quarterly					
II-1.5	Promote MDNRE's Pollution Prevention and Waste Reduction Programs to local commercial food service entities.						
II-2.1	Promote storm drain awareness by supporting SEMCOG's "Our water. Our future. Ours to protect." campaign.	Annually					
II-2.2	Storm drain awareness training for the focus group, which represents residents, business owners, and the public.	Annually					
II-3.1	Provide the public with information on household, yard, travel trailer and vehicle maintenance wastes.	Annually					
II-3.2	Provide the public with information regarding proper car care.	Annually					
II-4.1	Provide the public with information on the application and disposal of yard chemicals.	Annually					
II-4.2	Provide Homeowners Associations and local lawn care businesses with information from Southeastern Oakland County Water Authority (SOCWA) and Michigan Green Industry Association (MGIA).						
II-5.1	Provide the public with information on community or 'school' car washes.	Annually					
II-6.1	Provide the public with information on proper septic system maintenance.						
II-6.2	Support existing City ordinances and County efforts to have OSDS inspection ordinances.						
II-7.1	Provide the public with information on riparian land management and support related workshops.	Annually					

**Table 8-7 (cont.): SWMP Implementation Schedule by Minimum Measure Plan**

Task #	Plan/Task	Time to Start & Completion Following COC Issuance (yrs.)					
		Ongoing	1 to 2	2 to 3	3 to 4	4 to 5	5 +
II-8.1	Provide information on watershed stewardship.	Annually					
II-8.2	Form a focus group of interested groups and citizens within the City in designing and implementing public education and storm water management.						
II-8.3	Provide the public with links to information on the Huron River Watershed; the impact of the City on the watershed; and on watershed groups and activities.						
II-9.1	Provide information on the impacts of de-icers and snow removal.						
II-9.2	Provide information on Winter Storm Water Practices.						
II-10.1	Provide information on River-friendly landscaping and the benefits of using native vegetation.						
II-11.1	Determine, collectively as part of the Focus Group efforts, the best way at measuring the effectiveness of the PEP.						
II-11.2	Provide updates in the Progress Report on overall PEP effectiveness.						
	<b>PIPP</b>						
III-1.1	Provide copies of the draft and the final SWMP to the public and interested groups.						
III-1.2	Hold an informational meeting to discuss the draft SWMP and seek input.						
III-2.1	Continue to participate in an existing citizen's advisory committee to provide input and assist (See Task II-6.1).	Quarterly					
III-2.2	Develop and distribute an awareness survey form to the citizens of South Lyon.						
III-3.1	Develop a mailing and contact list for local stream and watershed protection organizations, etc.						
III-3.2	Provide the target groups with draft and final copies of the SWMP and solicit and evaluate comment on the plan.						
III-3.3	Contact the target groups to review and evaluate programs they sponsor that may satisfy SWMP requirements.	Annually					
III-3.4	Investigate forming a volunteer group that would assist the City with its current water quality monitoring program. The volunteer group would help collect and report data on the major water bodies in the area.	Annually					
III-3.5	Co-sponsor a stream clean-up with the School District, the HRWC or a similar group.	Annually					

**Table 8-7 (cont.): SWMP Implementation Schedule by Minimum Measure Plan**

Task #	Plan/Task	Time to Start & Completion Following COC Issuance (yrs.)					
		Ongoing	1 to 2	2 to 3	3 to 4	4 to 5	5 +
III-3.6	Co-sponsor a storm drain stenciling/program with a local community group.	Annually					
III-3.7	Co-sponsor a wetland planting or native landscape project on City property with a community group, the HRWC or similar group.						
	<b>IDEP</b>						
IV-1.1	Review existing City ordinances to ensure adequate legal authority.						
IV-1.2	Amend and adopt new ordinances as necessary.						
IV-2.1	Update the City storm sewer maps into GIS format.						
IV-2.2	Field verify all City storm conveyance outfalls and update maps and tables.	Annually					
IV-2.3	Develop procedures to identify and record outfalls from new construction.						
IV-3.1	Perform visual inspections and dry weather screenings of all City operated storm sewer outfalls.						
IV-3.2	Trace illicit discharges/connections and notify responsible party to correct.						
IV-3.3	Follow-up enforcement for non-correction.						
IV-3.4	Provide training to appropriate City staff on illicit connections and discharges, failed OSDS, safety issues and natural occurring phenomenon.						
IV-4.1	Identify and record all OSDS within the City.	Annually					
IV-4.2	Continue enforcement of City sewer connection ordinance.						
IV-4.3	Review Oakland County Department of Public Health (OCHD) OSDS program and ordinance.						
IV-4.4	Develop and utilize OSDS complaint tracking, response and investigation system (see Task II-1.2).						
IV-4.5	Evaluate the integrity of the sanitary sewers in the City.						
IV-4.6	Provide training to appropriate City staff on failed OSDS.	Annually					
IV-5.1	Coordination with OCWRC and OCHD.						
IV-5.2	Coordination with MDNRE.						
	<b>P-CMP</b>						
V-1.1	Prepare and adopt a storm water master plan.						
V-2.1	Adopt policies and ordinances or other regulatory mechanism to require appropriate post-construction BMPs.						

**Table 8-7 (cont.): SWMP Implementation Schedule by Minimum Measure Plan**

Task #	Plan/Task	Time to Start & Completion Following COC Issuance (yrs.)					
		Ongoing	1 to 2	2 to 3	3 to 4	4 to 5	5 +
V-2.2	Provide training for City field staff.						
V-2.3	Prepare informational materials and conduct outreach for the development community.	Annually					
V-2.4	Implement an inspection program for post-construction BMPs.						
V-2.5	Develop a Long-Term Maintenance and Operations program.						
V-2.6	Coordinate with other government agencies.						
V-3.1	Revise plan review procedures for new development/redevelopment to ensure post-construction control.						
	<b>CRCP</b>						
VI-1.1	Coordinate with the OCWRC.						
VI-1.2	Coordinate with MDNRE.						
VI-2.1	Review the existing Soil Erosion and Sedimentation Control Program administered by OCWRC.						
VI-2.2	Review and revise existing City ordinances as necessary to implement the CRCP.						
VI-2.3	Review and revise the City's plan review process.						
VI-3.1	Develop and utilize a complaint tracking, response and investigation system (see Task II-1.2).						
VI-4.1	Provide outreach and education to the construction community on SESC and CRCP.						
	<b>PPGH</b>						
VII-1.1	Conduct an inventory of all City storm water basins.						
VII-1.2	Develop inspection/cleanout program for all City storm water catch basins and manholes.						
VII-1.3	Televise City underground storm sewer conveyance system as appropriate.						
VII-1.4	Evaluate the use of vegetated swales in new construction by the City.						
VII-2.1	Review and update the City street sweeping program.						
VII-2.2	Evaluate the storage and containment of materials (sand, gravel, salt, oils, etc.) at the DPW yard.						

**Table 8-7 (cont.): SWMP Implementation Schedule by Minimum Measure Plan**

Task #	Plan/Task	Time to Start & Completion Following COC Issuance (yrs.)					
		Ongoing	1 to 2	2 to 3	3 to 4	4 to 5	5 +
VII-3.1	Evaluation and correction of maintenance procedures and wash water management, including the use of floor drains, at all City facilities.						
VII-3.2	Develop and implement a SWPPP.						
VII-3.3	Storm water management training for City field staff.	Annually					
VII-4.1	Conduct and inventory of all City storm water catch basins and manholes (see Task VII-1.2).						
VII-4.2	Label existing storm water system catch basins and manholes.	Annually					
VII-4.3	Label new storm water system catch basins and manholes using imprinting and raised lettering.						
VII-5.1	Evaluate means to reduce impervious surfaces in new construction by the City.						
VII-5.2	Evaluate the use of vegetated swales and infiltration islands in new construction by the City.						
VII-5.3	Update City building design procedures to consider innovative storm water design.						
VII-5.4	Evaluate all City ordinances for their impact in protecting water quality.						
VII-6.1	Provide training to City field and facility staff on the handling and storage of fertilizers and pesticides.						
VII-6.2	Require the use of low-phosphorus fertilizers on all City owned or managed properties.	Annually					
VII-6.3	Require soil testing on all City owned or managed properties prior to application of fertilizers.						
VII-6.4	Evaluate the use of Integrated Pest Management.						

**Table 8-8: SWMP Implementation Schedule by Year**

<b>Task #</b>	<b>Year/Tasks</b>
<b>Ongoing</b>	
II-1.3	Provide the public with information on how storm and sanitary sewer systems function and their effects on water bodies.
II-1.4	Provide information to the public on how to recognize an illicit discharge.
II-5.1	Provide the public with information on community or 'school' car washes.
II-6.2	Support existing City ordinances and County efforts to have OSDS inspection ordinances.
II-8.2	Form a focus group of interested groups and citizens within the City in designing and implementing public education and storm water management.
III-1.2	Hold an informational meeting to discuss the draft SWMP and seek input.
III-2.1	Continue to participate in the existing citizen's advisory committee to provide input and assistance.
III-3.1	Develop a mailing and contact list for local stream and watershed protection organizations, etc.
III-3.7	Co-sponsor a wetland planting or native landscape project on City property with a community group, the HRWC or a similar group.
IV-1.1	Review existing City ordinances to ensure adequate legal authority.
IV-1.2	Amend and adopt new ordinances as necessary.
IV-2.1	Update the City storm sewer maps into GIS format.
IV-2.3	Develop procedures to identify and record outfalls from new construction.
IV-3.1	Perform visual inspections and dry weather screenings of all City operated storm sewer outfalls.
IV-3.2	Trace illicit discharges/connections and notify responsible party to correct.
IV-3.3	Follow-up enforcement for non-correction.
IV-4.1	Identify and record all OSDS within the City.
IV-4.2	Continue enforcement of City sewer connection ordinance.
IV-4.3	Review Oakland County Department of Public Health (OCHD) OSDS program and ordinance.
IV-4.4	Develop and utilize OSDS complaint tracking, response and investigation system (see Task II-1.2).
IV-4.5	Evaluate the integrity of the sanitary sewers in the City.
IV-5.1	Coordination with OCWRC and OCHD.
IV-5.2	Coordination with MDNRE.
V-2.1	Adopt policies and ordinances or other regulatory mechanism to require appropriate post-construction BMPs.
V-2.4	Implement an inspection program for post-construction BMPs.
V-2.5	Develop a Long-Term Maintenance and Operations program.
V-2.6	Coordinate with other government agencies.
VI-1.1	Coordinate with the OCDC.
VI-1.2	Coordinate with MDEQ.
VI-2.1	Review the existing Soil Erosion and Sedimentation Control Program administered by OCWRC.
VI-1.1	Coordinate with the OCWRC.
VI-1.2	Coordinate with MDNRE.
VI-2.1	Review the existing Soil Erosion and Sedimentation Control Program administered by OCDC.
VI-2.2	Review and revise existing City ordinances as necessary to implement the CRCP.
VI-2.3	Review and revise the City's review process
VI-3.1	Develop and utilize a complaint tracking, response and investigation system (see Task II-1.2).
VII-1.1	Inventory all City storm water basins.
VII-1.3	Televise City underground storm sewer conveyance system, as appropriate.
VII-1.4	Evaluate the use of vegetated swales in new construction by the City.
VII-2.1	Review and implement the City street sweeping program.
VII-2.2	Evaluate the storage and containment of materials (sand, gravel, salt, oils, etc.) at the DPW yard.
VII-3.1	Evaluate and correct as necessary storm water drainage including floor drains at City facilities.
VII-4.1	Conduct an inventory of all City storm water catch basins and manholes (see Task VII-1.2).

<b>Task #</b>	<b>Year/Tasks</b>
<b>Ongoing (Continued)</b>	
VII-4.3	Labeling of catch basin and manhole covers in new construction.
VII-5.1	Evaluate means to reduce impervious surfaces in new construction by the City.
VII-5.2	Evaluate the use of vegetated swales and infiltration islands in new construction by the City.
VII-5.3	Update City building design procedures to consider innovative storm water design.
VII-5.4	Evaluate all City ordinances for their impact in protecting water quality
VII-6.2	Require the use of low-phosphorus fertilizers on all City owned or managed properties.
VII-6.3	Require soil testing on all City owned or managed properties prior to application of fertilizers.
VII-6.4	Evaluate the use of Integrated Pest Management.
<b>2<sup>nd</sup> year (2010)</b>	
II-1.5	Promote MDNRE's P2 and Waste Reduction Programs to local commercial food service entities.
II-4.2	Provide Homeowners Associations and local lawn care businesses with information from SOCWA and MGIA.
II-6.1	Provide the public with information on proper septic system maintenance.
II-7.1	Provide the public with information on riparian land management and support related workshops.
II-8.3	Provide the public with links to information on the Huron River Watershed; the impact of the City on the watershed; and on watershed groups and activities.
II-9.1	Provide information on the impacts of de-icers and snow removal.
II-9.2	Provide information on Winter Storm Water Practices.
II-10.1	Provide information on River-friendly landscaping and the benefits of using native vegetation.
III-1.1	Provide copies of the draft and the final SWMP to the public and interested groups.
III-2.2	Develop and distribute an awareness survey form to the citizens of South Lyon.
III-3.2	Provide the target groups with draft and final copies of the SWMP and solicit and evaluate comment on the plan.
V-1.1	Prepare and adopt a Storm Water Master Plan.
V-2.3	Prepare informational materials and conduct outreach for the development community.
VI-4.1	Provide outreach and education to the construction community on SESC and CRCP.
VII-3.2	Develop and implement a SWPPP.
<b>3<sup>rd</sup> year (2011)</b>	
II-11.1	Provide information to commercial food services and other entities that can potentially impact storm water.
II-12.1	Determine collectively as part of the Focus Group efforts, the best way at measuring effectiveness of the PEP.
II-12.2	Provide updates in the Progress Report on overall PEP effectiveness.
V-3.1	Revise plan review procedures for new development/redevelopment to ensure post-construction control.
<b>4<sup>th</sup> year (2012)</b>	
VII-3.2	Develop and implement a SWPPP.
<b>5<sup>th</sup> year (2013)</b>	
<b>Annually</b>	
II-1.1	Design and implement a training program for City field staff on IDEP.
II-1.2	Use and encourage public use of the existing OCWRC complaint receipt and response system.
II-2.1	Promote storm drain awareness by supporting SEMOG's "Our water. Our future. Ours to protect" campaign.
II-2.2	Storm drain awareness training for the focus group, which represents residents, business owners, and the public.
II-3.1	Provide the public with information on household, yard, travel trailer and vehicle maintenance wastes.
II-3.2	Provide the public with information regarding proper car care.

Task #	Year/Tasks
<b>Annually (Continued)</b>	
II-4.1	Provide the public with information on the application and disposal of yard chemicals.
II-5.1	Provide the public with information on community or 'school' car washes.
II-6.2	Support existing City ordinances and County efforts to have OSDS inspection ordinances.
II-8.1	Provide information on watershed stewardship.
III-3.3	Contact the target groups to review and evaluate programs they sponsor that may satisfy SWMP requirements.
III-3.4	Investigate forming a volunteer group that would assist the City with its current water quality monitoring program. The volunteer group would help collect and report data on the major water bodies in the area.
III-3.5	Co-sponsor a stream clean-up with the School District, the HRWC or a similar group.
III-3.6	Co-sponsor a storm drain stenciling/program with a local community group.
IV-2.2	Field verify all City storm conveyance outfalls and update maps and tables.
IV-3.4	Provide training to appropriate City staff on illicit connections and discharges, failed OSDS, responding to spills, proper enforcement, safety issues, and natural occurring phenomenon.
IV-4.6	Provide training to appropriate City staff on failed OSDS.
V-2.2	Provide training for City field staff.
VII-1.2	Continue an inspection/cleanout program for all City storm water catch basins and manholes.
VII-3.3	Storm water management training for City field staff.
VII-4.2	Label existing storm water system catch basins and manholes.
VII-6.1	Provide training to City field and facility staff on the handling and storage of fertilizers and pesticides.

**Appendix C: Summary of IDEP Outfalls**  
**City of South Lyon**

6/9/2010

Old Id Number	New Id Number	Size		Type	Receiving Water	Land Use	Description of Location
		(inches)					
17-3-1	17-3-010	12		Outlet Pipe	To be determined	R-1A	Buckboard Circle
17-3-2	17-3-020	12		Outlet Pipe	To be determined	R-1A	Buckboard Circle
17-3-3	17-3-030	12		Outlet Pipe	To be determined	R-1A	Buckboard Circle
17-3-4	17-3-040	21		Outlet Pipe	To be determined	R-1A	From Gentry Dr
17-3-5	17-3-050	12		Outlet Pipe	To be determined	R-1A	From Buckboard Circle
17-3-42	17-3-420	12		Outlet Pipe	To be determined	R-1A	11 Mile W of Gentry Dr
17-3-10	17-3-100	12		Outlet Pipe	To be determined	R-1A	Unnamed road
17-3-11	17-3-110	12		Outlet Pipe	To be determined	R-1A	Unnamed road
17-3-12	17-3-120	36		Outlet Pipe	To be determined	R-1A	Unnamed road
17-3-13	17-3-130	48		Outlet Pipe	To be determined	R-1A	Unnamed road
17-3-14	17-3-140	54		Outlet Pipe	To be determined	R-1A	Unnamed road
17-3-15	17-3-150	12		Outlet Pipe	To be determined	R-1A	Unnamed road
18-4-1	18-4-010	12		Outlet Pipe	To be determined	R-2	Polo Dr
18-4-2	18-4-020	12		Outlet Pipe	To be determined	R-2	Corral Ln
18-4-3	18-4-030	12		Outlet Pipe	To be determined	R-2	Appaloosa Ct
18-4-4	18-4-040	12		Outlet Pipe	To be determined	R-2	NE of Saddle Dr
18-4-5	18-4-050	12		Outlet Pipe	To be determined	R-2	Equestrian & Colt Dr
18-4-6	18-4-060	15		Outlet Pipe	To be determined	R-2	S end of Equestrian Dr near 11mile
18-4-7	18-4-070	12		Outlet Pipe	To be determined	R-2	Chestnut Ln
18-4-8	18-4-080	12		Outlet Pipe	To be determined	R-2	Chestnut Ln
18-4-9	18-4-090	24		Outlet Pipe	To be determined	R-2	Shetland & Colt Dr
18-4-10	18-4-100	12		Outlet Pipe	To be determined	R-2	Shetland North of Colt Dr
18-4-52	18-4-520			Outlet Pipe	To be determined	R-2	Outlets to ditch on 11 Mile
18-4-53	18-4-530			Outlet Pipe	To be determined	R-2	Outlets to ditch on 11 Mile
19-1-1	19-1-010			Outlet Pipe	To be determined	R-1	Outlets at C&O R/R crossing S. of 11 Mile
19-1-2	19-1-020	21		Outlet Pipe	To be determined	R-1	East C&O R/R, South of 11Mile
19-1-3	19-1-030	15		Outlet Pipe	To be determined	R-1	South of Raleigh Ct
19-1-4	19-1-040	24		Outlet Pipe	To be determined	R-1	West of Lexington & Yorktown Dr
19-1-5	19-1-050	18		Outlet Pipe	To be determined	R-1	W. of Lexington & N. of Ticonderoga Dr
19-2-1	19-2-010			Outlet Pipe	To be determined	RM-1	Unnamed road
19-2-2	19-2-020			Outlet Pipe	To be determined	RM-1	Unnamed road
19-2-3	19-2-030			Outlet Pipe	To be determined	RM-1	Unnamed road
19-2-4	19-2-040	36		Outlet Pipe	To be determined	RM-1	From Franklin Terrace
19-2-5	19-2-050	12		Outlet Pipe	To be determined	RM-1	N. of North Ridge Rd., W. of Pontiac Trail
19-2-6	19-2-060	18		Outlet Pipe	To be determined	RM-1	S. of Heritage, E. of Potomac Dr

**Appendix C: Summary of IDEP Outfalls**  
**City of South Lyon**

6/9/2010

Old Id Number	New Id Number	Size (inches)	Type	Receiving Water	Land Use	Description of Location
19-2-7	19-2-070	12	Outlet Pipe	To be determined	RM-1	N. of Heritage, West of Potomac Dr
19-2-8	19-2-080	18	Outlet Pipe	To be determined	RM-1	Outlets at C&O R/R crossing, from Hagadorn Ct
19-2-9	19-2-090	30	Outlet Pipe	To be determined	RM-1	S. of Heritage, South end of Potomac Ct.
20-1-1	20-1-010	15	Outlet Pipe	To be determined	R-2	West of Challenging Trail
20-1-2	20-1-020	12	Outlet Pipe	To be determined	IRO	W. of Kestrel Ct, N. of Sequoia Dr
20-1-3	20-1-030		Outlet Pipe	To be determined	IRO	W. of Kestrel Ct, N. of Kestrel Ridge Dr
20-1-4	20-1-040	12	Outlet Pipe	To be determined	IRO	W. of Kestrel Ct, N. of Kestrel Ridge Dr
20-1-5	20-1-050		Outlet Pipe	To be determined	R-1	High School
20-1-6	20-1-060		Outlet Pipe	To be determined	R-1	High School
20-1-7	20-1-070		Outlet Pipe	To be determined	R-1	High School
20-1-8	20-1-080		Outlet Pipe	To be determined	R-1	High School
20-1-9	20-1-090		Outlet Pipe	To be determined	R-1	High School
20-1-10	20-1-100		Outlet Pipe	To be determined	R-1	High School
20-1-11	20-1-110		Outlet Pipe	To be determined	R-1	High School
20-1-12	20-1-120		Outlet Pipe	To be determined	R-1	High School
20-1-13	20-1-130		Outlet Pipe	To be determined	R-1	High School
20-2-1	20-2-010	12	Outlet Pipe	To be determined	R-1	E. of Village Way Dr
20-2-2	20-2-020	12	Outlet Pipe	To be determined	R-1	NE of Pebble Ct
20-2-3	20-2-030	12	Outlet Pipe	To be determined	R-1	West of Deerfield Ct
20-2-4	20-2-040	12	Outlet Pipe	To be determined	R-1	Eagle Heights, South of Fox Ct
20-2-5	20-2-050	12	Outlet Pipe	To be determined	R-1	Eagle Heights, West of Brick Ln
20-2-6	20-2-060	30	Outlet Pipe	To be determined	R-1	West of Heights Ct
20-2-7	20-2-070	30	Outlet Pipe	To be determined	R-1	S. of Brick Ln, Between Eagle Heights Ct & Pebble Ct
20-2-8	20-2-080	12	Outlet Pipe	To be determined	R-1	From Grand Ct, South of Kestrel Ridge Dr
20-2-9	20-2-090		Outlet Pipe	To be determined	R-1	S. 11 Mile, West of Village Way
20-2-10	20-2-100		Outlet Pipe	To be determined	R-1	Leads to Detention Basin S. of Glen Meadows Dr
20-2-11	20-2-110		Outlet Pipe	To be determined	R-1	Leads to Detention Basin S. of Glen Meadows Dr
20-2-12	20-2-120		Outlet Pipe	To be determined	R-1	Leads to Detention Basin S. of Glen Meadows Dr
20-3-1	20-3-010	12	Outlet Pipe	To be determined	B-3	Sequoia Dr
20-3-2	20-3-020	12	Outlet Pipe	To be determined	B-3	Sequoia Dr
20-3-3	20-3-030	12	Outlet Pipe	To be determined	B-3	Sequoia Dr
20-3-4	20-3-040	12	Outlet Pipe	To be determined	B-3	Sequoia Dr
20-3-5	20-3-050	18	Outlet Pipe	To be determined	B-3	Sequoia Dr
20-3-6	20-3-060	15	Outlet Pipe	To be determined	RM-1	Walnut Dr
20-3-7	20-3-070	21	Outlet Pipe	To be determined	RM-1	Walnut Dr

### Appendix C: Summary of IDEP Outfalls City of South Lyon

Old Id Number	New Id Number	Size		Receiving Water	Land Use	Description of Location
		(inches)	Type			
20-3-8	20-3-080	15	Outlet Pipe	To be determined	RM-1	Sequoia Dr
20-3-9	20-3-090	12	Outlet Pipe	To be determined	RM-1	Sequoia Dr
20-3-10	20-3-100	12	Outlet Pipe	To be determined	RM-1	Sequoia Dr
20-3-11	20-3-110	12	Outlet Pipe	To be determined	RM-1	Sequoia Dr
20-3-12	20-3-120		Outlet Pipe	To be determined	RM-1	Sequoia Dr & Willow Dr
20-3-13	20-3-130		Outlet Pipe	To be determined	RM-1	Sequoia Dr & Willow Dr
20-3-14	20-3-140		Outlet Pipe	To be determined	RM-1	Sequoia Dr & Willow Dr
20-4-1	20-4-010	24	Outlet Pipe	To be determined	I-1	Culvert off of Norchester Dr & Hearthside Dr
20-4-2	20-4-020	12	Outlet Pipe	To be determined	I-1	Hearthside Dr
20-4-3	20-4-030	12	Outlet Pipe	To be determined	R-3	Wellington Dr
20-4-4	20-4-040		Outlet Pipe	To be determined	R-3	Eagle Way S. of Feather Ct
20-4-5	20-4-050		Outlet Pipe	To be determined	R-3	North end Eagle Way
20-4-10	20-4-100		Outlet Pipe	To be determined	R-3	Outlets North of 10 Mile, East of Martindale
20-4-17	20-4-170		Outlet Pipe	To be determined	B-3	Pontiac Trail N. of Lottie St
20-4-18	20-4-180		Outlet Pipe	To be determined	R-1	Abel St & Petibone St
29-1-1	29-1-010		Outlet Pipe	To be determined	MH	North end of Pole Ln
29-1-2	29-1-020		Outlet Pipe	To be determined	MH	Walden Ln & S. Lyon Woods Dr
29-1-3	29-1-030		Outlet Pipe	To be determined	MH	Lanier Ln & S. Lyon Woods Dr
29-1-4	29-1-040		Outlet Pipe	To be determined	MH	Clements & Audubon Dr
29-1-5	29-1-050		Outlet Pipe	To be determined	MH	Lafayette (Pontiac Trail) & S. of South Lyon Woods Dr
29-1-6	29-1-060		Outlet Pipe	To be determined	MH	Outlets at South end of Stryker St, East of Pole Ln
29-2-1	29-2-010	12	Outlet Pipe	To be determined	R-1	Outlets at East of Easton, South of Townsend Dr
29-3-1	29-3-010	36	Outlet Pipe	To be determined	R-2	East of Westbrook Dr
29-3-2	29-3-020	36	Outlet Pipe	To be determined	R-2	East of Westbrook Dr
29-3-3	29-3-030	18	Outlet Pipe	To be determined	R-2	South Westbrook Dr, East of Essex Dr
29-3-4	29-3-040	12	Outlet Pipe	To be determined	R-2	East of Essex Dr
29-3-5	29-3-050		Outlet Pipe	To be determined	R-2	South Westbrook Dr, East of Essex Dr, North of 9 Mile
29-4-1	29-4-010	42	Outlet Pipe	To be determined	R-2	East of C&O R/R
29-4-2	29-4-020		Outlet Pipe	To be determined	R-2	East of C&O R/R
29-4-3	29-4-030		Outlet Pipe	To be determined	R-2	East of C&O R/R
29-4-4	29-4-040		Outlet Pipe	To be determined	R-2	East of C&O R/R
29-4-5	29-4-050	36	Outlet Pipe	To be determined	R-2	West of C&O R/R
29-4-6	29-4-060		Outlet Pipe	To be determined	R-2	West of C&O R/R
29-4-7	29-4-070		Outlet Pipe	To be determined	R-2	West of C&O R/R
29-4-8	29-4-080		Outlet Pipe	To be determined	R-2	West of C&O R/R, Off of Parkwood Dr

**Appendix C: Summary of IDEP Outfalls  
City of South Lyon**

6/9/2010

Old Id Number	New Id Number	Size (inches)	Type	Receiving Water	Land Use	Description of Location
29-4-9	29-4-090		Outlet Pipe	To be determined	R-2	West of C&O R/R, Off of Parkwood Dr
30-1-1	30-1-010		Outlet Pipe	To be determined	I-2	East of Dixboro, North of Huron Valley Trail
30-1-2	30-1-020		Outlet Pipe	To be determined	I-2	East of Dixboro, North of Huron Valley Trail
30-3-1	30-3-010	24	Outlet Pipe	To be determined	R-2	W. of Hidden Creek Dr & N. of Ridgefield Ct
30-3-2	30-3-020	15	Outlet Pipe	To be determined	R-2	W. of Hidden Creek Dr & N. of Westhills Dr
30-3-3	30-3-030	15	Outlet Pipe	To be determined	R-2	W. of Hidden Creek Dr & S. of Huntington Dr
30-3-4	30-3-040	15	Outlet Pipe	To be determined	R-2	E. of Westhills & W. of Huntington Dr
30-3-5	30-3-050	15	Outlet Pipe	To be determined	R-2	E. of Westhills & W. of Huntington Dr
30-3-6	30-3-060	12	Outlet Pipe	To be determined	R-2	E. of Hidden Creek Dr & N. of Wood Run Dr
30-3-7	30-3-070	15	Outlet Pipe	To be determined	R-2	W. of Westhills
30-3-8	30-3-080	18	Outlet Pipe	To be determined	R-2	S. of Wood Run Ct
30-3-9	30-3-090	12	Outlet Pipe	To be determined	R-2	At Wood Run Ct
30-3-10	30-3-100	12	Outlet Pipe	To be determined	R-2	Off of Wood Run Ct, East side
30-3-11	30-3-110		Outlet Pipe	To be determined	R-2	E. of Hidden Creek Dr
30-3-10	30-3-120	12	Outlet Pipe	To be determined	R-2	Hidden Creek Dr & S. of Huntington Dr
30-3-13	30-3-130	18	Outlet Pipe	To be determined	R-2	S. of Wood Run Ct, N. of 9 Mile
30-3-14	30-3-140	18	Outlet Pipe	To be determined	R-2	S. of Wood Run Ct, N. of 9 Mile
30-3-15	30-3-150	24	Outlet Pipe	To be determined	R-2	S. 9 Mile, E. Hidden Creek Dr at stream
30-3-16	30-3-160	24	Outlet Pipe	To be determined	R-2	S. 9 Mile, E. Hidden Creek Dr at stream
30-3-17	30-3-170	18	Outlet Pipe	To be determined	R-2	S. 9 Mile, E. Hidden Creek Dr at stream
30-3-18	30-3-180	18	Outlet Pipe	To be determined	R-2	S. 9 Mile, S. Hidden Creek Dr at stream
30-3-19	30-3-190	18	Outlet Pipe	To be determined	R-2	S. 9 Mile, W. Hidden Creek Dr at stream
30-3-20	30-3-200	18	Outlet Pipe	To be determined	R-2	S. 9 Mile, W. Hidden Creek Dr at stream
30-3-21	30-3-210		Outlet Pipe	To be determined	R-2	S. 9 Mile, E. Hidden Creek Dr
30-3-22	30-3-220		Outlet Pipe	To be determined	R-2	S. 9 Mile, E. Hidden Creek Dr
30-4-1	30-4-010	36	Outlet Pipe	To be determined	R-3	S. of Cambridge Ave
30-4-2	30-4-020		Outlet Pipe	To be determined	R-3	E. of Hidden Creek Dr
30-4-3	30-4-030	24	Outlet Pipe	To be determined	R-3	S. of Princeton
30-4-4	30-4-040	24	Outlet Pipe	To be determined	R-3	S. of Princeton
30-4-5	30-4-050		Outlet Pipe	To be determined	R-3	N. of Princeton
30-4-6	30-4-060		Outlet Pipe	To be determined	R-3	N. of Princeton
30-4-7	30-4-070		Outlet Pipe	To be determined	R-3	S. of Princeton
30-4-8	30-4-080	21	Outlet Pipe	To be determined	R-3	N. of Princeton
30-4-9	30-4-090	12	Outlet Pipe	To be determined	R-3	N. of Princeton
30-4-10	30-4-100	12	Outlet Pipe	To be determined	R-3	S. of Princeton

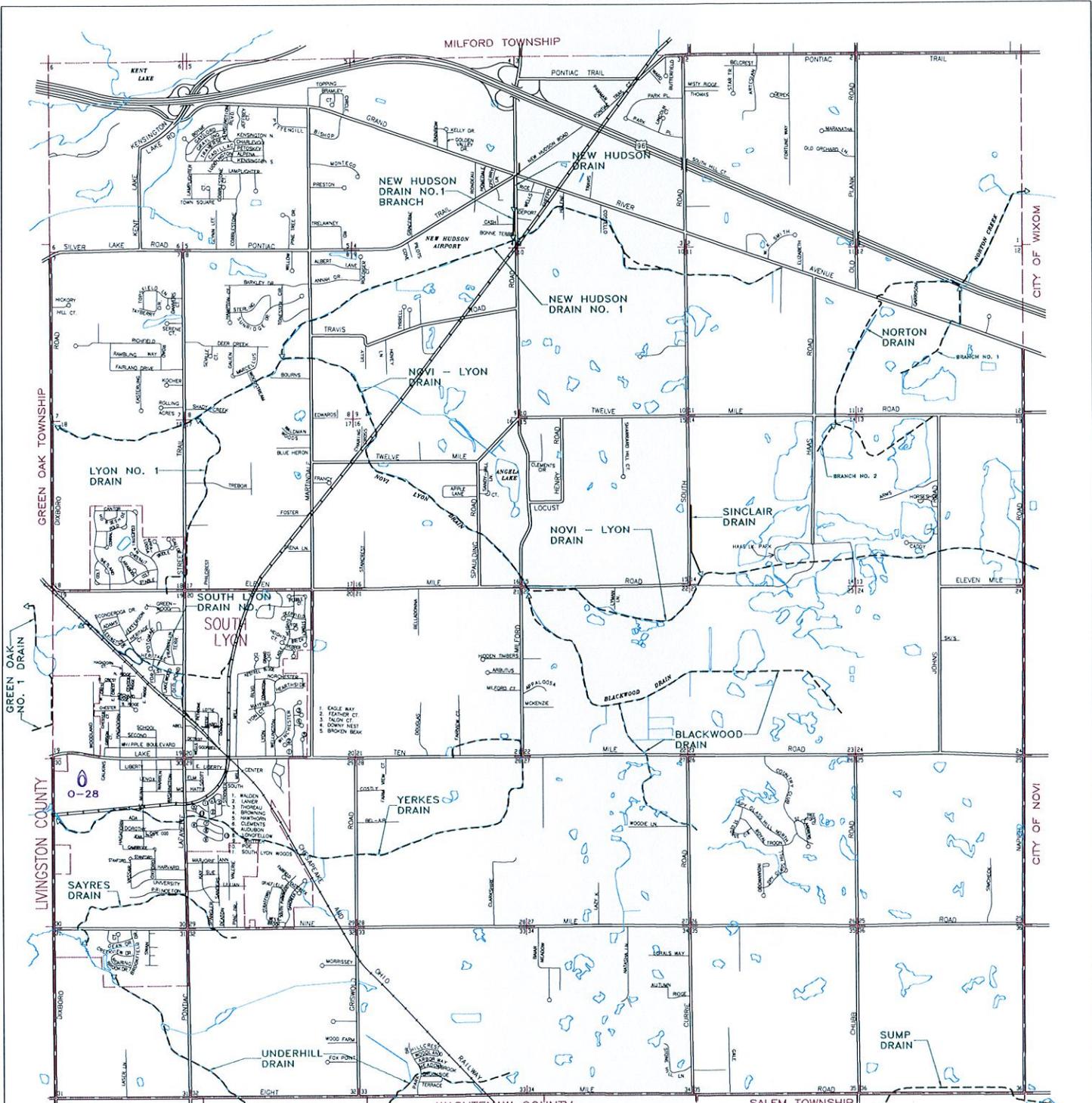
**Appendix C: Summary of IDEP Outfalls  
City of South Lyon**

6/9/2010

Old Id Number	New Id Number	Size (inches)	Type	Receiving Water	Land Use	Description of Location
30-4-11	30-4-110	12	Outlet Pipe	To be determined	R-3	N. of Princeton
30-4-12	30-4-120		Outlet Pipe	To be determined	R-3	S. of Princeton
30-4-13	30-4-130		Outlet Pipe	To be determined	R-3	S. of Princeton
30-4-14	30-4-140		Outlet Pipe	To be determined	R-3	S. of Princeton
30-4-15	30-4-150	21	Outlet Pipe	To be determined	R-3	N. 9 Mile, E. Wood Run
30-4-16	30-4-160	6	Outlet Pipe	To be determined	R-3	N. 9 Mile, E. Wood Run
30-4-17	30-4-170	6	Outlet Pipe	To be determined	R-3	N. 9 Mile, E. Wood Run
31-1-1	31-1-010		Outlet Pipe	To be determined	R-1	S. 9 Mile at Stream
31-1-2	31-1-020		Outlet Pipe	To be determined	R-1	S. 9 Mile
31-1-3	31-1-030		Outlet Pipe	To be determined	R-1	S. 9 Mile
31-1-4	31-1-040		Outlet Pipe	To be determined	R-1	S. 9 Mile
31-1-5	31-1-050		Outlet Pipe	To be determined	R-1	S. 9 Mile
31-1-6	31-1-060		Outlet Pipe	To be determined	R-1	S. 9 Mile
31-1-7	31-1-070		Outlet Pipe	To be determined	R-1	S. 9 Mile
31-1-8	31-1-080		Outlet Pipe	To be determined	R-1	S. 9 Mile at Stream
31-2-1	31-2-010	18	Outlet Pipe	To be determined	R-2	Off of Brookfield Ct
31-2-2	31-2-020	18	Outlet Pipe	To be determined	R-2	Off of Brookfield Ct
31-2-7	31-2-070	42	Outlet Pipe	To be determined	RM-2	W. of Swan Dr
31-2-8	31-2-080	42	Outlet Pipe	To be determined	RM-2	E. of Swan Dr

**Residential Districts Land Use Codes**  
R-1 One Family Residential  
R-1A One Family Residential  
R-2 One Family Residential  
R-3 One Family Residential  
RM-1 Multiple Family Residential  
RM-2 Multiple Family Residential  
MH Mobile Home Park

**Non-Residential Districts Land use Codes**  
B-3 General Business  
I-1 Light Industrial  
I-2 General Industrial  
IRO Industrial Research Office



**BASEMAP LEGEND**

- RAILROAD TRACKS
- HYDROGRAPHY LINE
- MUNICIPAL BOUNDARY LINES
- PRIMARY ROADS & HIGHWAYS
- LOCAL & SECONDARY ROADS

**DRAIN LEGEND**

- ENCLOSED DRAIN
- OPEN DITCH DRAIN
- ORIGINAL DRAIN
- LOWER TERMINUS
- DIRECTION OF FLOW
- RAIN GAUGE MAINTAINED BY O.C. DRAIN COMMISSIONER
- RAIN GAUGE MAINTAINED BY SEMCOG
- LAKE LEVEL CONTROL STRUCTURE
- LAKE LEVEL ELEVATION

952.30

**LYON TOWNSHIP**  
T. 1 n., r. 7 E.  
OAKLAND COUNTY, MICHIGAN

**REVISION BLOCK**

Rev. No.	Rev. By	Rev. Date	Description
1	OS	10/20/02	NEW HYDROGRAPHY ADDED
2	OS	12/04/03	EDIT HYDRO LAYER
3			

ORIG. DATE: 11/14/96  
SCALE: 1"=2000'  
DESIGNED BY: N/A  
DRAWN BY: OCDC MAPPING

ONE PUBLIC WORKS DRIVE  
BUILDING 95 WEST  
WATERFORD, MICHIGAN  
48326-1927

**OCDC**  
OAKLAND COUNTY DRAIN COMMISSIONER

SHEET NO.: 11



City of South Lyon

South Lyon High School

Bartlett Elementary

Sayre Elementary

Centennial Middle School

Millenium Middle School

- Streams
- Streets
- City Limits
- Nested Jurisdiction

# City of South Lyon Drain Map

TREBOR

City Limits

1 inch equals 400 feet

City Limits

EQUESTRIAN

APPALOOSA

GALLOP

SADDLE

CHESTNUT

COLT

STABLE

EQUESTRIAN

South Lyon  
No. 1 Drain

BUCKBOARD

SURREY

PHILCREST

ELEVENMILE

LAFAYETTE

GREENWOOD

Y:\200203\20020382\Design\ProjectData\WaterShed\SL\_No1\_Drain.mxd







# 2009 Land Use

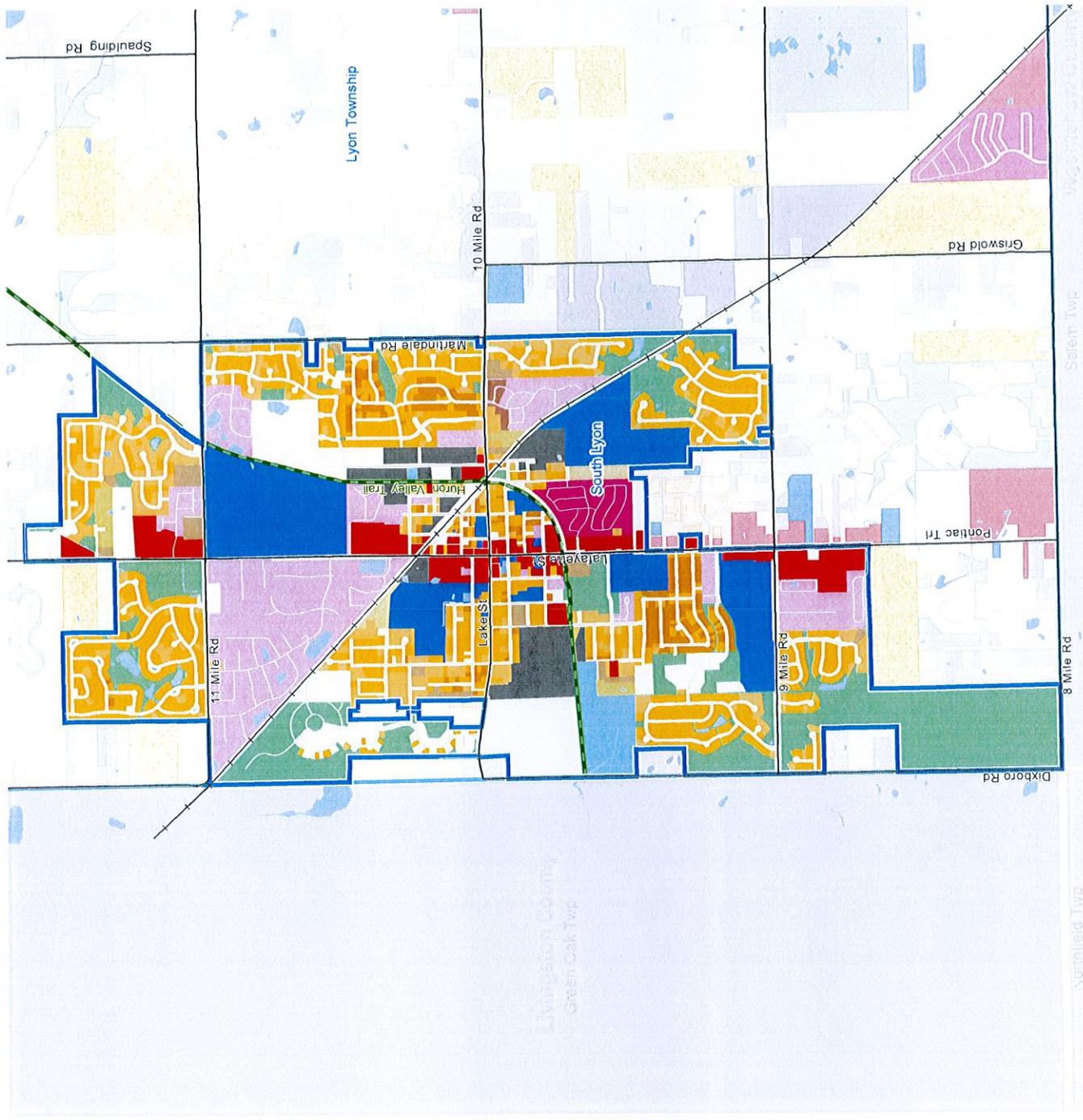
## City of South Lyon

- Legend**
- Agricultural
  - Single Family, 10 acres or greater
  - Single Family, 5 to 9.9 acres
  - Single Family, 2.5 to 4.9 acres
  - Single Family, 1 to 2.4 acres
  - Single Family, 14,000 to 43,559 sq. ft.
  - Single Family, 8,000 to 13,999 sq. ft.
  - Single Family, Less than 8,000 sq. ft.
  - Single Family, More than one unit per parcel
  - Multiple Family
  - Mobile Home Park
  - Commercial/Office
  - Industrial
  - Public/Institutional
  - Recreation/Conservation
  - Transportation/Utility/Communication
  - Vacant
  - Extractive



1 inch = 2,725 feet

map created on February 19, 2010



The information provided herein has been compiled from recorded deeds, plats, tax maps, surveys and other public records. It is not a legally recorded map or survey and is not intended to be used as such. Users should consult the information sources mentioned above when questions arise.