

Storm Water Pollution Prevention Initiative

Michigan General Permit Number MIG6100

Certificate of Coverage Number MIG610015

Municipality: CITY OF LIVONIA

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Signature of Permittee Representative: _____

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Purpose

The purpose of this Storm Water Pollution Prevention Initiative (SWPPI) is to bring together the goals and actions from the Watershed Management Plan (WMP), Illicit Discharge Elimination Plan (IDEP), and the Public Education Plan (PEP) into a single document containing the City of Livonia's commitments necessary to reduce the discharge of pollutants to the maximum extent practicable. The SWPPI includes those actions expected to be implemented over, and in some cases beyond, the term of the permit.

Table 1 lists the WMP Goals associated with the Upper Subwatershed and Middle 3 Subwatershed. Table 1 also identifies the short term objectives contained in these two Subwatershed Management Plans for which the City of Livonia is not proposing an action, and the reasons why. Except as noted, the City of Livonia supports the goals and objectives of two subwatershed plans. Table 2 identifies the progress measures from the Upper Subwatershed Plan that will be used by the City of Livonia to monitor progress. Table 3 and the paragraphs that follow outline the specific activities that the City of Livonia has undertaken, or will undertake, with respect to actions to achieve the applicable goals.

Throughout the term of the general permit, the City of Livonia will incorporate the key elements from the Upper Subwatershed Management Plan into its Storm Water Pollution Prevention Initiative (SWPPI). This SWPPI will be implemented throughout our corporate limits which lies within three (3) designated subwatersheds of the Rouge River, i.e., the Upper, Middle 1 and Middle 3 subwatersheds. While the City of Livonia will focus on the elements contained in the Upper Subwatershed Management Plan, the tables contained in this SWPPI identify how the City's activities relate to the goals established in the Middle 3 subwatershed management plan that encompasses about one third of the City. (Because only a very small portion Livonia lies within the Middle 1 subwatershed, the general permit certificate of coverage did not require the City to participate in developing the SWMP for the Middle 1. However, the City believes that its SWPPI actions relative to the Upper and Middle 3 subwatersheds will adequately address the goals of the Middle 1 subwatershed.)

As revisions are made to these plans, our Storm Water Pollution Prevention Initiative (SWPPI) will reflect those changes. This initiative outlines the specific activities that our community has undertaken, or will undertake, in each of the priority elements.

2. Annual Report to Assess Progress

In order to assess our progress, the City of Livonia will document the following on an annual basis :

- Changes to goals and/or actions in the WMP prior to the required permit date for biannual review and revision
- Progress with respect to specific goals and/or actions
- Actions taken to eliminate illicit discharges.
- Schedule for elimination of illicit connections identified but not eliminated.
- Documentation of the public education effort and an evaluation of its effectiveness.
- Any additional actions taken to reduce the discharge of pollutants in storm water.

The City will continue to submit its annual report to MDEQ on or before the date specified in its COC (i.e., November 1st).

3. Subwatershed Plan and SWPPI Revisions

The SWPPI shall be reviewed every two years and, as necessary, revised. The reviews have taken place in December 2003 and May 2005. Revisions to date-specific commitments listed in this SWPPI will only be made with the approval of MDEQ. As revisions are made to subwatershed management plans for the Upper or Middle 3 subwatersheds, the City of Livonia shall review those changes to determine whether or not its SWPPI needs to be revised.

4. Retention of records

The City of Livonia shall retain the approved SWPPI and its associated in-house records for a minimum of three years after the termination of the permit. These records shall be made available on request of MDEQ and shall include, but not be limited to:

- Information regarding the effectiveness of these activities;
- Records of analyses performed;
- Calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation, if used

5. SWPPI goals and priorities of the City of Livonia

The City of Livonia was an active participant in the development of the Upper Subwatershed Management Plan. The City of Livonia also contributed to the development of the Middle 3 Subwatershed Management Plan. However, based upon the City of Livonia's determination that the major area of concern and the opportunities for improvement are greatest in the Upper Subwatershed, that is where it focused most of its attention.

Livonia's City Council has been presented the results of the planning, public education and remediation efforts on the Rouge River and has authorized proceeding with implementation of the elements identified as priorities in this SWPPI. Individual residents and community organizations have expressed support for the restoration of the Rouge and specific programs designed to address priority concerns in the community affected by the quality of the river and the flow regimes.

Incorporated as a City in 1950, Livonia is now the second largest City in Wayne County with a population of just over 100,000. The City is nearly fully developed with existing land consisting of residential (41 %), commercial (18 %), industrial (10 %) and recreation/open space (8 %). A significant percentage of the total area is made up of transportation right-of-way (17%).

Livonia is served by separate sanitary sewers. In the late 1980s and 1990s, the City implemented a Combined Sewer Overflow Control Project to separate its few combined sewers (which served only portions of the City). Less than 200 homes in the City are still served by on-site disposal systems. The separate storm water drainage system in Livonia is managed by the City with its own facilities, by the Wayne County Department of Public Works in designated county drains, and by the state (MDOT) and county within road rights-of-way under their control. Much of the storm water drainage system in the City was constructed prior to 1980 and consists of enclosed storm sewers as well as concrete lined open channels. Many of these facilities were constructed to address residents' concerns about flooding.

The northern 2/3 (approximately) of the City lies within the Upper subwatershed. This portion of the City is largely residential and commercial. Most of the existing open watercourses in Livonia lie within the Upper subwatershed. The southern 1/3 of the City lies within the Middle 3 subwatershed. Land use in the Middle 3 subwatershed is more commercial and industrial than in the Upper portion of the City. Nearly all of the storm water drainage system in the Middle 3 portion of the City is enclosed. (A very small portion of the City – approximately 19 acres – lies within the Middle 1 subwatershed.)

Livonia residents share many of the same concerns as those in adjacent jurisdictions. The survey results of Rouge watershed residents conducted by the RPO in 1999, particularly the results obtained from residents in Wayne County, indicate that the protection of public health for those who use or come into contact with the river is the highest priority. This survey result was generally confirmed at public meetings held in the Upper and Middle 3 subwatersheds. Many Livonia residents attended these public meetings. An express concern of these residents –most of which reside in the Upper subwatershed - is the affects of excessive flows on property, including stream bank erosion and flooding. Several recent work shops in Livonia for those who wanted to learn about stream bank stabilization and stormwater pollution attracted many residents reinforcing the #2 priority that the Upper Subwatershed Management Plan assigns to reducing excessive flows.

The City has already taken actions to address public health concerns. As indicated previously, the City implemented a Combined Sewer Overflow Control Project. In addition, the City has implemented a correction project to address a Sanitary Sewer Overflow in the Sunset Hills subdivision. The City will continue to work with Wayne County and other Rouge communities to address regional sewer issues through the North Huron Valley/Rouge Valley technical committee.

Addressing excessive flows poses a considerable challenge for the City of Livonia. As stated previously, much of Livonia's storm drainage system consists of enclosed storm sewers and large concrete lined open channels, constructed prior to 1980. The City is nearly fully developed. Residential land use in the City is relatively dense with limited ability to contain runoff at individual sites or localized regional facilities. The City requires on-site detention for new and re-development projects. The City is has had an off-line regional retention facility at its Idyl Wyld golf course. This pilot project will provide valuable information to other Rouge watershed communities regarding the effectiveness of a regional facility at controlling flow fluctuations and erosion from existing flows in an already urbanized area. The City has also begun identifying additional open spaces where additional regional storm water facilities might be constructed.

Livonia has also been proactive in a number of other areas. The City has completed a study to evaluate the effectiveness of catch basin cleaning and street sweeping in reducing pollutants to the Rouge River. The City has used the study results to evaluate its own storm sewer maintenance practices and make adjustments. The City has designed and constructed a waste transfer facility for street sweepings and catch basin sediment and is located at its landfill. The transfer facility will be made available to neighboring communities within the Middle 3 Swag

In 1999, the City initiated a Storm Water Management Study. The scope of the study includes the following:

- Review City design standards, ordinances, and operating procedures and recommend appropriate changes.
- Conduct an inventory of the City's open drainage courses to identify areas with capacity problems, flow restrictions and/or erosion problems. The study will identify needed corrections, present alternatives for corrections, and prioritize those corrections. The study will also provide cost estimates for corrections.
- Review funding options and recommend alternative funding scenarios.
- The Study was completed

Many of the actions identified in Table 3 of the SWPPI refer to the Storm Water Management Study.

The following are long-term goals and explanatory bullets for these goals established for the Upper Subwatershed most closely reflecting the priority concerns of the City of Livonia:

U1 - Protect Public Health (*Control Sources of Untreated Sanitary Waste Entering the River*)

- Restore impaired water-related recreational uses
- Protect areas currently free of bacteria problems
- Achieve water quality standards for partial and full-body contact recreation during all times that human contact with the river water is reasonably expected to occur

U2 - Reduce Excessive River Flows

- Eliminate further increases in the frequency, volume and velocity of flood flows following wet weather events by effectively controlling storm water runoff from new developments
- Protect wetlands and flood plains that provide water storage as well as other benefits to the river
- Require effective storm water management for all development projects, increase maintenance and retrofitting of existing detention facilities, and construct new off-channel storm water detention facilities, to the extent feasible and cost effective
- To the extent feasible and cost effective, create wetlands and restore flood plain areas to increase water storage and provide other benefits

3U - Protect and Restore River Ecosystem for Fish and Wildlife

- Protect fish and wildlife habitat within the river and on adjacent riparian lands to sustain the diversity of viable fish and wildlife populations within the subwatershed
- Enhance the diversity and abundance of fish and wildlife populations in the subwatershed comparable to that found in other southern Michigan river systems with similar physical characteristics

4U - Restore and Maintain Aesthetically Appealing Conditions

Assure that the Upper Rouge River is an asset to area residents that results in:

- Enhancement of the value of riparian lands
- A pleasant, appealing setting in the public and private areas adjacent to the river
- Support of a wide range of quality outdoor recreational experiences

5U - Minimize Soil Erosion and Related Sedimentation

- Reduce the quantity of eroded soils entering the river via construction sites and roadways to help control sedimentation that
 - affects the survival and abundance of aquatic organisms in the river and
 - limits the capacity of storm sewer systems serving the Upper Subwatershed

Each of these long-term goals has a set of short-term goals identified in the Upper Subwatershed Plan. A better term for these short-term goals is five-year measurable objectives. Some of the five-year objectives do not apply to the City of Livonia. The Middle 3 subwatershed has adopted similar long-term and short-term goals (five-year measurable objectives) in its plan.

The top priority of the City of Livonia in the short-term is the protection of public health through control of untreated waste discharges to the river from illicit connections to separate storm sewer systems, CSOs, SSOs and failing septic systems. Wayne County's recently enacted ordinance requires inspection of OSDS at the time of sale for any property within Wayne County. The City of Livonia has informed all its residents on septic systems of the new county ordinance. The City of Livonia will rely upon the Wayne County Division of Roads and Michigan Department of Transportation (MDOT) to adequately maintain and clean roadways and control illegal discharges into storm water systems under their jurisdiction within the City of Livonia.

6. Storm Water Pollution Prevention Development

This SWPPI has been designed and will be implemented to reduce the discharge of pollutants to the maximum extent practicable and is consistent with the Upper and Middle 3 subwatershed management plan(s) developed under Part I.B.1 of the General Permit, and includes those actions expected to be implemented over the term of this permit. This SWPPI will be implemented upon approval of the MDEQ-SWQD District Supervisor, and includes:

1. Actions to be taken by the City of Livonia to assist in the goals established in the Upper and Middle 3 subwatershed management plans as described in Table 3;

2. Evaluation and implementation of pollution prevention and good housekeeping activities, as appropriate, have considered the following practices, which, except as noted below, are included in Table 3.
 - a. Maintenance activities, maintenance schedules, and inspection procedures for storm water structural controls to reduce pollutants (including floatables) in discharges from our permitted separate storm water drainage system; (See IDEP programs, Sewer System O/M and other activities in Table 3)
 - b. Controls for reducing or eliminating the discharges of pollutants from streets, roads, highways and parking lots; (See Pavement Cleaning and Storm Catch Basin Cleaning frequencies in Table 3)
 - c. Procedures for the proper disposal of operation and maintenance waste from the permitted separate storm water drainage system (dredge spoil, accumulated sediments, floatables, and other debris); (See Table 3 for Storm Catch Basin Cleaning frequency. Note: The City of Livonia disposes of road cleaning/catch basin debris/sediments in Livonia's approved Type III landfill and any dredged materials suspected of containing contaminants are tested to determine appropriate disposal under state requirements)
 - d. Ways to ensure that new flood management projects assess the impacts on the water quality of the receiving waters and, whenever possible, examine existing projects for incorporation of additional water quality protection devices or practices; (See Channel Maintenance/Restoration and Treatment/Control BMP's in Table 3. Note: The City of Livonia will assess impacts on water quality as part of any new or any retrofit project involving storm and flood management)
 - e. Implementation of controls to reduce the discharge of pollutants related to application of pesticides, herbicides, and fertilizers applied in our permitted jurisdiction. (See Public Facilities Management in Table 3)

3. Evaluation and implementation of site appropriate, cost-effective structural and nonstructural best management practices (BMPs) to minimize the water quality impacts from areas of new development and significant redevelopment, with the understanding that the goal is to protect the designated uses in the receiving waters from the effects commonly associated with urbanization. (See Land Use Planning and Management in Table 3)

4. The methods of assessing progress in storm water pollution prevention, as summarized for the Upper Subwatershed, are described in Table 2A. Details of the assessment methods are contained in the Upper Subwatershed Management Plan. Under the Rouge Project additional sampling will occur and those results will be evaluated. However, the SWAG of the Upper Subwatershed has committed to specific sampling of the river which, in the collective judgement of the SWAG members, is adequate to assess progress. The SWAG envisions working with the Rouge Program Office or its successor organization within Wayne County to conduct the sampling program. However, in the event that Wayne County does not have federal funds or other resources are not available to assist in the proposed sampling, the City of Livonia agrees to participate with other Upper SWAG members in using their own resources to implement the agreed upon monitoring program.

Table 1 includes a comprehensive list of the long-term goals contained in both the Upper and Middle 3 subwatershed plans encompassing portions of the City of Livonia. Table 1 also identifies those long-term goals (or in some instances specific five-year objectives) that the City of Livonia has not incorporated into their SWPPI at this time. The reasons that the City has not included specific actions related to specific

goals or five-year objectives are listed in the table. The long-term goals are provided a unique number in Table 1 that can be used to interpret the tables that follow.

The following describe the process and endpoint for evaluating progress in the measures developed for the Upper Subwatershed Management Plan outlined with schedules in Table 2A.

- Bacteria Sampling for *E. coli* – Repeat sampling at all those locations where 1993-99 Rouge Project sampling data indicates exceedance of WQS. Confirmation sampling at other locations to determine that compliance with state standard for *E. coli* is still being met.
- New Initiatives/Activities – Results of sampling will indicate where standard is being met and where additional actions to control sources may be needed.
- CSO/SSO Compliance – Statutory and permit requirements include reporting problems and progress in meeting schedules to abate these sources
- Maintain Flow Data/Baseline Information – Currently USGS maintains a gauging station on the lower part of the Upper. If for whatever reason this activity is no longer supported by the USGS, the Upper SWAG members will provide financial support to continue this essential baseline monitoring of flows.
- Analyze Flow Information – Currently the USGS/RPO provide analysis of the flow data so that the frequency of annual flood flows can be determine compared to long term averages. If for whatever reason this activity is no longer supported by the USGS/RPO, the Upper SWAG members will provide financial support to continue this essential analysis.
- Baseline Inventory of Flood Plains/Wetlands – See note below
- Evaluate Regulations/Progress in Protection – See note below
- Off-Channel Regional Retention- The City will has desgined the facility and completed construction in May 2005.
- Financing Options for Existing (non-public) Basins – The City of Farmington has accepted the responsibility under the Upper Subwatershed Management Plan to evaluate funding options to assure routine maintenance and retrofitting of storm water facilities that are in private ownership in its portion of the sub watershed.
- Dissolved Oxygen Monitoring – Repeat sampling at all those locations where 1993-99 Rouge Project sampling data indicates exceedance of WQS. Confirmation sampling at other locations to determine that compliance with state standard for dissolved oxygen is still being met. Sampling will include results from at least three 24-hour periods during the months of June, July and August when the lowest oxygen levels are anticipated.
 - Results of sampling will indicate where standard is being met and where additional actions to control sources may be needed.
- Monitor Biological Community – See note below
- Evaluate Public Information/Education Programs – Two existing surveys of Rouge residents establish a baseline for public knowledge. A new survey is proposed to directly measure the effectiveness of public outreach materials being distributed. The survey may be watershed-side depending upon the participation of other communities/agencies.
 - Public education materials/activities may be modified based upon the survey results.
- Riparian Survey to Determine Baseline Aesthetic Conditions – The Upper SWAG determined that a survey of riparian property owners was perhaps the most objective measure of progress in improving the aesthetics of the river. A baseline survey of perceptions will help identify problem areas and what materials or river conditions are most offensive and need attention. Over time, a repeat survey can measure progress in addressing concerns.

- BMP Street and Catch Basin/Application of Pilot Study Results – Several pilot studies are completed within the Rouge and at least one elsewhere in Michigan to evaluate the most effective frequency for street and catch basin cleaning. The members of the Upper SWAG have agreed to evaluate how the agencies and communities in the Upper have used the results of these studies to modify their current activities.
- Technical Training for Erosion and Sedimentation Control – The members of the Upper SWAG have determined that the best short term measure for improved control of upland sources of soil erosion is the number of local permitting officials who have been exposed to updated technical training. In stream monitoring of total suspended solids was not considered as an effective means to monitor the effectiveness of efforts to control upland erosion sources from construction since a primary source of solids found in the river following storm events comes from bank erosion due to excessive flows.
- Monitor Involvement in River Day – Level of resident participation in River Day will reflect increase in public awareness and help guide City’s future efforts for River Day.
- Public Surveys – See “Evaluate Public Information/Education Programs” above.
- Monitor Participation in HHW Days – The City will document resident participation in its annual HHW (as well as materials collected) and use information to shape future HHW efforts.
- Workshops/Meetings Attendance – Level of resident participation in workshops and meetings will be used to gauge public interest and help City plan future events.

Note: The MDEQ Land and Water Management Division is currently completing a wetlands inventory for the Rouge River watershed with partial funding under a Rouge Project Grant. Under the Governor’s Executive Directive No. 2001 – 5, the MDEQ, among other things, has been directed to complete a review of administrative rules regulating the use of Floodplains and Floodways to determine if current regulations adequately prevent state activities that cause the loss of water storage capacity in the state’s floodplains. While not specifically directed toward private developments that encroach on Floodplains and Floodways, this directive states that the goal is to provide a model for optimum floodplain management to local government and the public. The Upper SWAG will evaluate appropriate measures for protection of wetlands and floodplains in its 2003 update of the Upper Subwatershed Management Plan when the wetland inventory and floodplain/floodway regulations review by MDEQ is expected to be complete. As part of its statewide monitoring responsibilities the MDEQ has a program for evaluating once every five years the status of aquatic communities using the GLEAS monitoring protocols.

Table 2B shows the process and endpoints for evaluating progress in the Middle-3 Subwatershed.

In developing this SWPPI, the City of Livonia focused on the goals and actions identified in the Upper SWMP. Table 3 lists recommended actions from the Upper SWMP and describes Livonia’s commitments relative to those actions. The City has examined the goals and proposed actions in the Middle-3 SWMP and believes that the commitments shown in Table 3 adequately address the Middle-3 SWMP as well as the Upper SWMP. Table 3 includes a cross-reference to the specific actions identified in the Middle-3 SWMP.

There are two actions identified in the Middle-3 SWMP which have not been incorporated into the SWPPI. Livonia has re-evaluated these actions and decided they are no longer appropriate for the City as described below:

Action L28: Rouge Friendly Business – the City originally identified this action for the SWMP with the understanding that Wayne County would provide program support. Subsequently, the City has learned that the County may not be able to provide as much support as previously

anticipated. Until the City knows the level of County involvement, it cannot commit to this action. The City will continue to evaluate this action.

Action L31: Brochures – the City has re-evaluated its Public Education Plan, and while the City may use brochures it currently has none planned, and does not wish to commit to brochures. The City feels its other public education mechanisms adequately meet the SWMP goals and permit requirements.

In developing this SWPPI, the City of Livonia reviewed and re-evaluated the actions listed in its original PEP and IDEP (submitted with the permit application in December 1998). The City has retained most of the activities in the original PEP. However, the City chose to eliminate some of these activities. The PEP changes are summarized below. For the IDEP, the City simplified the descriptions, but feels that the original level of effort and intent are maintained. The City believes that the PEP and IDEP actions listed in Table 3 are adequate to meet SWMP goals and permit requirements.

Joint Mayor-Council Resolution (Activity #3 in original PEP) – this activity has been completed.

Explore possibility of Watershed Resource Center at Schoolcraft College (Activity #4 in original PEP) – the City has reconsidered this and determined that it is not feasible at this time.

Create Public Education Task Force (Activity #11 in original PEP) – this has been deleted due to lack of public interest (as measured by poor attendance at public involvement meetings). The City may conduct public outreach to specific segments of residents based on interest in specific topics. (For example, City residents that did attend the public involvement meetings, expressed interest in riparian landowner issues. The City is pursuing this.)

The annual report provided to the MDEQ as required under the General Storm Water Permit, will provide documentation of the progress for each of the identified actions and any others actions taken by the City consistent with the three watershed management plans to restore and protect the river.

The Table 3 **Requirements Addressed** column references requirements of the general permit where

- IDEP = Illicit Detection and Elimination Plan,
- PEP = Public Education Plan,
- PIP = Public Involvement Plan(s) of the subwatershed(s),
- 6(xx) [numbered items] = the specific general permit requirements identified in Part 6. Storm Water Pollution Prevention Development of this SWPPI, and
- Mgt. Plan = an action identified in at least one of the subwatershed plans, but not otherwise a requirement

7. Assessment of Local Authority

The City of Livonia has reviewed its ordinances, building and plumbing codes and other existing legal authority and has determined that existing regulations are adequate to implement the best management practices identified in Table 3 of this SWPPI. Specifically, ordinances regulating new construction or significant reconstruction authorize the city to require reasonable and necessary storm water best management practices including on-site retention through the site plan approval process. The same ordinances are used to require land developers to obtain soil erosion and sedimentation control permits as a condition of site plan approval. Construction and plumbing codes require all existing or proposed waste discharges to be properly connected to the sanitary sewers or county approved on-site waste disposal systems. In cooperation with Wayne County Health Department property owners with identified failing on-site disposal systems will be required to repair or replace failing systems.

Should Livonia determine at any time during the term of this permit that existing authority is inadequate to implement the requirements of this General Storm Water Permit it will notify the MDEQ. That notification will include those actions taken or proposed by the City to secure the legal authority to meet the permit requirements.

Table 1. Long-Term and Five-year Measurable Objectives of the Upper and Middle 3 Subwatershed Plans

<u>Long-Term Goals</u>	<u>Exceptions to Five-Year Objectives Not Addressed in This SWPPI</u>	<u>Reasons Objective Not Included and/or Comments</u>
Upper Subwatershed Plan		
1U – Protect Public Health	No exceptions identified	
2U – Reduce Excessive Flows		
	Legal Options for Channel Maintenance Activities	Wayne County Conducting Option Review
3U – Protect and Restore River Ecosystem for Fish and Wildlife	No exceptions identified	
4U – Restore and Maintain Aesthetically Appealing Conditions	No exceptions identified	
5U – Minimize Upland Soil Erosion and Related Sedimentation	No exceptions identified	
Middle 3 Subwatershed Plan		
1M3 – Remove sources of Pollution that threaten Public Health	No exception identified	
2M3 - Improve water quality in the River and restore impaired designated uses	No exception identified	
3M3 - Educate the public regarding their impact on the river and the river’s existing and future potential as a community asset and recreational resource	No exception identified	
4M3 – Enhance and preserve fish and wildlife habitat, especially along the Middle Rouge River	No exception identified	
5M3 – Minimize the amount of soil erosion and sedimentation	No exceptions identified	
6M3 – Reduce water volumes and velocities during storm events	No exceptions identified	

Table 2A. Upper Subwatershed Progress Measures

Goal Progress Measure	Responsible Entity	Short Term Target	Year 2008	09	2010	2011	2012
1U - Protect Public Health							
Bacteria Sampling	Rouge Project/or SWAG	Meet dry weather WQS for partial body contact in portions of the river adjacent to public parks and golf courses where public water contact is expected			*		
New Initiatives	SWAG	Identify new activities, if needed	*				
CSOs & SSOs	Livonia	Compliance with permits/orders					
2U – Reduce Excessive Flows							
Maintain River Flow Information	USGS/Rouge Project/or SWAG	Baseline information					*
Analyze Flow Data	Same as above	Number of annual peak flows > 120cfs on 7 year rolling average does not increase					*
Inventory of Flood Plain/Wetlands	MDEQ	Baseline information				*	
Evaluate Regulations	MDEQ	Measure progress in protecting natural flood attenuation functions					
Off Channel Regional /Retrofitting	Livonia	Evaluate relative benefits and costs			*		
Financing Options for Existing Private Retention Facilities	Farmington Hills	Identify alternatives to maintain and retrofit existing privately owned storm water retention facilities					*
Financing/Institutional Options for Channel Maintenance	Wayne County	Identify alternatives for funding areas not covered by drain code where removal of obstruction/bank stabilization a problem					*
3U – Protect/Restore River Ecosystem							
Monitor Dissolved Oxygen	Rouge Project/or SWAG	Significantly reduce the number of locations and the number of days D.O. levels recorded below 5mg/l minimum June-September					*
Monitor Biological Community	MDEQ and/or MDNR	Maintain “good” benthos scores in areas sampled previously and improve areas with current low scores to “good” status by 2025; maintain present populations of sensitive aquatic species					*
4U - Restore Aesthetics/Build Stewardship							
Evaluate Public Info./ Education Materials	Rouge Project/or SWAG	Conduct surveys to determine whether residents have better awareness of water quality problems and actions needed to restore/protect river		*			
Modify I/E Actions	SWAG	Use survey results to expand and/or develop/deliver new I/E products			*		
Riparian Surveys	SWAG and Livonia	Baseline survey to determine perceptions of river aesthetics and impact of remedial actions					

Goal Progress Measure	Responsible Entity	Short Term Target	Year 2008	09	10	11	12
5U – Minimize Upland Soil Erosion							
BMP Street and Catch Basin Cleaning	SWAG and Livonia	Determine application of pilot study results in communities and agencies	comp leted				
Technical Training	SWAG and Livonia	Progress - technical training of local SEC staff	comp leted				
Monitor embeddedness at GLEAS stations	MDEQ/GLEAS	Show improvement in embeddedness (by 2013)					*

Note: It is recognized by the permittee and the MDEQ that the subwatershed targets and schedules in Table 2A are intended to track effectiveness and progress of the SWPPI actions, and progress towards the subwatershed goals. The targets and schedules are not enforceable compliance items required by the permit, and the permittee will not be found in noncompliance with the permit if they are not achieved. The permittee's actions and schedules in Table 3 are enforceable. If, during SWPPI revisions, it is determined that progress towards achieving the subwatershed targets is not being made, the permittee and the MDEQ will negotiate additional and/or alternative actions, schedules, or targets.

Table 2B. Goal-Specific Long Term Assessment of Progress in the Middle 3 Subwatershed

Goal #	WMP Goals	N/A*	Methods for Evaluating Progress in River	Endpoint for Evaluation in the Subwatershed	Responsible Party for Evaluating Progress
1	Improve water quality in the river and restore impaired designated uses.		Sampling the M3 section of the Rouge River for dissolved oxygen, E. coli, total phosphorous, total suspended solids and temperature.	Bacterial water quality standards are met for partial and total body contact during dry weather periods by 2013 upstream of Nankin Dam and by 2025 downstream of Nankin Dam. Dissolved oxygen meets warmwater fish criteria by 2002. Algae does not interfere with recreation activities by 2013 upstream of Nankin Dam and by 2025 downstream of Nankin Dam. Decrease dry weather phosphorous concentrations to 0.05 mg/l at all sampling stations by 2013	RPO, Communities, Wayne County
2	Remove sources of pollution that threaten public health.		Dry and wet weather sampling for E. coli at sampling stations. Status of control or elimination of known CSOs. Status of remedial actions to control or eliminate SSOs. Sampling for PCBs in fish tissue. Number of failing onsite sewage systems corrected. Compliance with permits/orders.	The river meets partial and total body contact criteria for E. coli. in dry weather during May to September. The river is safe and navigable for canoeing in dry weather from May to September. These conditions are expected to be achieved by 2013 upstream of Nankin Dam and by 2025 downstream of Nankin Dam. Removal of fish advisories for PCBs by 2013.	RPO, Communities, Wayne County, MDEQ
3	Educate the public regarding their impact on the river and the river's potential as a community asset.		Number of participants in Rouge Rescue Days, amount of trash removed from the river, feet of river cleaned. Public surveys. Participation in household hazardous waste collection and battery collection. Home lawn and garden maintenance reduces nutrient losses. Involvement in activities Tracking complaints Workshops/meeting attendance Other reporting	Increasing numbers of participants in Friends of the Rouge activities and public education events. Decreasing need for ongoing Rouge Rescue cleanup activities Increased public knowledge of Rouge River and programs offered. Changes in personal practices. Increase in meeting attendance.	Communities, Friends of the Rouge

4	Enhance and preserve fish and wildlife habitat, especially along the river.		GLEAS and RPO periodic habitat/fisheries surveys. Surveys are expected to be done at existing GLEAS stations. Sampling of the M3 section of the Rouge River for dissolved oxygen. Measure and preserve greenways (river flood plain) adjacent to the Middle Rouge River.	Fish, macro-invertebrates and aquatic habitat scores are “good” or better by 2025. Dissolved oxygen meets warmwater fish criteria by 2013. Maintain or increase the amount of greenway/floodplain adjacent to the M3 portion of the Rouge River. Peak flows are reduced and base flow has increased by 2013. Meet adjusted Wile y-Seelbach numbers at US2 by 2025.	GLEAS, MDEQ, RPO, communities, Wayne County
5	Minimize the amount of soil erosion and sedimentation		Dry and wet weather sampling for suspended solids at sampling stations. All communities implement programs, requirements or ordinances for catch basin cleaning, street sweeping, and retention/detention ponds. Number of communities covered by a soil erosion control program. Monitor embeddedness at GLEAS stations.	Achieve TSS of 80 mg/l in dry weather by 2010. All communities implement programs, requirements or ordinances for catch basin cleaning, street sweeping, and retention/detention ponds by 2013. All communities are covered by a soil erosion control program by 2003. Completed Show improving embeddedness by 2010.	Wayne County, communities that border on the river.
6	Reduce water volumes and velocities during storm events		Number of downspouts disconnected, acres of retention/detention ponds constructed. Analyze flow monitoring data at USGS station US2.	Peak flows are reduced by 2025. Maintain or increase the amount of greenway/floodplain adjacent to the M3 portion of the Rouge River. Meet adjusted Wile y-Seelbach numbers at US2 by 2025.	Wayne County, Communities

* Explanation required in Section 5
WMP = Watershed Management Plan
N/A = Use this column to indicate if the goal is not applicable to your community
RPO = Rouge Program Office
GLEAS = Great lakes Environmental Assessment Section

It is recognized by the permittee and the MDEQ that the subwatershed targets and schedules in Table 1 are intended to track effectiveness and progress of the SWPPI actions, and progress towards the subwatershed goals. The targets and schedules are not enforceable compliance items required by the permit, and the permittee will not be found in noncompliance with the permit if they are not achieved. The permittee’s actions and schedules in Table 2 are enforceable. If, during SWPPI revisions, it is determined that progress towards achieving the subwatershed targets is not being made, the permittee and the MDEQ will negotiate additional and/or alternative actions, schedules, or targets.

Table 3 – City of Livonia Actions, Methods of Implementation, Schedule, Measures and Goals Addressed

City of Livonia Actions for Upper SWMP Table 3, Page 1 of 8	Method of Implementation and Schedule	Method of quantifying information in annual report	Requirement(s) Addressed	Upper SWMP Goals Addressed	Middle-3 SWMP Goals Addressed	Related Middle-3 SWMP Action(s)
URBAN SOURCE CONTROLS						
ILLICIT CONNECTION DETECTION/ ELIMINATION PROGRAM	See detailed description of IDEP program activities below		IDEP	1U, 3U, 4U	1M3, 2M3, 4M3	
Review Sampling Data	Continue to review available water quality sampling data collected by the RPO (and/or others) to assist in targeting areas for IDEP investigation. Review will be conducted annually.	Summary of data review	IDEP	Same as above	Same as above	L2
Complaint Reporting System	Continue to receive, record and track citizen or agency complaints of illicit discharges, illegal waste disposal or other pollution problems within the storm water system.	# of complaints received and description of follow up	IDEP	Same as above	Same as above	L2, L35
Dry Weather Outfall Inspections (To Identify Illicit Connections)	Completed first round of dry weather outfall inspections by December 2002. (Through September 30, 2005, approximately 754 outfalls have been inspected, or roughly 99 %.) Long-term - After first round of dry weather outfall inspections is completed, inspect 20% of outfalls annually.	Summary of : # outfalls inspected; problems found; corrections made.	IDEP	Same as above	Same as above	L2
Follow up Investigations and Enforcement for Illicit Connections	Continue to conduct follow up investigations at outfalls where dry weather inspections indicate the potential of illicit connection(s). Continue to investigate complaints of illicit discharges received through City's reporting system. Continue to notify MDEQ and other appropriate agencies of any significant violations. Initiate action against property owners to ensure that illicit discharges are corrected, in accordance with existing ordinances. Property owners will be given the opportunity to comply voluntarily before formal enforcement action is taken. (If property owners do not voluntarily comply within 30 days, the City will initiate formal enforcement.)	Summary of: # investigations conducted; # complaints received; # reported to MDEQ; problems found; enforcement actions taken; corrections made.	IDEP	Same as above	Same as above	L2, L3, L35

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City of Livonia Actions for Upper SWMP Table 3, Page 2 of 8	Method of Implementation and Schedule	Method of quantifying information in annual report	Requirement Addressed	Upper SWMP Goals Addressed	Middle-3 SWMP Goals Addressed	Related Middle-3 SWMP Action(s)
Staff Training	<p>Continue to provide IDEP training to City personnel as needed to ensure that City has sufficient level of trained staff to conduct outfall inspections and investigations. (19 City staff have completed IDEP training. Additional training will be conducted to accommodate staff transfers, retirements and/or new staff.)</p> <p>Provided “eyes and ears training” to all field staff by December 2002. As part of the Eyes and Ears program, field staff are trained to be aware of suspicious activities that they may observe while conducting their day to day work activities, and trained to report suspicious activities to appropriate personnel. In addition, City vehicles have Eyes and Ears stickers with a phone number, to alert citizens where to report suspicious activities.</p>	# staff trained	<i>IDEP</i>	Same as above	Same as above	L1
Public Information	Continue to distribute information regarding the appropriate disposal of motor vehicle fluids, household hazardous waste, grass clippings, leaf litter and animal wastes. (See public education activities listed below.)	# articles, brochures of other materials	<i>IDEP</i>	Same as above	Same as above	L4
Review City Ordinance(s)	Continue to review City ordinance(s) on a periodic basis to determine if changes are necessary to ensure adequate implementation of IDEP program. Annually	Summary of proposed ordinance changes	<i>IDEP</i>	Same as above	Same as above	L3
ILLEGAL DUMPING/SPILL CONTROLS	See below					
Complaint Reporting System	See Complaint Reporting System commitment above under Illicit Connection Detection/Elimination Prog		<i>IDEP</i>	Same as above	Same as above	L35
Enforcement/Correction of Illegal Dumping/Spills	<p>Continue to investigate reports of illegal dumping and/or spills received through the City’s reporting system or other means (such as PEAS and/or Wayne County).</p> <p>Initiate action against responsible party to ensure that dumping is eliminated and appropriate clean-up activities are taken, in accordance with City ordinance.</p> <p>Continue to notify MDEQ and other appropriate agencies of significant violations.</p>	<p># of reports received and follow up taken.</p> <p>Description of corrective actions</p> <p># reported</p>	<i>IDEP</i>	Same as above	Same as above	L35
Public Information	See Public Information commitment above under Illicit Connection Detection/Elimination Prog.		<i>PEP</i>	Same as above	Same as above	L4
Household Haz. Mat. Management	<p>On annual basis, advertise and host HHW collection day for homeowners via direct mailing to residents (quarterly newsletter and/or other mailer).</p> <p>Evaluate potential for expanding HHW collection program and make recommendations to City Council by December 2013.</p>	Estimated # of citizens and quantity disposed	<i>PEP</i>	Same as above	Same as above	L4

City of Livonia Actions for Upper SWMP Table 3, Page 3 of 8	Method of Implementation and Schedule	Method of quantifying information in annual report	Requirement Addressed	Upper SWMP Goals Addressed	Middle-3 SWMP Goals Addressed	Related Middle-3 SWMP Action(s)
MINIMIZE INFILTRATION OF SEEPAGE FROM OSDS	<p>Update map of areas within the City that are served by on-site disposal systems. Annually.</p> <p>Continue to work with Wayne County and residents to enforce County OSDS ordinance. When Wayne County identifies a system failure, notify County and property owner whether public sewer is available. When Wayne County identifies a system failure and public sewer is not available, evaluate feasibility and cost effectiveness of extending sewer to serve property.</p> <p>Visually (only) inspect all known properties with OSDS for obvious signs of system failure. Annually.</p> <p>If visual inspection indicates a failure, refer to Wayne County Health Department.</p>	<p>Updated map.</p> <p>Results of evaluation for each failure reported by Wayne Co</p> <p>Summary of inspections.</p> <p># referrals</p>	IDEP	1U, 3U, 4U	1M3, 2M3	L11 L12
LAND USE PLANNING AND MANAGEMENT	See below					
Storm Water Mgt. for New Development	<p>Continue to require on-site storm water management for new developments as needed.</p> <p>Completed Storm Water Management Study. The study report will identify recommendations for changes to City's review processes. Review process has changed, following Wayne County's Storm Ordinance.</p> <p>Long-term – review recommendations of Storm Water Management Study and develop implementation plan by December 2010.</p>	<p>General description of BMPs required</p> <p>Documentation that study is complete</p>	6(3)	2U, 3U, 4U, 5U	2M3, 4M3, 5M3, 6M3	L5, L16
Home Lawn and Garden Maintenance	Distribute information to residents in newsletters and in a video describing "Rouge Friendly" lawn and garden practices. Other public education activities may also address this topic. (See public education activities listed below.)	# of articles, est. use of video	PEP	3U, 4U,	2M3, 3M3, 4M3	L6
Admin. Soil and Sedimentation Controls	The City is a Local Enforcing Agency. The City will continue to require conformance with state regulations through site plan approval process.	Submit copy of annual SESC report to LWMD with annual report	6(3)	3U, 4U, 5U	4M3, 5M3	L7
Flood Plain/ Wetland Protection & Management	The City will require developers to obtain all necessary floodplain and/or wetland permits prior to approving site plan.	Examples of activity, if any	6(3)	2U, 3U	6M3	
Staff Training - Erosion Control	The City has provided soil erosion training to 19 staff during the last year. The City will send employees to state sponsored <u>update</u> training at earliest available opening. Completed staff training . Long-term—Maintain staff training and recertified as needed.	# trained	6(3)	5U	4M3	L7, L36

City of Livonia Actions for Upper SWMP	Method of Implementation and Schedule	Method of quantifying information in annual report	Requirement Addressed	Upper SWMP Goals Addressed	Middle-3 SWMP Goals Addressed	Related Middle-3 SWMP Action(s)
Table 3, Page 4 of 8						
PUBLIC FACILITIES MANAGEMENT	See below					
Storage/Loading/Unload. Management	Inspect all City-owned storage/loading/unloading facilities for application of appropriate BMPs by 12-31-13. Long-term – develop plan and schedule to address any concerns identified during inspection.	Summary of: facilities inspected; BMPs to be applied	6(2a)		2M3	L37
Outdoor Work Area Management	Inspect all City-operated facilities for application of appropriate BMPs by 12-31-13. Long-term – develop plan and schedule to address any concerns identified during inspection.	Summary of: facilities inspected; BMPs to be applied	6(2a)	Same as above	Same as above	L37
Vehicles and Equipment Management	Inspect all City-owned vehicle and equipment facilities for application of appropriate BMPs by 12-31-13. Long-term – develop plan and schedule to address any concerns identified during inspection.	Summary of: facilities inspected; BMPs to be applied	6(2a)	Same as above	Same as above	L37
Pavement Cleaning	Maintain current levels of sweeping residential streets (4 times/year) and main roads (7-8 times/year) under City control. Currently sweeping at least 4 times a year and 12 times for main roads. See System Master Planning and System Evaluation and Maintenance below.	Miles of streets swept	6(2b)	5U	3M3	L8
Deicing Practices Review	Monitor practices and materials use to minimize environmental impacts consistent with requirements of road safety.	Changes in basic program	6(2b)		1M3	L9
Golf Course/Rec. Area Management	Continue to require applicator training/certification of city employees/contractors who apply regulated pesticides, fungicides and herbicides on city owned property	# of certified applicators	6(2e)	3U	2M3, 4M3	L10
SEWER SYSTEM O/M	See below					
Storm Catch Basin Cleaning	Maintain current schedules of routine catch basin cleaning that ranges from once a year to once every five based upon need. Trying to clean every catch basin once in five years. See Master Plan and Pilot Study below.	Summary of: # catch basins cleaned; amount of sediment removed.	6(2a)	3U, 4U, 5U	4M3, 5M3	L13
Waste Transfer Facility	Designed and constructed regional Waste Transfer Facility at existing City landfill site, for disposal of catch basin cleanings/sediment. Design was completed by January 31, 2002. Construction was completed by August 31, 2002. (This facility will be made available to Middle 3 Swag members.)	Documentation that facility is completed.	6(2a)	3U, 4U, 5U	2M3, 4M3, 5M3	
City of Livonia Actions for Upper SWMP	Method of Implementation and Schedule	Method of quantifying information in	Requirement Addressed	Upper SWMP Goals	Middle-3 SWMP Goals	Related Middle-3 SWMP

Table 3, Page 5 of 8		annual report		Addressed	Addressed	Action(s)
Sanitary System Cleaning	Maintain routine inspection and maintenance cleaning of sanitary sewers in accordance with annual O & M report (submitted to MDEQ SWQD annually in January)	Summary of: Miles inspected; results of inspections.	<i>Mgt Plans</i>	1U, 3U, 4U	1M3, 2M3, 4M3	L14
SSO Identification and Control	One SSO (Sunset Hills) had been identified. The City has completed the corrective measure design and completed the construction by September 2002. Long-term – continue to report and address SSOs as required under state/federal regulations.	Summary of required reporting. # discharges remediated	<i>Mgt Plans</i>	1U, 3U, 4U	1M3, 2M3, 4M3	L15
TREATMENT AND CONTROLS BMPs						
STORM SYSTEM CONTROLS	See below					
System Master Planning	Complete Storm Water Management Study currently under development. Study was completed by December 2002.	Documentation of completion	6(2a) 6(2d) 6(3)	2U, 3U, 4U	2M3, 3M3, 4M3, 6M3	L16
GIS	The City has already developed a GIS. The City will continue to update the GIS to reflect new development and IDEP activities. The City will conduct an annual review of the GIS to determine additional update needs and schedule.	Summary of updates completed and annual review.	6(2a) 6(2d)			L16
Off-line Storm Water Detention	Determining the effectiveness and feasibility of the constructed regional storm water facility at Idyl Wyld Golf Course, and complete facility design by August 2004. (Construction of the storm water facility is complete with funding through CMI.) 24 locations for potential future regional storm water facilities have sited by December 2002.	Description of construction progress.	6(3) <i>Mgt. Plans</i>	2U, 3U, 4U	4M3, 6M3	L17, L23
Specific Storm Water BMPs (detention ponds, off-channel storage, swales, filter strips, constructed wetlands, media filters, sediment basins)	As part of City site review, required BMPs at new public and private developments and re-developments to control storm water volume and pollutants are required for approval.	Types of BMPs employed and quantification	6(3)	2U, 3U, 4U, 5U	4M3, 5M3, 6M3	L18, L19, L20
System Evaluation and Maintenance	Pilot study to determine optimal catch basin cleaning and street sweeping frequencies to reduce sediment loadings has been completed. The City's current practices were updated from the study by December 2002.	# of basins cleaned	6(2a) 6(2b)	2U, 3U, 4U	2M3, 4M3, 5M3	L8
Study Alternative Financing	Complete Storm Water Management Study currently under development by December 2002. Review study findings relative to alternative financing and select financing approach by June 2013.	Document study completion Report on findings	<i>Mgt. Plans</i>			

City of Livonia Actions for Upper SWMP Table 3, Page 6 of 8	Method of Implementation and Schedule	Method of quantifying information in annual report	Requirement Addressed	Upper SWMP Goals Addressed	Middle-3 SWMP Goals Addressed	Related Middle-3 SWMP Action(s)
SANITARY SYSTEM CONTROLS	See below					
Oil and Grease Trap Devices	Enforce city code requirements for hook-up and maintenance of sanitary systems (e.g. exclude storm water, require grease traps where appropriate, etc.)	Status of requirements	<i>Mgt. Plans</i>	1U, 3U, 4U	1M3, 2M3	L21
Combined Sewer Overflow Control Program	Continue to participate in the North Huron Valley/Rouge Valley technical committee currently developing regional sewer system improvement alternatives.	# meetings attended	<i>Mgt. Plans</i>	1U, 3U, 4U	1M3, 2M3, 4M3	
CHANNEL MAINTENANCE/ RESTORATION	See below					
OUTLET STABILIZATION	<p>Prioritize out falls that need stabilizing and develop schedule for implementing corrections by December 2013. (City has identified sixteen outfalls that need stabilization.)</p> <p>Long-term – implement correction plan and schedule.</p>	<p># addressed/ identified as problems</p> <p>Progress</p>	<i>6(2d)</i>	3U, 5U	2M3, 4M3, 5M3	L22
STREAM BANK STABILIZATION (engineered and bio-engineered protection)	<p>Completed Storm Water Management Study by December 2002. Study will include identification of erosion sites on open watercourses throughout the City.</p> <p>Prioritize erosion sites and develop plan for implementing solutions by June 2013.</p> <p>Long-term – implement correction plan and schedule</p> <p>(See also, previous description of Idyl Wyld regional storm water facility under Off-line Storm Water Detention.)</p>	<p># identified</p> <p>Progress toward plan.</p> <p>Progress toward plan</p>	<i>6(2d)</i>	3U, 5U	4M3, 5M3	L23
FLOW OBSTRUCTION PREVENTION/REMOVAL	<p>Evaluate results of financing study by Wayne County. Apply results if appropriate to reduce bank erosion/flooding</p> <p>Completed Storm Water Management Study by December 2002. Study will include identification of obstructions on open watercourses throughout City.</p>	<p>Progress</p> <p># identified.</p>	<i>Mgt. Plans</i>	2U	6M3	L24

City of Livonia Actions for Upper SWMP Table 3, Page 7 of 8	Method of Implementation and Schedule	Method of quantifying information in annual report	Requirement Addressed	Upper SWMP Goals Addressed	Middle-3 SWMP Goals Addressed	Related Middle-3 SWMP Action(s)
FLOW OBSTRUCTION PREVENTION/REMOVAL (continued)	Prioritize obstructions and develop plan for addressing by June 2013. The City will work with MDEQ and Wayne Co. in developing plan. Long-term- implement corrective plan and schedule	Progress toward plan Progress toward plan				
HABITAT RESTORATION	Consider habitat restoration as part of bank stabilization, regional retention and/or other specific public projects involving river corridor.	# sites addressed, if any	<i>Mgt. Plans</i>	3U, 4U	4M3	
PUBLIC EDUCATION INVOLVEMENT	See below			4U	1M3, 3M3	
SWAG SURVEY	Upper SWAG will complete survey to determine effectiveness of public education efforts by 2009. Annual progress report to MDEQ.	Report survey results when complete	<i>Mgt. Plans</i>	Same as above	Same as above	
CITY NEWSLETTER SERIES	Publish articles in City's quarterly newsletter to inform residents of actions to protect the Rouge River. At least 2 articles will be published each year covering a range of topics, including those required by the general permit. (The City began publishing Rouge educational articles in the newsletter in 1998.)	# & topics of newsletter articles published	<i>PEP</i> <i>PIP</i>	Same as above	Same as above	L4, L6, L25
CABLE PROGRAMS, PUBLIC SERVICE ANNOUNCEMENTS, ETC	Provide educational facts about storm water pollution, and citizen actions via the City's local cable station and web site. The City will broadcast at least 2 programs and/or public service announcements per year. This action will include broadcasting the video "Storm Drains are Not Garbage Cans" (produced by the communities in the Upper SWAG.) Long-term – identify additional existing video productions and broadcast.	# and topics of cable programs and/or announcements broadcast.	<i>PEP</i> <i>PIP</i>	Same as above	Same as above	L4, L6, L32, L33
PUBLIC BUILDING DISPLAYS	Use display boards at public buildings/events to provide information on river restoration (<i>boards and materials prepared by City of Livonia and used beginning in 2000</i>) Long-term – Update boards if proven to be effective education tool.	Estimated # of displays, topics, and locations	<i>PEP</i>	Same as above	Same as above	
PRESENTATIONS TO LOCAL GROUPS, ORG, AND GOV. OFFICIALS	Make presentations to homeowner associations, civic groups, local organizations and governmental bodies as requested. (Approximately 1/yr).	# and topics of presentations	<i>PIP</i> <i>PEP</i>	Same as above	Same as above	
STORM DRAIN STENCILLING	The City will continue to provide storm drain stenciling support– consisting of providing stencils, paint, and catch basin location maps - to FOTR, individuals and organizations upon request. The City published a newsletter article about storm drain stenciling and offering City support to interested organizations.	Report of locations stenciled Copy of newsletter article	<i>PIP</i> <i>PEP</i>	Same as above	Same as above	L29
TRIBUTARY SIGNAGE	Wayne County's signage program does not include signs in Livonia. The City has identify and placed appropriate signage on road right of ways.	# signs in place	<i>PIP</i> <i>PEP</i>	Same as above	Same as above	L30

City of Livonia Actions for Upper SWMP Table 3, Page 8 of 8	Method of Implementation and Schedule	Method of quantifying information in annual report	Requirement Addressed	Upper SWMP Goals Addressed	Middle-3 SWMP Goals Addressed	Related Middle-3 SWMP Action(s)
WEB SITE	The City of Livonia is providing Rouge watershed information to residents via the City's web-site, including Rouge friendly tips. Reviewing and updating web site yearly. (The City launched the web site in February 2001.)	Summary of updates.	PIP PEP	Same as above	Same as above	L4, L6, L32
ROUGE RESCUE	Continue to sponsor sites for annual river clean-up and education efforts in cooperation with FOTR (<i>Sponsorship began in 1987</i>)	Summary report including # sites, activities, # participants	PEP	Same as above	Same as above	L26
ROUGE EDUCATION PROJECT	Eight schools involved through 2007 school year (<i>City allocated Rouge grant dollars for FOTR beginning in 1999</i>) Long-term – Seek sponsors to expand number of schools involved.	# number of schools	PEP	Same as above	Same as above	L27
DIRECT MAILINGS TO HOMES	Use direct mailings (to supplement quarterly newsletter) to inform residents at least twice each year of watershed related activities and/or actions needed to protect river. Mailings will include two letters regarding annual HHW drop off program and one additional mailing on another watershed topic. (Since 1998, the City has sent yearly mailings regarding appropriate HHW disposal.)	# and topics of mailings and examples	PEP PIP	Same as above	Same as above	L4, L25
FROG AND TOAD SURVEYS	Host public informational meetings on Frog and Toad Surveys in cooperation with FOTR and Schoolcraft (<i>meeting held in October 2007 with good turnout</i>) Long-term – Evaluate public interest in continuing.	# of residents attending and # sites surveyed	PIP PEP	Same as above	Same as above	
COMMUNITY MEETINGS ON SUBWATERSHED PLAN	Made presentations to City Council to provide information regarding the Subwatershed Plans and the SWPPI. (Two general public meetings were held in 2002 and one citizen advisory group meeting). Provided opportunity for public comment on any revised subwatershed plans.	Summarize in Mgt. Plan and update	PIP PEP	Same as above	Same as above	L34