

CITY OF O'FALLON, MISSOURI

APPLICATION
FOR THE GENERAL PERMIT

TO THE STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT
SEPTEMBER 2007



City of O'Fallon, Missouri 2008-2013 Stormwater Management Program Introduction

The City of O'Fallon, Missouri recognizes that stormwater runoff may be polluted and is transported through its MS4 to local creeks, streams and rivers. We also recognize the land and impervious areas generate and cause pollution in our daily activities. Rain and snow melt, runoff and pick up oil, fertilizers, pesticides, dirt and other pollutants make their way into our storm sewer system and eventually to our local creeks, rivers and lakes.

We are required to submit a five-year Storm Water Management Plan as required under the Clean Water Act. The National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating sources, such as the City's separate storm sewer systems (MS4).

This plan will address the requirements emphasizing the six minimum control measures required and identify specific goals and best management practices associated with these key control measures along with target dates for completion. We will evaluate our effectiveness and assess the progress of each goal and best management practice.

Our plan of action for the next five-year reporting period will address the following six minimum control measures as identified in the permit:

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good House Keeping for Municipal Operations

We have seen some success with our previous five years in this program and look forward to continued success in this next reporting cycle.

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1 **COVERAGE UNDER THIS PERMIT**

1.1 **Permit Area**

This permit covers all areas served by a municipal separate storm sewer system (MS4) for which the applicant is identified as the continuing authority.

1.2 **Eligibility**

1.2.1 This permit authorizes discharges of storm water from regulated small MS4s, as defined in 10 CSR 20-6.200. The permittee, or co-permittee, is authorized to discharge under the terms and conditions of this general permit if the permittee:

1.2.1.1 Owns or operates a regulated small MS4 as defined in 10 CSR 20-6.200;

1.2.1.2 The regulated small MS4 is not a "large" or "medium" MS4 as defined in 10 CSR 20-6.200;

1.2.1.3 Submits a general permit application in accordance with Section 2 of this permit;

1.2.1.4 The regulated small MS4 is located fully or partially within an urbanized area as determined by the latest Decennial Census by the Bureau of Census or designated for permit authorization by the department pursuant to 10 CSR 20-6.200.

1.2.1.5 Complies with the terms of this general permit.

1.2.2 The following are types of discharges authorized by this permit;

1.2.2.1 *Storm water discharges.* This permit authorizes storm water discharges to waters of the State from the regulated small MS4s identified in Section 1.2.1, except as excluded in Section 1.3.

1.2.2.2 *Non-storm water discharges.* The permittee is authorized to discharge the following non-storm water sources provided that the permitting authority has not determined these sources to be substantial contributors of pollutants to the permittee's MS4 that require a separate permit:

- Landscape irrigation
- Rising ground waters
- Uncontaminated ground water infiltration (infiltration is defined as water other than wastewater that enters a sewer system, including sewer service connections and foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.)
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains

- Air conditional condensate
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Flows from riparian habitats and wetlands
- Street wash water
- Discharges or flows from fire fighting activities
- Individual residential car washing
- Dechlorinated residential swimming pool discharges

1.3 Limitations on Coverage

This permit does not authorize:

- 1.3.1 Discharges that are mixed with sources of non-storm water unless such non-storm water discharges are:**
- In compliance with a separate NPDES permit, or
 - Determined not to be a substantial contributor of pollutants to waters of the State.
- 1.3.2 Storm water discharges associated with industrial activities requiring separate NPDES permits as defined in 10 CSR 20-6.200.**
- 1.3.3 Storm water discharges associated with construction activities requiring separate NPDES permits as defined in 10 CSR 20-6.200.**
- 1.3.4 Storm water discharges currently covered under another permit.**
- 1.3.5 Discharges that are likely to jeopardize the continued existence of any species that are listed as endangered or threatened under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA.**
- 1.3.6 Discharges that violate the National Historic Preservation Act.**
- 1.3.7 Discharges that cause or contribute to a violation of instream water quality standards. The permittee's storm water management program must include a description of the BMPs that the permittee will use to ensure that violations will not occur. The department may require corrective action or an application for an individual permit or alternative general permit if an MS4 is determined to cause or create a significant potential for causing an instream exceedance of water quality standards.**
- 1.3.8 Discharges of any pollutant into any water for which a Total Maximum Daily Load (TMDL) has been either established or approved by the EPA unless the permittee's discharge is consistent with that TMDL. This eligibility condition applies at the time the permittee submits an application for coverage. If conditions change after the permittee has permit coverage, the permittee**

may remain covered by the permit provided the permittee complies with the applicable requirements of Section 3. The permittee shall incorporate any limitations, conditions and requirements required by the TMDL, including monitoring frequency and reporting required, into the Storm Water Management Program in order to be eligible for permit coverage. For discharges for which the permittee is responsible but are not eligible for coverage under this permit, the permittee shall apply for and receive an individual or other applicable general NPDES permit prior to discharging.

1.3.9 Discharges that do not comply with state anti-degradation requirements for water quality standards as specified at 10 CSR 20-7.031(2).

1.4 **Obtaining Authorization**

1.4.1 To be authorized to discharge storm water from regulated small MS4s, the permittee shall submit an application and a description of the permittee's storm water management program in accordance with the deadlines presented in Section 2 of this permit.

1.4.2 The permittee shall submit the information required in Section 2 on the latest version of the application form (or photocopy thereof). The permittee's application shall be signed and dated.

1.4.3 Where the operator changes, or where a new operator is added after submittal of an application under Section 2, a new application shall be submitted in accordance with Section 2 prior to the change or addition.

2 **APPLICATION REQUIREMENTS**

2.1 ***Deadlines for Application.*** If the permittee is automatically designated under 10 CSR 20-6.200 or designated by the department in this permit, then the permittee is required to submit an application and a description of the permittee's storm water management program or apply for an individual permit by March 10, 2003.

2.2 ***Additional designations after the date of permit issuance.*** If the permittee is designated by the department after the date of permit issuance, then the permittee is required to submit an application and a description of the permittee's storm water management program to the department within 180 days of notice.

2.3 ***Submitting a Late application.*** The permittee is not prohibited from submitting an application after the dates provided in Section 2.1. If a late, or modified application is submitted, the permittee's authorization is only for discharges that occur after permit coverage is granted. The department reserves the right to take appropriate enforcement actions for any unpermitted discharges.

3 SPECIAL CONDITIONS

3.1 Discharges to Water Quality Impaired Waters

3.1.1 If discharges from the MS4 are upstream from a 303(d) listed (impaired) waterbody, the permittee shall, in consultation with the department:

3.1.1.1 Determine whether storm water discharges from any part of the MS4 significantly contributes measurable pollutants directly or indirectly to a 303(d) listed (i.e., impaired) waterbody. If the permittee has discharges meeting this criteria, the permittee shall comply with Section 3.1.2. If the permittee does not, Section 3.1 does not apply to the permittee.

3.1.1.2 Determine whether a Total Maximum Daily Load (TMDL) has been developed by the department and approved by EPA for the listed waterbody. If there is a TMDL, the permittee shall comply with both Sections 3.1.2 and 3.1.3. If no TMDL has been finalized, Section 3.1.3 will apply when the TMDL is finalized.

3.1.2 *Water Quality Controls for Discharges to Impaired Waterbodies.* The permittee's storm water management program (SWMP) required under Section 4 shall include a description of how the permittee's program will control the discharge of measurable pollutants of concern and ensure the permittee's discharges will not cause or contribute to instream exceedances of the water quality standards. This discussion shall specifically identify measures and BMPs that will collectively control the discharge of the pollutants of concern.

3.1.3 *Consistency with TMDL Allocations.* If a TMDL has been finalized for any waterbody into which the permittee discharge, the permittee must:

3.1.3.1 Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from the permittee's MS4.

3.1.3.2 Determine whether the TMDL includes a pollutant wasteload allocation (WLA) or other performance requirements specifically for storm water discharge from the permittee's MS4.

3.1.3.3 Determine whether the TMDL address a flow regime likely to occur during periods of storm water discharge.

3.1.3.4 After the determinations above have been made and if it is found that the permittee's MS4 shall implement specific WLA provisions of the TMDL, assess whether the WLAs are being met through implementation of existing storm water control measures or if additional control measures are necessary.

3.1.3.5 Document all control measures currently being implemented or planned to be implemented. The permittee shall also include a schedule of

implementation for all planned controls and shall document the calculations or other evidence that shows that the WLA will be met.

3.1.3.6 Describe a monitoring program to determine whether the storm water controls are adequate to meet the WLA.

3.1.3.7 If the evaluation shows that additional or modified controls are necessary, describe the measures to be taken and the schedule for their implementation. The permittee shall continue meeting the requirements of 3.1.3.4 through 3.1.3.7 until two continuous monitoring cycles show that the WLAs are being met or that water quality standards are being met.

3.2 Duty to Comply

3.2.1 The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Missouri Clean Water Law and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or for denial of a permit renewal.

3.3 Continuation of the Expired General Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 10 CSR 20-6.010 (10) (E) and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

- Reissuance or replacement of this permit, at which time the permittee shall comply with the application conditions of the new permit to maintain authorization to discharge;
- Notice of Termination;
- Issuance of an individual permit for your discharges; or
- A permit decision by the Director not to reissue this general permit, at which time the permittee shall seek coverage under an alternative general permit or an individual permit.

3.4 Need to Halt or Reduce Activity Not an Excuse

Actions by the permittee in an enforcement action to halt or reduce the permitted activity does not excuse compliance with this permit or any provision of the Missouri Clean Water Law.

3.5 Permit Transfers

This permit is not transferable to any person except after notice to the department. The department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary.

3.6 Procedures for Modification or Revocation

If at any time the Missouri Department of Natural Resources determines that the quality of waters of the state may be better protected by requiring the owner/operator of the permitted site to apply for a site specific permit, the department may require any person to obtain a site specific operating permit [10 CSR 20-6.010 (13) and 10 CSR 20-6.200(5)].

The department may require the permittee to apply for and obtain a site specific or different general permit if:

- a. The permittee is not in compliance with the conditions of this general permit;
- b. The discharge no longer qualifies for this general permit due to changed site conditions and regulations; or
- c. Information becomes available that indicates water quality standards have been or may be violated.

The permittee will be notified in writing of the need to apply for a site specific permit or a different general permit. When a site specific permit or different general permit is issued to the authorized permittee, the applicability of this general permit to the permittee will be terminated upon the effective date of the site specific or different general permit, whichever the case may be. The permittee shall submit the appropriate forms to the department to terminate the permit that has been replaced.

3.7 Requiring an Individual Permit or an Alternative General Permit

3.7.1 Decision by the department. The department may require any person authorized by this permit to apply for and/or obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the department to require an individual permit. Where the department requires the permittee to apply for an individual NPDES permit, the department will notify the permittee in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the permittee to file the application, and a statement that on the effective date of issuance or denial of the individual NPDES permit or the alternative general permit. Coverage under this general permit shall automatically terminate in accordance with Section 3.6. The department may grant additional time to submit the application upon request of the applicant. If the permittee fails to submit an individual NPDES permit application in a timely manner as required by the department under this paragraph, then the applicability of this permit to the permittee is automatically terminated on the day specified by the department for application submittal.

3.7.2 Request by permittee. The permittee may apply for an individual permit in lieu of coverage under this general permit. In such cases, the permittee shall submit an application for the alternate permit in accordance with the requirements of 10 CSR 20-6.200, with reasons supporting the request. The request may be granted by issuance of any individual permit or an

alternative general permit.

4 STORM WATER MANAGEMENT PROGRAMS

4.1 Requirements

4.1.1 Reserved

4.1.1.1 The discharge of storm water shall not cause a violation of the state water quality standards, 10 CSR 20-7.031, which states, in part, that no water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

- a. Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
- b. Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
- c. Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
- d. Waters shall be free from substances or conditions in sufficient amounts to have a harmful effect on human, animal or aquatic life.
- e. There shall be no significant human health hazard from incidental contact with the water;
- f. There shall be no acute toxicity to livestock or wildlife watering;
- g. Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
- h. Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles, or equipment and solid waste as defined in Missouri's Solid Waste Laws, Section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to Section 260.200-260.247.

4.1.1.2 For facilities under the control of the permittee good housekeeping practices shall be maintained to keep solid waste from entry into waters of the state to the maximum extent practicable.

4.1.1.3 All fueling facilities under the control of the permittee shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.

4.1.1.4 Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that are transported, stored, or used for maintenance, cleaning or repair by the permittee shall be managed according to the provisions of RCRA and CERCLA.

4.1.1.5 All paint, solvents, petroleum products and petroleum waste products (except fuels) under the control of the permittee shall be stored so that these materials are not exposed to storm water. Sufficient practices of spill prevention, control, and/or management shall be provided to prevent any spills of these pollutants from entering a water of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.

4.1.2 The permittee shall develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from the permittee's regulated small MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Missouri Clean Water Law. The storm water management program should include management practices; control techniques and system, design, and engineering methods; and such other provisions as the permitting authority determines appropriate for the control of such pollutants. The permittee's storm water management program shall include the following information for each of the six minimum control measures described in Section 4.2 of this permit:

Note: These requirements do not supersede nor remove liability for compliance with county and other local ordinances.

4.1.2.1 A description of the best management practices (BMPs) that the permittee will implement for each of the storm water minimum control measures;

4.1.2.2 The measurable goals for each of the BMPs including, as appropriate, the months and years in which the permittee will undertake required actions, including interim milestones and the frequency of the action;

4.1.2.3 Individual(s) shall be designated by the permittee as responsible for environmental matters. The permittee shall inspect any structures that function to prevent pollution of storm water or to remove pollutants from storm water and of the facility in general to ensure that any Best Management Practices are continually implemented and effective;

4.1.3 In addition to the requirements listed above, the permittee shall provide a rationale for how and why the permittee selected each of the BMPs and measurable goals for the permittee's storm water management program. The information required for such a rationale is given in Section 4.2 for each minimum measure. The permittee shall develop and fully implement each measure within five (5) years of permit issuance.

4.2 Minimum Control Measures

The six (6) minimum control measures that shall be included in the permittee's storm water management program are:

4.2.1 Public Education and Outreach on Storm Water Impacts

See Appendix B-1, MCM 1

4.2.1.1 **Permit requirement.** The permittee shall implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

The City of O'Fallon continues its storm water education program to inform individuals, residents, and households of positive and negative behaviors, problems as well as corrective actions they can take to prevent non-point source (NPS) pollution. The City has identified the following goals for the 2008-2013-permit period:

- Increase continuity with municipal programs and materials.
- Increase residential and commercial awareness of proper yard waste disposal and encourage behaviors that will reduce yard waste as an erosion source and pollutant in local streams and lakes.
- Increase residential and commercial awareness of sediment runoff and encourage behaviors that will reduce sediment pollution in local streams and lakes.
- Increase resident recognition of household chemical toxicity and pollutant sources to prompt behavior changes that reduce pollution from household chemicals.
- Increase residential and commercial recognition of litter sources and illegal dumping and encourage behaviors to reduce these sources (or the opportunities for them) as a storm water pollutant.

4.2.1.2 **Decision process.** The permittee shall document the permittee's decision process for the development of a storm water public education and outreach program. The permittee's rationale statement shall address both their overall public education program and the individual BMPs, measurable goals and responsible persons for the permittee's program. The rationale statement shall include the following information, at a minimum:

Programs will be implemented throughout the permit area to the maximum extent practicable and will consider the needs of minority and disadvantaged communities. The measurable goals described in the Operating Plan Matrix 1 in Appendix B-1 and the BMPs listed below in section 4.2.1.2.1 and 4.2.1.2.5 have been selected:

1. With regard to the water quality needs and applicability to each target audience within the permit area;
2. To build on existing and new partnerships; and
3. To take advantage of related external events as well as positive resident interest.

4.2.1.2.1 **How the permittee plans to inform individuals and households about the steps they can take to reduce storm water pollution.**

To reach our target audiences and goals, the public education outreach strategy employs a multi-faceted approach of building partnerships, using mainstream and alternative outreach tools, and distributing educational materials. Partnerships with other governmental entities for developing and distributing unified outreach and educational materials and programs include (at a minimum) the cities of St. Charles County, St. Charles, and Wentzville. Other partnerships with smaller governmental entities will be pursued (such as city of Weldon Spring, city of Cottleville, etc.)

O'Fallon collaborates with and will continue to seek assistance from other local interest groups to perform outreach activities and distribute educational materials. In addition to developing our own materials in partnership with our municipalities, the City will use existing storm water educational resources provided by the Department of Natural Resources, EPA, and/or Soil and Water Conservation District and University Extension. To maximize coverage, the following specific materials/strategies (a.k.a. Best Management Practices) will be used:

- **Increase branding** through logo on deliverables
- **Press releases and articles** for local media and organizational newsletters
- **Pollution solution brochures and/or fact sheets** for the general public and specific audiences
- **Recreational guides** to educate groups such as golfers, park enthusiasts, pet owners or campers
- **Storm water activity books** for students and scouts
- **Alternative information sources**, such as comics, web sites, bumper stickers, or refrigerator magnets
- **A web-based library of educational materials** for community and school groups
- **An illustrated manual and/or web page section** to train target audiences to recognize illicit discharges and dumping, and faulty/inadequate construction site runoff controls
- **A public awareness survey** to evaluate BMP successes and areas for improvement
- **Storm drain stenciling** with messages "Dump No Waste - Drains to Stream"
- **Storm water pollution hotline and online reporting system** for information and citizen complaints reporting
- **Utility bill message inserts**
- **Training Workshops** for developers and construction industry professionals

O'Fallon's mix of local strategies listed above will address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children.

Please refer to Appendix B-1 for the City's activities and implementation process.

4.2.1.2.2 How the permittee plans to inform individuals and groups on how to become involved in the storm water program (with activities such as local stream and beach restoration activities).

Utilizing the information dissemination vehicles and strategies outlined above, the Division of Stormwater Management will promote specific involvement opportunities hosted internally as well as those offered by other supporting partner organizations (governmental and citizen volunteer). The City and hosts and co-sponsors various education and outreach seminars that serve as a venue for public feedback and involvement in plan development, such as Operation Clean Stream and Storm Drain stenciling. Please refer to Appendix B-1 for other BMPs to garner public involvement.

4.2.1.2.3 Identification of target audiences for the permittee's education program who are likely to have significant storm water impacts (including commercial, industrial and institutional entities) and an explanation why those target audiences were selected.

AND

4.2.1.2.4 The target pollutant sources the permittee's public education program is designed to address.

Based on previous common storm water pollutants (litter, yard and pet waste), the outreach strategies will predominantly be directed to residents. Emphasis will be placed on targeting parents and their children. Place-based, school-age appropriate programs and take-home materials will address local storm water issues.

The following target pollutant sources have been selected as having significant storm water impacts. These groups have been chosen based on experience from the previous permit cycle, existing Stream Team water quality data, field reconnaissance observations, and storm water complaints received.

- Construction site builders, contractors, and developers (erosion, litter, and other improper discharges)
- Landscaping companies, condo associations, municipal workers (landscaping, park and highway maintenance, etc.), and landowners whose lawn and landscape practices can negatively impact storm water quality (erosion, chemical pollutants)
- Do-it-yourselfers that generate household and lawn chemicals
- Illegal dumpers and property owners near illegal dump sites
- Litterbugs and flatbed truck drivers (prone to unknowingly produce flyaway litter).

4.2.1.2.5 The permittee's outreach strategy, including the mechanisms (e.g., printed brochures, newspapers, media, workshops, etc.) they will use to reach their target audiences, and how many people do they expect to reach by their outreach strategy over the permit term.

The public outreach strategy outlined in 4.2.1.2.1 combines effective distribution of materials (previously referenced), media relations, and co-sponsoring and

participation in specialty public and technical workshops-seminars and conferences.

O'Fallon will continue integration of public outreach with the other storm water program minimum control measures (MCMs 3-6) to create more institutional and community linkages to promote storm water pollution prevention. Other departments/divisions such as Parks, Landscaping, Highways, Building, and the Construction Inspection can help promote public awareness of storm water issues.

More substantive education, in the form of short training courses, live presentations, handbooks, and/or websites with photos of good and bad practices will target those specific groups likely to have significant storm water impacts (commercial, industrial, and institutional entities). If other pollutant sources are found as water quality monitoring efforts continue, strategies and materials will be redirected accordingly.

Please refer to Appendix B-1 and the Program Timeline for a more detailed account of the outreach strategy milestones and goals.

4.2.1.2.6 Identification of the person(s) responsible for overall management and implementation of the permittee's storm water public education and outreach program and, if different, the person responsible for each of the BMPs identified for this program.

The following employees have the overall responsibility for coordinating the public education and outreach efforts:

- Stormwater Management Coordinator, Engineering Department, Public Works Division

Other various departments/divisions including Public Relations and Communications also play a role in execution of this mission. Please refer to Appendix B-1 for employees responsible for individual BMPs.

4.2.1.2.7 How the permittee will evaluate the success of this minimum measure, including how the measurable goals for each of the BMPs were selected.

The Operation Plan Matrix in Appendix B-1 lists evaluation indicators for individual BMPs and measurable goals. Tools to measure project success are already weaved into existing operating procedures. Benchmark data from methods used in the previous permit cycle helped produce cost estimates and anticipated goals for the 2008-2013 permit period. Quantitatively, employees record the following measurable indicators of success:

- Number of storm drains stenciled
- Number of volunteers who participated in events/programs
- Number of related inquiries and/or complaints
- Educator surveys noting changes in awareness or behavior

This data can be correlated to the timing of public service announcements and other marketing strategies to see if the message is being received.

Qualitative progress will be tracked through a variety of casual observations, educator surveys, public conversations, and applied field analyses. The Stormwater Management Coordinator will enlist support from St. Charles County and/or other partnering organizations to perform a storm water public awareness survey at the beginning, during, and at the end of the permit term to gauge any change in resident awareness and behavior over time.

4.2.2 Public Involvement / Participation

See Appendix B-2, MCM 2

4.2.2.1 *Permit requirement.* The permittee shall implement a public involvement/participation program that complies with State and local public notice requirements.

4.2.2.2 *Decision process.* The permittee shall document the decision process for the development of a storm water public involvement/participation program. The documentation shall provide rationale for how the overall public involvement/participation program was developed, and explain the individual BMPs, measurable goals, and responsible persons for the program. The rationale statement shall include the following information, at a minimum:

The strategy outlined below has been selected based on the effectiveness of existing partnerships, successes from the previous permit cycle and available funding. Target audiences listed under 4.2.2.2.3 have been selected based on existing Stream Team water quality data, field reconnaissance observations, storm water complaints received, identified storm water pollutants (litter, sediment, yard and pet waste), and the effectiveness of existing partnerships.

4.2.2.2.1 *How the permittee has involved the public in the development and submittal of the application and storm water management program.*

O'Fallon continues to encourage public input, participation, and involvement in preparation of this plan and application by engaging and interacting with key dedicated community groups and organizations focused on environmental protection, natural resources preservation, and specific watershed restoration projects.

Stormwater Management Coordinator drafted initial program components, and then received internal department and external public feedback from these entities.

4.2.2.2.2 *The permittee's plan to actively involve the public in the development and implementation of their program.*

Future mechanisms of public feedback through education programs and events are incorporated into Appendix B-2 and the Program Timeline.

Public involvement strategies will continue to be integrated with the other storm water program minimum control measures to create more institutional and community linkages to promote storm water pollution prevention.

As part of our Illicit Discharge Detection and Elimination Program, we encourage residents to utilize St. Charles County Environmental Services Recycle Works Centers. They operate two drop-off recycling centers; this removes illegally dumped waste, and conducts free household chemical collections from April through October.

During storm drain stenciling events, surveys are often conducted for watershed knowledge or illicit discharge education. This also encourages residents to participate as well as educates them.

Fliers and letters are sent to schools, events are posted on the website and local cable access channel which encourage residents to come out and participate. Press releases are sent to the local newspapers requesting them to be posted for encouragement as well. These activities will continue throughout the next permit cycle.

4.2.2.2.3 The target audiences for the permittee's public involvement program, including a description of the types of ethnic and economic groups engaged. The permittee is encouraged to actively involve all potentially affected stakeholder groups, including commercial and industrial businesses, trade associations, environmental groups, homeowners associations, and educational organizations, among others.

O'Fallon strives to achieve demographic representation and an increased level of community involvement in plan development and implementation. Advertising and soliciting help from other local organizations will target specific population sectors, including minority and low-income communities; academic institutions; neighborhood and community groups; watershed alliances; and business and industry. Specifically, the City will focus on the following audiences:

- Commission on Environmental Quality;
- K-12 Educators;
- Lindenwood University faculty and students;
- Subdivision Associations (unincorporated areas);
- Dardenne and Peruque Creek Watershed Alliances;
- Construction site builders, contractors, and developers;
- Pet owners
- Municipal supervisors in Parks, Highways, Community Development, Environmental Services, etc.;
- Gardening clubs;
- Asian and Hispanic residents;
- Property owners near illegal dump sites; and/or

4.2.2.2.4 The types of public involvement activities included in the permittee's program. Where appropriate, the permittee must consider the following types of public involvement activities:

To generate interest, notify, and recruit the public for plan development and feedback, the following traditional and alternative modes of soliciting input can be utilized to capture all sectors of the community:

- **Advertising** on TV, the city website, in neighborhood newsletters, and at civic organization meetings to announce public meetings;
- **Postings** at other City centers, libraries, etc.;
- **Door-to-door visits** for "Pollution Found" doorknockers;
- **Public Workshops** allow feedback of plan development
- **Public Works Commission** will discuss various viewpoints and provide input concerning appropriate storm water management policies and BMPs;
- **City's Citizen Recycling Committee** discusses various viewpoints and provides input concerning the recycling program. Attend and participate in public events;
- **On-line Reporting** allows citizens and community groups to post complaints or track cleanups and water quality monitoring;
- **Recycling and Chemical Collection Program** participant feedback.
- **Stormwater Management Coordinator** conducts presentations, service learning programs, cleanups, encourages public participation, and staffs a kiosk at special events;
- **Storm drain stenciling** by concerned citizens, scouts, and students;
- **Community clean-ups** around storm drains and along local streams and rivers; and

The City will build on the success of partnerships and resident interest from the previous permit cycle. Partnerships with other governmental entities for involving the public include (at a minimum) the cities of St. Peters, O'Fallon, St. Charles, Lake St. Louis, and Wentzville.

4.2.2.2.4.1 Citizen representatives on a storm water management panel

Members of the City's Public Works Commission are appointed by the Mayor and approved by the Council as residents of the City representing demographic and geographic diversity with interest in the subject matter. This Commission meets every other month to discuss, research, and advise the City on local issues.

The City also has a volunteer Recycling Committee that is active in our City recycling program. They participate in city wide events. They are in the process of expanding their ideas and participation to include education of student in the local schools and participation in local events to promote our single stream recycling program as well as environmental education with regards to being "more green".

4.2.2.2.4.2 Public hearings

Meetings conducted by groups, organizations, boards, and commissions identified in this plan are, by intent, open to the public. O'Fallon regularly publicizes and holds formal and informal public meetings and has the ability to convene more formal hearings as warranted.

4.2.2.2.4.3 Working with citizen volunteers willing to educate others about the program

O'Fallon supports and interacts regularly with a cross-section of citizen volunteers in various organizations (Missouri Stream Team, Subdivision Association Trustees, etc.) that have developed core groups of informed constituents that are energized in promoting our storm water messages.

4.2.2.2.4.4 Volunteer monitoring or stream/beach clean-up activities

In addition to Operation Clean Stream (listed in the Program Timeline), O'Fallon supports Stream Team and Greenway Network, Inc. activities within multiple watersheds within city.

4.2.2.2.4.5 The person(s) responsible for the overall management and implementation of the permittee's storm water public involvement/participation program and, if different, the person responsible for each of the BMPs identified for this program.

The following employees have the overall responsibility for coordinating the public involvement and participation efforts:

- Stormwater Management Coordinator, Engineering Department, Public Works Division

Please refer to Appendix B-2 for employees responsible for individual BMPs.

4.2.2.2.4.6 The method for evaluating the success of this minimum measure, including how the permittee selected the measurable goals for each of the BMPs.

Tools to measure project success are already weaved into existing operating procedures. Benchmark data from methods used in the previous permit cycle helped produce cost estimates and anticipated goals for the 2008-2013-permit period. Quantitatively, employees record the following measurable indicators of success:

- Number of related inquiries and/or complaints,
- Tons of illegally-dumped waste collected,
- Number of volunteers,
- Number of quality surveys received,
- Number of stream feet cleaned,
- Number of storm drains stenciled

Qualitative progress will be tracked through observations, stakeholder surveys, public conversations, and applied field analyses. The Stormwater Management Coordinator will enlist support from other partnering organizations to perform a

storm water public awareness survey at the beginning, during, and at the end of the permit term to gauge any change in resident behavior over time.

Please refer to Appendix B-2 for individual BMP measurable goals and evaluation indicators.

4.2.3 Illicit Discharge Detection and Elimination

See Appendix B-3, MCM 3.

4.2.3.1 Permit requirement. The permittee shall:

4.2.3.1.1 Develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200) into the permittee's regulated small MS4;

Several divisions have roles in the City's Illicit Discharge Detection and Elimination (IDDE) Program. The Division of Code Enforcement has primary oversight of IDDE enforcement of Section 405.245 Stormwater Quality Management and Illicit Discharge Control. Division of Environmental Services operates our recycling center and conducts free bulk drop off quarterly on weekends through out the year outside of our curbside single stream recycling program. The Building Code Enforcement Division and Construction Inspection Division oversee construction sites for prevention of illicit discharges from construction sites. Stormwater Management Coordinator, Engineering Division serves as a clearinghouse for tracking and directing all complaints and concerns to the appropriate division, receives any concerns reported and conducts or assists the site visits to assist with enforcement.

4.2.3.1.2 Develop or submit, if not already completed, a storm sewer system map, showing the location of all outlets and the names and location of all waters of the State that receive discharges from those outlets;

Over the last six years, staff engineers have developed a detailed map of all storm water structures that are on record with the City. This data has been transferred to a digital map accessed through the GIS Department. This map is completed, however, new structures and sewers are added as projects are completed and old infrastructure is still in need of being added that we do not have plans for.

4.2.3.1.3 To the extent allowable under State, or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and actions;

The Division Stormwater Management is primarily responsible for the administration and Code Enforcement assists with enforcement of Section 405.245, Stormwater Quality Management and Illicit Discharge Ordinance, and other Nuisance ordinances in Chapter 220 of the City Code that pertains to dumping and discharges.

In addition, to Section 405.245, The Building and Construction Inspection Divisions can enforce "Stop Work Orders" for construction related activities prior to monetary fine enforcement actions.

4.2.3.1.4 Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the permittee's system;

As stated earlier, the Division of Stormwater Management has primary oversight of IDDE plan. As part of this plan, all storm water-related complaints will be directed to the Division of Stormwater Management, as the clearinghouse for tracking and directing complaints to the appropriate departments. Unless addressed below, the Division of Stormwater Management will address all illicit discharges as part of the illicit discharge/nuisance ordinance #5082, Stormwater Quality Management and Illicit Discharge Control.

The Division of Environmental Services of St. Charles County operates two drop-off recycling centers, conducts free household chemical collections from April through October. City of O'Fallon residents are encouraged to take their chemical and household collections to these facilities free of charge. The City of O'Fallon Environmental Services Division operates free of charge, a bulk drop off event quarterly for specific items at our transfer station as well as curbside single stream recycling service for all residents. These programs provide an outlet for common pollutants such as auto fluids, appliances, and household chemicals.

In addition, Christmas tree drop off sites have been established through out the City to prevent improper disposal and illegal dumping of trees.

Mapping and locating of all private sewage disposal systems in O'Fallon will be complete by 2008. Once this data is available, the City can verify which properties have not been upgraded over the years and work to bring these properties into compliance.

4.2.3.1.5 Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; and

O'Fallon plans to inform employees, businesses, and the public about the hazards through a variety of outreach tools.

Public meetings and education through school programs and subdivision meetings will educate residents about storm water issues and permit requirements, and provide an opportunity for input regarding possible dumping areas and to determine community needs. In this way, the City might better understand who the target audience is for illegal dumping control while implementing a valuable service for the watershed community.

Please see also:

4.2.2.2.4 Public Involvement Activities

- 4.2.3.1.6 **Address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if the permittee identifies them as significant contributors of pollutants to the permittee's regulated small MS4: landscape irrigation, rising ground waters, uncontaminated ground water infiltration (as defined in 10 CSR 20-6.200), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, springs, water from crawl space pumps, footing drains, lawn watering, flows from riparian habitats and wetlands, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are significant sources of pollutants to waters of the State).**

The listed non-storm water discharges are not significant contributors of pollutants.

- 4.2.3.1.7 **The permittee may also develop a list of other similar occasional incidental non-storm water discharges (e.g. non-commercial or charity car washes, etc.) that will not be addressed as illicit discharges. These non-storm water discharges shall not be reasonably expected (based on information available to the permittees) to be significant sources of pollutants to the MS4, because of either the nature of the discharges or conditions the permittee has established for allowing these discharges to the permittee's MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive waterbodies, BMPs on the wash water, etc.). The permittee shall document in their SWMP any local controls or conditions placed on the discharges. The permittee shall include a provision prohibiting any individual non-storm water discharge that is determined to be contributing significant amounts of pollutants to the permittee's MS4.**

The listed non-storm water discharges are not significant contributors of pollutants.

- 4.2.3.2 ***Decision process.* The permittee shall document the decision process for the development of a storm water illicit discharge detection and elimination program. The permittee shall provide rationale for both the overall illicit discharge detection and elimination program and the individual BMPs, measurable goals, and responsible persons for the permittee's program. The rationale statement shall include the following information, at a minimum:**

After consultation with legal staff, engineering staff, environmental personnel, and administrators and review of the EPA model ordinance an illicit discharge ordinance was enacted that responds to the needs and complaints of citizens in the City. The ordinance also provides for proactive enforcement.

Enforcement of the illicit discharge ordinance will be the responsibility of the Division of Stormwater Management Division of the Engineering Department. Other departments of the City will assist in enforcement on an as needed basis.

- 4.2.3.2.1 How the permittee will develop a storm sewer map showing the location of all outlets and the names and location of all receiving waters. The permittee shall describe the sources of information used for the maps, and how the permittee plans to verify the outlet locations with field surveys. If already completed, the permittee shall describe how the map was developed and how the map will be regularly updated.**

Over the last six years, staff engineers have developed a detailed map of all storm water structures that are on record with the City. This data has been transferred to a digital map accessed through the GIS Department. The map has been completed. Ongoing new structures and sewers are added as projects are completed and old infrastructure that the City does not have plans for still needs to be added.

- 4.2.3.2.2 The mechanism (ordinance or other regulatory mechanism) the permittee will use to effectively prohibit illicit discharges into the MS4 and why the permittee chose that mechanism. If the permittee needs to develop this mechanism, describe the permittee's plan and a schedule to do so. If the permittee's ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with the permittee's program.**

An ordinance was enacted in October of 2006 by the O'Fallon City Council for this mechanism. Fines and remediation recovery are included in the ordinance.

Section 405.245 Stormwater Quality Management and Illicit Discharge Control prohibits illicit discharges into the municipal separate storm sewer (MS4). This ordinance was chosen based on model ordinance language available and for municipal continuity. Regulatory language includes fines and remediation recovery.

As in the last five year permit, the Building Code Enforcement Division will handle septic-related complaints following Section 700 of the City of O'Fallon Code or appropriate Sewer District or St. Charles County may be contacted for assistance as well. These ordinances require that private sewage disposal systems be inspected at the time of sale for existing homes. If systems do not meet current code, the seller is required to bring it up to code.

- 4.2.3.2.3 The permittee's plan to ensure through appropriate enforcement procedures and actions that the permittee's illicit discharge ordinance (or other regulatory mechanism) is implemented.**

The ordinance outlines enforcement procedures. Existing staff in Divisions of Stormwater Management is available and dedicated to this activity.

4.2.3.2.4 The permittee's plan to detect and address illicit discharges to the permittee's system, including discharges from illegal dumping and spills. The permittee's plan shall include dry weather field screening for non-storm water flows and field tests of selected chemical parameters as indicators of discharge sources. The plan shall also address on-site sewage disposal systems that flow into the permittee's storm drainage system. The permittee's description shall address the following, at a minimum:

Please see plan and activities listed in 4.2.3.1.4.

4.2.3.2.4.1 Procedures for locating priority areas which includes areas with higher likelihood of illicit connections (e.g., areas with older sanitary sewer lines, for example) or ambient sampling to locate impacted reaches.

The screening plan includes visual field screenings in all major urban, unincorporated creeks for illicit discharges. The City will conduct wet weather visual field screenings once yearly and dry weather visual field screenings once yearly.

In addition to these visual field screenings, the Division of Stormwater Management will have primary oversight of the illicit discharge ordinance and will investigate public complaints as mentioned above.

Priority areas will be based on pollutants and quantity found, land use/urbanization, designated uses and related water quality standards; Total Maximum Daily Loads (TMDLs/303d/305b) impaired listing status, and any other available resources for the water body.

Priority areas will be selected based on the age of the systems, the amount of public concern (complaints), the probability of illegal connections, and areas of known discharges or impaired waters.

4.2.3.2.4.2 Procedures for tracing the source of an illicit discharge, including the specific techniques the permittee will use to detect the location of the source.

If a concern is raised during the field screenings listed above, an inspector may elect to screen further up the suspected tributary as needed to detect the possible pollutant source. The City will seek permission and access private property to the extent allowable by law.

Chemical tests performed in the areas of concern will be used to pinpoint pollutant type/quantity. Tests performed will be based on the situation; i.e. in industrial areas, conductivity, oil, etc. tests will be used; in more rural areas with septic, *E. coli* or *Fecal coliform* will be used; in other urban areas chloride, dissolved oxygen, and/or turbidity may be used.

Once the illicit discharge is reported a detailed field survey with testing will take place working upstream until the source is located.

4.2.3.2.4.3 Procedures for removing the source of the illicit discharge.

O'Fallon will work with the source of the illicit discharge to remedy the situation. The discharge shall be removed by the party responsible for the violation at the violator's expense. The violator will submit the proposed removal process to the City and other agencies if required or deemed necessary for approval. The process will be monitored by the City for proper methodology. Should the source of the illicit discharge refuse to cooperate, penalty provisions are included in the illicit discharge ordinance. The City will seek permission and access private property to the extent allowable by law.

Should the source of a violation not be identified, the City will remediate and curtail the violation taking into account cost and manpower requirements.

4.2.3.2.4.4 Procedures for program evaluation and assessment.

The Illicit Discharge Detection and Elimination (IDDE) program will be evaluated in the following manner over the course of the five-year permit (see Appendix B-1 - B-3, MCM 1, 2, and 3)

1. Informal & formal residential surveys will be conducted to assess changes in resident awareness about sources of illicit discharges and methods to reduce non-point source pollution.
2. The Environmental Programs Educator will track internal and public concerns or complaints before and after outreach programs or strategies were conducted.
3. The Division of Stormwater Management will track trends in the number and nature of violations over the permit cycle.

4.2.3.2.5 How the permittee plans to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. The permittee shall describe how this plan will coordinate with their public education minimum measure and the pollution prevention/good housekeeping minimum measure programs.

O'Fallon will continue integration of public outreach with the other storm water program minimum control measures (MCMs 1 & 6) to create more institutional and community linkages to promote storm water pollution prevention. Many departments/divisions such as Environmental Services, Building, Construction Inspection and Highway, are engaged in informing the public about storm water issues. The Highway and Community Development Departments sponsor and participation in specialty public and technical workshops-seminars and conferences for their employees and external target audiences.

More substantive education, in the form of short training courses, live presentations, handbooks, and/or websites with photos of good and bad practices will target those specific groups likely to have significant storm water impacts (commercial, industrial, and institutional entities). In support of the illicit discharge detection and elimination plan, a special educational section of the Stormwater Management website has been developed. If other pollutant sources

are found as water quality monitoring efforts continue, strategies and materials will be redirected accordingly.

This has been addressed in section 4.2.3.1.5.

4.2.3.2.6 Identification of the person(s) responsible for overall management and implementation of the permittee's storm water illicit discharge detection and elimination program and, if different, the person responsible for each of the BMPs identified for this program.

The Stormwater Management Coordinator has primary oversight of the IDDE plan.

4.2.3.2.7 How the permittee will evaluate the success of this minimum measure, including how they selected the measurable goals for each of the BMPs.

Success can be judged through the following types of positive behavior or physical changes over the five-year period:

1. An increase in resident awareness about potential sources of illicit discharges and methods to reduce their introduction into the rivers, streams, and lakes.
2. An increase in public/internal complaints or concerns after outreach programs or strategies were conducted.
3. A decrease in the number of violations over the five year permit cycle.
4. An improvement to the water quality of areas of concern.

4.2.4 Construction Site Storm Water Runoff Control

4.2.4.1 *Permit requirement.* The permittee shall develop, implement, and enforce a program to reduce pollutants in any storm water runoff to their regulated small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre shall be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The permittee's program shall include the development and implementation of, at a minimum:

The City of O'Fallon currently has Section 405 for Subdivision and Land Development of the City Code. Provisions of this section dictate the protection of all watercourses within the watershed of the project. The use of erosion and sediment Best Management Practices (BMP) prevent runoff from the site into the storm water management system and natural watercourses.

4.2.4.1.1 An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State or local law;

Sections 405.070, 405.240 of the Subdivision and Land Development and Chapter 520 of the Building and Construction Code provide an enforcement process by utilizing Erosion and Sediment Control Inspections. The ordinance provides for prevention at the plan review stage as well as inspection in the field. All site inspections will continue as prescribed.

4.2.4.1.2 Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;

Contractors are required to follow approved Storm Water Protection Plan's (SWPP's) that have been reviewed by the Missouri Department of Natural Resources and are required to submit sediment and erosion control plans to the City for review and approval prior to construction. This procedure will continue as prescribed.

4.2.4.1.3 Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

Contractors are instructed to follow all regulations set forth by EPA, DNR, and City of O'Fallon. This procedure will continue as prescribed.

4.2.4.1.4 Procedures for site plan review which incorporated consideration of potential water quality impacts;

All site plans are reviewed by City of O'Fallon Engineering Plan Review staff. This review includes the review of the erosion and sediment controls recommended for the site, the impact of storm water on the site as well as its impact off of the construction site. Also required is approval from Missouri Department of Natural and any other required agency prior to final approval from the City before grading or construction can begin.

4.2.4.1.5 Procedures for receipt and consideration of information submitted by the public; and

Public complaints are received by the Stormwater Management Coordinator, Building Department, and Construction Inspectors. The complaints are inspected as they are received. Determinations of violations are made and then the contractor is given a notice to correct, if necessary. The site is reinspected to ensure compliance. This procedure will continue as prescribed.

4.2.4.1.6 Procedures for site inspection and enforcement of control measures.

Inspections are performed on every permitted site within the City of O'Fallon. There is currently no set scheduling for inspections. Enforcement is currently handled through the issuance of a stop work order or citation through the court system in O'Fallon.

4.2.4.2 *Decision process.* The permittee shall document the permittee's decision process for the development of a construction site storm water control program. The permittee's rationale statement shall address both the permittee's overall construction site storm water control program and the individual BMPs, measurable goals, and responsible persons for the permittee's program. The rationale statement shall include the following information, at a minimum:

The Engineering Division is responsible for the decision making process with regard to storm water control on all site development in within the City. All plans are reviewed by engineers to determine the site conditions before, during and after construction. This includes the phasing of construction, the use of BMPs to protect the site, and a listing of the responsible parties involved with the construction site. Responsible parties are required to post a Performance Guarantee in the form of an escrow with the City to ensure that all BMPs are working and the site is protected against sediment runoff.

4.2.4.2.1 **The mechanism (such as an ordinance or other regulatory mechanism) the permittee will use to require erosion and sediment controls at construction sites and why they chose that mechanism. If the permittee needs to develop this mechanism, the permittee shall describe the plan and schedule implementation. If the permittee's ordinance or regulatory mechanism is already developed, the permittee shall include a copy of the relevant sections with the permittee's storm water management program description.**

The mechanism that O'Fallon will use to require erosion and sediment control at construction sites is Sections 405.070, 405.240 of the Subdivision and Land Development and Chapter 520 of the Building and Construction Code.

4.2.4.2.2 **The permittee's plan to ensure compliance with the permittee's erosion and sediment control regulatory mechanism, including the sanctions and enforcement mechanisms they will use to ensure compliance. The permittee shall describe the procedures for when the permittee will use certain sanctions. Possible sanctions include non-monetary penalties (such a stop work orders), fines, bonding requirements, and/or permit denials for non-compliance.**

The Engineering Division measures for compliance include inspections, notice to correct, stop work orders, fines, and use of the performance guarantee. Inspections performed by the Inspector provide enforcement of the BMPs employed on each site. If the BMPs are not being followed or the BMPs are not working a notice to correct is issued. If compliance is not met within the allocated time a Stop Work Order is issued. At this point fines can be issued to the violator. Fines not to exceed five hundred dollars (\$500.00) per violation per day could be levied by the courts.

- 4.2.4.2.3 The permittee's requirements for construction site operators to implement appropriate erosion and sediment control BMPs and control waste at construction sites that may cause adverse impacts to water quality. Such waste includes discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste.**

Wash-out areas are currently monitored as part of the Engineering review as part of the Sediment and Erosion control plan. Other hazards are being looked into further for improved action in this area. This is an area to be expounded upon in the next five years.

- 4.2.4.2.4 The permittee's procedures for considering the potential water quality impacts of pre-construction site plans. The permittee shall describe the procedures and the rationale for how the permittee will identify certain sites for site plan review, if all plans are not reviewed. The permittee shall describe the estimated number and percentage of sites that will have pre-construction site plans reviewed.**

A water quality program will be implemented to test the water quality of any watercourses affected by the construction site. This testing process will include turbidity, pH, and temperature. Before the site is disturbed a sample will be taken of the water and tested. These controls will be used in evaluation of the runoff during the construction period. The site will be monitored during the construction period. When site construction has been completed, an inspection will be performed along with a water quality test to determine if the site was properly finished. The project will be released after a determination has been made that there are no significant changes in water quality. These factors will be evaluated in the context of weather and other environmental factors.

- 4.2.4.2.5 The permittee's procedures for receipt and consideration of information submitted by the public. Consider coordinating this requirement with the permittee's public education program.**

Public concerns will be addressed by the Stormwater Management Coordinator. These concerns will be investigated as they arise by the Stormwater Management Coordinator or other Construction or Building Inspector designated by the Coordinator. After the investigation is performed, the parties involved will be notified of any violations, and a notice to correct will be issued. The individual that raised the concerns will be notified of the results of the inspection.

- 4.2.4.2.6 The permittee's procedures for site inspection and enforcement of control measures, including how the permittee will prioritize sites for inspection.**

Inspections of all sites are to be performed on a regular basis. The weekly review of the contractor's self-inspections will help to ensure code compliance. Sites are to be prioritized for City inspection by the proximity to a natural watercourse, the size of the project, the topography of the land, and the past performance of the contractor.

4.2.4.2.7 Identification of the person(s) responsible for overall management and implementation of the permittee's construction site storm water control program and, if different, the person responsible for each of the BMPs identified for this program.

The person responsible for the review of the site plans for construction will be the Review Engineer assigned to the project. The person responsible for the storm water control, inspections and compliance of the project will be the Stormwater Management Coordinator or assigned Construction or Building Inspector.

4.2.4.2.8 Describe how will the permittee evaluate the success of this minimum measure, including how the permittee selected the measurable goals for each of the BMPs.

All inspections are a measurable goal. Identification of deficiencies, correction of deficiencies, and the protection of the site can be tracked by reviewing all inspections performed. Water quality tests will show the effectiveness of the BMPs used on the site. Tracking of public concerns will facilitate code compliance of the site. The goals are to make sure that the water quality does not vary during construction activities, contractors are learning the best use of BMPs approved by the City of O'Fallon, and to keep public concerns to a minimum.

4.2.5 Post-Construction Storm Water Management in New Development and Redevelopment

See Appendix B-5, MCM 5.

4.2.5.1 *Permit requirement.* The permittee shall:

4.2.5.1.1 Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the permittee's regulated small MS4. The permittee's program shall ensure that controls are in place that would prevent or minimize water quality impacts;

The City has looked at many other municipalities post construction ordinances and programs and is currently in the process of working with the Home Builders Association to develop our own Post Construction ordinance that will help promote the protection of natural watercourses/riparian buffers. The Post construction ordinance will address impervious area, preserve open space, and disconnect impervious areas, and development requirements to allow more flexibility for low impact development and use of BMP's to manage stormwater on site. O'Fallon's "Design Criteria is used to regulate design standards for storm water runoff for all development. Currently we have a tree preservation and Floodplain ordinance.

We have installed a demonstration rain garden at a City park and porous pavers at City Hall to help promote the use of BMP's. Various sites have submitted plans

with other forms of BMP's, but no full low impact development or sustainable site has been submitted as of yet.

4.2.5.1.2 Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for the permittee's community; and

- Natural Watercourse Riparian Buffer – We have drafted a buffer ordinance and in this ordinance have also added a riparian zone/easement into it to help protect this area. *Responsibility for this lies with Engineering Department.*
- Tree Preservation Ordinance – Use current ordinance (requires preservation based on a percentage of existing trees in residential developments). *Responsibility for this lies with Planning & Development Division.*
- Parking/Driveway Requirements Commercial Sites – Review parking requirements and considering the use of porous pavement or pavers for overflow parking in excess of City requirements. *Responsibility for this lies with Planning & Development and Development Review Divisions.*
- Floodplain Ordinance – Use current ordinance (restricts land use in flood plain/floodway). *Responsibility for this lies with Flood Plain Manager of the Planning & Development Division.*
- Wastewater Disposal Regulations – Use current ordinance *Responsibility for this lies with Building and Planning & Development Divisions.*
- Detention Facility & Water Quality BMP Inspection – Section 405.240 Storm Water Detention regulates and requires periodic inspection of detention facilities in the City. The Engineering Department will examine instituting standards for water quality BMP inspection either by ordinance or policy. *Responsibility for this lies with Engineering Department.*
- Partner with Private/Public Groups – Grants, tax receipts, donations, and organizations are available to support clean water initiatives, preserve open space, create greenways, linear parks, and trailways through private and volunteer efforts. The City will continue to advance our partnerships with municipalities and/or non-profits such as: Greenway Network, St. Charles Soil and Water Conservation District, Missouri Department of Conservation and Great Rivers Greenway District, etc. *Responsibility for this lies with Planning & Development and Stormwater Management Divisions.*

4.2.5.1.3 Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, or local law; and

Ordinances regulating development standards discussed in 4.2.5.1.2 are found in Section 400 and 405 of the City Code, a Post Construction ordinance is in the process of being drafted. BMPs are regulated under O'Fallon' "Design Criteria" stated within the City Code and listed on our design "checklists" for residential, commercial and grading.

4.2.5.1.4 Ensure adequate long-term operation and maintenance of BMPs.

All infrastructure and structural BMPs are inspected by either the Building, Construction or Water/Sewer Department as they are being constructed. Construction is regulated by St. Charles County's "Standard Specifications for Highway Construction" and Metropolitan St. Louis Sewer District's (MSD's) "Standard Construction Specifications for Sewers and Drainage Facilities". Performance guarantees are required to be established with the City for the cost of the proposed construction. The City maintains all storm sewers dedicated to public use and all drainage ditches, storm sewer culverts and bridges located in public rights-of-way/easements. The City has a program to provide routine inspection of its storm water facilities. The City will also inspect and inventory our natural watercourse vegetated buffers preserved over the initial permit period.

By the nature of the business of park land management and maintenance, there is a constant awareness of adverse activity in the watersheds of public property. On-site staff as well as administration and management are all attuned to the identification and notification of problems to the appropriate authorities as the need requires.

As for lands owned and operated by City of O'Fallon Parks and Recreation, there are regular and routine efforts to not only minimize storm water effects from construction and development, but to take action to remedy pre-existing conditions of moderate to severe erosion. These actions have the effect of not only protecting the watershed and storm water runoff, but also improving the stability of the areas to an improved storm water control situation.

Projects undertaken by the Department of Project Management are very diverse and include, but are not limited to the following:

- Major renovation to existing city property and buildings
- Expansion of existing facilities
- New construction of city facilities
- New construction of roads, sanitary, storm sewers and water lines.

All project development, design and construction is monitored, supervised and administered by the Department of Project Management. Violations are handled the same as for other contractors and developers. If out of compliance, warnings, stop work orders can be issued by the inspectors and monetary fines can be issued by our courts.

4.2.5.2

Decision process. The permittee shall document their decision process for the development of a post-construction storm water management program. The permittee's rationale statement shall address both their overall post-construction storm water management program and the individual BMPs, measurable goals, and responsible persons for their program. The rationale statement shall include the following information, at a minimum:

All land development and surface disturbance from construction are monitored during all phases of planning and construction from conceptual master plan thru construction and post-construction management. The specific techniques and practices are as varied as the number of projects since each site is developed with sensitivity to its specific characteristics. The priority in construction management

is to minimize soil losses due to either water or wind. The techniques may range from the pattern of the grading profiles to the use of erosion control devices such as fencing, matting, tubes, socks, etc.

4.2.5.2.1 The permittee's program to address storm water runoff from new development and redevelopment projects. The permittee shall include in this description any specific priority areas for this program.

In order of priority:

- Complete the creation and implementation of water quality BMP design standards by 2008. Develop a long-term inspection program for routine maintenance of permanent water quality BMPs in 2008. Begin inspection program in 2009. Evaluate and revise water quality BMP design standards as needed 2010-2013. *Responsibility for this lies with Engineering and Stormwater Management Division.*
- Consider revisions to Sections 405 and 400, zoning and development regulations, and the "Design Criteria" to provide more flexibility in design standards by allowing low impact design. *Responsibility for this lies with Engineering and Planning & Development Divisions.*
- Continue to work with industry professionals and developers to try to encourage the use of porous type pavements on projects. Develop design standards. By 2013 explore possible residential and commercial uses for this technology, as more information becomes available. Conduct seminars and continue to provide education on use of innovative technologies effecting water quality. *Responsibility for this lies with Engineering and Planning & Development Department.*
- Revisions to the "Design Criteria" regulating detention standards shall be examined which would require a post-construction hydrology that emulates the pre-construction hydrology. One year extended detention will be considered (detention is currently required for the 2 yr. and 10 yr., 24 hour storms). Any proposed revisions will be presented to the City Council. *Responsibility for this lies with Engineering Division.*
- Provide sampling of local watercourses and outfalls before and after development of sites to determine the effectiveness of water quality BMPs in 2009. Use as base for future ongoing maintenance inspections to determine the effectiveness of water quality BMPs over time, 2009-2013. *Responsibility for this lies with Engineering and Stormwater Management Division.*
- Provide routine inspection of storm sewer facilities and storm water outfalls by 2009. Currently complaint driven. *Responsibility for this lies with Stormwater Management and Alliance Water Resources.*
- Examine revising Section 405 of ordinance to require porous pavement/vegetative pavers in parking areas that exceed City requirements by 2013. *Responsibility for this lies with Engineering and Planning & Development Divisions.*
- Coordinate and develop partnerships with public/private organizations, municipalities, and funding sources that are available to support clean water initiatives, preserve open space, and create greenways, linear parks, and trailways through public, private, and volunteer efforts, 2008-2013.

Responsibility for this lies with Planning & Development and Stormwater Management Divisions.

- Establish appropriate post-development runoff standards for the Dardenne Creek watershed using the January, 2007 comprehensive watershed study completed by the Army Corps of Engineers, 2009-2011. Review the possibility of partnering with the Corps, USGS, and other municipalities to study other major watersheds in the City, 2008-2013. Study storm water runoff hydrology and water quality on watershed basis. *Responsibility for this lies with Engineering Division.*

Projects administered by the Department of Project Management are funded by the City. All projects plans and specification are submitted to this department for review, comment, approval and permitting before construction contracts are let. The Department of Project Management ensures that the responsible parties abide by and obtain permits from other jurisdictional authorities such as Corps of Engineers (wetland / 404 permits), MODNR (water quality 401 / land disturbance), local Flood Plain Development Permit, and/or Building Permit before submission to Project Management.

4.2.5.2.2 How the permittee's program will be specifically tailored for their local community, minimize water quality impacts, and attempt to maintain pre-development runoff conditions.

Design criteria and construction specifications have been and are being developed that tailor storm water regulations and erosion control regulations to the local community. Water quality BMPs are being selected based on local soil conditions, rainfall/hydrologic/ground water conditions, freeze/thaw conditions, and proximity to and sensitivity of local watersheds, watercourses, and water impoundments (pond & lakes). Storm water runoff/hydrologic criteria are tailored to minimum lot sizes based on zoning requirements in the City and to local soils, rainfall, and ground cover. Current storm water detention requirements consider peak rates of runoff only and they will be reviewed and standards will be considered to require the post-construction hydrograph emulate the pre-construction hydrograph. Gauging stations have been established on Dardenne has been used to help calibrate hydrologic analyses. Further studies of local watersheds, especially Peruque Creek, may be made by partnering with U.S.G.S. and Army Corps of Engineers to study water quality and quantity. The City also partners with the local Soil & Water Conservation District in establishing our standards using their resources for local soil, water, and ground cover conditions. Ordinances and Design Criteria will be examined and revisions considered that will allow increased infiltration and treatment of the "first flush," slower velocities, and lower times of concentration of post-developed runoff, which should minimize water quality impacts and help to maintain pre-developed runoff conditions.

4.2.5.2.3 Any non-structural BMPs in the permittee's program, including, as appropriate:

4.2.5.2.3.1 Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation;

- The City's Comprehensive Plan, is used as a guide for development and proposes appropriate densities and land uses throughout the city. *Responsibility for this lies with Planning & Development Division.*
- The Floodplain Ordinance regulates and restricts land use in flood plain/floodway areas. *Responsibility for this lies with the Floodplain Manager, Engineering Division.*
- The Parks Department and other City entities and affiliates work to acquire land and maintain open space. Tax funds have been provided to for development of parks/linear parks/trails/open spaces including the "Dardenne Creek Greenway Conceptual Plan." *Responsibility for this lies with Planning and Development and Parks & Recreation Department.*
- Coordinate and develop partnerships with public/private organizations, municipalities, and funding sources that are available to support clean water initiatives, preserve open space, and create greenways, linear parks, and trailways through public, private, and volunteer efforts. *Responsibility for this lies with Planning and Development, Parks and Recreation, Engineering and Stormwater Management Divisions.*
- Under section 405 of the *Subdivision and Land Development Code*, developers are required to abide by and obtain permits from other jurisdictional authorities such as Corps of Engineers (wetland/404 issues), MDNR (water quality 401/land disturbance), local Flood Plain Development Permit (including "no-rise" certification), etc. before City approval of plans, permits, and construction. *Responsibility for this lies with Engineering Division.*

4.2.5.2.3.2 Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure;

O'Fallon does not have any ordinances precluding infill development in higher density urban areas and areas with storm sewer infrastructure. Some projects of this type have occurred in 2005-2007 and our current ordinances seem to be adequate to support this type of development. For the most part, the City is still growing and infill development has not been a problem.

The City is also considering a revision to our current storm water detention requirements for improved stormwater management on infill/redevelopment projects.

4.2.5.2.3.3 Education programs for developers and the public about project designs that minimize water quality impacts; and

O'Fallon participates and partners with other organizations regarding education programs and seminars for developers, contractors, engineers, inspectors, and the

general public regarding water quality issues. The Protecting Water Quality manual provided in the last five-year permit application represents a productive collaboration between St. Charles County and various state/federal partner agencies including NRCS and MDNR. This product is promoted through these partnering agencies as guidance for BMPs.

The City has been conducting seminars for developers, engineers, intra-county agencies and departments, and the home-building community using our staff and industry professionals. The City meets with subdivision associations and subdivision trustees to speak and distribute educational material on water quality, erosion, dumping, stream side maintenance, and detention facility maintenance. The City will continue to hold annual and special seminars to help educate our citizens and the development community. The City also participates and partners with other organizations, such as St. Charles Soil and Water Conservation District and NRCS regarding education programs/seminars for developers, contractors, engineers, inspectors, and the general public regarding water quality issues, including field trips to construction sites. Reference is also made to a document entitled "Protecting Water Quality." This "manual of practice" represents a productive collaboration between St. Charles County and various state/federal partner agencies including NRCS and MDNR.

4.2.5.2.3.4 Other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, and source control measures often thought of as good housekeeping, preventive maintenance and spill prevention.

- Section 400.405 of the *Landscaping and Screening regulations, City Code* was enacted to establish healthy environmental conditions. *Responsibility for this lies with Planning & Development Division.*
- Alliance Water and Sewer, the City's contract service company maintains all publicly dedicated storm sewers. They conduct a periodic inspection program of all their storm sewer systems. Storm sewer systems are inventoried on the City GIS map.

4.2.5.2.4 Any structural BMPs in the permittee's program, including, as appropriate:

4.2.5.2.4.1 Storage practices such as wet ponds and extended-detention outlet structures;

- Storm Water Detention is required and regulated under Section 405.240 of the City's Code. *Responsibility for this lies with Engineering Division.*
- Revisions to the "Design Criteria" regulating detention standards will be reviewed which would require a post-construction hydrology that more emulates the pre-construction hydrology. One year extended detention will be considered (detention is currently required for the 2 yr., 15 yr, 25 yr, 100 yr-20 min storm). *Responsibility for this lies with Engineering Division.*
- Any changes to federal or state regulations will be reviewed for the treatment of runoff in detention facilities. *Responsibility for this lies with Engineering Division.*

4.2.5.2.4.2 Filtration practices such as grassed swales, bioretention cells, sand filters and filter strips; and

- Under the 405.240 (H), undisturbed drainage easements have been established. *Responsibility for this lies with Planning & Development and Development Engineering Divisions.*
- Open drainage (grassed, roadside swales) is allowed for developments with minimum one (1/2) acre lot sizes (curb, gutter, storm sewer not required) to accomplish filtration/attenuation. Revisions to current zoning and the "Design Criteria" will be examined that would reduce curb & gutter requirements and allow open drainage in cluster/low impact developments. *Responsibility for this lies with Planning and Development and Engineering Divisions.*
- Water Quality Standards are currently being implemented into the "Design Criteria" allowing the design of grassed swales, sand filters, bio-retention cells, and vegetative filter strips. *Responsibility for this lies with Development Review Division.*

4.2.5.2.4.3 Infiltration practices such as infiltration basins and infiltration trenches.

- Water Quality Standards are currently being evaluated and considered for implementation into the "Design Criteria" encouraging and allowing the design of rain gardens, infiltration trenches, and infiltration basins. These designs are specifically tailored to local soil and rainfall conditions and local ordinances regulating standing water. *Responsibility for this lies with Engineering Division.*
- The Engineering Division will continue to work with industry professionals to develop design standards for porous pavements. The Engineering Division will continue to work with developers to try to encourage the use of porous type pavements on projects. Explore more possible residential uses as more information about this technology becomes available 2009-2013. *Responsibility for this lies with Engineering Division.*

Department of Project Management will work closely with in implementing "Water quality Standards" as set forth in their Design Criteria.

4.2.5.2.5 Identification of the mechanisms (such as an ordinance or other regulatory mechanisms) the permittee will use to address post-construction runoff from new developments and redevelopments and why the permittee chose that mechanism. If the permittee needs to develop a mechanism, the permittee shall describe the plan and a schedule for implementation. If the permittee's ordinance or regulatory mechanism is already developed, the permittee shall include a copy of the relevant sections with the program.

"Design Criteria "will be used as the mechanisms to address post-construction runoff are developed in a post construction ordinance. A post construction ordinance is in the process of being created to regulate many of the post construction run off measures. The City makes existing recommendations on our "plan review check lists" as well that are currently being used to regulate many of

the post-construction runoff measures. These documents are constantly being reviewed and will continue to be considered for modification along the schedules outlined in 4.2.5.2.1 to address post-construction runoff.

Department of Project Management will work closely with that of Community Development in implementing "Water Quality Standards" as set forth in their Design Criteria.

4.2.5.2.6 How the permittee will ensure the long-term operation and maintenance (O&M) of their selected BMPs. Options to help ensure that future O&M responsibilities are clearly identified include an agreement between the permittee and another party such as the post-development landowners or regional authorities.

- Section 405.240 of the *Storm Water Detention* requires the inspection, maintenance, and repair of storm water detention facilities. It also requires easements of access for the purpose of City inspection. Inspections are made by City staff on a periodic interval or when complaint is received. Any required maintenance or repair must be made by the subdivision homeowners or private property owners. *Stormwater Management is responsible for inspections.*
- Consider revising section 405.240, creating a new ordinance, or creating a departmental policy to provide inspection and evaluation of structural water quality BMPs, particularly where infiltration BMPs are being used in place of storm water detention. Consider requiring maintenance by property owners or subdivision homeowners by ordinance. *Development Engineering will be responsible for inspections.*
- Stormwater Management and Engineering staff will inspect the condition of existing natural watercourse vegetative buffers preserved under the current ordinance and assess their condition and the need to increase the buffer width requirements.
- The City currently has a program and equipment to provide routine inspection of storm sewer facilities and storm water outfalls.

4.2.5.2.7 Identification of the person(s) responsible for overall management and implementation of the permittee's post-construction storm water management program and, if different, the person responsible for each of the BMPs identified for this program.

Manager of the Engineering Division of the Community Development Department or their successor will be responsible for overall management and implementation of the post-construction storm water management program. Management responsibilities for each BMP will be allocated as indicated in 4.2.5.1.2, 4.2.5.2.1, 4.2.5.2.3.1, 4.2.5.2.3.4, 4.2.5.2.4.1, 4.2.5.2.4.2, 4.2.5.2.4.3, and 4.2.5.2.6. The following positions will be the responsible parties for individual BMPs.

- Engineering Manager
- Stormwater Management Coordinator
- Division Director of Planning & Development Division

- City Engineer
- Flood Plain Manager of Planning & Development Division
- Director of Building Safety
- Manager of Construction Inspection

4.2.5.2.8 How the permittee will evaluate the success of this minimum measure, including how the permittee selected the measurable goals for each of the BMPs.

- Natural Watercourse Riparian Buffer – objectives are to retard erosion to natural watercourses, provide filtration for storm water runoff, and protect natural habitat. These areas are designated currently under “undisturbed drainage areas” per section 402.240 (H). Inventory and inspect all buffer areas preserved under ordinance 2008-2010. Create an inventory of buffer areas on our GIS map 2008-2013. Make qualitative and quantitative inspection of buffers to determine the extent of preservation and the effect of the preserved buffer on stream erosion 2011. Our goals will be to establish the long term preservation of at least 75% of the original required buffer areas, to identify new erosion problems in less than 25% of the preserved buffer areas, and to document the state of the riparian habitat.
- Tree Preservation Ordinance – objectives are to preserve open space, reduce impervious area, and increase infiltration. 1989. Make quantitative inspection of buffers to determine the extent of open space preservation.
- Water Quality Structural BMPs – objectives are to filter pollutants from “first flush” of storm water runoff and to recharge the ground water and reduce runoff volume through infiltration and an increased time of concentration. Design standards are being considered in 2008 and an ordinance in the process of being drafted. Formulate and begin inspection program in 2009. Make quantitative and qualitative inspection of BMPs and sample local outfalls before and after development of a site 2009-2013. Our goals will be to establish the long term preservation and maintenance of at least 75% of water quality BMPs and to maintain or improve the quality of runoff from the BMP outfalls and in local watercourses as determined through sampling and biological monitoring. Other goals are to complete a commercial site project using porous pavement technology, considered as a standard method by 2013 and to use porous pavement to some extent in subdivision development.
- Storm Water Detention – objectives are to create a post-developed hydrology as similar as possible to the pre-developed hydrology; thereby, retarding erosion and flooding of our watercourses and to use these facilities as a dual purpose to help filter pollutants from the runoff. Look at additional standards in 2008 for consideration. Currently making qualitative inspections of basins periodically or on complaint basis to assure long-term maintenance and providing maintenance education to subdivision trustees and private basin owners. Our goals will be to see a reduction in the number of maintenance violations after the initial inspections by 2011 and to see an increase in the number of wet filtration basins or basins constructed with forebays.

- Revisions to Zoning & Development Regulations – objectives are to preserve open space, reduce impervious area, require or allow for the disconnection of impervious areas, encourage and allow for low impact development, and to limit development in environmentally sensitive areas. Ordinance changes have been ongoing to address these issues and will continue to occur throughout the permit period, the earliest changes being in 2008.
- Section 400.170 of the City Code promotes “Environmental Protection Planned Developments” to encourage the permanent protection of the environmentally sensitive areas of a site while allowing for the site’s development by concentrating development away from these environmentally sensitive areas.
- Partner with Parks and Recreation, and Private/Public Groups – objectives are to preserve open space, create regional storm water detention/management to help reduce flooding, preserve and enhance riparian buffers, and obtain funding and create projects that will both enhance water quality and provide recreational opportunities. Storm Sewer Inspection & Maintenance Program – objectives are to assure that storm sewers are not in disrepair, are cleaned out (removal of debris and pollutants), and that pipe outfalls are non-erosive.
- A tracking mechanism for storm water complaints/violations has been initiated. An inventory of the locations of the complaints will be established and a comparison will be tracked regarding the amount of storm water complaints in areas developed prior to water quality regulations versus those developed with water quality BMPs.

4.2.6 Pollution Prevention / Good Housekeeping for Municipal Operations

4.2.6.1 *Permit requirement.* The permittee shall:

4.2.6.1.1 Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and

O’Fallon Stormwater Management Department will collaborate with Facilities, Environmental Services, Landscaping, Parks and Recreation, Highway, Water/Sewer and Fleet Maintenance to develop and implement an Operations and Maintenance Program to prevent or reduce pollutant runoff from its municipal operations. The program will include but not necessarily be restricted to the following general categories:

- Building Maintenance
- Garden and Landscaping Operations
- Park / Open Space Maintenance
- Storm Water System Maintenance
- Licensed Vehicle Maintenance and Operation
- Off-Road Equipment Maintenance and Operation
- Fuel Storage and Fuel Dispensing Facilities
- Outdoor Bulk Material Storage

- Land Disturbance
- Soil Stabilization
- Illicit Discharge Detection
- Roadway Maintenance
- Waste Disposal

The following City departments will be responsible for compliance with the City's Operations and Maintenance Program such that storm water pollutants are minimized:

- Water/Sewer Plant
- Highway Department
- Fleet Maintenance
- Facility Maintenance Department
- Parks and Recreation Department
- Environmental Services

Employee training shall be held on a regular basis. The training will be held at each facility at least once every quarter and shall cover the above topics and be site specific for each facility. Every other year, subject matter experts will be used on topics relating to our operations for City wide training. By the end of the five year period the City will have site specific meetings every two months and an expert speaker every year.

- 4.2.6.1.2 Using training materials that are available from EPA, State, or other organizations, the permittee shall develop training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.**

Each applicable City department will create and implement a training program tailored for their operations including the categories cited in 4.2.6.1.1. Employee awareness and continuing education will be one of the best management practices utilized to reduce storm water pollutants from the municipal operations of City of O'Fallon Government. See Appendix B-6 for BMP and training schedules.

The Division of Stormwater Management will assist the individual City departments by compiling training resources from the EPA, Missouri Department of Natural Resources, and other applicable authorities. For continuity, training resources and subject material contained in public outreach programs will be utilized by the City departments.

The training will be presented to staff in groups and individual settings/sessions by live interactive talks. These presentations are site specific for each location. The sessions that are set up with subject matter specialists will make use of support materials generated for public outreach and information thereby integrating the internal/external audiences for maximum message impacts and effectiveness.

As stated above, the training will be held at a more frequent interval and on a regular basis. The training will be held at each facility at least once every quarter and shall cover the above topics and be site specific for each facility. Every other year subject matter experts will conduct City-wide training. By the end of the five year period the City will have site specific meeting every two months and an outside speaker every year.

4.2.6.2 *Decision process.* The permittee shall document the permittee's decision process for the development of a pollution prevention/good housekeeping program for municipal operations. The permittee's rationale statement shall address both the permittee's overall pollution prevention/good housekeeping program and the individual BMPs, measurable goals, and responsible persons for the program. The rationale statement shall include the following information, at a minimum:

Each applicable City department will continuously assess their municipal operations for their impact on storm water. The assessment will identify additional sources of pollutants as well as the reduction of existing sources of pollutants. The following decision process will be utilized to change existing municipal operations to reduce pollutant runoff.

1. Identification of current issues and alternative concepts
2. Feasibility and comparison of operational changes
3. Estimate of associated costs to implement desired changes
4. Departmental decision to proceed after Benefit / Cost Analysis
5. Implement changes if the department's budget is sufficient
6. Request additional funds if required
7. Financial Appropriation if required

4.2.6.2.1 The permittee's operation and maintenance program to prevent or reduce pollutant runoff from their municipal operations. The permittee shall specifically list the municipal operations that are impacted by this operation and maintenance program. The permittee shall also include a list of industrial facilities the permittee owns or operates that are subject to EPA's Multi-Sector General Permit (MSGP) or individual NPDES permits for discharges of storm water associated with industrial activity that ultimately discharge to the permittee's MS4. The permittee shall include the permit number or a copy of the Industrial application form for each facility.

O'Fallon (municipal) operations addressed by the operations and maintenance program coincide with the department activities cited in the preceding section above. Individual facility locations currently covered by site-specific NPDES general permits for storm water discharges are listed as follows and the corresponding documents are presented for reference (see Appendix D):

- Environmental Services Division Waste Transfer Station: *Permit MO 0418303*
- City of O'Fallon Wastewater Treatment Plant: *Permit MO-0028720*
- City of O'Fallon Water Treatment Plant: *Permit MO-0129623*

4.2.6.2.2 Any government employee training program the permittee uses to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. The permittee shall describe any existing, available materials the permittee plans to use. The permittee shall describe how this training program will be coordinated with the outreach programs developed for the public information minimum measure and the illicit discharge minimum measure.

See section 4.2.6.1.2.

4.2.6.2.3 The permittee's program description shall specifically address the following areas:

The Operations and Maintenance Program will contain but not necessarily be restricted to the following municipal operations and categories:

Building Maintenance

- Identification and marking of all Storm Sewer entry points
- Rooftop HVAC Equipment
- Exterior grade level HVAC Equipment
- Material storage and control
- Proper use and application of materials/chemicals

Garden and Landscaping Operations

- Proper operation of irrigation systems
- Material storage and control
- Proper use and application of materials/chemicals

Parking Lots and Storm Water System Maintenance

- Periodic Inspection of curbing and grating
- Assessment of storm water drainage
- Inspection and cleaning of storm water systems

Park / Open Space Maintenance

- Use of native and low maintenance plant and tree species
- Material storage and control
- Proper use and application of materials/chemicals

Licensed Vehicle Maintenance

- Performed by a competent vendor
- Weekly operator inspections before use
- Applicable vehicles cleaned within two days after a storm event
- Vehicle storage-leaking vehicles
- Onsite mechanics maintenance operations
- Proper use, disposal and application of chemicals
- Material storage and control

Off-Road Equipment Maintenance

- Maintenance performed within a protected facility
- Weekly operator inspections before use
- Remove equipment from service when fluid leaks are significant

Fuel Storage and Dispensing Facilities

- Compliance with Federal and State regulations
- Emergency spill containment
- Emergency generator installations

Outdoor Bulk Material Storage

- Covered material storage areas
- Short term uncovered storage areas

Land Disturbance

- Plan / Design projects for minimum disturbance
- Procedures for self-performed construction activities

Soil Stabilization

- Continuous assessment of City operated sites
- Projects to improve soil stability

Illicit Discharge Detection

- Periodic inspection of City sites for illicit discharges
- Awareness of illicit discharges when traveling within the City

Waste Disposal

- All wastes disposed per federal, state, and local regulations
- Recycling alternatives to reduce conventional waste disposal

4.2.6.2.3.1 Maintenance activities, maintenance schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants to the permittee's regulated small MS4.

Maintenance schedules, inspection procedures and controls are delineated in the SWMPPP documents previously cited for the maintenance facilities. The procedures to accomplish the reduction of floatables and other pollutants from the maintenance activities will be addressed as follows:

O'Fallon has implemented a program to inspect our storm sewer systems every year. The next five year plan calls for continuing the inspecting our sewer systems on a yearly basis.

The City plans to continue to sweep all the residential, collector and arterial streets that it maintains on a yearly basis. We currently operate on a nine week rotation to cover the entire City and City Facilities.

4.2.6.2.3.2 Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas the permittee operates.

Controls, practices, operations and structures designed for pollution reduction/containment from highway operations maintenance/storage yards, material pile sites and other locations are described and detailed in the afore-cited SWMPPP documents.

The City will continue our Adopt-A-Street program that is currently in place. More emphasis by our Volunteer Services department to get these groups more active in roadside trash pickup has taken place in 2007 and will continue.

4.2.6.2.3.3 Procedures for the proper disposal of waste removed from the permittee's MS4 and area of jurisdiction, including dredged material, accumulated sediments, floatables, and other debris.

Guidance on handling/transport and disposal/recycling procedures, contractors, regulatory requirements and facility options for removed waste materials, including sediment, trash and other debris is provided by consultation of front-line department (i.e., highway maintenance/facilities operations) with Division of Environmental Services staff on a case-by-case basis.

4.2.6.2.3.4 Procedures to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices.

All flood management projects that require approval from the Planning & Development Division and must follow guidelines set in the Floodplain ordinance of the City code. All plans are submitted to the Floodplain Manager for review in the Engineering Division to assess the water quality impacts and recommend the necessary water quality protection device(s) or practice(s).

4.2.6.2.4 Identification of the person(s) responsible for overall management and implementation of their pollution prevention/good housekeeping program and, if different, the person responsible for each of the BMPs identified for this program.

The following positions or their successors are responsible for their Department's compliance with the City's Operations and Maintenance Program:

- Director of Environmental Services
- Assistant Director of Public Works
- Manager of Fleet Services
- Parks Superintendent

4.2.6.2.5 How the permittee will evaluate the success of this minimum measure, including how the permittee selected the measurable goals for each of the BMPs.

Success of this MCM will be evaluated by compliance of the annual report forms to MDNR and per monitoring of any internal and external feedback received.

4.3 Sharing Responsibility

Implementation of one or more of the minimum measures may be shared with another entity, or another entity assumes responsibility for the measure if:

- 4.3.1 **The other entity, in fact, implements the control measure;**
- 4.3.2 **The particular control measure, or component of that measure, is at least as stringent as the corresponding permit requirement.**
- 4.3.3 **The other entity agrees to implement the control measure on permittee's behalf. Written acceptance of this obligation is required. This obligation shall be maintained as part of the description of the permittee's storm water management program. If the other entity agrees to report on the minimum measure, the permittee shall supply the other entity with the reporting requirements contained in Section 5.3 of this permit. If the other entity fails to implement the control measure on the permittee's behalf, then the permittee remains liable for any discharges due to that failure to implement.**
- 4.4 **Reviewing and Updating Storm Water Management Programs**
- 4.4.1 ***Storm Water Management Program Review:* The permittee shall do an annual review of the permittee's Storm Water Management Program in conjunction with preparation of the annual report required under Section 5.3**
- 4.4.2 ***Storm Water Management Program Update:* The permittee may change the Storm Water Management Program during the life of the permit in accordance with the following procedures:**
 - 4.4.2.1 **Changes adding (but not subtracting or replacing) components, controls, or requirements to the Storm Water Management Program may be made at any time upon written notification to the department.**
 - 4.4.2.2 **Changes replacing an ineffective or unfeasible BMP specifically identified in the Storm Water Management Program with an alternate BMP may be requested at any time. Unless denied by the department, changes proposed in accordance with the criteria below shall be deemed approved and may be implemented 60 days from submittal of the request. If request is denied, the department will send the permittee a written response giving a reason for the decision. The permittee's modification requests shall include the following:**
 - 4.4.2.2.1 **An analysis of why the BMP is ineffective or infeasible (including cost prohibitive),**
 - 4.4.2.2.2 **Expectations on the effectiveness of the replacement BMP, and**
 - 4.4.2.2.3 **An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.**
 - 4.4.2.3 **Change requests or notifications must be made in writing and signed in accordance with Section 6.**

- 4.4.3 ***Storm Water Management Program Updates Required by the Department:*** Changes requested by the department must be made in writing, set forth the time schedule for the permittee to develop the changes, and offer the permittee the opportunity to propose alternative program changes to meet the objective of the requested modification. All changes required by the department will be made in accordance with 10 CSR 20-6.200. The department may require changes to the Storm Water Management Program as needed to:
- 4.4.3.1 Address impacts on receiving water quality caused or affected by discharges from the Municipal Separate Storm Sewer System;
- 4.4.3.2 Include more stringent requirements necessary to comply with new federal or state statutory or regulatory requirements; or
- 4.4.3.3 Include such other conditions deemed necessary by the department to comply with the goals and requirements of the Missouri Clean Water Law.
- 4.4.4 ***Transfer of Ownership, Continuing Authority, or Responsibility for Storm Water Management Program Implementation:*** The permittee shall implement the Storm Water Management Program on all new areas added to the permittee's portion of the municipal separate storm sewer system (or for which the permittee becomes responsible for implementation of storm water quality controls) as expeditiously as practicable, but not later than one year from addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately.
- 4.4.4.1 Within 90 days of a transfer of ownership, continuing authority, or responsibility for storm water management program implementation, the permittee shall submit a revised plan, if necessary, for implementing the revised Storm Water Management Program on all affected areas. The plan shall include revised schedules for implementation. Information on all new annexed areas and any resulting updates required to the Storm Water Management Program shall be included in the annual report.
- 4.4.4.2 Only those portions of the Storm Water Management Programs specifically required as permit conditions shall be subject to the modification requirements of 10 CSR 20-6.200. Addition of components, controls, or requirements by the permittee(s) and replacement of an ineffective or infeasible BMP implementing a required component of the Storm Water Management Program with an alternate BMP expected to achieve the goals of the original BMP shall be considered minor changes to the Storm Water Management Program and not modifications to the permit.

5 MONITORING, RECORDKEEPING, AND REPORTING

5.1 Monitoring

- 5.1.1 The permittee shall evaluate program compliance, the appropriateness of identified best management practices, and progress toward achieving identified measurable goals. If the permittee discharges to a water for which a TMDL has been approved, the permittee will have additional monitoring requirements under Section 3.1.3.6.
- 5.1.2 When the permittee conducts monitoring at the permittee's regulated small MS4, the permittee is required to comply with the following:
- 5.1.2.1 *Representative monitoring.* Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- 5.1.2.2 *Test Procedures.* Monitoring results shall be conducted according to test procedures approved under 10 CSR 20-7-.015.
- 5.1.3 Records of monitoring information shall include:
- 5.1.3.1 The date, exact place, and time of sampling or measurements;
- 5.1.3.2 The names(s) of the individual(s) who performed the sampling or measurements;
- 5.1.3.3 The date(s) analyses were performed;
- 5.1.3.4 The names of the individuals who performed the analyses;
- 5.1.3.5 The analytical techniques or methods used; and
- 5.1.3.6 The results of such analyses.
- 5.1.4 *Discharge Monitoring Report.* Monitoring results shall be reported on a Discharge Monitoring Report (DMR).
- 5.2 **Record keeping**
- 5.2.1 The permittee shall retain records of all activities requiring record keeping by the SWMP and monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, copies of Discharge Monitoring Reports (DMRs), a copy of the NPDES permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended by request of the department at any time.
- 5.2.2 The permittee shall submit the permittee's records to the department only when specifically asked to do so. The permittee shall retain a description of the Storm Water Management Program required by this permit (including a copy of the permit language) at a location accessible to the department. The

permittee shall make the permittee's records, including the application and the description of the storm water management program, available to the public if requested to do so in writing.

5.3 Reporting

The permittee shall submit annual reports to the Director by April 10 of each year of the permit term. The report shall include:

5.3.1 The status of the permittee's compliance with permit conditions, an assessment of the appropriateness of the identified best management practices, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and the measurable goals for each of the minimum control measures;

5.3.2 Results of information collected and analyzed, if any, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP;

5.3.3 A summary of the storm water activities the permittee plans to undertake during the next reporting cycle (including an implementation schedule);

5.3.4 Proposed changes to the permittee's storm water management program, including changes to any BMPs or any identified measurable goals that apply to the program elements; and

5.3.5.1 Notice that the permittee is relying on another government entity to satisfy some of the permittee's permit obligations (if applicable).

6 GENERAL CONDITIONS

This permit includes General Permit Conditions attached as Part 1 to this permit.

DEFINITIONS

All definitions contained in 10 CSR 20-6.200 shall apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided, but in the event of a conflict, the definition found in the regulation takes precedence.

Control Measure as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the United States.

Director, refers to the Director of Staff, Water Pollution Control Program, Department Of Natural Resources.

Discharge, when used without a qualifier, refers to "discharge of a pollutant" as defined at 40 CFR 122.2.

Illicit Connection means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

Illicit Discharge refers to any discharge to a municipal separate storm sewer that is not entirely composed of storm water, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.

MEP is an acronym for "Maximum Extent Practicable," the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in storm water discharges that was established by CWA §402(p). A discussion of MEP as it applies to regulated small MS4s is found at 40 CFR 122.34.

MS4 is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to either a Large, Medium, or Small Municipal Separate Storm Sewer System (e.g. "the Dallas MS4"). The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities (e.g., the Houston MS4 includes MS4s operated by the city of Houston, the Texas Department of Transportation, the Harris County Flood Control District, Harris County, and others).

Outlet, refers to the point at which storm water exits an MS4 or enters waters of the state.

Permittee, as used in this permit refers to the permit holder.

Storm Water, means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm Water Management Program (SWMP) refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

SWMP is an acronym for "Storm Water Management Program."

**Appendix A
Minimum Control Measure (MCM)
Individual Responsibility**

MCM (Minimum Control Measure)	Department/Division Staff *Individual responsible
MCM 1 Public Education and Outreach on Storm Water Impacts	*Michele Gremminger, Stormwater Management Coordinator/Project Assistant Engineering Division
MCM 2 Public Involvement/Participation	*Michele Gremminger, Stormwater Management Coordinator/Project Assistant Engineering Division
MCM 3 Illicit Discharge Detection and Elimination	*Michele Gremminger, Stormwater Management Coordinator/Project Assistant Engineering Division Jay Herigodt, Manager Construction Inspection Nathan Lacey, Director of Building Safety Jim Luetkenhaus, Code Enforcement Manager
MCM 4 Construction Site Runoff	*Michele Gremminger, Stormwater Management Coordinator/Project Assistant Engineering Division *Jay Herigodt, Manager Construction Inspection *Nathan Lacey, Director of Building Safety Wade Montgomery, Sr. Project Manager, Project Management
MCM 5 Post-Construction Stormwater Management in New Development and Redevelopment	*Al Kilpatrick, Engineering Manager David Woods, Director of Planning & Development Steve Bender, City Engineer Jeannie Greenlee, Plan Review, Engineering Michele Gremminger, Stormwater Management Coordinator/Project Assistant
MCM 6 Pollution Prevention/Good Housekeeping for Municipal Operations	*Michele Gremminger, Stormwater Management Coordinator/Project Assistant *Carl Young, Manager Fleet Maintenance *Bill Mitchison, Parks Superintendent *Jim Wenzara, Director of Environmental Services *Ken Hammell, Asst. Director of Public Works

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 1 Public Education and Outreach

Goal: Promote Stormwater Messages

Objective: Increase continuity with municipal programs; Increase awareness of target pollutants; Encourage behaviors that reduce stormwater pollution

*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste

Activity/Product	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
Education/Enhancement Project	1 raparian planting/restoration project per year	2008-2013	Michele Gremminger
Logo Branding (M,E,H,L,S,Y)	The majority of print & web materials produced internally will display logo	Fall 2008	Michele Gremminger/Public Relations
Tailor messages to minority audiences	Translate outreach materials into Spanish and distribute at appropriate venues	2009-2013	Michele Gremminger
Provide alternative sources for information (M,E,H,L,S,Y)	Website hits & downloading statistics (when possible)	December Annually	Michele Gremminger/Public Relations
	Website library of educational material	2009	Michele Gremminger/Public Relations
	One student-developed comic in a community newsletter	2008-2013	Michele Gremminger/Public Relations
	Number of promotional magnets and other material distributed (E,H, L, Y)	2008-2013	Michele Gremminger
Pollution Solution Fact Sheets (M,H,S,L,Y)	Use existing sheets; work with other municipalities to distribute editable format; Distribute to 5 partnering organizations to target audience	Yard Waste-2008 Litter/Pet Waste-2010	Michele Gremminger
Press Releases addressing pollutants and solutions (M,E,H,L,S,Y)	3 Annually	2008-2013	Michele Gremminger/Public Relations

2008-2013 NPDES Permit City of O'Fallon, Missouri

Operating Plan Matrix MCM 1 Public Education and Outreach

Goal: Promote Stormwater Messages

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*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste

Activity/Product	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
Stormwater Management newsletter articles	2 printed annually	2008-2013	Michele Gremminger/Public Relations
Acquire PSA's for video production	1 30-second PSA to air 4 each annually	2009-2010	Michele Gremminger/Public Relations
Stormwater Management Video	Develop and broadcast 6 times annually (update as necessary)	2010-2013	Michele Gremminger/Communications
Public Awareness Survey	200 quality responses before, during and after permit cycle	2008,2010,2013	Michele Gremminger
Public reporting of programs/survey results	1 article produced	2009, 2011	Michele Gremminger
Land Disturbance/BMP Seminar (E)	1-2 Workshops conducted Annually	2008-2013	Michele Gremminger
Event Display (M,E,H,L,S,Y)	Educate stakeholders from construction industry		
Stormdrain Stenciling (M,E,H,L,S,Y)	1-2 Community Events per year	2008-2013	Michele Gremminger
Evaluation tool for education outreach (M,E,H,L,S,Y)	150 drains stencilled annually	2008-2013	Michele Gremminger
Stormwater Hotline (M,E,H,L,S,Y)	Majority of quality responses indicate positive change in behavior or level of awareness after program or strategy	Develop 2008 Implement 2009-2013	Michele Gremminger
	Already established. Increase in inquiries around campaigns	2009-2013	Michele Gremminger
	Decrease in pollution found over time		

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 1 Public Education and Outreach

Goal: Promote Stormwater Messages

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*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste

Activity/Product	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
Online reporting for complaints/inquiries (E,H,L,S,Y)	Already established. Increase in inquiries around campaigns	2009-2013	Michele Gremminger

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 2 Public Involvement/Participation			
Goal: Increase community involvement to 200 annually by 2013			
Objective: Public involvement and participation in NPDES plan development and implementation			
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste			
Activity/Product	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
NPDES plan review and public feedback	five-year and annual reports available on-line	2008-2013	Michele Gremminger/Public Relations
	Five-year plan available at 2 public meetings	2009	Michele Gremminger/AI Kilpatrick
Environmental education programs and community events	200 participants annually by 2013		Michele Gremminger
	Active network of 50 volunteers		Michele Gremminger
	150 stormdrains stencilled annually		Michele Gremminger
	50 quality responses received;majority indicate positive behavior change or response		Michele Gremminger
Household Hazardous Waste collections	2 community events for specific items accepted by Recycle Works	2008-2013	Michele Gremminger
Illicit Discharge Program	Annual reduction in waste illegally dumped. Feedback solicited and received form areas prone to dumping.	2008-2013	Michele Gremminger
Earth Day	One event per year (target audience-residents)	April 2008-2013	Michele Gremminger/Volunteer Services
Operation Clean Stream (M,E,H,L,S,Y)	One event annually-Coodinated event with multiple municipalities and non-profits	2008-2013	Michele Gremminger

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 2 Public Involvement/Participation			
Goal: Increase community involvement to 200 annually by 2013			
Objective: Public involvement and participation in NPDES plan development and implementation			
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste			
Activity/Product	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
	Plan available for comment; receive quality feedback from 30% of participants (many are kids) 100 volunteers annually		
Make a Difference Day (M,E,H,L,S,Y)	One event annually (target audience-residents)-Creek clean up, roadside clean up, stormdrain stenciling performed	2008-2013	Michele Gremminger/Volunteer Services
Stormdrain stenciling (M,E,H,L,S,Y)	2 events annually-(target audience-residents)-150 stormdrains stencilled annually. Ongoing Developers adding discs denoting pollution prevention to new developments per requirements.	2008-2013	Michele Gremminger/Volunteer Services
Stormwater Hotline	Already established. Increase inquiries around campaign	2009-2013	Michele Gremminger
	Decrease in pollutants found over time		
Event Display (M,E,H,L,S,Y)	1-2 Community Events per year	2008-2013	Michele Gremminger
Stormwater Management Video	Develop and broadcast 6 times annually (update as necessary)	2010-2013	Michele Gremminger/Communications
Education/Enhancement Project	1 raparian planting/restoration project per year	2008-2013	Michele Gremminger

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 2 Public Involvement/Participation		
Goal: Increase community involvement to 200 annually by 2013		
Objective: Public involvement and participation in NPDES plan development and implementation		
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste		
Activity/Product	Evaluation Indicator	Time Frame/ Due Date
Responsible Party		
City Volunteer Recycling Committee (M,H,L)	1-2 Community Events per year- volunteer residents that plan to participate in and possibly hold events for education	2008-2013
		Jim Wenzera

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 4 Construction Site Storm Water Runoff Control			
Site			
Objective: Establish Water Quality Baseline at Construction Sites and Enforce BMP's for Compliance			
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste			
Activity/Product	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
Monitoring of Construction Site Run Off	Regular inspections of all permitted sites	2008-2013	Michele Gremminger/Const. Inspectors/Building Inspectors/Project Mgmt
Evaluating Water Quality at Construction Sites	pH, DO, Temp and Turbidity Numbers to be determined before construction begins, then to be monitored throughout construction and after completion of the project.	2008-2013	Michele Gremminger
BMP Seminars	2 seminars for Industry Professionals and staff that explain the proper use of BMP's and expectations that are set forth by the City	Annually	Michele Gremminger
Ordinance Modifications: Construction Wastes	Allow for specifications regarding the storage of Hazardous Construction Materials; Disposal of Construction Waste; Litter on Site; Sanitary Waste on Site; Enforcement and Penalties will need to be included in Ordinance Addendum	2008	Michele Gremminger/AI Kilpatrick/Engineering/Planning & Zoning/City Council
Stop Work Order Fine	A \$250.00 fine to be established for any Stop Work Ordered issued for Land Disturbance	2008	Michele Gremminger/AI Kilpatrick/Engineering/Planning & Zoning/City Council
Work with Municipalities on Construction Site Standards	Hold Bi-Annual meetings with municipalities to discuss BMP's and Industry Standards	2009	Michele Gremminger

2008-2013 NPDES Permit City of O'Fallon, Missouri

Operating Plan Matrix MCM 5 Post-Construction Stormwater Management in New Development and Re-Development				
Goal: Minimize soil erosion or other mass movement during development and construction projects				
Objective: Establish measurable criteria to determine soil loss and other adverse land impact activity				
<small>*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste</small>				
Activity/Product	Objective	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
Complete BMP Resolution/Manual	To filter pollutants from "first flush" of storm water runoff, reduce runoff volume & recharge ground water table	Design standards being completed and manual being created	2008	Michele Gremminger/Al Kilpatrick/Steve Bender
Inventory & Inspect Water Quality BMP's	To ensure to long-term function, maintenance, and effectiveness of WQ BMP's.	Establish long-term preservation & maintenance of 75% of WQ BMP's	2009-2013	Michele Gremminger
		Sample WQ BMP outfalls before and after development- maintain or improve water quality of local outfalls.	2009-2013	Michele Gremminger
		Review need to revise WQ Standards	2011-2013	Michele Gremminger/Al Kilpatrick/Steve Bender
Standardize use of Porous Pavement	To filter out pollutants from "first flush" of storm water runoff, reduce runoff volume and recharge ground water table.	Use porous pavement as a standard for commercial development and find uses in residential development.	2011-2013	Al Kilpatrick/Steve Bender
Create Zoning Regulations for Cluster Development	Encourage and permit low impact development to preserve open space, reduce impervious area, allow for the disconnection of impervious area, and to limit development in environmentally sensitive areas	Develop cluster ordinance	2008-2011	Jeanie Greenlee, Al Kilpatrick (Engineering), David Woods (Planning)

2008-2013 NPDES Permit City of O'Fallon, Missouri

Operating Plan Matrix MCM 5 Post-Construction Stormwater Management in New Development and Re-Development				
Goal: Minimize soil erosion or other mass movement during development and construction projects				
Objective: Establish measurable criteria to determine soil loss and other adverse land impact activity				
<small>*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste</small>				
Activity/Product	Objective	Evaluation Indicator	Time Frame/ Due Date	
Responsible Party				
		One low impact/cluster development is established	2009	Al Kilpatrick (Engineering), David Woods (Planning)
		2 additional low impact developments	2011	Al Kilpatrick (Engineering), David Woods (Planning)
		Establish 5% of total development as low impact/cluster development	2013	Al Kilpatrick, Review Staff
Revise Zoning Regulations to Eliminate Curb & Gutter Requirement in Higher Density Developments	Encourage and allow for reduction in impervious areas, allow for the disconnection of impervious areas, and allow for increased infiltration and lower time of concentrations	Revise development ordinance and design criteria in development/redevelopment with open drainage design	2009-2013	Jeanie Greenlee, Al Kilpatrick (Engineering), David Woods (Planning)
Inspection & Evaluation of Natural Watercourse Vegetative Buffers	To retard erosion to natural watercourses, provide filtration of storm water runoff & protect natural habitat	Inspect all vegetative buffers preserved under 2007 ordinance for compliance periodically. Create tracking/inventory system for watercourse inspections	2008-2013	Michele Gremminger
Inspection & Evaluation of Natural Watercourse Vegetative Buffers		Create inventory of preserved buffer areas on GIS map	2008-2013	Kevin Kingrey (GIS), Michele Gremminger

2008-2013 NPDES Permit City of O'Fallon, Missouri

Operating Plan Matrix MCM 5 Post-Construction Stormwater Management in New Development and Re-Development			
Goal: Minimize soil erosion or other mass movement during development and construction projects			
Objective: Establish measurable criteria to determine soil loss and other adverse land impact activity			
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste			
Activity/Product	Objective	Evaluation Indicator	Time Frame/ Due Date
Create Additional Standards for Buffer Requirements and Improvements to Natural Watercourses as Needed Inspection & Evaluation of Tree Preservation Areas	To retard erosion to natural watercourses, provide filtration of storm water runoff & protect natural habitat Preserve open space, reduce impervious area, and increase infiltration	Create standards for improvements to natural watercourses allowed under ordinances. Inspect a sample of tree preservation areas to determine degree of preservation.	2009 2009-2011
Revise Storm Water Detention Standards	Explore post-development hydrology as similar as possible to pre-developed hydrology and to integrate water quality functions to basin use.	Explore standards regarding design storms, extending detention time, and regulating post-developed time of concentration	2008-2013
Inspection & Maintenance Enforcement of Stormwater Detention Facilities	Assure long-term maintenance & function of detention facilities and to provide maintenance and watershed education to subdivision trustees and private basin owners	Increase compliance of maintenance after initial inspections through enforcement.	2011
			Michele Gremminger, Jeannie Greenlee Michele Gremminger (Stormwater Management), Al Kilpatrick (Engineering), Bob Dearduff (Landscape Manger) Jeannie Greenlee, Review Staff Michele Gremminger

2008-2013 NPDES Permit City of O'Fallon, Missouri

Operating Plan Matrix MCM 5 Post-Construction Stormwater Management in New Development and Re-Development				
Goal: Minimize soil erosion or other mass movement during development and construction projects				
Objective: Establish measurable criteria to determine soil loss and other adverse land impact activity				
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste				
Activity/Product	Objective	Evaluation Indicator	Time Frame/ Due Date	
Responsible Party				
Partner with Parks & Recreation and Other Private/Public linear Park & Stream organizations. Evaluation regional detention opportunities	Preserve open space through acquisition of property for parks, create opportunities for regional stormwater detention/management, preserve and enhance riparian buffers, and obtain funding available for projects that will enhance water quality and provide for recreational opportunity	Make stormwater management a regular part of the planning process for public parks.	2013	Steve Bender (City Engineer), Al Kilpatrick (Engineering Manager), Cindy Springer (Parks Director)
Create Storm Sewer Facilities Inspection & Maintenance Program	Assure that storm sewers are not in disrepair, are free firm debris and pollutants, and that pipe outfalls are non-erosive	Have 100% of publicly maintained storm sewers & stormwater facilities inspected annually	2008	Dan Scherer (Alliance Water Resources)
Track Storm Water Complaints	To determine if problem areas exist regarding storm water management and to compare the impact of new storm water regulations on new development vs old development	Tracking mechanism is in place to log complaints.	2008-2013	Michele Gremminger

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 5 Post-Construction Stormwater Management in New Development and Re-Development				
Goal: Minimize soil erosion or other mass movement during development and construction projects				
Objective: Establish measurable criteria to determine soil loss and other adverse land impact activity				
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Activity/Product	Objective	Evaluation Indicator	Time Frame/ Due Date	Responsible Party

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 6 Pollution Prevention/Good Housekeeping for Municipal Operations			
Goal: Decrease polluted runoff from Municipal Operations			
Objective:	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste			
Alliance Water Resources			
Storm Sewer Inspections	Yearly Inspections	2008-2013	Dan Scherer
Highway Department			
Residential Street Sweeping	Continue current schedule	2008-2013	Highway
Herbicide Application	10% reduction in herbicide use	2009	Highway
Truck Washing	Continue current schedule and incorporate as part of O & M	2008	Highway
Adopt-A-Street	As request come in for an adoption	2008	Highway
Generation of Initial "Operations and Maintenance Program" for Highway Dept.	Program created specific to the operations of the Facilities Dept.	2008	Michele Gremminger/Ken Hammell
Creation of Employee Training Program for Highway Dept.	Program created specific to the operations of the Facilities Dept.	2008	Ken Hammell
Compile Training Materials	All Employees	2008	Ken Hammell
Initial Training and Annual Training of Highway Dept employees	All Employees	2008-2013	Ken Hammell
Facilities			
Generation of Initial "Operations and Maintenance Program" for Facilities Dept.	Program created specific to the operations of the Facilities Dept.	2008	Michele Gremminger/Mike Leonard

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 6 Pollution Prevention/Good Housekeeping for Municipal Operations			
Goal: Decrease polluted runoff from Municipal Operations			
Objective:			
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste			
Activity/Product	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
Creation of Employee Training Program for Facilities Dept.	Program created specific to the operations of the Facilities Dept.	2008	Mike Leonard
Compile Training Materials	All Employees	2008	Mike Leonard
Initial Training and Annual Training of Facilities Dept employees	All Employees	2008-2013	Mike Leonard
Fleet Maintenance			
Generation of Initial "Operations and Maintenance Program" for Fleet Maintenance Dept.	Program created specific to the operations of the Fleet Maintenance Dept.	2008	Michele Gremminger/Carl Young
Creation of Employee Training Program for Fleet Maintenance Dept.	All Employees	2008	Carl Young
Compile Training Materials	All Employees	2008	Carl Young
Initial Training and Annual Training of Fleet Maintenance Dept employees	All Employees	2008-2013	Carl Young
Truck Washing	Vehicles are washed at commercial car washes	2008	Fleet
Parks/Landscaping			
Generation of Initial "Operations and Maintenance Program" for Parks Dept.	Program created specific to the operations of the Fleet Maintenance Dept.	2008	Michele Gremminger/Bill Mitchison

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 6 Pollution Prevention/Good Housekeeping for Municipal Operations			
Goal: Decrease polluted runoff from Municipal Operations			
Objective:			
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste			
Activity/Product	Evaluation Indicator	Time Frame/ Due Date	Responsible Party
Creation of Employee Training Program for Parks Dept.	All Employees	2008	Bill Mitchison
Compile Training Materials	All Employees	2008	Bill Mitchison
Initial Training and Annual Training of Parks Dept employees	All Employees	2008-2013	Bill Mitchison
Herbicide Application	10% reduction in herbicide use	2009	Highway
Truck Washing	Establish schedule, designated wash area as part of O & M	2008	Parks
Environmental Services			
Generation of Initial "Operations and Maintenance Program" for Environmental Services Dept.	Program created specific to the operations of the Fleet Maintenance Dept.	2008	Michele Gremminger/Jim Wenzara
Creation of Employee Training Program for Environmental Services Dept.	All Employees	2008	Jim Wenzara
Compile Training Materials	All Employees	2008	Jim Wenzara
Initial Training and Annual Training of Environmental Services Dept employees	All Employees	2008-2013	Jim Wenzara
Truck Washing	Establish schedule, designated wash area as part of O & M	2008	Jim Wenzara

**2008-2013 NPDES Permit
City of O'Fallon, Missouri**

Operating Plan Matrix MCM 6 Pollution Prevention/Good Housekeeping for Municipal Operations		
Goal: Decrease polluted runoff from Municipal Operations		
Objective:		
*Key: M=municipal continuity; E=Erosion/sedimentation; H=Hazardous chemicals; L=Litter/Illegal Dumping; S=Septic; Y=Yard Waste		
Activity/Product	Evaluation Indicator	Time Frame/ Due Date Responsible Party



City of O'Fallon
Community Development GIS
O'Fallon, Missouri

Storm Sewer System

Printed: 8/13/2007

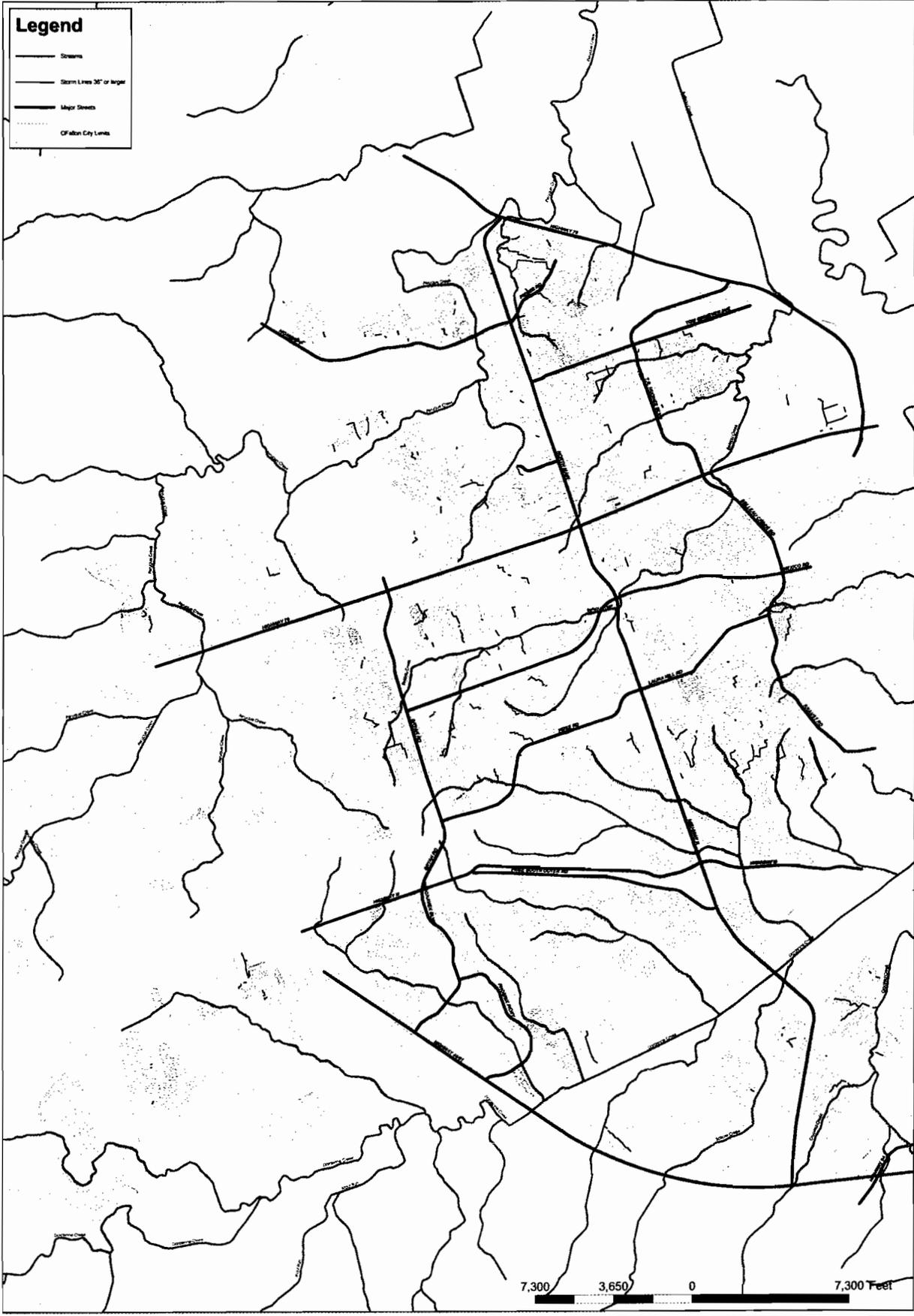


Legend	
	Storm Features
	Storm Line
	Catchment Basin
	Stream
	Storm System Accessed By Ordinance
	O'Fallon City Limits

Map created by the City of O'Fallon, Missouri, Community Development GIS. All other symbols are the property of their respective owners.

Legend

-  Streams
-  Storm Lines 36" or larger
-  Major Streets
-  O'Fallon City Limits



Community Development
Administration GIS
O'Fallon, Missouri

Creek Outfall Map

Printed: 08/17/2007



Map was created by the City of O'Fallon Community Development GIS and compiled from various sources including the St. Charles County GIS Dept.

