

**CITY OF FARMINGTON, MISSOURI  
MUNICIPAL STORMWATER MANAGEMENT PROGRAM  
(UPDATED 2012)**

**GENERAL**

This plan is an update of the City of Farmington, Missouri's Stormwater Management Plan created in 2003. This plan reflects changes in projects and priorities of the Public, City government, and staff.

The purpose of this plan is to help reduce the harmful effects of stormwater runoff by allowing no significant increase in the rate of stormwater runoff to result from new development from start to finish; and to significantly reduce the quantity, and improve the quality of stormwater runoff from existing developments.

The programs contained within this plan are designed to reduce the discharge of pollutants from the municipal separate stormwater system to the maximum extent practicable, to protect water quality, and to satisfy the water quality requirements of the Clean Water Act. The program includes management practices; control techniques; system design; and engineering methods; and other provisions determined appropriate for the control of such pollutants.

**BACKGROUND**

Comprehensive stormwater management was nonexistent in the City of Farmington during most of the 20<sup>th</sup> Century. Storm sewers that routed runoff from the buildings and streets above to underground piping to local drainage ditches and creeks were installed in much of the downtown area. Subdivision regulations were first adopted in 1973, which applied to residential developments. Although some engineered stormwater management measures were taken in residential development both before and after subdivision regulations, the primary goal in retrospect appears to have been draining the stormwater effectively from the lots and removing it from the development. Neither the storm sewers installed downtown, nor the grading, nor drainage ditches in many residential developments accounted for reducing the runoff rate or eliminating the harmful runoff effects.

Regulations that brought comprehensive stormwater management to the forefront were adopted in 1998. The Stormwater Management Ordinance required a development permit for any developmental activity, a term which was broadly defined. Although it has taken a few years to implement various aspects of the ordinance, it has been a very significant improvement over previous years. Under the new regulations the City requires the design of the stormwater management plan by a registered design professional for all development, except for single-Family Residencies located on a individual lot of record. Runoff must be controlled while

development is in progress. Post-development runoff must be equal to or less than the pre-development runoff. Maintenance of stormwater structures on private property is also required.

Through the perpetuation of these existing programs and the implementation of some new programs the City can positively guide future development, and look to reduce the impact of existing development on the environment.

### **MINIMUM CONTROL MEASURES**

There are six basic minimum control measure elements which should be considered in the City's Stormwater Management Plan.

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement and Participation
3. Illicit Discharge Elimination
4. Construction Site Stormwater Runoff
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention in Municipal Operations

The purpose of this plan cannot be accomplished without continually setting, attaining, and maintaining goals. This plan describes existing programs, recommendations for improvements, and recommended goals.

### **PUBLIC EDUCATION AND OUTREACH**

#### **General**

The City should be educating the public regarding harmful effects of stormwater runoff; how people can help reduce the harmful effects of stormwater runoff; what the City has done to reduce stormwater runoff; and its harmful effects.

#### **Existing Program**

The City currently publishes a quarterly newsletter to all persons having City utilities, through which information is distributed. Select City personnel provide weekly radio interviews, discussing ongoing community activities and plans. Development guides and other handouts are produced for distribution. Cable television advertisements are run. There is a good rapport between the local newspapers and the City. The City recently initiated a customer service e-mail portal as part of the City web site, in addition to e-mail's of City Staff involved with stormwater management. The City has made the Municipal Code available online. City staff stencils inlets to inform the citizens to not discharge waste into the storm sewers. Various City staff has participated in the annual Farmington Home Show where public information regarding stormwater is distributed, along with other documentation.

### **Recommendations**

Existing efforts should be continued. Additional advertisements should be placed and more information should be provided on the City's web site. Handouts should be improved in quality, and made available online and at the public library for greater accessibility. The City should continue to mark all storm drains. These recommendations will be accomplished by the end of 2012.

## **PUBLIC INVOLVEMENT AND PARTICIPATION**

### **General**

The City should be fostering grass roots public involvement; help facilitate public education; and provide for an overall plan that maximizes public input.

### **Existing Program**

Public hearings are posted, publicized, and held when stormwater regulations are to be adopted or changed and when new development is proposed. The citizen members of the Planning and Zoning Commission decide appropriate policy to recommend to the City Council, which in turn establishes policy. Annual surveys are mailed to residents, which assists in directing capital improvement planning. Citizens are involved as advisors and committee members with the recently approved Comprehensive Plan update. The updated Comprehensive Plan includes a chapter about the environment and the planning that needs to be provided to address stormwater concerns.

### **Recommendations**

The City should make a regular practice of having workshops or special meetings when major projects are planned concerning stormwater infrastructure improvements. The Planning and Zoning Commission should continue their development of the City's Stormwater Regulations and the planning of Regional Detention capital improvements plans. Adoption of capital improvement plans for Regional Detention should continue to be accompanied by public hearings and workshops at all levels. The City should continue to poll its citizenry via annual citizen surveys to gather input about stormwater issues. The continual marking of storm drains should continue. The City should consider establishing a "Community Stream Cleanup" program. This program could be started by year 2013. The City should also consider adding an "adopt a storm drain" program. This program could be implemented in two or three years.

## **ILLICIT DISCHARGE AND ELIMINATION**

### **General**

The City should be taking positive steps to identify and eliminate sources of illicit discharge.

### **Existing Program**

The City has building code and construction regulations, stormwater regulations, and other ordinances which control the discharge of pollutants into storm sewers, creeks, drainage ditches, gutters, or other stormwater facilities. There are penalties for ordinance violations.

The City has not identified a widespread problem with illicit discharges. There have been occasional incidents where illicit discharges have occurred. Those cases have been reported in the annual report required by the stormwater operation permit. Major sources of illicit discharges have historically been isolated.

The City maintains the local waterways within the corporate boundaries. City staff looks for signs of illicit discharges during annual and other maintenance practices of removing brush, broken limbs, obstructions, and other debris from the drainage ditches and streams. In addition, City staff responds to citizen concerns regarding possible illicit discharges, which have included reports of discolored water, odors, solid accumulation, and vegetative growth. The City also employs a full-time person to operate the street sweeper, who is observant of possible pollution source discharges into the City's storm sewers.

Such potential sources of illicit discharge into the City's storm drainage network are handled on a case-by-case basis. Investigation of the possible problem source is made immediately by Public Works Department staff member(s), typically by the Public Works Director, the Water & Sewer Superintendent, the Street Superintendent, City Planner, or a Building Inspector. If an illicit discharge is detected or suspected, the mitigation procedures are started.

Typical procedures are to investigate for obvious signs of an odd smell, different water color, oil deposits, sheen, solids accumulation, and other abnormal conditions. Should an illicit discharge be confirmed as a major source, City staff would immediately contact MoDNR concerning the finding and then attempt to determine the discharge source and remediate the problem. MoDNR personnel have responded immediately to City reports, and likewise, the City to MoDNR complaints.

Dependent on the suspected contaminant, the City may sample and analyze the discharge for TSS, BOD, or Fecal Coliform at the City's West Wastewater Treatment Plant, or sample and send the product for TCLP or other contaminant concentration determination by a private laboratory. In instances of illegal sanitary sewage spill via broken sewer lateral or pipe, City staff would respond with the vacuum truck, trash pumps, and hand tools to mitigate the spill. In cases of vehicle accidents, the City has extracted a liquid sample and forwarded it to a private laboratory, ultimately requiring the City's removal of the contaminated soil for landfill. Recently a discharge of biodiesel residual was determined within the City's storm sewer and into a drainage swale. Staff from both MoDNR and EPA investigated the illicit discharge with City assistance with backhoes, fire trucks, and staff. In this instance, City staff took photographs,

prepared a report for MoDNR records, and assisted in remediating the spill. The person responsible for the illicit discharge was cited and charged appropriately for City expenses. Similar leadership actions should continue.

The City has a recurring problem with sinkholes, especially in the south and southwest areas, which is an allied problem with sound stormwater management. City staff have investigated such instances and remediated them within City rights-of-way and also assisted others on private properties.

A map of the municipal Separate Storm Sewer System has been developed (Exhibit A). The location of privately maintained facilities constructed under the City's stormwater regulations is also indicated.

### **Recommendations**

More public education is needed to prevent pollution from private residences such as gasoline, oil, herbicides, paints, solvents, and other hazardous materials. Special efforts should be provided to educate local businesses and industries about illicit discharge of pollutants from their operations. Special attention needs to be given to biodiesel production and its byproducts, and proper disposal practices.

The Transfer Permit program should be considered for reinstatement with an expanded scope that includes the intent to identify possible illicit discharges. This should be considered in 2013 with the adoption of the proposed stormwater regulation enhancements.

Citizens and City staff who are not involved in stormwater management should be provided with additional educational opportunities to identify and report illicit discharges. Select City staff and members of the Planning and Zoning Commission should be indoctrinated with such training. This should be accomplished by the end of 2012.

One related concern should be to provide additional public information regarding sinkholes, most importantly the connections between stormwater and sinkholes. Training documents and public brochures should be developed by the end of 2012.

The City's stormwater system maps need to be updated. The City is reviewing its long term mapping needs, looking toward advances in GIS based systems integration to assist with both planning and enforcement activities. Mapping updates should be available by the end of 2012.

Additional procedures should be added as necessary to eliminate illicit discharges when found. The continual stenciling of storm drains should continue.

### **CONSTRUCTION SITE STORMWATER RUNOFF**

## **General**

The City should be acting to reduce the harmful effects of stormwater runoff by appropriate local legislation and administrative procedures.

## **Existing Program**

The City has adopted Land Use Regulations. Those include: subdivision regulations, stormwater regulations, and zoning ordinances. They all provide for control of stormwater runoff. The City has incorporated into the adopted Building Codes additional protective measures.

All developmental activity requires a development permit. Developmental activity is very broadly defined as:

“Any manmade change to improved or unimproved land, including but not limited to buildings or other structure, mining, dredging, filling, grading, paving, excavating, drilling operations. Any subdivision of land as defined in the City’s Subdivision Regulations, excluding minor subdivisions. ....”

The City has a permitting process for development permits. An application for development permit, a stormwater management plan, and the appropriate fee must be submitted to the Planning and Zoning Administrator. The plan is reviewed by the Planning and Zoning Administrator and the Public Works Director to ensure compliance. Final approval of the plan and issuance of a permit is administrative. Prior to any construction, a predevelopment meeting with the owner, developer, contractor, subcontractors, design professional(s) and Building Inspector(s), is convened to discuss project issues. Such issues may include but are not limited to plan review, needed modifications to comply with minimum code requirements, project scheduling, coordination, necessary inspections, SWPPP review and coordinator, and project closeout. The construction team is duly informed of the stormwater regulations. During construction, the site manager must submit a weekly (or after a significant rainfall) SWPPP Inspection Sheet, ensuring BMP’s are intact and functional.

Stormwater management structures are a part of the infrastructure improvements in a residential subdivision. Any improvements, such as construction of water, sewer, streets or stormwater detention in a residential subdivision require a development permit. Commercial construction cannot be started without making a submittal and obtaining a development permit. Giving consideration to either requirement, a development permit is required for nearly any work, except a single family dwelling on an individual lot of record or an accessory structure.

Development permits are required for commercial developments located within individual lots. Evidence from the development's project engineer would be submitted for review and the need

for any stormwater management structures would be evaluated. Work may be started only after a development permit is approved. However, proper BMP's must be provided regardless of the commercial lot size.

Industrial developments fall principally under the same requirements as commercial developments. The City is the developer of several industrial parks and has designed a plan for the development of the sites, as an incentive to industry. The Eastern Industrial Park and the Highway "H" Industrial Park are mostly undeveloped. The Western Industrial Park, and the adjacent Executive Park, which were also primarily developed by the City, are mostly developed. The remaining properties located within the industrial development area that are not in use, would submit applications for development with stormwater management plans before they can build or conduct land disturbance of the affected parcels.

All City ordinances applicable to Stormwater Management contain a penalty for violations. After the City has identified a violation, administrative processes would take place in which the violator would be notified. Failure to correct a violation would result in a summons being issued to appear at municipal court. Anyone convicted of the ordinance violation of which they are charged would be fined and penalized in accordance with the appropriate ordinance, and ruling of the municipal judge. There are also allowances for civil penalties to be sought by the City. Appeals can be made to the Circuit Court of St. Francois County.

The City has several staff members who are responsible for various aspects of Stormwater Management.

City Administrator – Manages all City Staff, projects, and assets involved in Stormwater Management within the City.

Public Works Director (Civil Engineer) – Oversees the Public Works Department, including the Water Department, Sewer Department, Street Department, Electrical Department, Planning and Zoning Administrator, and Building Inspectors, and is responsible for the staff, projects, assets, and staff committed to stormwater management within the City. Also makes engineering reviews of submitted engineering drawings, stormwater management plants and SWPPP, and SWPPP Inspection Sheets.

Master Building Inspector, and Building Inspector – Responsible for general enforcement of the City's building regulations and site adherence with best management practices, which provide for temporary stormwater control measures where there is grading or excavation during construction. These persons also review plans, issue building permits, and conduct inspections of work which include temporary stormwater control measures.

Planning and Zoning Administrator – Responsible for general administration and enforcement of the City’s plans and land use regulations. Reviews plans for all new development, issues development permits, conducts general oversight of the design, construction, and maintenance of stormwater facilities, and structures with the assistance and coordination with the Public Works Director.

Street Superintendent – Oversees the construction of certain stormwater facilities, especially for City projects. Also, maintains the City’s stormwater system including storm sewers, creeks, drainage ditches, gutters, and other facilities, as assisted by Street Department staff.

City Engineer (Consultant) – Responsible for performing technical reviews as needed, to determine conformity to accept engineering practice, and the design requirements of the City’s Stormwater Ordinance.

**Recommendations**

The City should continue to evaluate its ordinances for effectiveness and determine appropriate amendments over the next several years. This review shall be completed every year and a determination made if an update is needed.

Collaboration of developers with one another and with the City should be increased to promote joint stormwater management facilities where possible. This option will be discussed with developers when applicable, primarily in areas where adjoining land tracts were developed prior to the City’s adoption of Stormwater Ordinances.

A more cohesive unit should be formed by the staff involved in stormwater management. The most desirable scenario is for a new “Stormwater Utility” to emerge, but at least a “Stormwater Management Team” would be more efficient than the current confederation. The stormwater management team should be in place no later than fall 2012.

Distributing the Development Guide to all developers should be completed with all new permit issuances. This program has already commenced.

**POST-CONSTRUCTION STORMWATER MANAGEMENT**

**General**

The City must continue to develop and improve its stormwater regulations, enforcement measures, and abatement of conditions created by existing developments.

**Existing Program**

As previously stated, the City has adopted Land Use Regulations. They include subdivision regulations, stormwater regulations, and zoning ordinances. They all provide for control of stormwater runoff. Additionally, the City has adopted Building Codes and construction regulations which provide for some additional protective measures.

The City has also been working towards the goal of reducing pre-regulation stormwater runoff from existing developments by construction of strategically located public regional detention basins.

Pre-regulation development has caused such an increased volume of runoff from the Northwest area of the City that flooding began to occur around the creek that runs south from the Maple Valley area along the City's West side. Upstream of the City, on this same creek, uncontrolled development in St. Francois County continues to create impervious surfaces and more adverse stormwater runoff. No flood map panel was printed for part of the area of the City in which this creek lies. The creek presents a definite flood risk to properties downstream.

A major project was recently completed in this area, in coordination with a commercial developer, which has greatly assisted in reducing the runoff rate and contaminants from upper developed commercial tracts. This project included the construction of an approximate 400,000 cubic foot detention basin, where in accordance with current regulations, a lesser sized basin would have been necessary for the tract being developed. Thus, the resulting downstream impact of the larger sized detention basin has been reduced.

However, additional stormwater control efforts near this commercialized area are needed to relieve the threat of flood water in the back yards of residences which may someday threaten homes on Rose Lane Court, along Alexander Street to Liberty Street. Erosion has been a problem along the length of this creek. City staff efforts to remove deposits and brush, in conjunction with the above referenced detention basin, have been beneficial. This project was completed in 2008.

The Citizen of the City of Farmington recently passed a one-quarter cent (1/4¢) sales tax initiative for the improvement of City's stormwater infrastructure. The additional funding will speed the design and construction of planned public stormwater projects and the implementation of regional detention projects. This new funding will be available for ten years starting in October of 2012.

### **Recommendations**

The City should continue to evaluate its ordinances for effectiveness and determine any appropriate amendments over the next several years. This review shall be completed every year and a determination made if an update is needed.

Collaboration between developers and with the City should be increased to promote joint stormwater management facilities where possible. This option will be discussed with developers in areas near older developments, in which stormwater regulations did not exist.

A maintenance and inspection schedule should be implemented, that ensures routine maintenance of both privately maintained facilities that contribute to the system such as detention basins, as well as City maintained creeks, ditches, gutters and other facilities.

A system should be developed to track all stormwater calls to ensure consideration of all identified issues. The recently added online citizen's portal provides for tracking Public Works Department concerns. A specific program for tracking stormwater related calls was implemented during the fall of 2010.

## **POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS**

### **General**

The City must exhibit leadership for citizens, businesses, and industry to follow by taking responsible steps to eliminate the harmful effects of Stormwater runoff. This is accomplished through education of staff and improved facilities management.

### **Existing Program**

Each department is aware of specific programs for pollution prevention and good housekeeping practices. Paints, solvents, herbicides, and petroleum products are stored inside. Various City departments maintain MSDS sheets in binders, providing information concerning possible personal and environmental hazards. The City is unaware of maintained federal regulated substances exposed to the weather. The City does not store fuels, except within the emergency generators, which are equipped with secondary containment tanks.

City Street Department staff covers salt during winter with tarps to minimize discharge into storm sewers. A staff member of the City Street Department is dedicated as a full-time street sweeper operator. Streets, municipal parking lots, and the City airport are maintained as necessary.

The City owns, operates and maintains two wastewater treatment plants, each designating via separate NPDES permits water quality and effluent discharge limitations. The City does not own any industrial sites subject to NPDES permits.

Hazardous materials from the Maintenance Department are handled and disposed properly. There is an existing work place safety program that encompasses these issues.

The City does not currently own or operate any industrial facilities that are subject to permitting.

Specific procedures concerning disposal and removal of dredged material, sediments, floatables, etc., does not exist, but would be evaluated on a case-by-case basis to determine and provide proper disposal. The City maintains a quality rapport with MoDNR and would coordinate efforts for disposal requirements for such materials.

Training materials consist of designated City codes, building codes, the Municipal Stormwater Management Program, handouts, and the adopted *A Field Guide to Erosion, Sediment and Stormwater Best Management Practices for Development Sites in Missouri and Kansas.*

Design professionals, developers, and builders are becoming more cognizant of City stormwater requirements and expectations. Most citizens seem to acknowledge good judgment concerning stormwater management and control of illicit discharges.

### **Recommendations**

The plan should be expanded to provide guidance for all municipal departments and a centralized education program should be implemented. All City staff should be educated to help prevent illicit discharge and to identify and report illicit discharges at City facilities or elsewhere. Additional efforts will be initiated by fall of 2012.

Supervisory staff, with decision making authority regarding City facilities and operations, should have additional education to assist them in making responsible decisions about the layout and operations of the facilities. This should be accomplished by fall of 2012.

Ensure all fleet maintenance activities and City facilities are following procedures to ensure no illicit discharges take place. This should be accomplished by fall 2012.

### **SUMMARY**

The following goals and objectives have been developed in accordance with the recommendations of this plan to fulfill the purpose of this plan.

#### **Purpose**

To reduce the harmful effects of stormwater runoff by allowing no significant increase in the rate of stormwater runoff to result from new development from start to finish; and to significantly reduce the quantity, and improve the quality of stormwater runoff from existing developments.

#### **Public Education and Outreach**

##### Goal

To educate the public regarding harmful effects of stormwater runoff, how people can reduce the harmful effects of stormwater runoff, and what the City has done to reduce stormwater runoff and its harmful effects.

#### Objectives

- Maintain educational materials and periodicals at library;
- Perform storm drain stenciling;
- Implementation of updated Stormwater Control Regulations;
- Discuss issues during City's local radio reports;
- Post additional information on City website;
- Improve handouts.
- Continue City Newsletter informing the public of stormwater issues.

### **Public Involvement and Participation**

#### Goal

To foster grass roots public involvement, help to facilitate public education, and provide for an overall program that maximizes public input.

#### Objectives

- Have public workshops during planning for major projects;
- Involve Planning and Zoning Commission in capital improvement plan;
- Provide and analyze citizen survey concerning capital improvement plan;
- Initiate a citizen's stream cleanup and/or adopt a storm drain program;
- Perform storm drain stenciling.

### **Illicit Discharge and Elimination**

#### Goal

Take positive steps to identify and eliminate sources of illicit discharge.

#### Objectives

- Update storm sewer system maps;
- Increase public education to prevent stormwater pollution;
- Increase public education on biodiesel and byproduct disposal;
- Educate local businesses and industries about illicit discharges;
- Educate City staff and citizens to better detect and report illicit discharges;
- Develop procedures to eliminate / mitigate illicit discharges when found;
- Educate the public regarding sinkholes;
- Perform storm drain stenciling.

## **Construction Site Stormwater Runoff**

### Goal

Act to reduce the harmful effects of stormwater runoff by appropriate local legislation and administrative procedures.

### Objectives

- Continually evaluate City ordinances for effectiveness and amend as needed;
- Promote joint stormwater management facilities where possible;
- Initiate preconstruction meetings with engineers, architects, owners, developers, contractors, and City staff to discuss project scopes and responsibilities, including proper stormwater management goals and requirements;
- Distribute development guide to all developers;
- Ensure SWPPP is completed by a design professional and approved by City staff;
- Ensure the SWPPP is signed, delegating a single competent member of the development / construction team to coordinate, control, initiate, and manage all stormwater responsibilities;
- Develop and require that SWPPP Inspection Checklists are submitted to the City on a routine basis;
- Form a Stormwater Utility or Stormwater Management Team

## **Post Construction Stormwater Management**

### Goal

Continue to develop and improve stormwater regulations, enforcement measures, as an abatement of conditions created by existing developments.

### Objectives

- Continually evaluate City ordinances for effectiveness and amend as needed;
- Promote joint stormwater management facilities where possible;
- Provide / increase funding to speed design and construction of planned public stormwater projects;
- Develop a tracking system for stormwater related calls and actions taken;
- Consider establishment of stormwater utility;
- Implement sales tax to fund stormwater projects;
- Establish a maintenance and inspection schedule to ensure routine maintenance is provided at private and public facilities;
- Ensure long-range planning considers stormwater effects.

## **Pollution Prevention/Good Housekeeping for Municipal Operations**

### Goal

Exhibit leadership for the citizens, businesses and industries. Take responsible steps to eliminate the harmful effects of stormwater runoff through education of staff and improved facilities management.

Objectives

- Implement an education program for City staff to prevent illicit discharges;
- Teach City staff to make responsible decisions about layout and operations of City facilities;
- Educate City staff directly involved with public works projects to ensure BMP's are used at City project sites.
- Ensure proper fleet maintenance procedures are followed by all City employees.

**CONCLUSION**

The City of Farmington has already taken many actions to reduce the harmful effects of stormwater runoff. There is also room for improvements and additions to the City's existing programs.

Some actions that can be taken may not be economically feasible. Actions that can be taken, while economically feasible, may not be politically palatable. The recommendations made in this plan can help the City make improvement in its programs regarding stormwater. They are made with economic feasibility in mind, but without regard to political palatability.

A perfectly good recommendation, that is economically feasible, still cannot be accomplished without political support. Therefore the City's elected officials should always be involved sooner rather than later in the process improving the City's existing programs regarding stormwater.

The purpose of this plan, as stated before, cannot be accomplished without continually setting, attaining, and maintaining goals. This is a team effort involving the public, the Planning and Zoning Commission, the City Staff/Administration, and the elected officials of the City Council.

**Implementation Schedule**

**Public Education and Outreach**

<u>Objectives</u>	<u>Implement Date</u>
➤ Maintain educational materials and periodicals at library;	Ongoing
➤ Perform storm drain stenciling;	2009 - Current
➤ Provide cable TV ads;	Ongoing
➤ Discuss issues during City's local radio reports;	Ongoing
➤ Post additional information on City website;	Summer 2012

- Improve handouts; Summer 2012
- Continue City Newsletter informing the public of stormwater issues; Ongoing
- Attend Home Show to distribute flyers and handouts. Ongoing

### **Public Involvement and Participation**

#### Objectives

- Have public workshops during planning for major projects; Fall 2010
- Involve Planning and Zoning Commission in capital improvement plan; Ongoing
- Provide and analyze citizen survey concerning capital improvement plan; Ongoing
- Initiate a citizen's stream cleanup and/or adopt a storm drain program; Fall 2012
- Perform storm drain stenciling. 2009 - Current

### **Illicit Discharge and Elimination**

#### Objectives

- Update storm sewer system maps; Fall 2012
- Increase public education to prevent stormwater pollution; Summer 2012
- Increase public education on biodiesel and byproduct disposal; Summer 2012
- Educate local businesses and industries about illicit discharges; Summer 2012
- Educate City staff and citizens to better detect and report illicit discharges; Summer 2012
- Add procedures when necessary to eliminate / mitigate illicit Discharges; As Necessary
- Educate the public regarding sinkholes; Fall 2012
- Perform storm drain stenciling; 2009 - Current
- Consider to reinstate transfer permit process. 2012

### **Construction Site Stormwater Runoff**

#### Objectives

- Continually evaluate City ordinances for effectiveness and Amend as needed; Annually
- Promote joint stormwater management facilities where possible; Per project
- Initiate preconstruction meetings with engineers, architects, Owners, developers, contractors, and City staff to discuss project scopes and responsibilities; Ongoing

- Update distribute development guide for all developers; Summer 2012
- Ensure SWPPP is completed by a design professional and approved by City staff; Ongoing
- Ensure the SWPPP is signed, delegating a single competent member of the development / construction team to manage stormwater responsibilities; Ongoing
- Develop and require that SWPPP Inspection Checklists are Submitted to the City on a routine basis; Ongoing
- Form a Stormwater Utility or Stormwater Management Team. Fall 2012

**Post Construction Stormwater Management**

Objectives

- Continually evaluate City ordinances for effectiveness and Amend as needed; Annually
- Promote joint stormwater management facilities where possible; Per project
- Provide / increase funding to speed design and construction of planned public stormwater projects; As available
- Develop a tracking system for stormwater related calls and actions taken; Summer 2012
- Consider establishment of stormwater utility; 2013
- Implement sales tax to fund stormwater projects; Implemented
- Establish a maintenance and inspection schedule to ensure routine maintenance is provided at private and public facilities; Fall 2012
- Ensure long-range planning considers stormwater effects; Ongoing

**Pollution Prevention/Good Housekeeping for Municipal Operations**

Objectives

- Increase education program for City staff to prevent illicit discharges; Fall 2012
- Educate City staff regarding layout and operations of City facilities; Fall 2012
- Additional education for City staff directly involved with public works projects to ensure BMP's are used at City project sites; Ongoing
- Ensure proper fleet maintenance procedures are followed by all City employees. Ongoing

Supporting Information:

1. Land Use Regulations
2. Subdivision Regulations

3. Stormwater Regulations
4. Zoning Ordinances
5. Building Code Adoption
6. Utility Regulations



# **Farmington StormWater Management Program (SWMP)**

## **(Updated 2012)**

### **MCM #1- Public Education and Outreach**

#### **Statement of Minimal Need**

There is a need in the community for Public Education and Outreach. The City of Farmington has, at our home show, provided brochures and posters regarding stormwater control and best management practices. We recently have published a comprehensive plan that includes an environmental preservation section that deals with stream buffers and protecting riparian corridors.

#### **Decision process**

Farmington developed the public education and outreach program to target pollutants. The target pollutants were identified and prioritized. The actions that impact the target pollutants were identified. The public education was designed to impact the actions identified.

#### **Target audiences**

During the development of the education program, Farmington identified the sources of stormwater pollutants that needed to be reduced to improve overall water quality. The target audiences were selected because changing their behavior would have a significant stormwater quality impact on the target pollutants. The target audiences for the public education program are:

1. Citizens (Homeowners)
2. Restaurant owners and operators
3. Car wash owners and operators
4. Developers and home builders
5. Service Stations and Oil/Lube business owners and operators
6. Elected officials
7. City Staff

#### **Target Pollutants**

The following is a prioritized list of the leading pollutants, experienced in the permit area, that are carried by stormwater runoff into water bodies (1 = having most impact and 10 = having least impact)

- 2 Suspended Solids
- 8 Nutrients
- 5 Pesticides
- 6 Metals
- 4 Oil and Grease
- 9 Salinity
- 7 Priority Toxic Organic Chemicals (Household Hazardous Waste Pesticides/Herbicides)
- 1 Habitat Alterations
- 3 Floatables
- 10 Temperature

### **Target Pollutant Sources**

Target pollutant sources having a major impact on stormwater quality were identified. The following is a list of potential sources of pollutants that are experienced in the permit area. (1 = Major Impact, 2 = Minor Impact, 3 = Not an impact)

- 1 Construction Activities (Sediment, construction chemicals and debris, solid and sanitary wastes)
- 2 Over application of fertilizer, herbicides, pesticides
- 2 Improper disposal of paint and household hazardous chemicals
- 3 Pet waste contamination
- 1 Improper disposal of waste oil, grease, and gasoline
- 2 Trash, debris, and illegal dumping
- 2 Detergents washed into drains
- 2 Snow removal (salt, sand and snow disposal)
- 2 Sanitary sewer overflows
- 2 Infiltration from cracked sanitary sewers
- 3 Failing septic systems
- 2 Sewer service connections to storm drainage system
- 1 Foundation drains connected to storm drainage system
- 1 Downspouts connected to storm drainage system
- 2 Spills from roadway accidents or 'fires'
- 1 Connected impervious areas covering large acreages (such as malls, institutions with large parking areas)
- 1 Stream bank erosion

### **Outreach Strategy**

Farmington's outreach strategy is to implement a variety of methods to reach a number of different target audiences multiple times. To change behavior, repetition is important. The mechanisms are described in the above statement of minimal need.

The estimated number of people targeted to be reached by the public education and outreach strategy is 2500 to 4000 people annually.

**Person Responsible**

The person responsible for overall management and implementation of the permittee's stormwater public education and outreach program is the Public Works Director. Others may be involved in the execution of each of the individual activities in the program.

**Measureable Goals**

The implementation of the BMP's selected (shown in the table below) will determine the success of the measure on water quality.

Measureable Goals: Public Outreach and Education	2011	2012	2013	2014	2015
Distribute Brochures (Ongoing)	X	X	X	X	X
Preconstruction meetings (before any land disturbance)	X	X	X	X	X

**MCM#2- Public Involvement and Participation**

**Permit Requirements**

Farmington will comply with State and Local public notice requirements when implementing the public involvement and participation program.

**Decision Process**

The following is the documentation for Farmington's decision process and rationale statement for the development of a stormwater public involvement and participation program. It documents the overall program and the individual BMP's, measureable goals, and responsible party for the program.

**Involving the Public in Developing the Submittal**

Farmington has involved the public in the development and submittal of the stormwater ordinances as follows:

1. Held public hearings prior to adoption of stormwater ordinances.
2. Followed the guidance of the Comprehensive Plan which was developed by the citizens.
3. Posted public meeting announcements.

## **Involving the public in program implementation**

Farmington plans to actively involve the public in the development and implementation of the stormwater program through a number of different methods selected because they are existing effective methods used by Farmington or because of EPA guidance documents that list these BMP's as effective public involvement methods.

## **Target Audiences to Involve in Programs**

The target audiences for the permittee's public involvement program are:

1. Citizens (homeowners)
2. Mass media
3. Local Elected Officials
4. Local Governmental Agencies
5. Business leaders
6. Contractors, home builders, and developers
7. Teachers
8. Seniors
9. Civic Organizations

## **Public Involvement Activities**

Farmington plans to involve the public through a series of public meetings and continued use of the City's website and social media networks. The City also has public meetings when new subdivisions are proposed to allow the public to comment on the development.

## **Person Responsible**

The person responsible for the overall management and implementation of the permittee's stormwater public involvement/participation program is the Public Works Director. Others may be involved in the execution of each of the individual activities in the program.

## **Measureable Goals Selection**

The implementation of the BMP's selected (shown in the table below) will determine the success of the measure on public involvement. The public involvement methods selected were chosen because they have been used effectively by Farmington in the past. The implementation of BMP's selected will determine the success of the measure on water quality.

Measureable Goals: Public Involvement and Participation	2010	2011	2012	2013	2014
Community Meetings (as needed)	X	X	X	X	X

Comprehensive Plan review (before any land development)	X	X	X	X	X
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## **MCM#3- Illicit Discharge Detection and Elimination**

### **Overview**

Farmington will develop, implement and enforce a program to detect and eliminate illicit discharges.

### **Outfall Map**

Farmington has developed mapping showing the storm sewer system and the location of outfalls and the names and location of all waters of the State that receive discharges from those outfalls. The map will be updated each time there is a change in the storm sewer system or the corporate limits of the City of Farmington.

### **Enforcement**

Farmington will effectively prohibit non-stormwater discharges into the City's stormwater system via ordinances and regulations. Each ordinance is enforceable by Farmington with appropriate procedures and consequential actions.

### **Detection Methods**

Farmington will implement a plan using dry-weather and wet-weather field screening to detect and address non-stormwater discharges. Farmington will detect and address illicit discharges to the MS4, including discharges for illegal dumping and spills.

### **Informing the public**

Farmington will inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste using the following methods:

1. Procedural Training for City Staff
2. Distribute literature (See also Minimum Control Measure #1)
3. Preconstruction meetings

The literature will contain a phone number for residents to call if they suspect an illicit discharge has occurred. This will alert city staff to a potential discharge and dispatch to check on the concern.

### **Not Significant Contributors**

Farmington has not identified any of the following categories of non-stormwater discharges or flows (i.e. illicit discharges) as significant contributors of pollutants to their small MS4; water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltrations, 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-stormwater and will only be addressed where they are identified as significant sources of pollutants to the waters of the State)

### **Occasional Incidental Non-Stormwater Discharges**

Farmington's illicit discharge ordinance will include a list of other similar occasional incidental non-stormwater discharges (e.g. non-commercial or charity car washes, etc.) that will not be addressed as illicit discharges because they are not reasonably significant sources of pollutants to the MS4. Should these occasional or incidental non-stormwater discharges be identified in the future, those entities responsible for discharging will be prohibited or conditions placed on them so as to minimize their discharge of pollutants.

### **Decision process**

Farmington will document their decision process for the development of a stormwater illicit discharge detection and elimination ordinance and program. Farmington's rational statement addresses both their overall illicit discharge detection and elimination program and the individual BMP's, measureable goals, and responsible persons for their program.

### **Regulatory Mechanism**

Farmington will use the following mechanism to effectively prohibit illicit discharges to the MS4.

1. City Ordinance
2. Inspection

This mechanism was selected because ordinances are commonly used by Farmington to establish laws and set forth the enforcement mechanisms. The ordinance will establish legal authority to:

1. Regulate the contribution of pollutants to the municipal separate storm sewer system (MS4) of stormwater discharges by any use.
2. Prohibit illicit connections and discharges to the MS4.
3. Carry out all inspections, surveillance and monitoring procedures necessary to ensure compliance.

Farmington will develop the ordinance and implement an inspection program in 2012-2013 in order to effectively prohibit illicit discharges to the MS4.

## Enforcement

Farmington will set forth in the ordinance enforcement procedures intended to remove the source of the illicit discharge detected. Farmington will ensure compliance with the ordinance through civil penalties.

## Removal

Farmington will follow the enforcement mechanisms detailed in the ordinance, including those legal actions described above, to enforce the removal of an identified illicit connection.

## Identify priority areas

Farmington will use the map identified above and other data to identify priority areas with likelihood of illicit connections.

## Responsible Party

The Public Works Director will be responsible for overall management and implementation of Farmington's stormwater illicit discharge detection and elimination program. Others may be involved in the execution of each of the individual activities in the programs.

## Measureable Goals and Program Evaluation

Farmington will evaluate the success of the program based on the number of illicit connections discovered and eliminated.

Measureable Goals: Illicit Discharge Detection and Elimination	2011	2012	2013	2014	2015
1. Pass Ordinance		X			
2. Inspection					
a. Dry weather field screening (every 6 months and as needed)		X	X	X	X
b. Wet weather field screening (every 6 months and as needed)		X	X	X	X
3. Update Storm Sewer Map (Ongoing, as needed)	X	X	X	X	X
4. Household Chemical Collection			X	X	X

## MCM#4- Construction Site Stormwater Runoff Control

### Permit requirements

Farmington enforces a program to reduce pollutants in any stormwater runoff from construction activities that result in disturbance of greater than or equal to one acre. Farmington also plans to reduce pollutants in stormwater runoff from construction activities that disturb an area less than one acre if the site is part of a larger common plan of development or sale.

### **Decision Process**

The following is the rationale statement for the development of Farmington's overall construction site stormwater runoff control program. It documents the individual BMP's, measurable goals, and responsible party for their program.

### **Regulatory Mechanism**

Farmington has adopted stormwater regulations that require the use of erosion and sediment controls on construction sites. Farmington requires the inclusion of construction specifications and design standards that outline the requirements for designers and construction activities. The ordinance adopting these regulations provide enforcement measures for those designers and contractors who do not follow the regulations.

### **Pre-Construction Site Plan Review**

Farmington has implemented procedures for site plan review, including the review of pre-construction plans, which will look at the potential water quality impacts. Farmington will implement procedures and rationale for those sites that do not require site plan review. The estimated percentage of sites that will have a preconstruction site plan review is 100%.

### **Site Inspection**

Farmington will implement procedures for site inspection and enforcement of erosion and sediment control measures. The sites will be inspected using a priority rating system. The site with the most potential risk to the community will be top on the priority list.

### **Enforcement**

Farmington will ensure compliance with the developed regulations by including an enforcement section detailing the sanctions and enforcement mechanisms. Farmington will use the following sections:

1. Fines
2. Permit Denial for Non-Compliance

### **Public Input of Submittals**

Farmington will require construction site operators to control wastes that may cause adverse impacts to water quality such as:

1. Discarded Building Materials
2. Sediment
3. Litter or Trash
4. Sanitary Waste

**Person Responsible**

The person responsible for overall management and implementation of the permittee's Construction Site Stormwater Runoff Control program is the Public Works Director. Others may be involved in the execution of each of the individual activities in the programs.

**Measureable Goals**

The BMP's selected were chosen because of the evidence that they will have a positive impact on the target pollutants identified for Farmington. The implementation of BMP's selected will determine the success of the measure on water quality.

Measureable Goals: Construction Site Stormwater Runoff Control	2010	2011	2012	2013	2014
Pre-Construction Plan Review (Ongoing)	X	X	X	X	X
Construction Site Inspection (Ongoing)	X	X	X	X	X

**MCM#5- Post-Construction Stormwater Management**

Farmington will develop a program to address stormwater 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.

**Decision Process**

The following is the rationale statement for the development of a post-construction stormwater management program. It documents the BMP's, measureable goals, and responsible party for the program.

**Strategies**

Farmington will implement strategies which include a combination of structural and/or non-structural Best Management Practices (BMP's)

**Regulatory procedures**

Farmington will implement regulatory procedures that will be specifically tailored for the community, minimize water quality impacts, and attempt to maintain pre-development runoff conditions.

### **Regulatory Procedures: Non-Structural Best Management Practices (BMP's)**

Farmington will implement policies that will help minimize water quality impacts. Policies will include minimizing disturbance of soils and vegetation and encouraging green space in new development and redevelopment.

### **Regulatory Procedures: Structural Best Management Practices (BMP's)**

Stormwater regulations will be adopted that will address post-construction runoff from new development and water quality from redevelopment. Farmington will implement regulatory procedures that will attempt to mimic pre-development runoff conditions for new development and minimize water quality impacts for redevelopment. Farmington will require detention/retention for all land development on any site having a gross land area of one acre or more, including projects less than one acre that are part of a larger common plan of development or sale, unless waived by the city in accordance with the adopted stormwater regulations. The requirements for designers and contractors before, during and after the construction activities. The ordinance adopting these regulations will provide enforcement measures for those designers and contractors who do not follow the regulations.

### **Enforcement Mechanisms**

Farmington will ensure compliance with the regulations by way of sanctions and enforcement mechanisms. Farmington has implemented the following sanctions in their ordinance:

1. Fines
2. Permit Denial for Non-Compliance
3. Ordinance

### **Long-Term Operation and Maintenance**

Farmington will require developers and owners to perform the long-term operation and maintenance of their selected BMP's.

### **Priority Areas**

There are no areas identified as priority for regulatory procedures.

### **Responsible Party**

The person responsible for overall management and implementation of the permittee's Post Construction Stormwater Management program is the Public Works Director. Others may be involved in the execution of each of the individual activities in the program.

**Measureable Goals**

The BMP's selected were chosen because of the evidence that they will have a positive impact on the target pollutants identified as a concern for Farmington. The implementation of BMP's selected will determine the success of the measure on water quality.

Measureable Goals: Post-Construction Stormwater Management	2010	2011	2012	2013	2014
Non-Structural BMP inspections(Ongoing)	X	X	X	X	X
Structural BMP inspections (Ongoing)	X	X	X	X	X
Construction Site Inspection (Ongoing)	X	X	X	X	X

**MCM#6- Pollution prevention and Good Housekeeping**

**Statement of minimal need**

There is a need for the City of Farmington to implement measures for Pollution Prevention and Good Housekeeping for Municipal Operations. The City performs its own vehicle and equipment maintenance.

**Accountability**

The City of Farmington will develop a Stormwater Quality Plan that includes Best Management Practices (BMP's) to be followed by all city staff.

**Right of way Clean-up**

Farmington currently requires property owners to maintain their own right-of-way. Brochures included in Minimum Control Measure #1 will remind owners of this responsibility and encourage frequent litter pick-up to reduce floatables and improve water quality.

**Responsible Party**

The Public Works Director will be responsible for overall management and implementation of the pollution prevention and good housekeeping program for Farmington. Others may be involved in the execution of each of the individual activities in the programs.

**Measureable Goals**

Farmington will evaluate the success of the pollution prevention/ good housekeeping minimum control measure by tracking the progress of each measure against the implementation schedule below. Each one of the measures described in this plan was chosen based on it's ability to be implemented by Farmington staff and impact on water quality.

Measureable Goals: Pollution Prevention and Good Housekeeping	2012	2013	2014	2015	2016
Develop Stormwater Protection Plan	X				
Stormwater Protection Plan update		X	X	X	X
Send out Brochures (See Minimum control measure #1)	X	X	X	X	X