

# CITY OF KENNETT, MISSOURI

RECEIVED

2006 JUL 24 PM 12:04

WATER PROTECTION PROGRAM

## Stormwater Management Plan

# CITY OF KENNETT, MISSOURI

## Table of Contents

Introduction	Page 1
City Information	Page 2
Definitions	Page 3
Public Education and Outreach	Page 4
Public Involvement and Participation	Page 5
Illicit Discharge Detection and Elimination	Page 6
Construction Site Runoff Control	Page 7
Post-construction Site Runoff Control	Page 8
Pollution Prevention/Good House Keeping	Page 9

# CITY OF KENNETT, MISSOURI

## Introduction

Phase II of the National Pollution Discharge Elimination System (NPDES) stormwater permitting program, a Federal Clean Water Act requirement delegated to the Missouri Department of Natural Resources, requires cities with Municipal Separate Storm Sewer Systems (MS4s) to implement stormwater maintenance and management programs as a means to control polluted discharges.

The City of Kennett has a Municipal Separate Storm Sewer System (MS4) and because the city has a population of over 10,000, it is a Missouri regulated MS4 city and must obtain a NPDES Stormwater Permit. In order to obtain a permit, the city is required to develop a Stormwater Management Plan (SMP).

The Stormwater Management Plan will be a dynamic document to be revised over time to better able the City to meet the following objectives:

1. Solve existing flood/drainage problems
2. Prevent future flood/drainage damage
3. Preserve natural and beneficial functions of the existing drainage system.
4. Preserve and enhance stormwater quality.

In order to preserve and enhance stormwater quality the Stormwater Management Plan summarizes the city's intentions to reduce the amount of pollution in its stormwater runoff by addressing the six mandated categories of concern listed in the permit. These categories are as follows:

1. Public Education and Outreach.
2. Public Involvement and Participation.
3. Illicit Discharge Detection and Elimination.
4. Construction Site Runoff Control.
5. Post-construction Site Runoff Control.
6. Pollution Prevention/Good House Keeping

The City has adapted this plan to reflect its own unique situation and intends to review and improve this plan each year. As circumstances change, objectives 1, 2 and 3 will also be addressed to better control stormwater flows and improve the quality of stormwater. This plan is a foundation on which new and innovative ideas and solutions can be developed to better protect the water quality of our local streams.

# CITY OF KENNETT, MISSOURI

## City Information

Name of City: Kennett, Missouri

Population: 11,200

Water Supply: Wells (100 to 130 feet deep)

Waste Water Treatment: Aerated Lagoons

Water Shed: Buffalo Ditch, Varney River Ditch, Ragland Slough

Geologic Setting: Missouri Southeast Lowlands – Bootheel Area

Average Rainfall: 46 inches per year, subject to occasional thunder storm events of over 5 inches possible.

Kennett is located in the Missouri Bootheel. Soil samples demonstrate late Tertiary/Quaternary geology. The Bootheel lies in a flood plain between the Mississippi and St. Francis rivers; the land is very flat and is now used for predominantly agricultural purposes, but was mostly abandoned, swampy forest land prior to the 20<sup>th</sup> century. Between 1893 and 1989, about 85% of the native forests were cut; the entire landscape was transformed into farmland by extensive logging, draining of the water shed, and the construction of flood control structures. High levees along both river courses and an extensive system of drainage ditches, diversion channels, and controlled lakes, pumping stations and cutoffs protect much of the area from flooding.

The city has a number of old stormwater drains of inadequate size and poor condition in need of replacement and improvement. Due to the flat nature of the area, the deteriorated condition of drainage ditches and city's stormwater sewers, surface water does not flow quickly and tends to pond, fill streets and low areas even during moderate rain events. These storm waters cause street closings and may enter buildings.

# CITY OF KENNETT, MISSOURI

## Definitions

Stormwater: The rain water that flows off parking lots, yards, roofs and other properties into roadside ditches, storm drains, and streams during a rainstorm.

Municipal Separate Storm Sewer System: A stormwater sewer (drainage) system that is “separate” from the regular domestic sanitary sewage system. The stormwater sewer system discharges directly to streams without treatment of the rainwater.

MS4: An abbreviated term for the phrase “Municipal Separate Storm Sewer System”.

Regulated MS4: A Municipal Separate Storm Sewer System that is required to obtain an NPDES Permit and comply with Missouri stormwater regulations.

MCM: An abbreviated term for “Minimum Control Measure”.

Minimum Control Measure: One of the six categories, which at a “minimum,” must be addressed in the stormwater management plan. The six categories include Public Information, Public Participation, Illicit Discharges, Construction Site Runoff, Post-construction Runoff, and Pollution Prevention/Good House Keeping. Each of these categories is a Minimum Control Measure.

BMP: An abbreviated term for “Best Management Practice”.

Best Management Practice: A type of management, habit, action, practice, type of construction or other ways of doing things that accomplishes the best result – given the circumstances (size, budget, other factors) a city must work under. The City of Kennett will look at its own particular situation and determine what BMPs will work best to implement the six MCMs.

MEP: An abbreviated term for “Maximum Extent Practicable”

Maximum Extent Practicable: Doing your best to the maximum extent that is practical – given the city’s abilities, resources and needs.

# CITY OF KENNETT, MISSOURI

## I. Public Education and Outreach

The City of Kennett has a goal of increasing awareness among its citizens of the negative effects of stormwater pollution. The strategy for accomplishing the goal will include measurable efforts to raise public awareness of how stormwater is contaminated and ways individual citizens can help minimize the problem. Outreach seeks to inform people about the following subjects:

1. The proper handling and disposal of solid wastes.
2. The proper handling and disposal of hazardous wastes.
3. The proper handling and application of fertilizers and pesticides on lawns.
4. The elimination of illegal dumping of oil and other chemicals into storm drains.
5. The importance of erosion control structures on construction sites to prevent sediment from eroding and being carried into storm drains.
6. The importance of detention basins and other post-construction structures to prevent erosion and flooding down stream of new development.

### **Actions and Measurable Goals:**

**Action I-1:** Establish a stormwater section on the city's website that discusses the six subjects listed above.

**Measurable Goal I-1.a:** Complete action 1 by one year after the date of issuance of the permit.

**Action I-2:** Place informational brochures available to the public in the municipal building discussing the six subjects listed above.

**Measurable Goal I-2.a:** Have brochures in place within 6 months after the issuance of the NPDES permit.

**Action I-3:** Make stormwater presentations to the public.

**Measurable Goal I-3.a:** Make 2 presentations per year to various civic groups.

# CITY OF KENNETT, MISSOURI

## II. Public Involvement and Participation

**Action II-1:** The Mayor and City Council will adopt a Public Participation Plan.

**Measurable Goal II-1.a:** The City of Kennett will adopt a Public Participation Plan within 1 year following the issuance of the NPDES permit.

**Action II-2:** The Kennett City Council will discuss stormwater issues.

**Measurable Goal II-2.a:** The City Council will discuss stormwater requirements at least 2 times per calendar year at a public meeting.

**Action II-3:** The Planning and Zoning Commission will add stormwater related issues and to their agenda.

**Measurable Goal II-3.a:** The Planning and Zoning Commission will discuss stormwater issues at least 2 times per year at a public meeting.

**Action II-4:** The City will form a Stormwater Advisory Committee to discuss stormwater issues and make recommendations for improvements.

**Measurable Goal II-4.a:** The Mayor and City Council will establish a Stormwater Advisory Committee within 6 months of issuance of the NPDES permit. The committee will meet at least 4 times per year to discuss stormwater related issues including making recommendations regarding improvements to the Stormwater Management Plan and its implementation.

**Measurable Goal II-4.b:** The Advisory Committee's findings and recommendations shall be made available to the City Council, the Planning and Zoning Commission and the Public following their adoption by the Committee.

**Action II-5:** The City of Kennett will identify local groups that cleanup local streams and drainage ditches.

**Measurable Goal II-5.a:** The city will support at least 1 stream or ditch cleanup per year by providing for the disposal of the collected TRASH.

# CITY OF KENNETT, MISSOURI

## III. Illicit Discharge Detection and Elimination

The City of Kennett will implement measures to reduce and eliminate unauthorized discharges to its storm sewer system.

**Action III-1:** The City of Kennett Street Department will conduct visual inspections of stormwater outlets to detect illegal discharges to storm sewers.

**Measurable Goal III-1.a:** The City will visually inspect 20% of all stormwater outlets each year and record the inspection date and conditions of the outlet and any stormwater issues observed. The first inspection is to be completed within 6 months of the issuance of the NPDES permit.

**Action III-2:** The City will publish a phone number that citizens can call to report illegal discharges.

**Measurable Goal III-2.a:** The City will place publish a public notice with phone number within 6 months of the issuance of the NPDES permit.

**Action III-3:** The City Council will hold public meetings and discussions about establishing an ordinance prohibiting the discharge of oil, paints, wash water, and other wastes into the city storm sewer.

**Measurable Goal III-3.a:** The City Council will hold public discussions on an illegal discharge ordinance within 6 months of issuance of the NPDES permit.

*storm sewer map*

- 1. Need to inspect wet weather systems/open conveyance*
- 2. Need for procedures - train staff*
- 3. Need ordinance*

*4. Formal training of inspectors*

*5. Will need logs of calls, responses*

*IDOE fact sheet*

# CITY OF KENNETT, MISSOURI

## IV. Construction Site Runoff Control

The City of Kennett will establish procedures and policies to promote the control of sediment erosion on construction sites. The following actions will be taken.

**Action IV-1:** The City will develop an informational brochure on proper erosion control measures and attach a copy to construction permit applications issued by the City.

**Measurable Goal IV-1.a:** The informational brochures will be attached to the construction permit applications within 6 months of the issuance of the NPDES Permit.

**Action IV-2:** The City will amend the City's Water Runoff and Stormwater Management Ordinance to require an erosion control plan to be submitted to the City for every construction site of 1 acre or more within the City.

**Measurable Goal IV-2.a:** The city will amend the City's Runoff and Stormwater Management Ordinance requiring the submittal of an erosion control plan for all construction sites of 1 acre or more within 1 year after the issuance of the NPDES Permit.

**Action IV-3:** The Stormwater Advisory Committee will hold public discussions about the drafting of an erosion control ordinance. The ordinance would require a permit and erosion control plan for all construction sites of 1 acre or more or as determined by the Committee. The ordinance would specify examples of BMPs that could be used on a construction site.

**Measurable Goal IV-3.a:** The Advisory committee will begin discussions of an erosion control ordinance within 6 months of the issuance of the NPDES Permit.

**Action IV-4:** Building inspectors will inspect erosion control measures on construction sites.

**Measurable Goal IV-4.a:** Building inspectors will conduct regular inspections of erosion control measures on construction sites following adoption of an Erosion Control Ordinance.

*need inspection plan, rationale, training*  
*Need time table for all actions*  
*How measurable?*  
*formal training*  
*procedural control quality*

# CITY OF KENNETT, MISSOURI

## V. Post-Construction Site Runoff Control

The city of Kennett will establish policies and procedures to control post-construction site runoff. The city will implement the following actions.

**Action V-1:** The Stormwater Advisory Committee will begin discussions about requiring detention basins for projects with large impervious areas such as large shopping centers and large subdivisions. The detention basins are to prevent flooding and erosion down stream.

**Measurable Goal V-1.a:** The Advisory Committee will publicly discuss requirements for detention basins within 6 months after the issuance of the NPDES Permit.

**Action V-2:** During the review of plans for a construction project the City will require a detention basin if the project includes a large impervious area.

**Measurable Goal V-2.a:** Detention basins will be required by 2 years after the issuance of the NPDES Permit.

**Action V-3:** The City of Kennett will adopt an ordinance outlining the requirements and standards for detention basins.

**Measurable Goal V-3.a:** The City will begin discussions for develop of an ordinance governing detention basins within 1 year after the issuance of the NPDES permit

**Measurable Goal V-3.b:** The City will adopt an ordinance governing detention basins within 2 years after the issuance of the NPDES permit.

**Action V-4:** The City will discuss the possibility of a regional retention basin for very large development areas.

**Measurable Goal V-4.a:** The City will discuss the possibility of a **regional retention** basin within 3 years after the issuance of the NPDES Permit.

**Action V-5:** The City will encourage commercial and industrial property owners and local residents to pick up litter on a daily bases.

**Measurable Goal V-5.a:** The City of Kennett will encourage commercial and industrial property owners and local residents to pick up litter on their property within 6 months of the issuance of the NPDES Permit.

*This piece should be more than detention basins. Need to focus on small storm events and water quality.*

# CITY OF KENNETT, MISSOURI

## VI. Pollution Prevention/Good House Keeping

The City of Kennett will establish policies and procedures to reduce the potential for pollution of stormwater by city operations. The following actions will be implemented.

**Action VI-1:** City department heads will meet with their employees to discuss good house keeping BMPs. The training will include proper handling and disposal of solid and liquid wastes and hazardous wastes.

**Measurable Goal VI-1.a:** Department heads will meet with their employees to discuss good house keeping practices within 6 months of issuance of NPDES permit.

**Measurable Goal VI-1.b:** Department meetings will be held at least once every 6 months to refresh personnel on environmental regulations and Best Management Practices.

**Action VI-2:** Kennett employees will be instructed in the proper handling and application of pesticides (BMPs).

**Measurable Goal VI-2.a:** Kennett employees will be instructed in the proper handling and application of pesticides within 6 months of the issuance of the permit. Employees will be instructed in the proper handling and application of pesticides at least 1 time per calendar year.

**Action VI-3:** City employees who handle pesticides will be instructed in the proper use of BMPs on City property and City operated construction sites.

**Measurable Goal VI-3.a:** City employees who handle pesticides will be instructed in the proper use of BMPs on City property and City operated construction sites within 6 months of the issuance of the NPDES Permit.

*Need list of <sup>all</sup> municipal ops  
sw mgmt for each  
Routine/seasonal training  
Fleet Mngmt?  
Salt domes?  
storm sewer cleaning?  
Street sweeping?  
Residential lawn care?*