

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
STORM WATER QUALITY MANAGEMENT PLAN
KPDES PERMIT NO. KYG200055
(SWQMP) November 2013



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EXECUTIVE SUMMARY

This document presents the City of Cold Spring Storm Water Quality Management Plan (SWQMP) for submittal to the Kentucky Division of Water. Environmental Rate Consultants Inc. (ERC), and URS Corporation Inc. (URS), (hereafter referred to as the ERC Team), have prepared this document on behalf of the City of Cold Spring. The purpose of the SWQMP is to present a program that is consistent with Federal and State regulations to meet permitting requirements. Specific objectives of this document include: presenting a review of the legal framework for the necessity of being permitted and a brief background on pollutants, urban runoff, and the City's storm water facilities; the program itself; and penalties for failure to comply with regulations and the program.

A. Legal Regulatory Framework

The 1987 Clean Water Act amendments required the U.S. Environmental Protection Agency (EPA) to develop a tiered implementation strategy for the National Pollution Discharge Elimination System (NPDES) Storm Water Program. Phase I began in the early 1990s and covered municipalities and urban areas of 100,000 population and above. Phase II regulations were published in the Federal Register on December 8, 1999. Owners or operators of small, municipal, separate, storm sewer systems (MS4s) located in any incorporated city, county, or place under the jurisdiction of a governmental entity within a census-designated urbanized area. Small MS4s located in a census-designated urbanized area must apply for a NPDES permit by March 10, 2003. Some cities or counties may be partially located in census-designated urbanized areas. Only the portion located in the urbanized area would be automatically regulated.

The City of Cold Spring was under the Sanitation District 1 (SD1) KPDES Phase II permit and regulations program from the inception of the phase II program beginning March 2003. Based on a letter dated September 11, 2013 from Jory M. Becker, P.E. from the Division of Water informing the City of Cold Spring will be responsible for compliance to meet the Municipal Separate Storm Sewer System (MS4) program and permit implementation beginning October 1, 2013.

With this notification, the City of Cold Spring is required to develop a stormwater management quality plan (SWQMP) that implements six minimum measures focusing on a Best Management Practice (BMP) approach. The BMPs chosen by the operators of the MS4s should be designed to reduce pollutants in urban stormwater compared to existing levels in a cost-effective manner. Best Management Practices include public education, treatment practices, operating procedures, and practices to control site runoff, spillage, or leaks.

KPDES permits are issued for five-year terms and generally follow a progressive pattern. This SWQMP presents strategies, goals, priorities, and management activities for years 2013-2018. In the first five years of the program, the focus is on establishing a program customized to local conditions using the following six minimum measures:

1. Public education and outreach;
2. Public participation/involvement;
3. Illicit discharge detection and elimination;
4. Construction site runoff control;
5. Post-construction runoff control; and
6. Pollution prevention/good housekeeping.

Future permits will be issued based on using the knowledge gained during the first five-year permitting and putting it to work on improving water quality incrementally over time.

The City of Cold Spring created a Stormwater Program Technical Advisory Committee comprised of the Mayor, three City Council members, the City Attorney and the Consulting Team of Environmental Rate Consultants (ERC) and URS Corporation (URS) referred to in this document as the ERC Team. The TAC has prepared the attached SWQMP to comply with KPDES Phase II requirements. The SWQMP and Notice of Intent are required to be submitted to Kentucky Division of Water within six months from the letter dated September 11, 2013 from Jory M. Becker, P.E., KDOW.

B. City's Efforts to Comply

The City of Cold Spring is committed to improving the quality of urban runoff through the development and implementation of a proactive, storm water quality management plan (SWQMP).

On behalf of the City of Cold Spring, the ERC Team will be responsible for managing and implementing the MS4 KPDES SWQMP. The City of Cold Spring Public Works is responsible for the City storm water drainage conveyance system, which includes gutters, swells, ditches, culverts, storm drain inlets, catch basins, storm drainage pipes, and detention facilities. This conveyance system provides an opportunity for pollutants to reach waterways because motor oil, paint products, pet wastes, and chemicals used in homes and gardens are washed into street gutters and storm drains via rain water. Streets typically contain vehicle exhaust products, brake and tire materials, oil and grease, litter and other materials that can get flushed through the storm drainage system. This mix of rain and other water is called urban runoff. If not managed, urban runoff and all its pollutants flow untreated through the storm drainage system into local creeks and flood control channels where it can harm wildlife, pollute fisheries, and negatively impact overall water quality.

C. Storm Water Quality Management Program

The attached SWQMP will guide staff activities related to stormwater control with the objective of this program to:

- Effectively manage and coordinate implementation of the storm water program;
- Identify and eliminate illicit connections and illicit discharges to the storm drain system;

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- ◆ Reduce stormwater impacts associated with development and redevelopment projects;
 - ◆ Reduce stormwater quality impacts associated with public agency activities;
 - ◆ Increase public knowledge about the impacts of stormwater pollution and about actions that can be taken to prevent pollution.
 - ◆ Increase knowledge and understanding about the quality, quantity, sources, and impacts of urban runoff.
 - ◆ Evaluate the effectiveness of implementing stormwater management programs.

1. **The Purpose of the Storm Water Quality Management Plan (SWQMP)**

The purpose of the SWQMP, through education, inspection, response, is to prevent pollutants from entering the storm drainage system. The objectives of the SWQMP are to provide guidance to the public and businesses, and act as a coordinating entity towards a cohesive stormwater quality program and plan. A KPDES Phase II SWQMP must meet six minimum controls, use best management practices (BMPs) to the maximum extent practicable, and achieve measurable goals or referred to in this document as “program accountability” measures.

2. **The Stormwater Management Program: Six Minimum Control Measures**

The following is a brief overview of the six minimum control measures contained in the SWQMP and how the City plans to incorporate them.

a. MCM 1 Public Education and Outreach:

Generate awareness by educating citizens about the topic of stormwater, stormwater quality, stormwater quantity, the stormwater flooding and drainage system and the impact of polluted stormwater on water quality through educational materials and other outreach programs, such as;

- i. Utilize existing quarterly newsletter
- ii. Enhance city website
- iii. Attend Park Board Day with a Stormwater booth
- iv. Develop Stormwater Fact Sheets
- v. Develop, Update and Post on web site Frequently Asked Questions
- vi. Establish Stormwater hotline
- vii. Develop tributary signage program
- viii. Develop water quality brochure
- ix. Perform public survey to measure effectiveness
- x. Monitor development of TMDLs in local streams
- xi. Utilize KDOT cabinet radio and TV programs
- xii. Organize social networking system
- xiii. Identify and reach diversity for the stormwater program

b. MCM 2 Public Participation/Involvement:

Provide opportunities for citizens to be involved in developing and implementing the stormwater management program by sponsoring public meetings and panels and water body cleanups.

- i. Establish and utilize a SWAC and meet two times per year

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- ii. Meet with and educate and train K-12 school systems to include stormwater into the student curriculum
 - iii. Renew the citywide tree program
 - iv. Comply with all state and local notification laws
 - v. Organize community activities for Adopt-A-Road and Stream programs
- c. MCM 3 Illicit Discharge Detection and Elimination:
- i. Create a stormwater IDDE ordinance for regulating illegal discharges and for providing enforcement capability.
 - ii. Create an IDDE Process Manual
 - iii. Begin to develop an MS4 stormwater mapping system program
 - iv. Use ARC GIS to create an MS4 GIS for the City
 - v. Develop integrated IDDE map and maintenance system
 - vi. Train existing Public Works staff
 - vii. Educate city employees, businesses and the general public about hazards associated with illegal dumping and improper disposal of waste
 - viii. Coordinate with Campbell County site plan review and site inspection and with NKAPC for mapping and GIS
- d. MCM 4 Construction Site Runoff Control:
- i. Create a stormwater Construction Site Runoff Control ordinance for regulating Construction sites and for providing enforcement capability.
 - ii. Create a stormwater Construction Site Runoff Process Manual for public and private development
 - iii. Review current site plan review procedures for water quality impacts, enforcement measures and how these plans are integrated into the MS4 program
 - iv. Identify and train a site runoff control inspector
 - v. Identify and train a registered engineer to perform site plan review
 - vi. Educate and train contractors, local engineers, public employees, businesses, and the general public.
 - vii. Develop site runoff control BMP manual
- e. MCM 5 Post-Construction Runoff Control:
- i. Create a stormwater Post Construction Site Runoff Control ordinance for regulating existing development and for providing enforcement capability.
 - ii. Create a stormwater Post Construction Site Runoff Process Manual for public and private development
 - iii. Review, revise and update the existing subdivision regulations and zoning ordinance
 - iv. Establish and implement a stormwater credits program
 - v. Develop and implement strategies which include combinations of structural and non-structural BMP's
 - vi. Develop a green infrastructure program that would retrofit existing development and develop low impact development for new development
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- vii. Develop a long-term inspection, plan review and maintenance controls program
 - viii. Develop a site runoff control BMP manual
 - ix. Develop a Post Construction training program
- f. MCM 6 Pollution Prevention/Good Housekeeping:
- i. Identify and estimate the number of facilities in the service area
 - ii. The City will utilize the SWPPP previously developed and is the possession of KDOW
 - iii. Develop training program for pollution prevention and good housekeeping for the facility operators and staff , the maintenance managers, staff and public employees
 - iv. Develop a water quality operation and maintenance program to reduce and prevent pollution (the beginnings of a maintenance management system program).
 - v. Develop training programs for the pollution prevention and good housekeeping for the businesses and general public
- g. Program Evaluation Activities
- In addition to the minimum six elements, the City is required to monitor the progress of the program. Permitting requires that the City:
- i. Obtain feedback that will allow the City to continually improve the program.
 - ii. Measure whether program activities are making progress toward reducing pollution in storm water discharges to the maximum extent practicable.
 - iii. Ensure compliance requirements of the City's MS4 permit.
 - v. Demonstrate that an appropriate level of effort is being made.
 - vi. Verify that public funds are being utilized appropriately by targeting limited resources for the most significant local environmental problems.
 - vii. Submit annual reports to KDOW.

D. Failure to Comply

Failures to comply with the MS4 KPDES regulations indicate that a fine of \$25,000 per calendar day can be made for permit violations.

This document contains the minimum elements required by the current regulations for preparing and submitting a Storm Water Quality Management Plan (SWQMP). It is anticipated that the current regulations will be changing on a fairly regular basis and it is anticipated that the regulations may vary with the new permit cycle beginning in 2015.

ACRONYMS AND TERMS AS USED IN THIS DOCUMENT

The definitions below are intended strictly for clarification purposes, and may not contain the full legal definition as per regulation.

Annual Report, A yearly report to the KDOW on the Permit's' compliance with the permit requirements, including an accounting of progress made towards each of the Permit's' measurable goals.

BMPs, Best Management Practices. Management procedures, equipment or facilities that either prevents pollutants from contaminating runoff or that treat runoff before it enters a stream. BMPs may also reduce runoff velocity or volume in order to prevent stream degradation from excessive erosive forces. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

CWA, Clean Water Act. The MS4 permit is a result of the 1987 amendments to the Clean Water Act, where congress mandated that the EPA address non-point source pollution in stormwater runoff.

Consent Decree. A judicial decree expressing a voluntary agreement between parties to a suit, especially an agreement by a defendant to cease activities alleged by the government to be illegal in return for an end to the charges.

EPA, U.S. Environmental Protection Agency. The US federal agency responsible for regulating environmental hazards.

FEMA, Federal Emergency Management Agency. An agency of the US Department of Homeland Security that was created to coordinate response to disasters, recovery efforts, and disaster preparation and planning.

GH, Good Housekeeping. Those programs and activities performed to reduce pollution by not creating it or by not releasing it from the source at municipal facilities. Good Housekeeping goes hand in hand with Pollution Prevention (P2). GH includes materials substitution by use of less-toxic alternatives, management procedures that minimize the quantity of waste generated, housekeeping practices that reduce spillage and recover materials, reuse of materials recovered and recycling of waste.

GIS, Geographic Information System. An information system for capturing, storing, analyzing, managing and presenting data which are spatially referenced. MSD uses GIS platforms to efficiently and effectively manage and store data associated with its storm sewer system and stormwater permit. This capability includes producing maps, displaying the results of data queries, and conducting spatial analysis.

Green Infrastructure An adaptable term used to describe an array of materials, technologies, and practices that use natural systems—or engineered systems that

mimic natural processes— to enhance overall environmental quality and provide utility services. As a general principal, green infrastructure techniques use soils and vegetation to infiltrate, evapotranspire, and/or recycle stormwater runoff. Examples of green infrastructure include green roofs, porous pavement, rain gardens, and vegetated swales. “Green” infrastructure is a combination of natural and engineered infrastructure that is designed to reduce the environmental footprint of the system. In terms of stormwater, green infrastructure can effectively manage stormwater runoff through the use of infiltration, biofiltration, detention and other stormwater management techniques.

IDDE, Illicit Discharge Detection and Elimination. One of the requirements under the NPDES stormwater program to address non-stormwater discharges into waterways through regulatory measures, identification and removal.

KDOW, Kentucky Division of Water. (In the Department for Environmental Protection in the Environment and Public Protection Cabinet). Responsible for issuing all permits for discharges into the waters of the Commonwealth.

KPDES, Kentucky Pollutant Discharge Elimination System. Any National Pollutant Discharge Elimination System permit issued to MSD by the Cabinet pursuant to the authority of the Clean Water Act and Kentucky Revised Statutes (KRS) Chapter 224 and the regulations promulgated thereunder. KPDES is the state regulatory permitting program through which MSD’s stormwater program is directed.

KYTC, Kentucky Transportation Cabinet. The Kentucky Transportation Cabinet operates storm sewers on their properties and state road and highway rights-of-way within the Louisville Metro MS4.

MEP, Maximum Extent Practicable – the standard for evaluating permit compliance. Minimum measures Storm Water management programs that are required under the NPDES MS4 permit. They include public education and outreach, public participation/involvement, illicit discharge detection and elimination, construction site storm water runoff control, post- construction storm water management, and pollution prevention/good housekeeping for municipal operations.

MS4, Municipal Separate Storm Sewer System – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are owned or operated by the City to dispose of storm water runoff.

Municipality, A city, town, county, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes.

NOV, Notice of Violation. Permittees not meeting the regulatory requirements of their permit may receive a NOV. A NOV may include the item or items in violation, corrective actions and fines incurred.

NPDES, National Pollutant Discharge Elimination System. NPDES is the federal regulatory permitting program through which MSD's stormwater program is directed.

Program Accountability, the City's Storm Water Program goals, which are intended to gauge permit compliance and program effectiveness.

Stream. Surface water channel having well-defined banks and bed, either constantly or intermittently flowing. "Ephemeral stream" means a watercourse which only flows in direct response to precipitation in the immediate watershed, or in response to the melting of a cover of snow and ice, and which has a channel bottom that is above the local water table. An ephemeral stream is a water of the United States, provided it has an OHWM. "Intermittent stream" means a stream or part of a stream that does not flow continuously throughout the calendar year; but that has a bed below the local water table for at least one (1) month of the calendar year during which it obtains its flow from both surface water and ground water discharge. The term does not include an ephemeral stream. "Perennial stream" means a stream or part of a stream that flows continuously during all of the calendar year as a result of ground-water discharge or surface runoff. The term does not include "intermittent stream" or "ephemeral stream".

Surface Waters. Those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface.

SWAC Storm Water Advisory Committee.

SWQMP Storm Water Quality Management Plan.

SWPPP Storm Water Pollution Prevention Plan.

Watershed. Land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean.

1. INTRODUCTION

1-1 The SWQMP (the Plan)

This document presents the City of Cold Spring's Storm Water Quality Management Plan (SWQMP) to meet the MS4 KPDES permit regulations. The plan provides a comprehensive outline to direct the City with the SWQM Plan and its priorities and activities for the years 2014-2018. This SWQMP was developed as a requirement of Phase II of the National Pollutant Discharge Elimination System (NPDES) Program as ordered by the United States Environmental Protection Agency. The City's Program is required by federal law automatically designated by the United States Environmental Protection Agency pursuant to 40 CFR 122.32(a)(1) of the Federal Water Pollution Control Act (also referred to as the Clean Water Act) to comply with the Phase II requirements of NPDES.

Cold Spring is a 5th-class city in Campbell County, Kentucky, in the United States. Cold Spring is located at 39°0'50"N 84°26'0"W (39.013769, -84.433392)[1]. According to the United States Census Bureau, the city has a total area of 4.8 square miles (12 km²), all land. The name Cold Spring refers to a cold stream which for many years served as the sole source of drinking water. The City of Cold Spring, population 5,912, was incorporated in 1941. The city is located in Campbell County, Kentucky approximately 8 miles south of Cincinnati, Ohio on US 27, occupying about 13.2 square miles. There is access to the City of Cold Spring by several major expressways, I-71/75, I-275 and I-471. The city is approximately 16 miles from the Northern Kentucky/Greater Cincinnati Airport. Cold Spring is a fifth class city with a Mayor/Council (six total council members) form of government, which has non-partisan elections. There are four voting precincts situated in the 68th House District, the 24th Senatorial District and the 4th Congressional District. The Administrative Building is located at 5694 East Alexandria Pike, Cold Spring KY, 41076

1-2 SWQMP Organization

The following provides a brief summary of the SWQMP:

- ◆ **Chapter 1: INTRODUCTION**

This chapter contains a brief introduction to the SWQMP, information on SWQMP organization, and a description of the process for preparing this SWQMP.

- ◆ **Chapter 2: SWQMP OVERVIEW**

This chapter provides an overview of SWQMP strategy, direction, and organization; and regulatory background and history. It also contains a brief summary of coordination with other storm water programs if applicable.

- ◆ **Chapter 3: SWQMP MANAGEMENT**

This chapter provides a detailed description of SWQMP Elements.

- ◆ **Chapter 4: SWQMP MINIMUM CONTROL MEASURE IMPLEMENTATION**

This chapter is the heart of the City of Cold Spring's Storm Water Quality Management Plan. Complete descriptions of the six SWQMP Minimum Control Measures (MCM's) are provided:

- ◆ Public Education and Outreach;
- ◆ Public Participation and Involvement;
- ◆ Illicit Discharge Detection and Elimination;
- ◆ Construction Site Storm Water Runoff Control/New Development;
- ◆ Post Construction Storm Water Management;
- ◆ Pollution Prevention/Good Housekeeping for Municipal Operations; and
- ◆ MCM specific activities, BMPs, and effectiveness and performance measures are identified.

- ◆ **Chapter 5: SWQMP EVALUATION ACTIVITIES**

This chapter provides the conceptual approach to SWQMP effectiveness evaluation. Evaluation activities are a required and important aspect of the SWQMP; conducting assessments and obtaining feedback allow for continued improvement of SWQMP activities, including modification of existing activities and identification of new efforts.

- ◆ **APPENDIX**

- **Appendix A** – The City of Cold Spring Map of the service area.
- **Appendix B** – The KDOW NOI removing the City of Cold Spring from the SD1 co-permittee agreement and allowing the City of Cold Spring to participate in the MS4 program separate from SD1.

1-3 SWQMP Update Process

This SWQMP contains approaches and guidance for activities, Best Management Practices (BMPs), and effectiveness evaluation for the permit term. The approved SWQMP will be in effect until it is replaced or updated in the future. This SWQMP serves to provide the description and approach to effectiveness evaluation. The Annual Reports will provide the specific activities and effectiveness evaluations accomplished for each fiscal year, based on the direction and targets of the SWQMP. Input from regulators and the public are important to the process of developing an effective SWQMP during the initial permit term.

Activities to obtain input included:

- ◆ Conducting meetings with City officials (The TAC)
- ◆ Announcing availability of the SWQMP

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- The City will begin to post relevant information about the SWQMP on the City's website once this task is developed and completed and in the Newsletter
 - Addressing public comments and include in the SWQMP

The intent of the City is to have a current, relevant, and dynamic SWQMP. In order to remain proactive and effective, the SWQMP should reflect the most recent information and needs. The SWQMP will continue to evolve and improve through evaluations and feedback from various sources and activities. Input from regulators and the public throughout the permit term can be used to modify specific portions of the SWQMP. The SWQMP effectiveness evaluations and Annual Reports are also used to facilitate review and adjustments to the SWQMP. The SWQMP will be revised as needed to adjust to future needs. As a living document, modifications may be made directly to the SWQMP, subject to the City of Cold Spring Administration and City Council. The Annual Report preparation will begin in at the end each calendar year to be submitted to KDOW by April 15th to reflect the previous years accomplishments.

2. SWQMP OVERVIEW

2-1 SWQMP Implementation Overview

The City's Storm Water Quality Management Plan (SWQMP) is a comprehensive Plan comprised of various elements and activities designed to reduce storm water pollution to the maximum extent practicable (MEP) and eliminate prohibited non-storm water discharges in accordance with federal and state laws and regulations. These laws and regulations are implemented through National Pollutant Discharge Elimination System (NPDES) municipal storm water discharge permits.

The core SWQMP Six Minimum Control Measures are:

- Public Education and Outreach
- Public Participation/Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control / New Development
- Post-Construction Storm Water Management
- Pollution Prevention/Good Housekeeping for Municipal Operations and Facilities

Alternative to above – The City of Cold Spring will be responsible for compliance with these regulations. The ERC team will implement much of the permit activities under the direction of the Mayor and City Council. The Public Works Department will be responsible for the City storm water drainage conveyance system. Drainage facilities include gutters, swales, ditches, culverts, storm drain inlets, catch basins, storm drainage pipes, and detention basins.

2-2 Regulatory Background

The 1972 amendments to the federal Clean Water Act (CWA) prohibited the discharge of pollutants from point sources to waters of the United States, unless the discharge was authorized by a permit issued under the NPDES permitting program. The 1987 amendments to the CWA added Section 402(p), which defined storm water discharges from certain defined municipal and industrial activities as point sources required to be permitted by a NPDES permit. The amendments directed the U.S. Environmental Protection Agency (EPA) to adopt regulations establishing permitting requirements for municipal and industrial storm water discharges. The Phase I amendments also required storm water discharges from municipal separate storm sewer systems (known as MS4 systems) serving populations greater than 100,000 to obtain coverage under a national surface water permit program. The EPA then developed the Phase II Storm Water Program to include small MS4 systems in urban areas and operators of small construction sites. In the Commonwealth of Kentucky, the federal National Pollutant Discharge Elimination System (NPDES) permitting program is implemented through the Kentucky Division of Water and refers to the program as the Kentucky Pollutant Discharge Elimination System (KPDES) permitting program.

The EPA promulgated the NPDES Phase II regulations on December 8, 1999. Municipalities to be addressed in Phase II are defined as any municipal separate storm sewer system (MS4s) not already covered by the Phase I program and defined by the Bureau of Census as an “Urbanized Area” or on a case-by-case basis on small MS4s located outside of “Urbanized Areas” that the NPDES permitting authority designates.

3. SWQMP MANAGEMENT

3-1 Introduction

This chapter presents the City of Cold Spring Storm Water Quality Management Plan (SWQMP) strategy, goals, priorities and management activities for 2013-2018; legal authority; organization; planning and reporting activities; and budget/staff resources.

3-2 SWQMP Strategy

The 1987 amendments to the Clean Water Act added Section 402(p), which established National Pollutant Discharge Elimination System (NPDES) permit requirements for municipalities to develop and implement comprehensive storm water management programs. The storm water quality management program is required to describe the Best Management Practices (BMPs) to reduce the discharge of pollutants in storm water runoff to the maximum extent practicable (MEP). The MEP standard for municipal storm water management programs is also required by U.S. Environmental Protection Agency (EPA) Phase II storm water regulations promulgated on December 8, 1999.

This strategy is pursued through the implementation of the City’s SWQMP. The Plan is a living document with periodic modifications to ensure that it is effectively carrying out activities to accomplish the Plan. If it is determined that the Plan is not adequately

addressing particular pollutants or sources, minor modifications and additions will be identified, which are submitted to the KDOW for review and approval.

Significant changes in the scope or direction of the SWQMP will be accomplished through the annual report process. Modifications to the SWQMP will generally be made in response to any new Best Management Practices (BMPs) if applicable. It is important that the SWQMP reflects BMPs and includes activities that have been shown to be successful in other storm water programs.

- ◆ **Pollutant Removal:** Will the BMP meet minimum national standards?
- ◆ **Regulatory Compliance:** Is the BMP compatible with environmental regulations?
- ◆ **Public Acceptance:** Does the BMP have public support?
- ◆ **Implementation:** Is the BMP compatible with land uses, facilities, or the activity in question?
- ◆ **Technical Feasibility:** Is the BMP technically feasible considering soils, geography, etc.?
- ◆ **Cost Effectiveness:** Is the cost for the BMP commensurate with the environmental benefit?

The City is committed to the SWQMP Six Minimum Control Measures to further incorporate pollutant reduction activities. These strategies explore opportunities for participation in regional, state, and national efforts to address storm water pollution issues that are beyond the City's ability to control at the local level.

3-3 Program Priorities and Management Activities

Program priorities for 2014-2018 include implementing the SWQMP and achieving regulatory compliance. The Elected Officials, City Staff, other agencies (such as the County and the NKAPC) and the ERC Team will continue to develop and improve SWQMP activities to reduce storm water pollution and eliminate prohibited non-storm water discharges, while facilitating understanding and involvement in storm water management.

3-4 Legal Authority

City of Cold Spring will provide sufficient legal authority to implement and administer the SWQMP based on Kentucky Revised Statute (KRS) 82.082 home rule authority and the enactment of a stormwater management user fees per Kentucky Revised Statute KRS 91A.510. The City of Cold Spring will as administer the SWQMP per the unfunded mandate from the Federal Environmental Protection Agency as directed to be administered by the Kentucky Division of Water (KDOW) identifying the City of Cold Spring as having to comply with KPDES water quality permitting requirements.

3-5 SWQMP Organization

The SWQMP is a comprehensive storm water quality management plan that includes the traditional core minimum control measure (MCM) elements necessary to comply with federal and state regulations. The core MCM elements include Public Education and Outreach, Public Participation/Involvement, Illicit Discharge Detection and Elimination, Construction Site Storm Water Runoff Control/New Development Element, Post Construction Storm Water Management, and Pollution Prevention/Good Housekeeping for Municipal Operations. The City will attempt to seek innovative, proactive activities to tackle the most significant local problems. Public education and resultant changes in behavior are necessary to bring about long-term improvements to urban runoff quality and protection of the environment.

Another important aspect of the SWQMP is that each MCM Plan Element includes ongoing development in an interactive feedback process resulting in a suite of activities tailored to meet Plan goals. It is important to strive to measure or assess the effectiveness of Plan activities and BMPs so they can meet current conditions and be continually improved. These measurable goals are referred to in this SWQMP as “program accountability” measures.

The City as a whole, including elected officials, Department Heads, and City employees, will work with the ERC Team that is the MS4 agent representing the City’s interests; will be responsible for compliance with the City’s MS4 Permit requirements and the SWQMP. The City owns a municipal separate storm drain system. The Public Works Department is responsible for construction, maintenance, and operation of the storm drainage system as well as the administrative and management functions of the Plan. The ERC Team in conjunction with Public Works will be involved with development review to ensure that public and private projects include the necessary control measures for erosion and sediment control as well as permanent features to minimize storm water pollution from development projects. The review process also ensures that construction projects have the necessary permits and that on-site regional control measures are considered for new development projects.

The ERC Team will represent and work as the MS4 agent and work with and solicit input from the Elected Officials and Staff, to be responsible for SWQMP development and implementation. The SWQMP will establish several control programs, procedures, and policies aimed at identifying and reducing sources of storm water pollution caused by discharges, in both wet and dry weather, from the storm drain system. Cost effectiveness is obtained by integrating the SWQMP with existing resources, programs, and functions, whenever possible.

The ERC Team will provide education, training, and technical assistance to other City departments and the development community; reviews new development projects; provides inspections; develops guidance; and implements multiple activities and BMPs.

One of the goals of the Stormwater Quality Program is for City employees to be concerned and knowledgeable as well as responsible for protecting the quality of storm water. Implementation of the SWQMP requires the participation and assistance of all City departments.

3-6 Annual Planning and Reporting Activities

The City will perform annual planning and prepare Annual Reports to comply with the KPDES Permit requirements.

3-7 Implementation and Interaction with Other Agencies

In order to be most effective and utilize resources most efficiently, it is important for the SWQMP to implement various programs and efforts with other agencies such as the Campbell County site plan approval process and the Northern Kentucky Planning Commission (NKAPC).

3-8 Illicit Discharge Enforcement Procedure

The City will develop an illicit discharge Enforcement Procedure through the development of and or revisions to the existing City's Code. The Enforcement will involve written warnings to stop the discharge followed up with fines and court proceedings if necessary.

4. SWQMP MCM ELEMENT IMPLEMENTATION

4-1 Introduction

Implementation of the City of Cold Spring Storm Water Quality Management Plan (SWQMP) is conducted through six SWQMP MCM Elements: Public Education and Outreach, Public Participation/Involvement, Illicit Discharge Detection and Elimination, Construction Site Storm Water Runoff Control, Post Construction Storm Water Management, Pollution Prevention/Good Housekeeping for Municipal Operations.

The SWQMP provides a description of each of the six MCM Element's activities/BMPs and corresponding implementation actions. Minimum performance standards are also provided for those activities/BMPs that are quantifiable and predictable. These performance standards will be used to demonstrate the City's commitment to the SWQMP and achievement of a reasonable level of implementation. Some activities are not easily quantifiable, and minimum performance standards may not be appropriate. Other activities like spill responses and ordinance revisions are not predictable and will therefore be accomplished as needed.

Performance and effectiveness evaluations are keys to ensuring that the SWQMP implements activities, which are successful in changing behaviors and reducing, storm water pollution. Examples of "program accountability" measures include the number of

public events attended, training sessions conducted, or media tools such as newsletters and the City Website.

Effectiveness “program accountability” measures provide assessments of the degree to which activities reduce pollutants to the maximum extent practicable or eliminate non-storm water discharges. This information is used to focus and modify activities to maximize environmental benefits. Effectiveness measures include quantifying the effectiveness of a particular effort; for example, the percentage increase in public awareness is measured by public opinion surveys. The results of these effectiveness evaluations, including performance and effectiveness measures, will be provided in the Annual Reports.

The Annual Reports will quantify the previous fiscal year (where possible), including the performance and effectiveness of activities, BMPs, and specific tasks. This annual evaluation will assess how well the SWQMP Elements were achieved and whether the minimum performance standards were accomplished. Activities and specific BMPs may also be modified, added, or deleted as needed to meet SWQMP Element goals. In-depth evaluation of each MCM Element will be conducted at least once during this 5-year span, or as needed.

4-2 Public Education and Outreach Element

The Public Education and Outreach Element is the cornerstone of the City of Cold Spring Storm Water Quality Management Plan (SWQMP). Whether dealing with the general public, local industry, developers, or City of Cold Spring officials and departments, the goal of the Public Education and Outreach Element is to: (1) generate awareness of storm water pollution prevention by educating people about the storm drain system and its relationship to the health of local waterways; and (2) change behavior patterns through education and encouragement of active participation in water pollution prevention and (3) let the public know what steps they can take to reduce pollutants in storm water runoff.

Outreach activities can be grouped into four categories:

- ◆ Outreach to the general public and target sectors
- ◆ Outreach to children and schools
- ◆ Outreach to public officials and agency managers

It will become evident over the initial years of the SWQMP that an important component of a successful outreach program for all categories will be to commit to building lasting relationships and partnerships with other groups in the community, if possible. These partnerships assist in promoting the SWQMP’s key messages and expand City resources. During the permit term, the Public Education and Outreach MCM Element will actively seek opportunities to work with others to promote water quality protection and the quality of life in the City of Cold Spring.

Because City staff is highly visible in the community, City department activities are a vital target for partnerships. The coordinated efforts of the Public Education and Outreach and Pollution Prevention/Good Housekeeping for Municipal Operations MCM's will result in knowledgeable City staff that can implement appropriate control measures and serve as role models for water quality protection.

The Public Education and Outreach Element should become an active presence in classrooms through adding storm water quality into the local school system curriculum with meetings with teachers, classroom presentations with development and implementation of water quality curricula. The long-range goal is to become an integral part of the classroom lesson plan developed for each school year. By educating the children about the importance of water quality protection, a new generation will have the necessary tools to make informed decisions on how best to protect the City and Campbell County's natural waterways.

Public Education and Outreach Element Activities - Best Management Practices

Public Education – 1.A: Develop Public Distribution Materials

1.A.1: Quarterly Newsletter Articles

The City of Cold Spring will include one article per newsletter (three articles per year) that pertains to stormwater quality in the existing City newsletter.

Program Accountability:

The newsletter is mailed to 100% of the 5,912 residences within the City of Cold Spring.

1.A.2: Enhance City Website

The City will add a storm water section (page or pages) to the City Web site. This stormwater area of the City website will provide educational material, downloadable and printable material. The stormwater area of the City website will also give a place to receive public feedback and report Illicit Discharges.

Program Accountability:

The website can be accessed by a majority of the 5,912 residences within the City of Cold Spring through their own computers or by computers provided in the local libraries.

1.A.3: Stormwater Booth at Park Board Event

The City of Cold Spring will attend, participate and man a booth at the annual Park Board Event. The City will obtain and utilize the KDOW Enviroscape as a "hands on" educational tool to illustrate stormwater quality.

Program Accountability:

It is estimated that approximately 500 City of Cold Spring residences visit and participate at the annual Park Board Event that is typically held during the fall season. The October 6, 2013 outdoor event had to be cancelled because of bad weather and severe thunder storms.

1.A.4: Develop Two Stormwater Fact Sheets

The City of Cold Spring will develop two stormwater fact sheets that pertain to stormwater quality management.

Program Accountability:

The Fact Sheets will be posted on the City web site and on display at City Hall and the local library.

1.A.5: Develop FAQs for Website

The City of Cold Spring will develop FAQ's that pertains to stormwater quality management program.

Program Accountability:

The FAQ's will be posted on the City web site and on display at City Hall.

1.A.6: Establish Stormwater Hotline and Training

The City of Cold Spring will develop a Stormwater Hotline that pertains to stormwater quality management.

Program Accountability:

The Hotline will be answered by the City Clerk and advertised in the newsletter and posted on the City website. Training will be provided to the City Clerk for answering questions or directing the call to someone who can answer the issue.

1.A.7: Develop Tributary and Other Signage Program

The City of Cold Spring will promote volunteer storm drain inlet stenciling through volunteer organizations, community neighborhood associations, and schools.

Program Accountability:

The stenciling program will be promoted on the City website, the quarterly newsletter

and will be implemented by the public works department.

1.A.8: Develop a Water Quality Brochure

The City of Cold Spring will develop a Stormwater brochure that pertains to stormwater quality management.

Program Accountability:

The brochure will be posted on the city website and displayed at City Hall, the Local Library.

1.A.9: Perform Public Survey to Measure Program Effectiveness

The City of Cold Spring will perform an initial public survey during Year 3 of the program to serve as a baseline for determining the level of the public knowledge related to storm water pollution and again in Year 5 to measure the effectiveness of MCM 1 public education activities.

Program Accountability:

The survey will be used to establish the baseline and then later measure the effectiveness of MCM 1.

1.A.10: Monitor Development of TMDLs in Cold Spring Streams and Service Area

The City of Cold Spring will monitor the potential for TMDL's in the system. At present, there is no evidence that any TMDL will be possible in the future. TMDL monitoring will continue as be addressed in the appropriate manner in the future.

Program Accountability:

The City will monitor and address the TMDL as deemed appropriate

1.A.11: Utilize Kentucky Department of Transportation Cabinet, Education Curriculum, TV and Radio Programs

Program Accountability:

The City of Cold Spring signed a Memorandum of Agreement Partnering Under the Clean Water Act and the US Environmental Protection Agency's National Pollution Discharge Elimination System, Stormwater Program Between the City of Cold Spring and the Kentucky Transportation Cabinet, District 6. Kentucky Transportation Cabinet, District 6 has provided a public participation kit to be used for informing the citizens of the City of Cold Spring regarding stormwater quality issues and concerns.

Program Accountability:

The City will utilize the public participation kits in public meetings and meeting with the school systems and where deemed appropriate.

Public Education-1.B: Social Networking

1.B.1: Organize a Stormwater Social Networking Organization

The City of Cold Spring will design a social networking in the future.

Program Accountability:

The City of Cold Spring will design a social networking in the future in year 7 of the permit cycle.

1.B.2: Identify and Reach Diversity in Stormwater Audience

The City of Cold Spring will identify design a diversity outreach program in the future.

Program Accountability:

The City of Cold Spring will identify design a diversity outreach program in Year 6 of the permit cycle.

Public Education-1.C: Annual Reporting

1.C.1: Annual Reporting

The ERC Team will prepare and submit the annual report as required.

1.C.2: Annual City Council Update

The Technical Advisory Committee will update City Council as needed

Effectiveness Evaluation

There are many methods of evaluating the effectiveness of the Public Education and Outreach MCM Element. The success of some BMPs, such as participation in community events and the volunteer storm drain stenciling program, may be evaluated through public response or the amount of information that is distributed. The number of people reached or the frequency of the message may measure these educational campaigns. However, the best tool for measuring the effectiveness of overall outreach efforts will be the public knowledge measurement survey. The survey should provide information on whether or not the public is receiving and accepting the outreach information in the format in which it has been presented. The information should indicate

whether or not there is a trend toward behavioral change and stewardship, while providing an updated base for continuing outreach efforts.

1. PUBLIC EDUCATION AND OUTREACH							
No.	Activity Description	Permit Year	Program Accountability	Community Responsibility			Notes / Activity Assumptions
				City	ERC	Other	
1.A Develop Public Distribution Materials							
1	Utilize current quarterly newsletter for storm water articles.	Year 1 (every year)	The plan is to reach 1/5 of the population of 5,912 per year	X	X		The City of Cold Spring has an existing newsletter that is mailed to all Cold Spring residences three times a year. This newsletter will be used to convey the Storm water Quality information of the MS4 Program. ERC will write a 500 word article 3 times per year to be included in the Quarterly newsletter.
2	Enhance city website development and maintenance	Year 1 (every year)	The plan is to reach 1/5 of the population of 5,912 per year	X			Webmaster will develop a stormwater page to the existing city website. City will need to get final cost from webmaster.
3	Add storm water booth at annual Park Board meeting. Utilize the KDDW EnviroSCOPE. Contact KDDW with date of meeting and KDDW will transfer the EnviroSCOPE display to the Florence KY office or will deliver to City.	Year 1 (every year)	The plan is to reach 1/4 of the population of 5,912 per year	X	X		City staff and members of the ERC Team attend the annual Park Board meeting and man the stormwater booth once a year. ERC will coordinate with KDDW to order EnviroSCOPE display.
4	Develop 2 storm water fact sheets supporting the program. Seasonal.	Year 2 and Year 7	The plan is to reach 1/4 of the population of 5,912 per year		X		ERC will write 2 stormwater fact sheets to be displayed at city hall, the library and other locations to be determined.
5	Develop a list of FAQ's for the newsletter and website.	Year 1 Only	The plan is to reach 20% of the population of 5,912 per year		X		The ERC Team normally includes developing FAQ's as part of a Public Education Program associated with implementing a stormwater utility.
6	Establish a storm water hotline and advertise the new hotline telephone number. Provide training to city staff answering the hotline.	Year 1 Only	The plan is to be available to 100% of the population of 5,912 per year	X			City Staff will utilize the FAQ's document as the basis for training. The ERC Team will develop information and perform training to city staff specifically for the KPDES permit.

7	Develop tributary and other signage program. Purchase "Do Not Dump" decals.	Year 2 and every year after	Place 20% of the tributary Signs "Do Not Dump" decals per year	X	X	The ERC Team will determine the best product to develop tributary signage and catch basin markers and contact a signage company and order the materials. It will be the responsibility of the City to instruct the Public Works Department to perform installation or organize with a volunteer group to Perform installation. Actual costs of materials may vary from the cost estimate included in this activity.
8	Develop a water quality brochure	Year 5			X	The ERC Team will assist the City with determine the best approach to measure success.
9	Perform public survey to measure effectiveness of public information techniques used.	Year 3 and Year 5			X	The ERC Team will assist the City with determine the best approach to measure success.
10	Monitor the development of TMDL's in streams near Cold Spring.	Year 5			X	
11	Utilize KY Department of Transportation Cabinet TV and radio storm water quality programs.	Year 1 (every year)			X	The ERC Team assumes the City will establish a stormwater credits program. The credits program is necessary in order to encourage the schools to participate in this task. The hours in this task are for the ERC Team to hold 1 meeting with all school systems and train the administrators regarding water quality program. This assumes the City will sign the KT Department agreement and use the Education Materials from that agreement.
1.B Social Networking				City	ERC	Other
1	Organize a storm water social networking organization.	Year 7	Number of people subscribing to social Networking site	Website Administrator / City Clerk	Assist	
2	Identify and reach diversity in the storm water target audience.	Year 6	Social Network Questionnaire results	Website Administrator / City Clerk	Assist	
1.C Annual Reporting				City	ERC	Other
1	Annual Reporting	Year 1			X	The ERC Team will develop and prepare the annual report to be in compliance for the KPDES plan to be discussed via the TAC.

4-3 Public Participation/Involvement Element

The Public Participation/Involvement MCM Element of the City of Cold Spring's SWQMP will allow the public to provide valuable input and assistance in implementing the Plan.

Benefits of a Public Participation and Involvement Program

Since it is the activities of the public within urban landscapes that produce diffuse pollution, and the citizenry (general public) funds municipal activities, it is imperative that the public is given opportunities to play an active role in both the development and implementation of the SWQMP. An active and involved community is crucial to the success of a storm water quality management plan because it allows for:

- ◆ **Broader public support**, since citizens who participate in the development and decision-making process are partially responsible for the SWQMP and are more likely to take an active role in its implementation;
- ◆ **A broader base of expertise and economic benefits**, since the community can be a valuable, free, intellectual resource; and
- ◆ **A conduit to other programs**, as citizens involved in the storm water program development and implementation process provide important cross-connections and relationships with other community and government programs. This benefit is particularly valuable when trying to implement a storm water program integrated on a watershed basis.

To satisfy this minimum control measure, the City of Cold Spring will:

- ◆ Comply with applicable State and local public notice requirements using an effective mechanism for reaching the public; and
- ◆ Determine the appropriate SWQMP activities and measurable goals for this minimum control measure.
- ◆ Educate Train, and Involve Elected Officials, Staff, and Citizens through the use of a Storm Water Advisory Committee (SWAC) for the 6 Minimum Control Measures.

Possible implementation approaches are described below.

Guidelines for developing and implementing this measure will include public participation in developing, implementing, and reviewing each minimum measure of the SWQMP. The public participation process should make every effort to reach out and engage all economic and ethnic groups.

The best way to handle common notification and recruitment challenges is to know the audience and think creatively about how to gain its attention and interest. Since traditional methods of soliciting public input, such as advertising in local newspapers to announce public meetings and other opportunities for public involvement, are not always successful in generating interest and subsequent involvement in all sectors of the community, possible alternative methods of advertising to be used whenever possible may include radio or television spots, postings at bus stops, billboards, announcements in neighborhood newsletters, announcements at civic organization meetings, distribution of flyers, and mass mailings. These efforts, of course, are closely tied to the efforts for the Public Education and Outreach minimum control measure.

Public Participation/Involvement - Best Management Practices

Public Participation 2.A: Public Participation

2.A.1: Establish and Utilize Stormwater Advisory Committee (SWAC)

The City of Cold Spring will create a Storm Water Advisory Committee (SWAC) that is comprised of key stakeholders representing a cross section of the community that will review and provide input on water quality issues pertaining to the City of Cold Spring SWQMP. The SWAC Meetings will be public meetings that will be advertised and the contents of the meetings will be documented.

Program Accountability:

The City of Cold Spring will measure the results of the SWAC as needed. This will include the number of meetings conducted and the number of people that participate.

2.A.2: Adopt-A-Road and/or Adopt-A-Stream

The City of Cold Spring will work with local groups to organize adopt the road and adopt the stream program pertaining to the City of Cold Spring SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of adopt a road and adopt the stream program as needed. This will include the number of miles of stream adopted, number of times the cleanup is accomplished and the number of persons participating.

2. A.3: Renew Citywide Tree Program

The City of Cold Spring will renew the tree program group to organize the tree planting program.

Program Accountability:

The City of Cold Spring will measure the results of the tree program as needed. This will include the number of trees planted.

2.A.4: Work With K-12 School Curriculum Through Stormwater Credit Program

The City of Cold Spring will develop a stormwater credits program within the first year of the program. The City of Cold Spring will meet with the schools annually to educate the schools.

Program Accountability:

The City of Cold Spring will measure the results of the credits and schools program as needed. This will include the number of classes using the Stormwater Curriculum.

2.A.5: Comply With All State and Local Notification Laws

The City of Cold Spring will comply with all state and local laws.

Program Accountability:

All meetings will be conducted in accordance with the Kentucky Open Meetings Act, including compliance with all notice requirements.

Public Participation 2.B: Annual Reporting

2.B.1: Annual Reporting

The ERC Team will prepare and submit the annual report as required.

Effectiveness Evaluation Measurable goals are intended to gauge permit compliance and the Plan effectiveness. At a minimum, the measurable goal for this MCM would be to provide adequate public notice of all public hearings, published in a community publication or newspaper of general circulation, when implementing the storm water management programs required under the permit.

2. PUBLIC INVOLVEMENT AND PARTICIPATION							
No.	Activity Description	Permit Year	Program Accountability	Community Responsibility			Notes / Activity Assumptions
				City	ERC	Other	
2.A Public Participation							
1	Establish and utilize a Storm Water Advisory Committee (SWAC). Establish membership and number of annual meetings.	Year 1 (every year)	Two Meetings per year	X	X		The ERC Team normally includes developing a SWAC Public Education Program associated with implementing a stormwater utility
2	Organize community activities and work with the Roads and Parks Departments to identify any Adopt-A-Road and/or Adopt-A-Stream or stream cleanup.	Year 7		X			
3	Renew citywide tree program and take credit for Tree City USA program and consider funding a tree planting program.	Year 3		X			These are city activities. The ERC Team has assumed no cost for consultants for this task
4	Work with K-12 school curriculum through the storm water credit program. If available, the City should obtain a KYTC storm water tool kit that can be used by local schools for water quality education.	Year 1 (every year)	Number of schools/ Teachers using the Tool Kit	X	X		The ERC Team will invite all schools in for an initial meeting to begin the education process. Each year there will be a meeting with follow up education - City will monitor the schools for compliance.
5	Comply with all state and local notification laws.	Year 1 (every year)	Meeting notices in local papers, newsletter and website	X			City Attorney and City Staff will comply with this activity
2.B Annual Reporting							
1	Annual Reporting				X		The ERC Team will develop and prepare the annual report to be in compliance for the KPDES plan to be discussed via the TAC

4-4 Illicit Discharge Detection and Elimination Element

The goal of the Illicit Discharge Detection and Elimination MCM Element is to prevent non-storm water sources from entering the drainage system and waterways. Achieving the goal of the Illicit Discharge Detection and Elimination MCM depends on the coordinated efforts of all other local agencies.

The public also plays an important role in identifying and reporting incidents of spills or illegal dumping.

Illicit Discharge Detection and Elimination Element Activities - Best Management Practices

Illicit Discharge Detection and Elimination - 3: IDDE Activities

IDDE - 3.A: Program Planning

3.A.1: Program Planning

The City of Cold Spring will utilize the TAC and SWAC to monitor and make changes as appropriate for MCM 3

Program Accountability:

Meeting Summaries of TAC & SWAC

IDDE – 3.B: Legal Authority

3.B.1: Create and Implement an IDDE Ordinance

The City of Cold Spring will create and implement an IDDE ordinance for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing the IDDE ordinance as needed. This includes the IDDE Ordinance.

3.B.2: IDDE Process Manual

The City of Cold Spring will create and implement an IDDE Process Manual for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing the IDDE Process Manual as needed. This includes the IDDE Process Manual.

IDDE – 3.C: Program Development

3.C.1: Begin Development of MS4 Mapping System

The City of Cold Spring will begin to develop the MS4 mapping and GIS system to assist in managing the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing MS4 mapping and GIS as needed. This includes the MS4 Water Quality GIS consisting of themes of graphic information and databases.

3.C.2: Use ArcGIS to Develop MS4 Geographic Information Package

The City of Cold Spring will begin to develop the MS4 mapping and GIS using ARC GIS with managing the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing MS4 mapping and GIS using ARC GIS software as needed. This includes the an MS4 Water Quality GIS consisting of themes of graphic information and databases.

3.C.3: Develop Integrated IDDE Map and Maintenance System

The City of Cold Spring will begin to develop and integrate the IDDE map and maintenance system for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing the IDDE map and maintenance system as needed. This includes the MS4 Water Quality GIS consisting of themes of graphic information and databases. A Maintenance Theme and Database will be included.

IDDE – 3.D: Communications

3. D.1: Training Staff Using KY Stormwater Association Videos

The City of Cold Spring will use the Kentucky Stormwater Association (KSA) videos for training City Staff for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the training videos as needed. This includes the number of training sessions and participants in those sessions.

3.D.2: Educate Public Employees, Businesses and General Public about Hazards Associated with IDDE

The City of Cold Spring will educate the public employees, local businesses, and the general public regarding the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of effectiveness of the training the public staff, local businesses and general public through the survey in Year 3 and Year 5. Measurement will be based on the number, content, and participants in the training and education material and training sessions

IDDE – 3.E: Annual Reporting**3.E.1: Annual Reporting**

The ERC Team will prepare and submit the annual report as required.

Effectiveness Evaluation

The number and types of discharge incidents as well as the number of enforcement actions taken measure the effectiveness of the Illicit Discharge Detection and Elimination MCMs. Assessments will include feedback from drainage maintenance inspectors and other City staff, as well as public comments.

The program accountability (measurable goals), as well as the BMPs, should reflect the needs and characteristics of the MS4 operator and the area served by the MS4. The minimum measurable goals for the permit term may include activities such as the following:

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION							
No.	Activity Description	Permit Year	Program Accountability	Community Responsibility			Notes / Activity Assumptions
				City	ERC	Other	
3.A Program Planning							
1	City Elected Officials and Staff and the ERC Team will utilize the TAC to develop all 3 program ordinances. The ERC Team will develop draft documents to be discussed at the TAC to reach consensus.	Year 1 (every year)	Draft Ordinance outlines	X	X		
3.B Legal Authority							
1	Create and implement an IDDE ordinance.	Year 1	City Council will approve, adopt and enforce all 3 ordinance documents required for the SWQMP	X	X		The ERC Team will develop the 3 draft ordinance documents for discussion and decision making via the TAC
2	IDDE Process Manual	Year 2 and Year 3					This IDDE Process Manual will need to be developed with a similar process used by the ERC Team for all decision making used such as develop Goals Policies Procedures. Plans to detect and address Non Stormwater discharges, checklists, monitoring, sampling protocol, inventory sheets, develop a plan for tracing and analyzing IDDE incidents and there may be additional costs identified in the future that are not included as part of this initial costing process for the KPDES permit and regulations. There are many unknowns at this time and future cost increases are very probable in the future.
3.C Program Development							
1	Begin development of an MS4 storm water mapping system by investigating sources of mapping such as the One Stop Shop or other computerized mapping system.	Year 1	Secure existing Map Products (One Stop Shop)	X	X		The ERC Team will develop a GIS plan for discussion and decision making via the TAC After City Collects the data and joins the One Stop Shop
2	Based upon decision above, use ARC GIS to create an MS4 Geographic Information package.	Year 2 and every year thereafter	Purchase of ARC GIS and set up of existing data	X	X		The ERC Team will begin implementing the GIS plan based on available funding. The assumption is Public Works Department will perform all field work associated with this task
3	Develop Integrated IDDE Map and Maintenance System	Year 3,4,5			X		
3.D Communications							
1	Consider training Public Works staff using the KY Stormwater Association training videos. City will need to join the KSA.	Year 3					
2	Educate public employees, businesses and the general public about the hazards associated with illegal discharges and improper disposal of waste.	Year 3					
3.E Annual Reporting							
1	Annual Reporting				X		The ERC Team will develop and prepare the annual report to be in compliance for the KPDES plan to be discussed via the TAC

4-5 Construction Site Storm Water Runoff Control

The goal of the Construction Site Storm Water Runoff Control MCM is to reduce the discharge of storm water pollutants to the maximum extent practicable (MEP) by: (1) requiring construction sites to reduce sediment in site runoff and (2) requiring construction sites to reduce other pollutants such as litter and concrete wastes through good housekeeping procedures and proper waste management.

Excessive erosion and sediment transport can harm creek habitat through both scour and smothering of spawning areas. The Construction Element conducts outreach activities, development reviews and approvals, and inspections and enforcement at construction sites. This MCM Element also develops and maintains standards for erosion and sediment control. Development reviews and approvals include reviewing site plan documents, applying standard conditions during the entitlement process, and reviewing and approving improvement plans. Appropriate standards are based on research into Best Management Practice (BMP) effectiveness and maintenance requirements.

The Construction MCM also assists in educating the development community and the municipal staff about storm water related construction activity requirements including the existing Storm Water Pollution Prevention Plan (SWPPP) that was previously developed prepared and submitted to KDOW. This outreach is conducted as part of the outreach activities that also address the City's own requirements for construction projects.

The development review process will incorporate storm water requirements for private development projects as well as public projects from the planning process to completion of construction. Resources will also be focused on ensuring that all municipal projects have the tools and procedures in place to effectively comply with City and state requirements. This may include items such as the development of activity-specific BMPs.

Construction Site Storm Water Runoff Control –Best Management Practices

Construction- 4.A: Program Planning

4.A.1: Program Planning

The City of Cold Spring will utilize the TAC and SWAC to monitor and make changes as appropriate for MCM 4.

Program Accountability:

Meeting Summaries of TAC & SWAC

Construction – 4.B: Legal Authority

4.B.1: Legal Authority

The City of Cold Spring will create and implement a Construction Site Runoff ordinance for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing the Construction Site Runoff ordinance as needed. This includes the Construction Site Ordinance.

Construction – 4.C: Construction Site Management

4.C.1: Develop Public and Private Construction Site Runoff Program

The City of Cold Spring will create and implement a Construction Site Runoff program for the both the public and private development and include the Process Manual for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing the Construction Site Process Manual as needed. This is composed of Construction Site Program Documents that will include a construction site GIS theme and database, checklists, inspection forms and site summary reports.

Construction – 4.D: Review and Inspections

4.D.1: Review Current Site Plan Review Procedures for Water Quality Impacts and Enforcement Control Measures

The City of Cold Spring will review the current site plan review process for water quality impacts and enforcement control measure issues for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of reviewing the current site plan review process and enforcement control measures as needed. This will include a Site Plan Review Memorandum.

Construction – 4.E: Communications / Training

4.E.1: Identify and Train Site Runoff Control Inspector

The City of Cold Spring will identify a construction site inspector for construction sites to review water quality issues and enforcement control measure issues regarding the SWQMP.

Program Accountability:

The City of Cold Spring will work with the field inspector for training and reviewing site plans as needed. This includes the number of training sessions and participants in those sessions.

4.E.2: Identify and Train Professional Engineer (P.E.) to Perform Site Plan Review

The City of Cold Spring will identify a Professional Engineer for construction site review for water quality issues and enforcement control measure issues regarding the SWQMP.

Program Accountability:

The City of Cold Spring will work with the engineer for training and reviewing site plans as needed. This includes the number of training sessions and participants in those sessions.

4. E.3: Train and Educate Contractors, Engineers, Public Employees, Businesses and General Public on Site Runoff Control

The City of Cold Spring will train and educate contractors, engineers, public employees, local businesses and the general public for construction aspects of the site plan review for water quality issues and enforcement control measure issues regarding the SWQMP.

Program Accountability:

The City of Cold Spring will continue to work with and train and educate contractors, engineers, public employees, local businesses and the general public for construction as needed. This includes the number of training sessions and participants in those sessions.

4.E.4: Develop Site Runoff Control Manual

The City of Cold Spring will develop a site plan runoff control manual and train and educate contractors, engineers, public employees, local businesses and the general public for construction aspects of the runoff control manual for water quality issues and enforcement control measure issues regarding the SWQMP.

Program Accountability:

The City of Cold Spring will continue to work with and train and educate contractors, engineers, public employees, local businesses and the general public for the runoff control manual as needed.

Construction – 4.F: Annual Reporting

4.F.1: Annual Reporting

The ERC Team will prepare and submit the annual report as required.

4. CONSTRUCTION SITE RUNOFF CONTROL							
No.	Activity Description	Permit Year	Program Accountability	Community Responsibility			Notes / Activity Assumptions
				City	ERC	Other	
4.A Program Planning							
1	City Elected Officials and Staff and the ERC Team will utilize the TAC to develop all 3 program ordinances. The ERC Team will develop draft documents to be discussed at the TAC to reach consensus.	Year 1 (every year)	The Construction Ordinance will be a part of an MS4 Ordinance Package	X The City Attorney will work with	X		
4.B Legal Authority							
1	Develop a Construction Site Runoff ordinance in accordance with the MS4 regulations. This may be part of a total storm water ordinance package that includes IDDE, construction and post-construction.	Year 1	City Council will approve, adopt and enforce all 3 ordinance documents required for the SWQMP	X	X		The ERC Team will develop the 3 draft ordinance documents for discussion and decision making via the TAC
4.C Construction Site Management							
1	Develop a construction site runoff program for public and private development and Include Construction Site Process Manual.	Year 3 and Year 4			X		This Manual will need to be developed with a similar process used by the ERC Team for all decision making used such as develop Goals Policies Procedures Plans to detect and address Non Stormwater discharges, checklists, monitoring, sampling protocol, inventory sheets and there may be additional costs identified in the future that are not included as part of this initial costing process for the KPDES permit and regulations. There are many unknowns at this time and future cost increases are very probable in the future.
4.D Review & Inspections							
1	Review current site plan review procedures for water quality impacts, enforcement control measures. How are current plans approved and how to integrate the MS4 program into the review process.	Year 2			X		
4.E Communications / Training							
1	Identify and train a site runoff control inspector.	Year 1	Hire or name a runoff control inspector and perform first annual training		X		
2	Identify and train a registered Professional Engineer to perform site plan review.	Year 1	Hire or contract a registered Professional engineer for site plan review		X		The ERC Team needs to understand the County process. After we understand this process, the costs will need to be added to the total costs
3	Education and training of contractors and engineers as well as public employees, businesses, and the general public concerning construction site runoff control.	Year 4			X		
4	Develop site runoff control BMP manual.	Year 3 and Year 4			X		
4.F Annual Reporting							
1	Annual Reporting				X		The ERC Team will develop and prepare the annual report to be in compliance for the KPDES plan to be discussed via the TAC

4-6 Post-Construction Storm Water Management in New Development and Redevelopment Element

Post-construction storm water management in areas undergoing new development or significant redevelopment is necessary because runoff from these areas has been shown to significantly affect receiving water bodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction storm water discharges is the most cost-effective approach to storm water quality management.

There are generally two forms of substantial impacts from post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil, grease, pesticides, heavy metals, and nutrients. These pollutants often become suspended in runoff and are carried to receiving waters such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impacts occurs by increasing the quantity of water delivered to the water body during storms. Increased impervious surfaces interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include stream bank scouring and downstream flooding, which often leads to a loss of aquatic life and damage to property.

The City of Cold Spring will develop and implement strategies to include a combination of structural and/or non- structural BMPs appropriate for the community. 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 ensure adequate long-term operation and maintenance of BMPs. The Program calls for the implementation of planning procedures and enforcement controls to reduce the discharge of pollutants after construction is complete from areas of new development and redevelopment that disturbs one acre or more of land (including projects less than one acre that are part of a larger common plan of development).

Post Construction Storm Water Management - Best Management Practices

Post Construction- 5.A: Program Planning

5.A.1: Program Planning

The City of Cold Spring will utilize the TAC and SWAC to monitor and make changes as appropriate for MCM 5

Program Accountability:

Meeting Summaries of TAC & SWAC

Post Construction- 5.B: Legal Authority**5.B.1: Create Post Construction Site Runoff Control Ordinance**

The City of Cold Spring will create and implement a Post Construction Site Runoff ordinance for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing the Post Construction Site Runoff ordinance as needed. This includes the Post Construction Site Ordinance.

5.B.2: Post Construction Process Manual

The City of Cold Spring will create and implement a Post Construction Site Runoff program for the both the public and private development and include the Process Manual for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of developing the Post Construction Site Process Manual as needed. This will include the Post Construction Site Runoff Process Manual.

5.B.3: Review Revise and Update Current Subdivision Regulations

The City of Cold Spring will review the current subdivision regulations and process for water quality impacts and enforcement control measure issues for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of reviewing the current subdivision regulations process as needed. This will include the changes made to the Current Subdivision Regulations.

5.B.4: Establish a Stormwater Credits Program

The City of Cold Spring will establish a credits program that will include water quality aspects for the SWQMP.

Program Accountability:

The City of Cold Spring will update the credits program and BMP's as needed. This will include a Stormwater Credits Manual.

Post Construction- 5.C: Program Development

5.C.1: Design and Implement Structural and Non-Structural BMPs

The City of Cold Spring will implement structural and nonstructural BMP's for water quality impacts and control measure issues for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the structural and nonstructural BMP's as needed. This will include the development of a BMP Manual.

5.C.2: Develop Green Infrastructure Program

The City of Cold Spring will implement Green BMP's for water quality impacts and control measure issues for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the Green BMP's as needed. This will include the development of a BMP Manual.

5.C.3: Develop Program for Long-Term Inspection, Plan Review and Maintenance of Controls

The City of Cold Spring will implement for Long-Term Inspection, Plan Review and Maintenance of Control BMP's for water quality impacts and control measure issues for the SWQMP. The elements of Long-Term Inspection, Plan Review and Maintenance of Controls will be a part of the development of a BMP Manual

Program Accountability:

The City of Cold Spring will measure the results of the Long-Term Inspection, Plan Review and Maintenance of Control BMP's for water quality impacts and control measure issues for the SWQMP as needed. This will include the implementation of the BMP Manual and Long-Term Maintenance Manual.

5.C.4: Develop a Long-Term Maintenance Agreement Document

The City of Cold Spring will develop a Long-Term Maintenance Agreement Document for water quality impacts and control measure issues for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the Long-Term Maintenance Agreement Document as needed. This will include the implementation of the BMP Manual and Long-Term Maintenance Manual.

5.C.5: Develop Site Runoff Control BMP Manual

The City of Cold Spring will develop a site runoff control BMP Manual for water quality impacts and control measure issues for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the site runoff control BMP manual as needed. This will include the development of a BMP Manual

5.C.6: Develop a Post Construction Training Program

The City of Cold Spring will develop a post construction training program for water quality impacts and control measure issues for the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the post construction training program as needed. This includes the number of training sessions and participants in those sessions.

Post Construction- 5.D: Annual Reporting**5.D.1: Annual Reporting**

The ERC Team will prepare and submit the annual report as required.

Effectiveness Evaluation

The effectiveness of the New Development Element will be based on whether on-site and regional storm water quality control measures have been designed, constructed, and maintained according to the developed criteria. Maintenance records, inspection

records, and visual monitoring will provide verification that the control measures are working.

5. POST-CONSTRUCTION RUNOFF CONTROL							
No.	Activity Description	Permit Year	Program Accountability	Community Responsibility			Notes / Activity Assumptions
				City	ERC	Other	
5.A Program Planning							
1	City Elected Officials and Staff and the ERC Team will utilize the TAC to develop all 3 program ordinances. The ERC Team will develop draft documents to be discussed at the TAC to reach consensus.	Year 1 (every year)		X	X	X	
5.B Legal Authority							
1	Create a post construction site runoff ordinance. This may be part of a total storm water ordinance package that includes IDDE, construction and post construction.	Year 1	City Council will approve, adopt and enforce all 3 ordinance documents required for the SWQMP				The ERC Team will develop the 3 draft ordinance documents for discussion and decision making via the TAC... This will include the prohibited discharges, inspection, reviews, enforcement, forms and checklists.
2	Post Construction Process Manual	Year 4 and Year 5					This Manual will need to be developed with a similar process used by the ERC Team for all decision making used such as develop Goals Policies Procedures Plans to detect and address Non Stormwater discharges, checklists, monitoring, sampling protocol, inventory sheets and there may be additional costs identified in the future that are not included as part of this initial costing process for the KPDES permit and regulations. There are many unknowns at this time and future cost increases are very probable in the future.
3	Review, revise and update the existing subdivision regulations document and the zoning ordinance document information for water quality issues.	Year 1		X	X		The City will provide the existing subdivision regulations as well as existing development procedures. The ERC Team will review and provide input regarding the existing subdivision regulations.
4	The City will establish a stormwater credits program.						The ERC Team Normally includes developing a credits program as part of a Engineering & Public Education Program associated with implementing a stormwater utility - City will monitor the schools for compliance
5.C Program Development							
1	Develop and implement strategies which include a combination of structural and/or non-structural BMP's.	Year 6					
2	Develop a green infrastructure program that would retrofit existing development and develop a low impact program for new development.	Year 6					
3	Develop a program for long-term inspection, plan review and maintenance of controls.	Year 2					
4	Develop a long-term maintenance agreement document.	Year 1		X	X		This document refers to all of the new and old Water Quality, Green Infrastructure, Low Impact development and detention/retention ponds identifying a specific entity/person/organizations responsibility to maintain on a regular basis
5	Develop site runoff control BMP manual.	Year 3 or 4					
6	Develop a Post Construction Training Program	Year 2		X	X		
5.D Annual Reporting							
3	Annual Reporting				X	X	The ERC Team will develop and prepare the annual report to be in compliance for the KPDES plan to be discussed via the TAC

4-7 Pollution Prevention/Good Housekeeping for Municipal Operations Element

The City of Cold Spring conducts a limited number of municipal operational and maintenance activities (because they are a small community that does not have a potable water or wastewater program), some of which have the potential to result in discharges of pollutants in runoff or be sources of non-storm water discharges. The goal of the Municipal Operations Element is to reduce these discharges of pollutants in runoff and control non-storm water discharges.

The Municipal Operations MCM Element evaluates activities to identify those that could be significant sources of pollutants in runoff, develops appropriate measures to reduce the discharge of pollutants from these sources to the maximum extent practicable (MEP), and identifies and controls discharges of non-storm water from facilities owned or operated by the City. This MCM Element also conducts operation and maintenance activities that remove pollutants. City operations and maintenance activities provide for the collection and removal of significant quantities of pollutants from storm water runoff. Furthermore, planning efforts provide the opportunity to incorporate water quality features in the design of regional detention basins to provide treatment and removal of pollutants as well as flood and drainage control.

Proposed activities include continued efforts to identify and improve municipal operations that are potentially significant sources of pollutants. Outreach and training are essential to ensure that municipal employees are aware of and able to implement the Municipal Operations MCM Element. Employee education will be conducted. Areas of focus include: (1) equipment maintenance and washing; (2) pesticide application practices; and (3) waste storage and disposal. Development of fact sheets, performance standards, and procedure manuals for common municipal activities will help ensure that pollutant prevention practices are followed. Catch basin cleaning activities will be evaluated to determine effectiveness, and alternatives will be considered to improve pollutant removal. Proposed activities will help protect and improve the habitat of urban creeks.

Municipal Operations and Facilities MCM Activities - Best Management Practices

The purpose of this section is to develop an operation and maintenance program that will prevent or reduce pollutant runoff from municipal operations.

Good Housekeeping – 6: Pollution Prevention and Good Housekeeping

Good Housekeeping – 6.A: Program Planning

6.A.1: Program Planning

The City of Cold Spring will utilize the TAC and SWAC to monitor and make changes as appropriate for MCM 6

Program Accountability:

Meeting Summaries of TAC & SWAC

Good Housekeeping – 6.B: Program Development

6.B.1: Determine Number of Facilities in Cold Spring Service Area

The City of Cold Spring will determine the number of facilities in the city service area

Program Accountability:

The City of Cold Spring will measure the results of the determining the number of facilities as needed. This will be included in the SWPPP.

6. B.2: Stormwater Pollution Prevention Plans (SWPPP)

The City of Cold Spring will utilize the SWPPP provide by KDOW

Program Accountability:

The City of Cold Spring will measure the results of using the existing SWPPP as needed. This will include the Development if the SWPPP.

Good Housekeeping – 6.C: Communications / Training

6.C.1: Develop Training Programs for Pollution Prevention and Good Housekeeping

The City of Cold Spring will develop Training Programs for Pollution Prevention and Good Housekeeping program for water quality issues as they pertain to the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the Develop Training Programs for Pollution Prevention and Good Housekeeping program for water quality issues as they pertain to the SWQMP on an as needed basis. This includes the number of training sessions and participants in those sessions.

6. C.2: Develop a Maintenance Management System

The City of Cold Spring will develop a Maintenance Management System program for water quality issues as they pertain to the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the Development of the Maintenance Management System program for water quality issues as they pertain to the SWQMP on an as needed basis. This includes the MS4 Water Quality GIS consisting of themes of graphic information and databases. A Maintenance Theme and Database will be included.

6. C.3: Develop Training Programs for Businesses and General Public

The City of Cold Spring will develop a Training Programs for Businesses and General Public program for water quality issues as they pertain to the SWQMP.

Program Accountability:

The City of Cold Spring will measure the results of the Training Programs for Businesses and General Public for water quality issues as they pertain to the SWQMP on an as needed basis. This includes the number of training sessions and participants in those sessions.

Good Housekeeping – 6.D: Annual Reporting

6.D.1: Annual Reporting

The ERC Team will prepare and submit the annual report as required.

Effectiveness Evaluation

The effectiveness of the Municipal Operations MCM is dependent on adequate training, resources, and staff to ensure that City operations and facilities are reducing storm water pollution and controlling non-storm water discharges. Assessments will include inspections, review of feedback from staff, and public comments. Public comments may be useful indicators of the consistency and fairness of storm water requirements being established for businesses and residents.

Program Accountability (Measurable Goals)

Program Accountability (measurable goals) is meant to gauge permit compliance and program effectiveness. The measurable goals, as well as the BMPs, should consider the needs and characteristics of the operator and the area served by its MS4. The measurable goals should be chosen using an integrated approach that fully addresses the requirements and intent of the minimum control measure.

6. GOOD HOUSEKEEPING							
No.	Activity Description	Permit Year	Program Accountability	Community Responsibility			Notes / Activity Assumptions
				City	ERC	Other	
6.A Program Planning							
1							
6.B Program Development							
1	City needs to identify and estimate the number of each of the above facilities in the City of Cold Spring service area.	Year 2					
2	Stormwater Pollution Prevention Plans (SWPPP)	Year 2				The City will use the SD1 - SWPPP	
6.C Communications / Training							
1	Develop training programs for pollution prevention and good housekeeping for the facility operators and staff, maintenance managers and staff, public employees.	Year 2		X		The ERC Team will organize a training session with city staff and borrow the Kentucky Stormwater Association (KSA) training video	
2	Develop a water quality program operation and maintenance program to reduce and prevent pollution (Maintenance Management System).	Year 4					
3	Develop training programs for pollution prevention and good housekeeping for the businesses and general public.	Year 7					
6.D Annual Reporting							
1	Annual Reporting	Year 1		X		The ERC Team will develop and prepare the annual report to be in compliance for the KPDES plan to be discussed via the TAC	

5. SWQMP EVALUATION ACTIVITIES

5-1 Introduction

The SWQMP (the Plan) evaluation is an important part of the interactive process for improvement of the City of Cold Spring Storm Water Quality Management Plan (SWQMP) and Program. Selection of appropriate activities and Best Management Practices (BMPs) to reduce pollutants to the maximum extent practicable (MEP) includes evaluation of pollutant removal capabilities, compatibility with environmental regulations, applicability for the City, and cost effectiveness. The successes or problems, including public acceptance, will also be reviewed. Regular evaluations are required and are critical for a variety of reasons:

- Obtain feedback that will allow the City to continually improve the SWQMP (Plan).
- Measure whether SWQMP activities are making progress toward reducing pollution in storm water discharges to the MEP and protecting the beneficial uses of local receiving waters.
- Provide information useful to the community for modifying efforts and evaluating the effectiveness of the City's storm water quality management activities.
- Ensure compliance with the requirements of the City's MS4 Permit.
- Demonstrate that an appropriate level of effort is being expended to implement pollution prevention activities to the MEP.
- Verify that public funds are being utilized appropriately by targeting limited resources for the most significant local environmental problems.

Evaluation activities will always be a part of the City's SWQMP (Plan). The City will be evaluating the activities consistently over the first five year of the Plan. Evaluations will generally be done as the MS4 laws change and are defined over time against water quality degradation.

5-2 Evaluation Strategy

The City recognizes that the ultimate goals of the SWQMP are to reduce storm water pollution to the MEP, eliminate prohibited non-storm water discharges, and protect beneficial uses of local receiving waters. However, evaluating whether the SWQMP is accomplishing these goals presents a difficult task. At this point in time, there are no practicable measurements that can directly correlate the SWQMP accomplishments with water quality in the receiving waters. Several factors preclude a simple evaluation of SWQMP effectiveness. These factors include the following:

- Urban runoff pollution comes from a wide array of diffuse sources in the urban environment.
- The solutions or BMPs used to control storm water pollution are diverse in nature; some act to prevent pollution (e.g., education) and others act to remove pollutants that have already entered the runoff (e.g., detention facilities)

It generally takes years to see the impacts of BMPs. For example, many years of implementing recycling programs were necessary before the public began to change its behavior.

To meet this challenge, the City will establish specific objectives for the SWQMP to make progress toward reducing storm water pollution, eliminating prohibited non-storm water discharges, and protecting receiving waters. On a regular basis, the City will evaluate the ability of SWQMP activities to achieve these standards and reach SWQMP goals by using both performance measures and effectiveness measures:

- **Performance measures** are designed to measure level of effort such as the number of staff assigned to the activity, the number of public events attended, or number of people reached through media campaigns.
- **Effectiveness measures** are intended to measure the degree to which a particular effort is successful. For example, the percentage increase in public awareness is measured by public opinion surveys. In some cases, effectiveness measures can be used to directly assess an activity's environmental benefit. For example, documenting the maintenance and cleaning of catch basins each year shows a measure of pollutants that would have otherwise been discharged downstream to a local creek.

5-3 Program Performance and Effectiveness Evaluation

The City plans to evaluate the SWQMP on three levels:

- Overall SWQMP
- Program MCM
- Activity/BMP

Overall Program evaluation includes assessments of SWQMP (Plan) progress, adequacy of resources to conduct the SWQMP. The SWQMP will be evaluated with consideration given to the effectiveness of the various activities within each MCM. Activity/BMP evaluation includes reporting and assessments specific to the SWQMP MCM and specific activities and BMPs.

5-4 Reporting Performance and Effectiveness Evaluations

The Annual Reports submitted to the KDOW as required in the KPDES permit regulations will describe the goals, activities, and performance/effectiveness measures proposed for the upcoming permit year. They also will document the City's accomplishments in the previous permit year and evaluate progress toward reaching the goals in completing the proposed activities. To provide information for these reports, records and data from various internal agency departments and divisions are compiled

and analyzed. At the end of each permit year, the compiled data from that year will be reviewed and presented to demonstrate the SWQMP performance.

5-5 Continued Program Improvements

On a regular basis, the City will network with other agencies and groups in an effort to stay current about national and statewide storm water efforts and to obtain ideas for continued improvement of the SWQMP. For example, the ERC Team are members of the Kentucky and Ohio Stormwater Association, the Water Environment Federation (WEF), the American Public Works Association (APWA), and NACWA to keep apprised and up to date with the ever changing regulatory environment nationally and in the commonwealth of Kentucky.

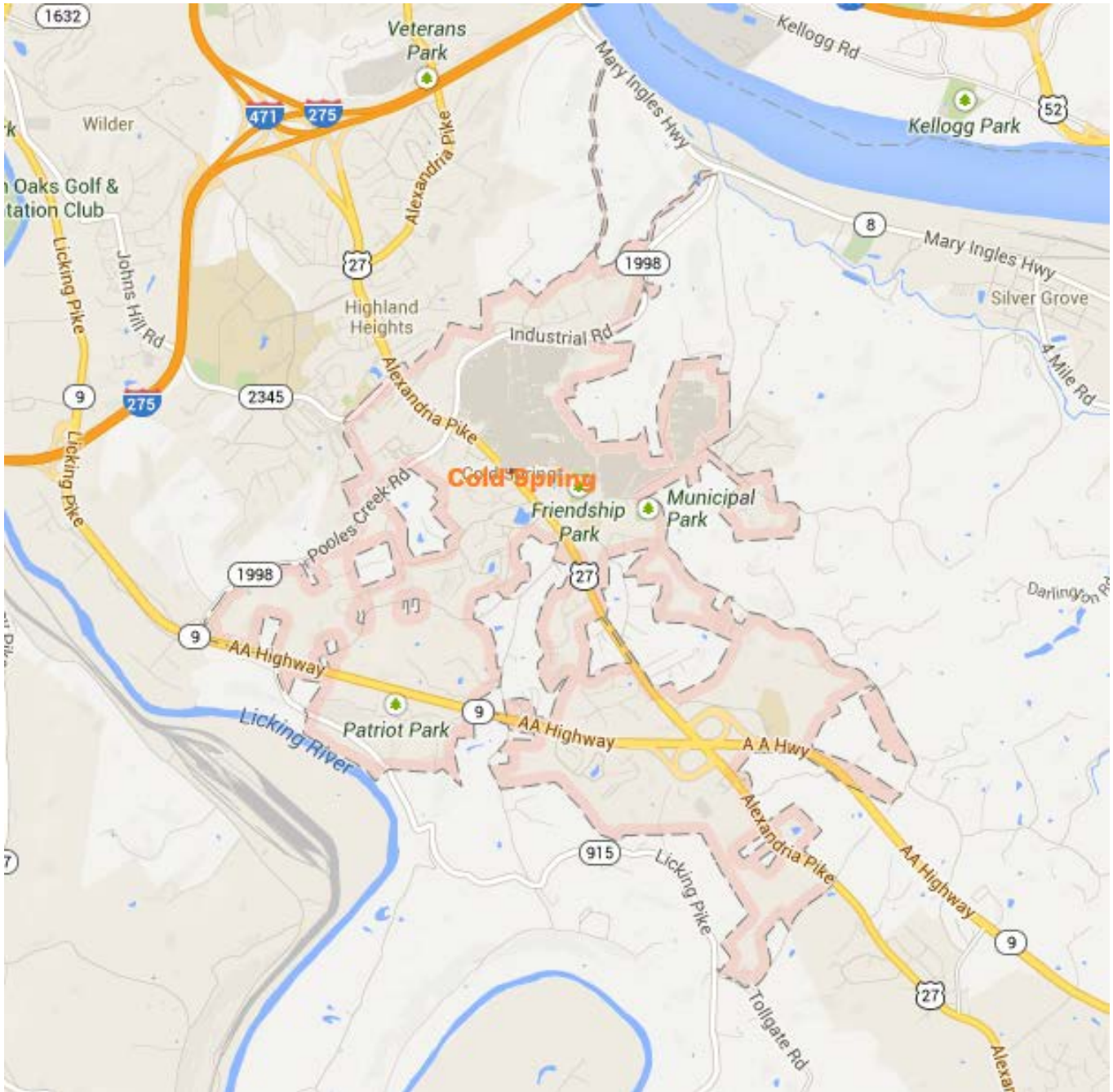
The various types of data provided by these groups include results of BMP effectiveness studies, public awareness surveys, and program evaluations. The evaluation process will allow the City to benefit from experience and use that experience to improve the Program by modifying activities that did not work well, enhancing those that have proven to be effective, and selecting activities and BMPs to address new areas.

APPENDICES

Appendix A – The City of Cold Spring Map of the service area.

Appendix B – The KDOW NOI removing the City of Cold Spring from the SD1 co-permittee agreement and allowing the City of Cold Spring to participate in the MS4 program separate from SD1.

Appendix A – The City of Cold Spring Maps of the SWQMP MS4 Water Quality service area.





Appendix B – The KDOW NOI removing the City of Cold Spring from the SD1 co-permittee agreement and allowing the City of Cold Spring to participate in the MS4 program separate from SD1.



STEVEN L. BESHEAR
GOVERNOR

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LEONARD K. PETERS
SECRETARY

September 11, 2013

Honorable Mark A. Stoeber, Mayor
City of Cold Spring
5694 East Alexandria Pike
Cold Spring, Kentucky 41076-9164

Re: Phase II MS4 General Permit
KPDES No.: KYG200055
AI: 119607
Campbell County, Kentucky

Dear Mayor Stoeber:

Enclosed is the Kentucky Pollutant Discharge Elimination System (KPDES) permit for the above-referenced municipality. Effective **October 1, 2013**, Cold Spring is no longer co-permitted with Sanitation District #1 and is responsible for the Municipal Separate Storm Sewer System (MS4) Program and permit implementation.

The MS4 program is implemented by the development and utilization of a Stormwater Quality Management Plan (SWQMP). Cold Spring is required to submit the SWQMP within six months of the date of this letter. This SWQMP should detail Cold Spring's development and enforcement of the six minimum control measures which are as follows:

- 1.) Public Education and Outreach
- 2.) Public Involvement and Participation
- 3.) Illicit Discharge Detection and Elimination
- 4.) Construction Stormwater Runoff Management
- 5.) Post-Construction Stormwater Runoff Management in New and Redevelopment
- 6.) Pollution Prevention and Good Housekeeping for Municipal Operations.

Please do not hesitate to contact Abigail Rains, MS4 Program Manager at (502) 564-3410, ext.4891, if you have any questions.

Sincerely,

Jory M. Becker, P.E.
Environmental Engineering Branch Manager
Surface Water Permits Branch
Division of Water