

CHRISTIAN COUNTY STORMWATER MANAGEMENT PLAN



Prepared by:
Christian County
Planning Department
1106 West Jackson Street
Ozark, MO 65721
March 2021

CHRISTIAN COUNTY STORMWATER MANAGEMENT PROGRAM

Table of Contents

Purpose and Scope.....	3
General Information about Christian County.....	3
Introduction.....	5
General Permit Requirements.....	6
MCM 1: Public Education and Outreach.....	9
MCM 2: Public Involvement and Participation.....	16
MCM 3: Illicit Discharge Detection and Elimination.....	20
MCM 4: Construction Site Storm Water Runoff Control.....	23
MCM 5: Post-Construction Storm Water Management in New Development and Redevelopment.....	27
MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations.....	34
Monitoring, Record Keeping and Reporting.....	39
Appendices.....	40

CHRISTIAN COUNTY, MISSOURI

APPLICATION FOR STORMWATER PERMITS FOR SMALL MUNICIPAL SEPARATE SEWER SYSTEMS (MS4)

Purpose and Scope

The application for the general permit requires the ongoing maintenance and implementation of our stormwater management program (SWMP) in accordance with the terms of the general permit. The primary purpose of this stormwater management program is the development and implementation of programs throughout Christian County that effectively minimize stormwater pollutant runoff in the various watersheds located within the County. (See Appendix B to view a copy of the Watershed Map for the County).

General Information about the Covered Area

Christian County covers approximately 564 square miles in Southwest Missouri and is bordered by Greene, Lawrence, Stone, Taney, Douglas and Webster Counties. Christian County's northern boundary is situated immediately south of Springfield, the major metropolitan center in Southwest Missouri.

Christian County has experienced continuous and rapid growth since the 1970s, far outpacing the rate of growth for the State of Missouri and the United States. Christian County is on the list of the 100 fastest growing counties in the United States. The County's rate of growth has been explosive since 1990, with the population increasing from 32,644 in 1990 to 77,422 in 2010, a 42.6 percent rate of growth. In migration overwhelmingly accounts for the County's rapid increase in population. Although Christian County is one of the fastest growing counties in the

State of Missouri and is considered part of the Springfield Metropolitan Statistical Area (Greene and Christian Counties), the southern part of the County is predominantly rural, with a large land area being a part of the Mark Twain National Forest.

The vast majority of the County is Unincorporated. Incorporated cities in Christian County include: Billings, Clever, Fremont Hills, Nixa, Ozark, Saddlebrooke and Sparta. Of these cities, Nixa and Ozark are the largest with 2010 populations of 19,022 and 17,870 respectively. Both cities have grown significantly since the 2000 Census with a recent survey suggesting that Nixa has a current population closer to 15,000 people.

Primary access to Christian County is provided by U.S. Highway 65, U.S. Highway 160, U.S. Highway 60 and MO Highway 14. Both Highways 160 and 65 serve as the major north-south routes connecting Nixa and Ozark to Springfield and the ever growing tourism/recreation centers in the Branson and Table Rock Lake areas to the south. MO Highway 14 provides the major east-west access route across the northern third of Christian County, linking the County's various cities and villages.

Christian County has a varied natural environment, ranging from relatively flat lowland areas to rugged hills and valleys. The County is characterized by karst topography. The geologic features of karst, such as sinkholes, lineaments, caves and losing streams, place limitations on development due to the potential for surface contaminants to enter the groundwater supply.

The Christian County Comprehensive Plan recognizes that, "Maintenance of groundwater quality is a critical environmental concern as development proceeds in the County. This concern is reflected in the need for appropriate disposal of sewage and solid waste materials."

INTRODUCTION

As stated earlier, the application for the general permit requires the development of a stormwater management program (SWMP) in accordance with the terms of the general permit. The requirements for the SWMP are set forth in the general permit.

Christian County has a number of programs and ordinances in place that will be a firm building block in fulfilling the Phase II Stormwater Regulation. It is our intention to comply with the policies required by this permit.

Despite the fact that we are the fastest growing County in the State, Christian County has put a number of steps in place to preserve the natural resources that make our county such a desirable place to live. This has been accomplished through the cooperative efforts of the Planning and Development Department, the County Health Department, and the overview by a very dedicated County Commission.

Christian County adopted the Stormwater & Erosion Control Regulations for Christian County, MO on July 8, 2010. Christian County adopted an Illicit Discharge Ordinance on October 31, 2011. (See Appendix D)

GENERAL PERMIT REQUIREMENTS FOR SWMP

Application Requirements for Small MS4's

3 Special Conditions

3.1 Discharges to Water Quality Impaired Waters

Some of the water discharge from the regulated areas of Christian County does enter water bodies that are on the MoDNR 303(d) list of impaired waters. These water bodies that are on the list include the James River and Wilson's Creek. At the present time only the James River has a Total Maximum Daily Load (TMDL) that has been approved by the EPA. Phosphorus is the primary nutrient of concern with approximately 64% of the phosphorus loading coming from municipal wastewater treatment facilities which are independently permitted and regulated. The remaining load is attributed to agricultural and urban runoff and sediment loading. The County, along with Environmental Works, continues to work with the other small MS4s in these watersheds to coordinate efforts to monitor several sites for water quality monitoring. This cooperative monitoring effort is one of the recommendations of the Data Gap Analysis, conducted to identify areas of needed research on water quality in the area. (See Appendix C for a description of the Southwest Missouri Water Quality Improvement Project (WQIP) – Data Gap Analysis).

The pollutants that have been identified by the EPA as approved TMDLs for the James River of most concern are phosphorus and sediment. Christian County has a number of measures currently in place which we feel effectively control runoff from construction sites. Post-construction runoff is specifically addressed in Stormwater and Erosion Control Regulations.

3.1.1 Discharges to Water Quality Impaired Waters

Some discharges from Christian County are upstream of MoDNR 303(d) listed waters.

3.1.1.1 Monitoring Program for Stormwater Discharges to MoDNR 303 (d) Listed Waters

Christian County is currently working with Environmental Works and other area MS4s on a cooperative monitoring program to determine if significant contributions of measurable pollutants exist. Test results are monitored on a quarterly basis.

3.1.1.2 EPA Approved TMDLs

The James River has TMDLs that have been developed by the MoDNR and approved by the EPA. A small area within Christian County's regulated MS4 is upstream of both of these water bodies.

3.1.2 Water Quality Controls for Discharges to Impaired Watersheds

As Christian County begins a cooperative monitoring program it will allow the County to determine if discharges from this small MS4 are contributing significantly to the measurable pollutants of concern. (Phosphorus is the primary nutrient of concern.) As stated in our Stormwater and Erosion Control Regulations, quality BMPs are required in all watersheds within Christian County.

3.1.3 Consistency with TMDL Allocations. *If a TMDL has been finalized for any water body into which Christian County discharges, the County must:*

3.1.3.1 Determine Whether the Approved TMDL is Likely in Stormwater Discharge

The TMDLs are for phosphorus, which is likely to be found in stormwater discharges.

3.1.3.2 Determine a Wasteload Allocation

The TMDL does include a load allocation (LA) for non-point pollution sources, but not specifically for stormwater discharges.

3.1.3.3 Determine if TMDL Addresses a Flow Regime

The TMDL does address a flow regime for stormwater flows.

3.1.3.4 Additional Control Measures

Monitoring will need to be conducted to determine if Las are being met.

3.1.3.5 Current and Planned Control Measures

Christian County has and will continue to adopt a number of regulations and policies which are very effective non-structural BMP's with regard to water quality protection. These current and proposed regulations include:

- Stormwater and Erosion Control Regulations (Appendix D)
- Urban Services Area Agreement (Appendix C)
- Zoning Regulations (Appendix C)
- Comprehensive Plan (Appendix E)
- Floodplain Management Regulations (Appendix D)

3.1.3.6 Cooperative Monitoring Program

Christian County is currently cooperating with both the MoDNR and other area MS4s and has established a regional monitoring program.

3.1.3.7 Additional or Modified Controls

If additional or modified controls are necessary the type and scope of controls will be determined by the results of the water quality monitoring program.

3.2 Duty to Comply

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

4.2 Six Minimum Control Measures:

4.2.1 Public Education and Outreach

4.2.1.1 Permit Requirement: Christian County shall implement a public education program to distribute education materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharge on water bodies and the steps the public can take to reduce pollution in stormwater runoff.

4.2.1.1.1 Target Pollution Sources

Christian County's primary pollutant sources will include residential and commercial development.

4.2.1.1.2 Target Audiences of our education program that can have significant stormwater impacts

Our target audiences will be landowners, architects, engineers, real estate professionals, and contractors.

4.2.1.1.5 Outreach strategy including the type of media we intend to use to reach our target audience and how many people we expect to reach

Being a cooperative partner with other local jurisdictions as well as numerous not for profit organizations whose mission is focused on water quality. We are able to reach a much larger audience with this shared approach. We issue press releases to local newspapers and other local media outlets of these events and encourage their attendance in order to generate additional interest. We also utilize numerous types of printed brochures and flyers to be distributed at expos as well as in our planning office.

4.2.1.1.6 Evaluation of the success of this approach

By tracking attendance to these events as well as the number of educational materials that we distribute.

4.2.1.2 Decision Process

The decision process is documented in the ensuing paragraphs.

4.2.1.2.1 Plans to Inform Individuals & Households of Steps to Reduce Stormwater Pollution

Christian County has provided its citizens and business and property owners with stormwater education and outreach, through cooperative efforts between the Christian County Planning and Development Department, the Greene County Resource Management Department, the city of Nixa, the city of Ozark, the James River Basin Partnership (JRBP), the Watershed Committee of the Ozarks, the Christian County Soil and Water Conservation District (SWCD), the Natural Resources Conservation Service (NRCS) and Environmental Works. All entities expect continued success as additional target audiences are identified and modifications to the current program are phased in.

The focus of these education efforts, both past and in the future, will be to educate the public concerning stormwater discharges and their relative impacts on storm water quality, as well as informing the public of measures they can take to reduce pollutants in storm water runoff. As stated earlier, the Christian County Planning and Zoning Department, has and will continue to work with the Greene County Resource Management Department, the city of Nixa, the city of Ozark, the James River Basin Partnership (JRBP), the Watershed Committee of the Ozarks, the Christian County Soil and Water Conservation District (SWCD), the Natural Resources Conservation Service (NRCS) and Environmental Works to provide a public education and outreach program to its citizens, businesses and property owners.

Much of Christian County is considered a sensitive karst region. The north central and northwestern parts of the county have been classified by the MoDNR as a sensitive area for well construction due to the karst topography. This is also the area that falls directly under this regulated small municipal storm sewer system program. Due to these factors, water quality protection has historically been of the utmost importance. In the early 1980's the Watershed Committee of the Ozarks was born out

of the recommendation of a Springfield/Greene County Watershed Task Force. The Watershed Committee of the Ozarks is funded in part by Greene County and therefore the majority of its efforts take place in the County immediately to our north. But the Watershed Committee of the Ozarks has provided the Christian County Planning and Development staff with information and educational materials which are distributed to the public by the County staff and are used to educate and inform these members of the public about water quality issues.

As concerns over water quality in Table Rock Lake grew in the 1990's Christian County joined other counties and cities within the James River Watershed in the formation of the James River Basin Partnership. The James River Basin Partnership's mission is to implement programs that positively impact water quality and to increase citizen awareness and participation in water quality issues. These goals are accomplished through a variety of programs, grant projects and other initiatives. Some of the recent and current programs of the James River Basin Partnership include the following:

- 1. County Wide Watershed Festivals:** The Christian County Planning and Development Department works in conjunction with the James River Basin Partnership, the University of Missouri Extension, the Missouri Department of Conservation, the local NRCS Office and a number of other agencies and volunteers to offer a County Wide Watershed Festival to 5th grade students in school districts throughout Christian County. The watershed festivals reach over 1200 students, teachers and volunteer chaperons annually. Students participating in this half-day event have the opportunity to visit five interactive stations, each dealing with an aspect of water quality, watersheds, conservation, groundwater, and point/non-point pollution. Following the tour of the educational stations, the students are tested on the information presented. Post surveys completed by teachers indicated that 75% of the students gained new information.
- 2. Septic Pump-Out Program:** This is a cost share program where participants are offered a monetary incentive for participation in the pump-out program. The primary goal of this program is to prevent septic tank failures and impending water pollution. Through this program each homeowner is also visited by a representative from the JRBP or the Table Rock Lake Inc. and given a packet of educational

information. JRBP's "Get Pumped" program has helped to keep over a million gallons of effluent from ever reaching our waterways.

- 3. Rain Gardens Implementation:** The James River Basin Partnership has established a number of demonstration rain gardens throughout Greene and Christian Counties which encourage homeowners to install rain gardens as a means of reducing stormwater runoff and pollution, while also encouraging water conservation. Using funds from the Stormwater 319 grant awarded through the Missouri Department of Natural Resources, they worked with the Ozark Environmental Water Resource Institute (OEWRI) to study local effects of rain gardens. Partnering with residences in Park Hill Subdivision in Nixa. A monitoring station was placed to collect stormwater samples coming from the subdivision. Then 15 rain gardens were implemented and post data was collected.
- 4. Annual River Rescue:** Volunteers are organized for this annual James River clean-up and benefit concert. Information on water quality issues is also distributed at the benefit concert that follows the river clean-up.
- 5. Urban lawn-testing Program:** A JRBP representative collects a soil sample from the lawn participants. The soil sample is analyzed by a state soil testing laboratory. The JRBP staff along with the NRCS prepares an urban fertilizer plan for their yard based on a soil test. All residents of the James River Basin are eligible for this program.

The Christian County Soil and Water Conservation District (SWCD) has been involved in a number of stormwater education and outreach efforts throughout the County. The Christian County Soil and Water Conservation District (SWCD) is a board of vested stakeholders who provide leadership for environmentally sound stewardship of natural resources in the county with the goals of promoting voluntary participation of landowners and citizens in District programs by informing, educating and motivating them to use land and water in ways that will insure supplies of these resources for the future.

- 1. Ground Water Demonstrations:** The Information-Education Specialist with the Christian County Soil and Water Conservation District has used a Ground Water Flow Model purchased from Iowa

State University to complete a number of stormwater demonstrations in elementary and middle school classrooms throughout the County.

The Environmental Division of the Christian County Health Department conducts training seminars every two months for on-site wastewater installers, for whom certification is required to do work in the County.

Each of the organizations mentioned above plays an active and effective role in public education and outreach, providing a strong framework of existing initiatives for this required minimum control measure.

Besides being directly involved with many of the efforts listed above the Christian County Planning and Development staff have been active in public education and outreach activities. It is our intent to continue to form a working relationship with our local school districts in order to provide educational handouts and classroom activities to promote stormwater and environmental impact education. Some of the recent, on-going and planned programs of the Christian County Planning and Development Department include the following:

- 1. County Wide Watershed Festivals:** The Christian County Planning and Development Department works in conjunction with the James River Basin Partnership, the University of Missouri Extension, the Missouri Department of Conservation, the local NRCS Office and a number of other agencies and volunteers to offer a County Wide Watershed Festival to 5th grade students in school districts throughout Christian County. The watershed festivals reach over 1200 students, teachers and volunteer chaperons annually. Students participating in this half-day event have the opportunity to visit five interactive stations, each dealing with an aspect of water quality, watersheds, conservation, groundwater, and point/non-point pollution. Following the tour of the educational stations, the students are tested on the information presented. Post surveys completed by teachers indicated that 75% of the students gained new information.
- 2. Informational Guides:** BMP informational guides developed by the MoDNR, the EPA, the Watershed Committee of the Ozarks, the James River Basin Partnership, the Christian County Soil and Water Conservation District, the NRCS, and other entities are provided to

developers, builders, and the general public throughout the subdivision and building process.

- 3. Stormwater and Erosion Control Seminars:** The Christian County Planning and Development Staff in conjunction with other area MS4's have been active in attending several Stormwater and Erosion Control seminars, as well as inviting local contractors and developers to these functions.

The County plans to continue and expand upon all of these efforts to both meet the requirements of the permit and improve the quality of the area's water resources.

4.2.1.2.2 Plans to Inform Individuals & Groups on Becoming Involved in the Stormwater Program

The programs mentioned above such as the JRBP's annual River Rescue and the Christian County SWCD's ground water demonstrations will help to fulfill this permit requirement.

4.2.1.2.3 Target Audiences

The target audience for our stormwater education program is very diverse. The Planning and Development Department will continue to train contractors and builders on soil and erosion control regulation and installation. The Planning and Development Staff works directly in conjunction with the James River Basin Partnership, the University of Missouri Extension, the City of Branson, the Missouri Department of Conservation, the NRCS and a number of other agencies to put on a County-Wide Watershed Festival for 5th grade students throughout the County. Through this Watershed Festival school age children are taught about the need to protect water quality, since they will be managing stormwater in the future. By providing education to children, homeowners, developers, engineers, and contractors we hope to improve the quality of not just stormwater but all of our water resources.

4.2.1.2.4 Target Pollutant Sources

All of the above organizations and programs are aimed at reducing sediment and nutrients in surface and groundwater.

4.2.1.2.5 Outreach Strategy

These programs utilize brochures, pamphlets, educational workshops, speaking presentations, and media advertisements to get the message out to the public. The JRBP's County-Wide Watershed Festivals reach thousands of students, teachers and volunteer chaperons. The County Health Department has also reached nearly every septic installer in the county.

4.2.1.2.6 Responsible Parties

The Christian County Planning and Development Department is responsible for the management and implementation of the stormwater program. Although the Planning and Development Department is ultimately responsible for the management and implementation of this program, we must work in cooperation with several of other entities in order to effectively implement a number of the activities and programs. The Planning and Development department will continue to work with Greene County, the City of Nixa, the City of Ozark, the James River Basin Partnership, the Watershed Committee of the Ozarks, the Christian County Soil and Water Conservation District, the local NRCS Office, Environmental Works and others in order to attain the best management program possible.

4.2.1.2.7 Evaluation

The best measurable goal for the Public Outreach and Education Control Measure is to document the number of people reached by the education program.

The Watershed Committee of the Ozarks has begun keeping track of the number of attendees at each educational program (see Appendix A).

The Christian County Health Department currently keeps an up-to-date list of state and county certified on-site wastewater installers. The Health Department also documents the number of installers trained per year.

4.2.2 Public Involvement/Participation

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

4.2.2.2 Decision Process

The decision process is documented in the ensuing paragraphs.

4.2.2.2.1 Public Involvement in the Development of the Stormwater Program

All development which takes place within the unincorporated areas within Christian County must meet the required regulations of the Christian County Zoning Regulations and the Christian County Stormwater and Erosion Control Regulations. Both the Zoning Regulations and the Stormwater and Erosion Control Regulations were adopted on July 8, 2010 and became effective on August 9, 2010. This replaced our previous regulations, the Unified Development Codes (UDC). Under the UDC, the Stormwater and Erosion control regulation were a section of that document. With the adoption of these new regulations, it is now its own separate document.

The annual budget has and will continue to include a line item for Phase II Stormwater Management implementation. The budget is considered and adopted by the Christian County Commission. The budget is reviewed in public hearings which are open for public comment and review. A copy of the budget can be obtained from the Christian County Commission Office, 100 West Church Street, Ozark, Missouri 65721. (A copy of the 2007 Christian County Planning and Zoning Department Budget can be found in Appendix I. The 2008 budget is under consideration by the Christian County Commission at this time.)

On August 7, 2007, the voters of Christian County approved County Wide Building Codes. The County has adopted the 2006 International Building Codes. The County Commission has appointed a Building Commission. County-wide Building Codes went into effect in 2008, in

which all new construction will be inspected after a specific effective date. A Building Regulations Department was also formed in 2008 and works jointly with the Planning and Development Department to ensure that specific requirements relating to stormwater are met including both pre and post-construction stormwater management.

4.2.2.2.2 Plan for Continued Public Involvement in the Development and Implementation of the Program

As Christian County continuously works to improve its Stormwater Management Program the Stormwater & Erosion Control Regulations will require modifications. These future revisions will be held to the same high standards of public notice and input. Any revisions to the Stormwater & Erosion Control Regulations, the Building Codes or any other County regulations will be submitted to the general public, the local engineering community and the local development and building community.

4.2.2.2.3 Target Audiences

Christian County has attempted to identify and target as many stakeholder groups as possible, for involvement in the overall stormwater management program and any modifications that are made to it. The primary target audiences involved in the program are:

- *Citizens*
- *Engineers*
- *Builders/Developers*
- *Students*
- *Business Leaders*
- *Watershed Partnership Groups*
- *Local Government Officials*
- *Missouri State University (OEWRI)*
- *Environmental and Conservation Groups*
- *Mass Media*

4.2.2.2.4 Types of Public Involvement Activities

A number of different types of activities have been used to involve the target audiences listed above.

The James River Basin Partnership (JRBP) has conducted a series of stakeholder meetings with citizens residing within each of the James River's six sub-watersheds. These stakeholder meetings are designed to collect citizens input concerning the development of a watershed management plan for each of the six sub-watersheds. These six management plans have been combined in order to create a basin wide watershed management plan. A draft plan has been submitted to the Missouri DNR. The action plans of many of the sub-basin plans have focused on stormwater related issues.

The JRBP also conducts an annual James River clean-up and benefit concert.

The JRBP is also responsible for promoting the use of rain barrels, septic tank pumping initiatives, urban lawn testing and other demonstration projects which help to involve the citizens directly in the protection of our ground and surface water resources.

The Christian County Soil and Water Conservation District has also conducted a series of stakeholder meetings with citizens residing within the Finley River Watershed. These stakeholder meetings were designed to collect citizens input concerning the development of a watershed management plan. As with the JRBP, the action plans have focused on a number of stormwater related issues.

4.2.2.2.5 Parties Responsible

The Christian County Planning and Development Department is responsible for the management and implementation of the stormwater program. Although the Planning and Development Department is ultimately responsible for the management and implementation of this program, we must work in consultation with several of other entities in order to effectively implement a number of the activities and programs. The Planning and Development department will continue to work with Greene County, the City of Nixa, the City of Ozark, the James River Basin Partnership, the Watershed Committee of the Ozarks, the Christian County Soil and Water Conservation District, the South Missouri Water Quality Project of the NRCS, the Ozarks Environmental and Water Resources Institute (OEWRI) and others in order to attain the best management program possible.

4.2.2.2.6 Evaluation

Through the combined efforts of Christian County, the James River Basin Partnership, the Christian County Soil and Water Conservation District and a number of other groups this program complies with state and local public notice requirements. The Christian County Planning and Development Department will strive to involve all of the identified target groups in the various aspects of this Stormwater Management Plan.

4.2.3 Illicit Discharge Detection and Elimination

4.2.3.1 Permit Requirement: *Christian County shall develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in 10 CSR 20-6.200) into Christian County's regulated small MS4;*

4.2.3.1.1 Illicit Discharge Program

Christian County adopted an Illicit Discharge Ordinance on October 31, 2011 which will be included as Appendix B of the Christian County Stormwater and Erosion Control Regulations.

4.2.3.1.2 Storm Sewer System Map

Christian County has no storm water system per se. The County has developed a map showing the location of outlets of storm systems from the City of Nixa and the City of Ozark which are located within the regulated MS4 as well as the major outfalls for streams and tributaries in the unregulated parts of the county. This map also contains the locations and names of all waters of the State that receive discharges from these outlets. This map has been incorporated into Christian County's GIS system and can be found in the front pocket of the MS4 Stormwater Plan.

4.2.3.1.3 Regulatory Mechanisms Prohibiting Illicit Discharge

Our Illicit Discharge Ordinance, adopted in 2011, as well as the Christian County Building Codes (2006 International Building Codes) address this issue. These regulations include requirements for discharges and connections which are permitted and prohibited to the storm drainage system or to surface waters, as well as enforcement and penalty provisions for violations. The Christian County Health Department has adopted regulations for on-site septic systems.

4.2.3.1.4 Illicit Discharge Detection

Reported actions are inspected by the Code Enforcement/Environmental Officer and remedies are sought by compliance or other actions. Illegal dumping complaints are investigated by the Christian County Sheriff's Department, the Christian County Health Department or the MoDNR. The County Emergency Management Office is involved with hazardous or

suspicious materials. The county also works with neighboring jurisdictions to be on the lookout for sources of Illicit Discharge.

4.2.3.1.5 Informing the Public

Septic system installers must obtain a biennial certification from the Christian County Health Department. A written examination is required for certification. The Health Department provides certification training classes for on-site wastewater system installers.

4.2.3.1.6 Non-significant Contributors

None of the following discharges are known to be a significant contributor of pollutants to Christian County's MS4:

- *Landscape irrigation or rising groundwater*
- *Uncontaminated groundwater infiltration (as defined in 10 CSR 20-6.200)*
- *Uncontaminated pumped groundwater*
- *Discharges from potable water sources including waterline flushing and fire hydrant testing, foundation drains and air conditioning condensation*
- *Springs*
- *Water from crawl space pumps*
- *Footing drains*
- *Lawn watering*
- *Flows from riparian habitats and wetlands*
- *Street wash water*

4.2.3.1.7 Other Non-significant Contributors

At this time Christian County has not yet addressed any occasional incidental non-stormwater discharges.

4.2.3.2 Decision Process

The decision process is documented in the both the previous and ensuing paragraphs.

4.2.3.2.1 Development of a Storm Sewer Map

Christian County has no storm sewer systems per se but the Planning and Development Staff have completed a map showing outfalls coming into the County from the cities of Nixa and Ozark along with the major stream

outfalls leaving the County's boundary. (A copy of the map has been provided with this MS4 Stormwater Permit.)

4.2.3.2.2 Regulatory Mechanism

Reported violations are inspected by the County's Environmental Inspector. Subsequent penalties for violations are included in the County's Illicit Discharge Ordinance.

4.2.3.2.3 Implementation of Illicit Discharge Regulatory Mechanism

Currently, reported actions are inspected by our Environmental Inspector and remedies are sought by compliance with the County's Illicit Discharge Ordinance. The penalties for violations are specified in the ordinance.

4.2.3.2.4 Plan to Detect and Address Illicit Discharges

At present, Christian County does not have sufficient staff to perform dry weather screening of major outfalls.

4.2.3.2.5 Public Information

This requirement is addressed by several JRBP and WCO programs that include discussions of no-point sources of stormwater pollution. We will develop programs to inform County employees of the hazards associated with illegal discharges and improper waste disposal.

4.2.3.2.6 Parties Responsible

The Christian County Planning and Development Department is responsible for the management and implementation of the stormwater program. Although the Planning and Development Department is ultimately responsible for the management and implementation of this program, we must work in consultation with several of other entities in order to effectively implement a number of the activities and programs.

4.2.3.2.7 Evaluation

One of the best current measures of success are the numbers of sanitary sewer permits issued and the on-site wastewater system inspections conducted by the Environmental Division of the Christian County Health Department. Other measures of success include the number of wastewater and solid waste complaints that are successfully resolved and the number of filing septic systems that are successfully repaired annually.

4.2.4 Construction Site Stormwater Runoff Control

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

4.2.4.1.1 Regulatory Mechanism – Erosion and Sediment Controls

On July 8, 2010, Christian County adopted the Stormwater and Erosion Control Regulations originally adopted as Chapter 19 of the Unified Development Codes. These regulations apply to all non-agricultural land disturbance of over one acre. At this time, there are no regulations for a development disturbing a land area of under one acre (43, 560 Sq. feet) unless it is deemed necessary due to topographic considerations. These regulations deal in great detail with issues concerning both stormwater quantity and quality and became effective on August 9, 2010. In order to obtain a Soil and Erosion Control Permit through the County, the applicant must provide a sediment and erosion control plan that must be prepared by and bear the seal of an engineer, land surveyor, architect, landscape architect or geologist registered to practice in the state of Missouri or by a Certified Professional in Erosion and Sediment Control (CPESC).

Christian County has a locally approved program for construction site runoff control under a general permit from the Missouri Department of Natural Resources. Any land disturbance activity disturbing more than one acre requires a land disturbance permit from the Missouri DNR as well a Christian County Soil and Erosion Control permit. Construction site stormwater runoff control is administered and enforced by the Christian County Planning and Development Department. This department consists of

five employees: The administrator, one senior planner, one administrative clerk, one secretary, and one code enforcement/stormwater inspector.

4.2.4.1.2 Requirements - Implementation of Best Management Practices

Prior to issuance of a County soil and erosion control permit the applicant/developer must first submit an engineering plan which is reviewed by both county personnel and Great River Engineering (The County's contract engineer).

4.2.4.1.3 Requirements for Other Construction Site Wastes

Construction site operators are required to follow the SWPPP regulations to control other wastes. Wastes required to be controlled include discarded building materials, concrete truck washouts, chemicals, litter and sanitary waste.

4.2.4.1.4 Site Plan Review

All site plans are reviewed for approval by the Planning and Development Administrator and/or the Senior Planner. The soil and erosion control plan is reviewed by the Planning and Development Administrator and/or the Senior Planner in direct consultation with the County Engineer.

4.2.4.1.5 Receipt and Consideration of Public Information

All new commercial land use requests or major subdivisions (subdividing a tract of land into over 3 lots) must be presented through a series of public hearings before the Christian County Planning Commission. All neighboring property owners within 1000 feet of the proposed development are contacted first by a regular mailing, prior to the Pre-application Conference and later by a certified mailing prior to the first Public Hearing before the Planning Commission. These Public Hearings are also advertised in the local paper and are posted on-site 15 days prior to the public hearing. All of these notice requirements are per Missouri State Statutes governing public hearings. These hearings are a forum for the public to provide any relevant information for any and all proposed developments.

4.2.4.1.6 Procedures for Site Inspection and Enforcement

All land disturbance sites are inspected on a regular basis by the Code Enforcement/ Environmental Inspector as a part of their required job duties.

4.2.4.2 Decision Process

As stated earlier, on April 29, 1996, Christian County adopted a Soil and Erosion Control Section to the Unified Development Codes (Chapter 19). On July 8, 2010, Christian County adopted the Stormwater and Erosion Control Regulations originally adopted as Chapter 19 of the Unified Development Codes. These regulations apply to all non-agricultural land disturbance of over one acre. At this time, there are no regulations for a development disturbing a land area of under one acre (43, 560 Sq. feet) unless it is deemed necessary due to topographic considerations. These regulations deal in great detail with issues concerning both stormwater quantity and quality and became effective on August 9, 2010. In order to obtain a Soil and Erosion Control Permit through the County, the applicant must provide a sediment and erosion control plan that must be prepared by and bear the seal of an engineer, land surveyor, architect, landscape architect or geologist registered to practice in the state of Missouri or by a Certified Professional in Erosion and Sediment Control (CPESC).

4.2.4.2.1 Regulatory Mechanism Requiring Erosion and Sediment Controls

The Stormwater and Erosion Control Regulations require sediment and erosion controls as applicable at construction sites. These can be found in Appendix E.

4.2.4.2.2 Plan to Ensure Compliance Including Enforcement

Inspection requirements and penalties for violation are found in the Stormwater and Erosion Control Regulations.

4.2.4.2.3 Requirements for Construction Site Operators

Construction site operators must follow the requirements of the SWPPP as mandated by the United States Environmental Protection Agency.

4.2.4.2.4 Consideration of Potential Water Quality Impacts During Site Plan Review

As previously stated, all site plans are reviewed for approval by the Planning Administrator and/or the Senior Planner. The soil and erosion control plan is reviewed by the Planning Administrator and/or the Senior Planner in

direct consultation with the County Engineer (Great River Engineering). See Appendix D for current submittal and review procedures and Appendix E for the Stormwater and Erosion Control Regulations.

4.2.4.2.5 Procedures for Receipt and Consideration of Public Information

As required by Chapter 64 of the Missouri Revised Statutes, the Christian County Planning Commission is required to hold public hearings when considering commercial land use requests or major subdivisions (subdividing a tract of land into over 3 lots). See the procedure described above in Section 4.2.4.1.5.

4.2.4.2.6 Procedures & Requirements for Site Inspections

The procedures and requirements for site inspections by the Christian County Staff are set forth in the Stormwater and Erosion Control Regulations. The Code Enforcement Officer/Environmental Inspector conducts inspections of sediment and erosion control measures. In addition, construction site operators are required under the requirements of the MoDNR issued land disturbance permit to perform weekly and post rainfall self-inspections of erosion control measures.

4.2.4.2.7 Parties Responsible

The Christian County Planning and Development Department is responsible for the management and implementation of the stormwater program. Although the Planning and Development Department is ultimately responsible for the management and implementation of this program, we must work in consultation with several of other entities in order to effectively implement a number of the activities and programs.

4.2.4.2.8 Evaluation

The success of this minimum control measure can be evaluated in part by the number of County soil and erosion control permits issued per year and the number of those sites that require a MoDNR land disturbance permits. But success can also be measured by the number of inspections that have been completed by the county staff through the year and the number of soil and erosion control permits that are successfully closed.

The following actions will be needed:

- Develop and formalize reporting procedures.
- Define measurable goals for the BMPs.

- Coordinate requirements with the TMDLs established for the James River.

4.2.5 Post Construction Stormwater Management

4.2.5.1.1 Permit Requirement: *Christian County shall develop, implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development of sale, that discharge into the Christian County's small MS4. The County's program shall ensue that controls are in place that would prevent or minimize water quality impacts;*

4.2.5.1.2 Development and Implementation Strategies

In the past, Christian County's regulations and requirements traditionally focused primarily on temporary stormwater management BMP's for construction sites. With the adoption of the Stormwater and Erosion Control Regulations the County also plans for the design, construction, operation and maintenance of permanent stormwater management facilities.

Christian County being in a highly sensitive geological area has been the site of several recent studies on water run off and water quality. The Ozarks Environmental and Water Resources Institute (OEWRI) through Missouri State University and some members of the Watershed Committee of the Ozarks are and have been working in our County and are providing information in these areas.

Christian County will develop and implement strategies, which include a combination of structural and non-structural BMP's. We have adopted the following definitions of non-structural and structural BMP's:

Non-structural BMP's include practices which affect stormwater quality by activities and requirements which do not include construction of stormwater facilities per se. Examples of non-structural BMP's are public education, standards for land use planning and design, etc.

Structural BMPs are those which result in the actual construction of a stormwater management facility. Permanent structural BMPs include

extended detention basins, bioswales, vegetative filter strips, sand filters, etc. Structural BMP's may be "hard" (a concrete sand filter chamber, for example or "soft" (bio-swale, vegetative filter strip) depending upon their design and application.

4.2.5.1.3 Mechanism for Addressing Post-Construction Runoff

As of 2008, all new developments in Christian County will be required to provide stormwater detention to limit post-construction peak discharges to the pre-construction rate or lower as a part of the Stormwater and Erosion Control Regulations. (Appendix E)

4.2.5.1.4 Operation and Maintenance of Best Management Practices

At present the County only provides operation and maintenance for permanent stormwater facilities located on County road right-of-way. Operation and maintenance for permanent stormwater facilities located on private property are the responsibility of the property owner. For commonly owned private facilities, the Zoning Regulations include requirements for the formation of either home owners' or property owners' association and mandatory collection of dues to provide for operation and maintenance of stormwater facilities. Covenants including the formation of the association must be provided to the Planning and Development department prior to even being placed on the Planning Commission Agenda. All permanent BMP's are required to be located within one single lot where maintenance is the property owner's responsibility, or in dedicated common space where maintenance is the responsibility of the homeowner's association. The Stormwater and Erosion Control Regulations address permanent BMP operation and maintenance (Appendix D).

To more adequately address the long-term operation and maintenance of permanent stormwater BMP's Christian County is investigating long term funding options to enable the County to play a greater role in stormwater system maintenance.

4.2.5.1.5.1 Policies which direct growth to identify areas and to protect sensitive areas

Our floodplain ordinance does not allow development in the 100 year floodplain, our stormwater regulations address setbacks and protection of streams, sinkholes, caves, springs, faults and fracture trends, and wetlands.

4.2.5.1.5.2 Policies that encourage development in higher density areas

with sewer infrastructure

Christian County has an Urban Service Agreement with Nixa and Ozark, our two largest cities. This encourages development within these areas, providing sanitary sewer services.

4.2.5.1.5.4 Policies to minimize impervious surface area

Maximum impervious surface is addressed in the Stormwater regulations and the use of grass swales, vegetative filter strips, or other Best Management Practices are encouraged. Also preservation of open space is encouraged by the PUD zoning classification.

4.2.5.1.6.1 Practices that provide or re-use such as grass swales

Addressed in Stormwater Regulations, also our Building Regulations address and allow the use of green roofs and other green building methods.

4.2.5.2 Decision Process

The decision process is documented in both the previous and ensuing paragraphs.

4.2.5.2.1 Discharge Requirement for Stormwater Detention

As stated above all new developments in Christian County are required in the Stormwater and Erosion Control Regulations to provide stormwater detention to limit post-construction peak discharges to the pre-construction rate or lower.

4.2.5.2.2 Tailoring the Program

As of 2008, all new developments in Christian County will be required to provide stormwater detention volume for the 100 year storm event with discharge rates of all required frequencies (2, 10, and 100 year) not to exceed the pre-developed conditions.

4.2.5.2.3 Non-Structural Best Management Practices

Christian County has adopted a number of regulations and policies which are very effective non-structural BMP's with regard to water quality protection. These include:

- Comprehensive Plan (Appendix E)
 - Sets the goals of the County including general environmental and water quality policies.
- Zoning Regulations (Appendix C)
- Urban Services Area Agreement (Appendix C)

- Encourages urban level growth near established infrastructure.
- Floodplain Management Regulations: (Appendix D)
 - Regulates all development within a FEMA Floodplain area.
- Stormwater and Erosion Control Regulations (Appendix D)
 - Sets specific standards for stormwater system design and erosion control.

4.2.5.2.3.1 Policies and Ordinances that Direct Growth

Currently, high density development is allowed only in areas that can be served by both municipal sewer and water services. In order for an application to even be placed on the Planning Commission Agenda a high density development must connect to municipal services. Only lots greater than 3 acres are allowed to have on-site waste water systems. This greatly encourages centralized growth around already urbanized areas where sanitary sewer can be easily extended. Christian County is in the process of enacting an Urban Service Area Policy which would require all developments that are contiguous to the city and within 300 feet of municipal services to begin annexation procedures with the city in question. All developments within the Urban Service Area of a municipality but outside of the 300 foot service requirement would receive a negative score in the scoring process when seeking approval before the County Planning Commission. This plan has already undergone public hearings and a vote by the Planning Commission and must now be voted on by the County Commission at a public hearing.

4.2.5.2.3.2 Policies or Ordinances that Encourage Infill Development

See the proposed Urban Service Area Policy and the Zoning Regulations (Appendix F and D respectively). Both mechanisms help to limit high density growth to areas close to existing infrastructure.

4.2.5.2.3.3 Education Programs Concerning Project Design

The James River Basin Partnership has established a number of demonstration rain gardens throughout Greene and Christian Counties which will encourage homeowners to install rain gardens as a means of reducing stormwater runoff and pollution, while also encouraging water conservation. The JRBP has recently implemented a demonstration rain garden at the 4-H building in Ozark and plans to implement a series of 16 rain gardens in a

Nixa subdivision. This Nixa subdivision project will involve the monitoring of the reduction of stormwater with automatic samplers.

The water retention area at the Common One District contains a vegetative filtering system which was designed by the County Engineer to remove a number of pollutants through the use of cattails and other plants that remove pollutants from the stormwater runoff. The County will have to investigate sources of funding

4.2.5.2.3.4 Other Measures

Specific standards for development in sinkhole areas and around karst features are a part of the Stormwater and Erosion Control Regulations (see Appendix E).

An issue that we feel needs to be addressed is the stability of stream channels in urban and urbanizing areas. We feel that urban stream channel erosion is likely a significant contributor to water quality impairment.

4.2.5.2.4 Structural BMPs

4.2.5.2.4.1 Storage Practices

The soils in Christian County are generally not suited for standard bioretention cells and sand filters. However, in the sediment and erosion control plan review process engineers and designers are required to leave existing grass and vegetation undisturbed wherever possible as a means of erosion and sediment control.

4.2.5.2.4.2 & .3 Filtration and Infiltration Practices

Christian County currently allows Low Impact Development but the County has yet to be directly involved in an LID development.

4.2.5.2.5 Non-Structural BMPs

As mentioned above Christian County already has several ordinances and policies in place to reduce post-construction runoff.

- Comprehensive Plan (Appendix E)
- Zoning Regulations(Appendix C)
- Urban Services Area Agreement (Appendix C)
- Floodplain Management Regulations (Appendix D)

- Stormwater & Erosion Control Regulations (Appendix D)

4.2.5.2.6 Long-Term Operation and Maintenance of BMPs

At present the County only provides operation and maintenance for permanent stormwater facilities located on County road right-of-way. Operation and maintenance for permanent stormwater facilities located on private property are the responsibility of the property owner. For commonly owned private facilities, the Zoning Regulations include requirements for the formation of either home owners' or property owners' association and mandatory collection of dues to provide for operation and maintenance of stormwater systems. Covenants including the formation of the association must be presented to the Planning and Development Department before the application is even allowed to be placed on the Planning Commission agenda. (Appendix C) The Stormwater and Erosion Control Regulations address permanent BMP operation and maintenance. (Appendix D)

The County does not presently have sufficient staff to monitor maintenance activities by private property owners. Staffing needs to effectively address this requirement. Minimum maintenance requirements will need to be drafted and adopted. An inventory of privately owned storm drainage facilities will need to be made and a schedule of maintenance developed. The provision of operation and maintenance drainage facilities off of County road right-of-way is permitted by State Statute. However, the County does not currently have the financial or staffing resources to provide this service. This is a significant issue and will require community input and discussion. If this service is provided by the County a source of additional revenue will be needed. Christian County is also investigating long term funding options to enable the County to play a larger role in stormwater system maintenance.

4.2.5.2.7 Parties Responsible

The Christian County Planning and Development Department is responsible for the management and implementation of the stormwater program. Although the Planning and Development Department is ultimately responsible for the management and implementation of this program, we must work in consultation with several of other entities in order to effectively implement a number of the activities and programs. The

Planning and Development department will continue to work with other Federal, State and local jurisdictions.

4.2.5.2.8 Evaluation

The success of this minimum control measure can be evaluated in part by ensuring that new development meets the requirements for detention and retention areas as stated in the Stormwater and Erosion Control Regulations. The staff will have to evaluate the success of each structural BMP on its effects on water quantity and quality on an individual basis.

4.2.6 Pollution Prevention/Good Housekeeping for Municipal Operations

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

“Municipal” operations for Christian County include:

The Christian County Road Department is split into two separate road districts, Common District One and Common District Two, along with six special road districts which operate and maintain all public roads, including the storm drainage system contained within the public road right-of-way.

Special Road Districts

Ozark Special
Sparta Special
Billings Special
Garrison Special
Selmore Special
Stoneshire Special

Common Road Districts

Common District One
Common District Two

Only Common District One, Common District Two and the Ozark Special Road District fall within the Springfield urbanized area as determined by the latest Decennial Census. The remaining special road districts are very small in size, are located in rural areas of the County and have limited equipment and funding. The County Road Department operations are located near

Sparta (Common District One), near Nixa (Common District Two) and within the City limits of Ozark (Ozark Special Road District). Each Road District provides for its own routine upkeep and maintenance. The upkeep and maintenance for all other County vehicles is contracted out to a licensed service provider.

Both the Common Road Districts and the Planning and Zoning Department are under the direct control of the Christian County Commission. The Special Road Districts have been given their own authority and tax funding sources by Missouri State Statutes. Christian County does not own or operate any other facilities or services.

4.2.6.1.2 Training

The staff of the Christian County Planning and Development Department holds an annual training session with the employees of the County's two Common Road Districts.

4.2.6.2 Decision Process

The decision process is documented in the previous and ensuing paragraphs.

4.3.6.2.1 Operation & Maintenance Program to Prevent or Reduce Pollutant Runoff from "Municipal" Operations

The County Road Districts presently manage the following programs for operation and maintenance:

Salt Storage

The Christian County Road Department presently utilizes two enclosed salt storage facilities, one located near Sparta (Common District One) and the other near Nixa (Common District Two). The enclosed salt storage facility for the Ozark Special Road District is located within the City of Ozark. Even though they are enclosed, any runoff leaving the area will flow into the detention basins lined with 6 x 10 filter stone and located at each site.

Equipment Washing

Both, trucks and other heavy equipment are washed at each of the Road District complexes. Products such as EC-510 Citrus Solvent are utilized in place of petroleum or chlorinated solvent products. The County is currently in the process of designing a sediment trap and trash baffle system which would treat the wash water before it is released into a detention basin. The

Common District One detention area also contains a vegetative treatment system which was designed by the County Engineer.

Shop Activity

Used motor oil is stored in waste oil barrels. These barrels are transported to the Christian County Recycling Center, where a licensed contract vendor transports the used oil barrels to an approved facility for recycling and disposes of used oil filters. A licensed contracted service provider is responsible for changing the anti-freeze in the heavy equipment tires. Anti-freeze which is used in heavy equipment tires for weight is of the R/V environmental type.

Fuel Storage Facility

The Common District One near Sparta currently operates a fuel storage facility which meets the 1998 EPA FRP Clad Steel Storage UST (underground storage tanks) requirement. This fuel storage facility services only the trucks and large equipment used by the Common District One. All other fuel needs for all other County owned vehicles are provided by commercial establishments, through the use of gas cards.

Herbicide Program

The two Common Road Districts and the Ozark Special Road District each currently have a certified herbicide applicator. The program utilizes GLY-4 as the primary herbicide. This herbicide is stored in small (10 gallon) EPA approved containers. All containers are triple rinsed and disposed of as prescribed by labeling. Chemicals are applied per labeling direction. Chemicals are stored in a secure area located within each Road District Facility.

County Road and Special Projects

Environmental Concerns are dealt with through preliminary plan and monitored through all phases of construction.

Surface Water

Each of the Common Road District Complexes has its 6x10 stone filter retention areas which were designed by the County Engineer. The water

retention area at the Common One District also contains a vegetative filtering system.

4.2.6.2.2 Government Employee Training Program

Currently the Foreman for each Road District is responsible for the training of Road District employees in the safe handling, storage, and disposal of materials such as salt and fuel. As stated earlier, the staff of the Christian County Planning and Development Department holds an annual training session with the employees of the County's two Common Road Districts.

4.2.6.2.3.1 Maintenance Activities, Maintenance Schedules & Long-Term Inspection

The County will need to develop procedures for routine maintenance and inspection to prevent floatables and other pollutants.

4.2.6.2.3.2 Controls for Reducing or Eliminating the Discharge of Pollutants

As stated above, all salt and sand storage facilities are enclosed from the weather. Any runoff with entrained pollutants is captured in each of the detention basins located at each facility.

4.2.6.2.3.3 Procedures for Proper Disposal of Waste

All debris, sediment, and floatables are disposed of in accordance with state law. These disposal procedures will be formalized.

4.2.6.2.3.4 Procedures to Ensure Assessment of Flood Management Projects for Water Quality Impacts

All flood management projects are reviewed by the County Engineer to ensure consideration of water quality impacts.

4.2.6.2.4 Parties Responsible

The Christian County Planning and Development Department is responsible for the management and implementation of the stormwater program. Although the Planning and Development Department is ultimately responsible for the management and implementation of this program, we must work in consultation with the Common Road Districts, the Special

Road Districts and other entities in order to attain the best management program possible. The Planning and Development department will also continue to work with other Federal, State and local jurisdictions.

In order to comply with this requirement we need to:

- Inventory stormwater facilities on public road right-of-way.
- Develop a routine maintenance schedule for maintenance activities related to stormwater quality.
- Formalize documentation and schedule for employee training.

4.2.6.2.5 Measurable Goals and Evaluation

The County Road Department has further set the following goals:

- Training annually for employees on environmental awareness issues (re-engineering or in place modifications)

Although the each Road Foreman of each District provides training in the following areas the County needs to incorporate more emphasis on stormwater pollution prevention during training. We need to document and formalize training for County employees, including training in the following specific areas:

- Routine inspection of equipment yards, material storage facilities, and stormwater facilities.
- Procedures for storage, handling, application and disposal of herbicides and pesticides.
- Spill response and clean-up.
- Salt storage and application.
- Used oil recycling.
- Truck and large equipment maintenance procedures (Other County Vehicles are maintained by a contracted service provider).

4.3 Sharing Responsibility

As noted in the foregoing sections, most of the activities included in Public Education and Outreach and Public Involvement and Participation are funded jointly by Christian County, Greene County, the City of Springfield, the City of Nixa, the City of Ozark, and other agencies.

4.4 Reviewing and Updating Stormwater Management Program

The plan will be reviewed and updated annually in conjunction with preparation for the annual report in accordance with the procedures outlined in the Missouri State Operating Permit.

5 Monitoring, Record Keeping and Reporting

5.1 Monitoring Requirement; *Christian County shall evaluate program compliance, the appropriateness of identified best management practices, and progress toward achieving identified measurable goals. If Christian County discharges to a water for which a TMDL has been approved, Christian County will have additional monitoring requirements under Section 3.1.3.6.*

5.1.2 Monitoring

Christian County along with the surrounding MS4s developed a comprehensive regional water monitoring program. Christian County has a contract with Environmental Works to sample and submit the outfall data. The sampling techniques comply with the requirements of this permit.

5.2 Record Keeping

Records of all permits and inspection reports are kept on file for the requisite time period in the offices of the Christian County Planning and Development Department and are available for public inspection upon request during normal business hours.

Copies of the general permit are kept on file and will be available for inspection by the public as required in the general permit.

5.3 Reporting

Annual reports will be submitted as required.

The annual report is prepared and submitted to the Director of the Department of Natural Resources by February 28th of each calendar year. In accordance with the requirements of the general permit the annual report contains the following:

- Status of compliance with permit conditions.
- Assessment of the appropriateness of identified best management Practices.

- Progress toward achieving measurable goals for each of the six minimum control measures.
- Progress toward the statutory goal of reducing the discharge of pollutants to the maximum extent practicable.
- Results of information collected and analyzed including monitoring data, if any.
- A summary of stormwater activities which are plan during the next reporting cycle, including an implementation schedule
- Any changes in identified measurable goals that apply to the program elements.

We have listed a number of activities that are ongoing within Christian County’s MS4 Program. Based on these requirements as well as our most recent audit in 2017, we believe to be in full compliance with all the terms of the general permit.

APPENDICES

APPENDIX A: Environmental Works Monitoring Data

APPENDIX B: Christian County Watershed Map & Road Districts Map

APPENDIX C: Zoning Regulations
 -Urban Services Area Agreement

APPENDIX D: Stormwater and Erosion Control Regulations
 -Illicit Discharge Ordinance
 -Floodplain Management Ordinance

APPENDIX E: Comprehensive Plan