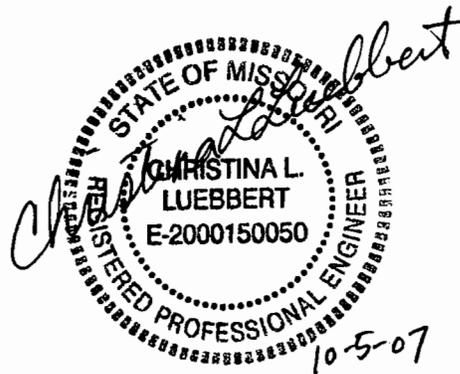


**STORMWATER
MANAGEMENT PLAN
MARSHALL, MO**

OCTOBER, 2007

Prepared By:

Shafer, Kline and Warren, Inc.
1400 Forum Blvd., Suite 19A
Columbia, Missouri 65203
573-442-4537



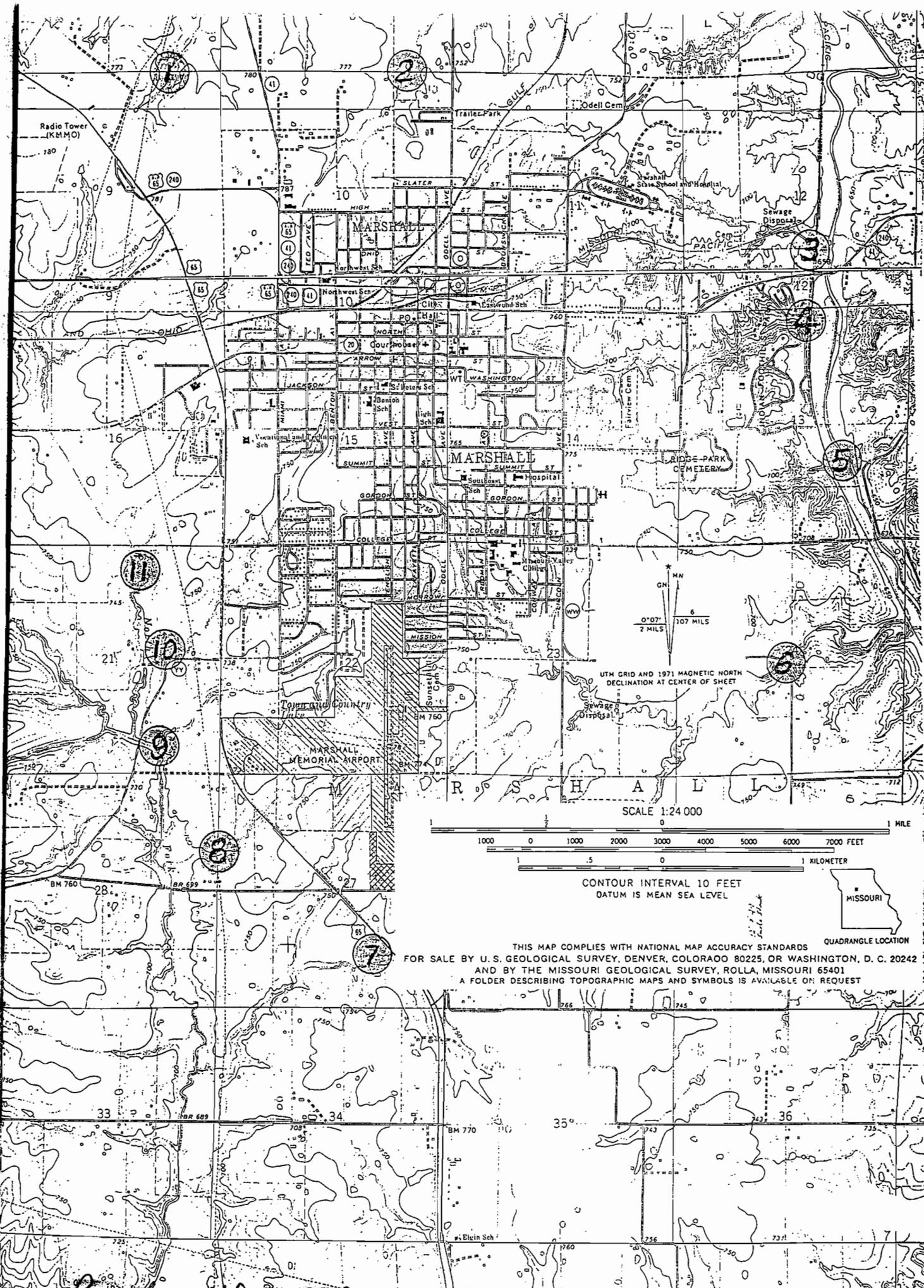
RECEIVED
OCT 16 2007
WATER PROTECTION PROGRAM

Signed: Christina L. Luebbert, P.E.
E-2000150050

TABLE OF CONTENTS
SMALL MS4 STORM WATER MANAGEMENT PROGRAM
FOR MARSHALL, MO

PART I CITY OF MARSHALL BACKGROUND.....	1
PART II SWMP MINIMUM CONTROL MEASURES	
1 Public Education and Outreach.....	3
Regulatory Requirement.....	3
Target Pollutants.....	3
Target Audiences	3
Current Programs.....	3
Selected BMPs Public Education and Outreach	4
2 Public Involvement in Storm Water Management Program Development	7
Regulatory Requirement.....	7
Current Projects.....	7
Selected BMPs Public Involvement.....	7
3 Illicit Discharge Detection and Elimination	9
Regulatory Requirement.....	9
Current Projects.....	9
Selected BMPs Illicit Discharge Detection and Elimination.....	9
4 Construction Site Storm Water Controls.....	11
Regulatory Requirement.....	11
Current Projects.....	11
Selected BMPs Construction Site Storm Water Controls	11
5 Post Construction Storm Water Management for New Development/ Redevelopment	14
Regulatory Requirement	14
Current Projects.....	14
Selected BMPs Post Construction Storm Water Management for New Development/Redevelopment	14
6 Pollution Prevention/Good Housekeeping for Municipal Operations	16
Regulatory Requirement	16
Current Projects.....	16
Selected BMPs for Municipal Operations.....	16
7 General Rationale Information	19
Decision Process	19
Responsible Person.....	19
Evaluation.....	19

**PART I
CITY OF MARSHALL
BACKGROUND**



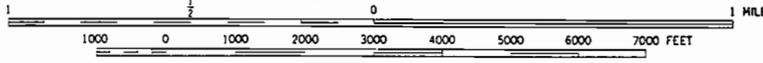
Radio Tower (KMMO)

MARSHALL

MARSHALL

R S H A L L I

SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
AND BY THE MISSOURI GEOLOGICAL SURVEY, ROLLA, MISSOURI 65401
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

Previous outfall map



City of Marshall

DEPARTMENT OF MUNICIPAL SERVICES

1277 SOUTH ODELL AVENUE
MARSHALL, MISSOURI 65340
660-886-3945

October 9, 2007

RECEIVED

OCT 9 2007

WATER PROTECTION PROGRAM

Ruth Warren
MDNR
PO Box 176
Jefferson City, MO 65102

Dear Ms. Warren,

Please find enclosed:

- Completed Form M
- Completed Form K
- \$150 check made out to MDNR
- A copy of the plan I sent you (SWMP)
- A copy of the previous outfall map

If you have additional questions, please call us at 660-886-3945.

Sincerely,

CITY OF MARSHALL, MISSOURI

Bill Anderson mj

Bill Anderson
Director of Municipal Services

City of Marshall Background

Information on the Permittee:

Name of the Permittee: City of Marshall, Missouri
Type of Entity: City - Municipality
Total Area (acres): 10.2 sq. miles
Mailing Address: 214 N. Lafayette, Marshall, MO 65340
Primary Contact: Bill Anderson, Director – Municipal Services
Phone Number: 660-886-3945
Secondary Contact: Marie Fowler, Asst. Director – Municipal Services
Phone Number: 660-886-3945
Population (2000): 12,433

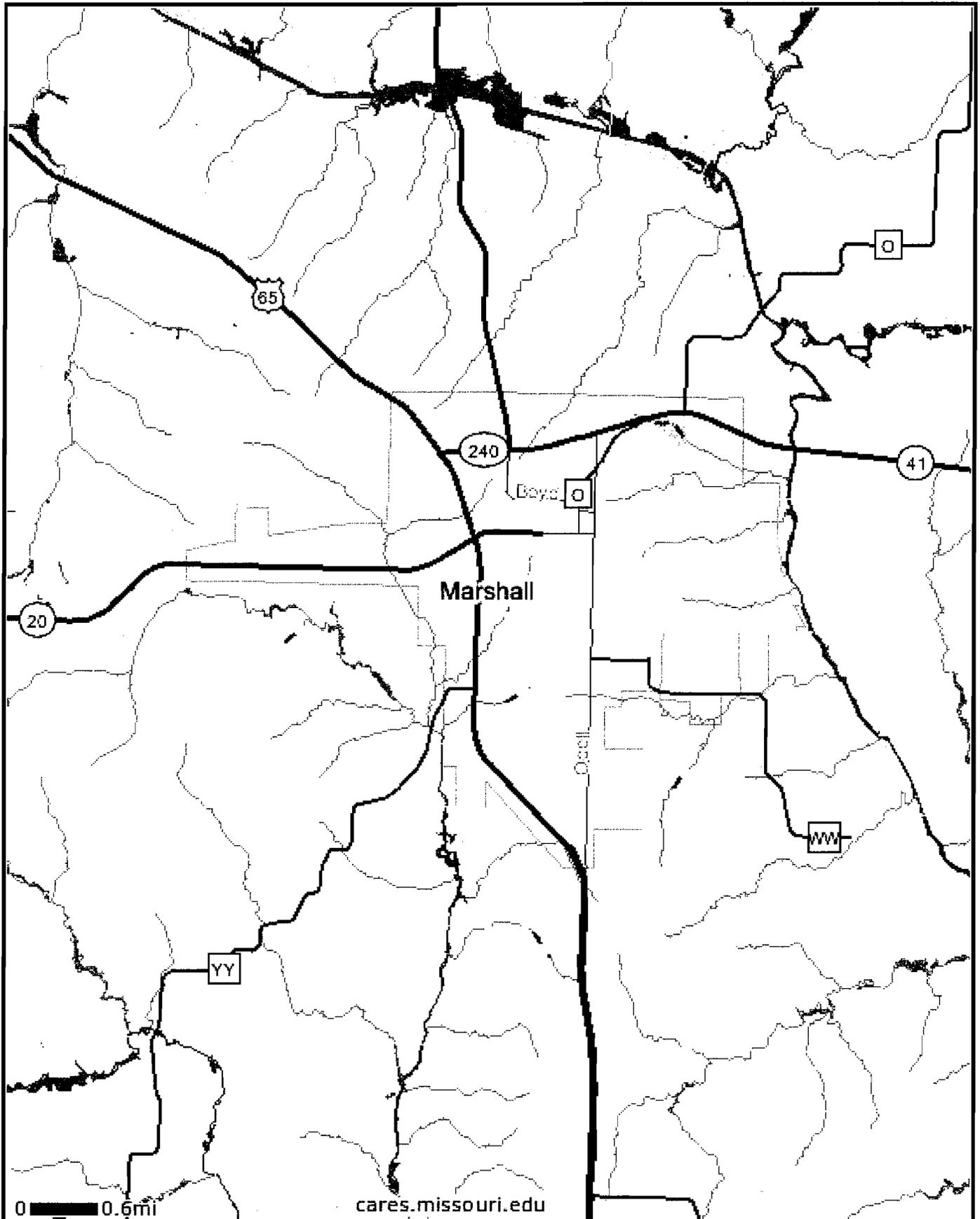
Information on the Municipal Separate Storm Sewer System:

MS4 System Location: Marshall, Missouri
Name of Organization: City of Marshall, Missouri
County(ies) Permittee Resides: Saline County
The major receiving waters within the permitted area include: North Fork of Finney Creek and Salt Fork
Neither of the receiving waters are on the latest CWA's list of impaired waters.

Information on Adjacent Waterways:

The Permittee is within 100 feet of: North Fork of Finney Creek and Salt Fork
The Permittee is not within 100 feet of waters classified as major reservoirs.
The Permittee has some area defined as wetlands as identified by the National Wetland Inventory. See attached map.
Stormwater from Marshall does not discharge to a sinkhole.

City of Marshall, MO - Nat'l Wetland Inv.



Legend

Locator Map

- Roads and Highways**
-  Interstate
 -  U.S. Highway
 -  State Numbered Highway
 -  State Lettered Highway
 -  Principal Road
 -  Road or Street
- County Boundaries**
- 
- NHD Rivers and Streams**
-  Perennial Stream/River
 -  Intermittent Stream/River
 -  Canal or Ditch
 -  Artificial Path (Approx. Centerline)
 -  Other Hydrologic Feature
- Incorporated Areas**
-  City
 -  Town
 -  Village
 -  Census Designated Place
 -  Other
- National Wetlands Inventory**
-  Inland Aquatic Bed
 -  Inland Forested Wetland
 -  Inland Herbaceous Wetland
 -  Inland Shrub Swamp
 -  Lower Perennial River
 -  Upper Perennial River
 -  Intermittent River
 -  Lake (Shallow)
 -  Lake (Deep)
 -  Pond
 -  Pond (Drawdown)
 -  Other Vegetated Wetland



Map prepared by:
<http://cares.missouri.edu>,
10/5/2007

**PART II
MINIMUM
CONTROL
MEASURES**

1. Public Education and Outreach

1.1 Regulatory Requirement

40 CFR 122.34 (b)(1) – Implement a public education program to distribute educational materials to the community of contact, equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps the public can take to reduce pollutants in storm water runoff.

1.2 Target pollutants

The following is a prioritized list of the leading pollutants, experienced in the permitted area, that are carried by stormwater runoff into water bodies:

1. Suspended solids
2. Oil and grease
3. Pesticides/Herbicides
4. Bacteria/Nutrients/Oxygen-depleting substances
5. Habitat alterations
6. Salinity (salt)

1.3 Target audiences

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

1. Citizens (Homeowners)
2. Developers and Home Builders
3. Business Owners
4. Children
5. Elected Officials
6. City Staff

1.4 Current Programs

The City of Marshall provides public education to residents through the City web site, articles in the newspaper, handouts at the Chamber of Commerce and Library and City Hall, postings on the local cable channel, and utility bill announcements.

1.5 Selected BMPs for Public Education and Outreach

1.5.1 Brochures

The City of Marshall has selected placement of brochures on pollution prevention in public locations for implementation as part of this Storm Water Management Program. A general brochure for property owners has been developed based on EPA education materials. Additional brochures targeting specific audiences and pollutants may be developed in the future. It will be integrated into the program through placement of the brochures at City Hall, Chamber of Commerce, Library, Municipal Services office, Municipal Utilities office, Airport and Parks office.

The measurable goals for implementation of this BMP include: To produce and print the brochures as needed and to check the locations where they are to be stocked on a quarterly basis. As future brochures are developed, staff may consider rotating the brochures seasonally.

1.5.2 Public presentations

The City of Marshall has selected public presentations for implementation as part of this Storm Water Management Program. This will allow the message to be tailored to specific audiences. It will be integrated into the program through coordination with various schools, civic organizations, service clubs and other opportunities as they arise.

To assist with this goal, staff will develop a "canned" presentation for both adult and children audiences. This may be an outline of topics that can be discussed, but could also include PowerPoint slides. This is to enable various staff members or even possibly volunteers to give the presentations with minimal preparation effort.

The measurable goal for implementation of public presentations is to complete the "canned" presentations by 12/31/08 and provide a presentation at least twice a year. Staff will keep an up to date list of contact information for various organizations and make annual contact offering presentations.

1.5.3 Public Access Television (Channel 10)

The City of Marshall has selected posting information on the public access television station for implementation as part of this Storm Water Management Program. This will allow messages to get out to a wider variety and potentially larger volume of people.

The measurable goal for implementation of this BMP is to post information to the cable channel at least twice a year. Staff will tailor messages to tie into different outreach and education activities.

1.5.4 Web Site

The City of Marshall has selected posting information on the City web site for implementation as part of this Storm Water Management Program. This will allow messages to get out to a wider variety and potentially larger volume of people.

The measurable goal for implementation of this BMP is to post information to the City web site at least twice a year. Staff will tailor messages to tie into different education and outreach activities

1.5.5 Press Releases

The City of Marshall has selected issuing press releases for implementation as part of this Storm Water Management Program. This will allow messages to get out to a wider variety and potentially larger volume of people.

The measurable goal for implementation of this BMP is to issue at least two press releases a year. Staff will tailor messages to tie into different outreach and education activities

1.5.6 Utility Bill Announcements and/or Inserts

The City of Marshall has selected using utility bill announcements and/or inserts for implementation as part of this Storm Water Management Program. This will allow messages to get out to a wider variety and larger volume of people.

The measurable goal for implementation of this BMP is to include information with utility bills at least twice a year. Staff will tailor messages to tie into different outreach and education activities.

1.5.7 Distribute Information at Public Event

The City of Marshall has selected distributing information at a public event for implementation as part of this Storm Water Management Program. This may allow the message to be tailored to specific audiences. It will be integrated into the program through development of display materials and identification of opportunities to participate in public events.

The measurable goal for implementation of distributing information at a public event is to do so at least once a year.

1.5.8 Maintain Dog Waste Disposal Signage in Parks

The City of Marshall has selected maintaining dog waste disposal signage in parks for implementation as part of this Storm Water Management Program. This provides a direct message of desired behavior changes.

The Parks Department will also investigate the installation of dog waste stations.

The measurable goal for implementation is to regularly check that signage has not been vandalized or removed. Additional signs may be added if disposal stations are installed.

1.5.9 Newsletters

The City of Marshall has selected distributing information via the City employee and Chamber of Commerce newsletters for implementation as part of this Storm Water Management Program. This may allow the message to be tailored to specific audiences.

The measurable goal for implementation of distributing information through these newsletters is to submit information to be published at least twice each year to each newsletter.

1.5.10 Storm Drain Stenciling Program

The City of Marshall has selected a storm drain stenciling program for implementation as part of this Storm Water Management Program. This BMP provides a direct message at the point of expected change of behavior. Additionally, educational materials will be placed on the doors of all residences in the area when the inlets are stenciled providing an additional level of education. Also, employees and volunteers will be provided yet another level of education in conjunction with the project.

The measurable goal for implementation of the storm drain stenciling program is to complete at least 100 inlets/year. Marked inlets will be tracked on maps and the number of informational brochures placed on doors will be documented as well.

1.5.11 Distribute Children's Activity Books

The City of Marshall has selected distributing children's activity books for implementation as part of this Storm Water Management Program. This provides a NPS pollution reduction message tailored to children. It will be integrated into the program through inclusion at public events where children are present or through school presentations.

The measurable goal for implementation of distributing children's activity books is to do obtain and distribute at least 50 each year.

2. Public Involvement in Storm Water Management Program Development

2.1 Regulatory Requirement

40 CFR 122.34 (b)(2) -At a minimum, comply with state, tribal, and local public notice requirements when implementing a public involvement/participation program. EPA recommends that the public be included in developing, implementing, and reviewing your storm water management program and that the public participation process should make efforts to reach out and engage all economic and ethnic groups.

2.2 Current Programs

Currently, the City of Marshall invites public participation and input through regular planning and zoning hearings and regular City Council meetings. All standard state and local public notice requirements are followed for the meetings. They also have participation through the Subdivision and Development Advisory Board.

The City formed a Missouri Stream Team to allow them access to supplies and educational materials for stream cleanup and storm drain stenciling activities. This contact has also allowed them to create liaisons with other active teams in the area for additional cooperation and involvement.

2.3 Selected BMPs for Public Involvement

The City of Marshall will comply with state and local public notice requirements when implementing the public involvement/participation program. The public will be included in reviewing and implementing the storm water management program where feasible. Additional specific BMPs for this measure include:

2.3.1 Invite public input through existing mechanisms

The City of Marshall has selected inviting public input through existing mechanisms for implementation as part of this Storm Water Management Program. This BMP allows public involvement and participation to be integrated into existing activities through the addition of a regular agenda item to the City Council meetings and discussion of development and redevelopment issues as they relate to stormwater at the Planning and Zoning hearings. The Subdivision and Development Advisory Board will also discuss stormwater issues as they relate to development and re-development projects.

The City is developing a web site that will be completed prior to the new permit cycle. It will allow for receipt of information from the public.

Descriptions on the types of information sought will be provided along with an email address to receive that information. Citizens will also be provided a physical address and phone number for receipt of written, in person or phoned information. All of the contact information will be on brochures produced as part of MCM #1 as well.

The measurable goal for implementation of this BMP is to have at least two City Council meetings where public input on stormwater issues is an agenda item and at least two Planning and Zoning hearings where stormwater issues are discussed. The Subdivision and Development Advisory Board meets on an as-needed basis and will discuss stormwater issues at most meetings. Staff will document the input received and report on them annually.

2.3.2 Work with community groups to perform stormwater quality related activities.

The City of Marshall has selected working with community groups to perform stormwater quality related activities such as stream cleanups, storm drain marking, and water quality monitoring for implementation as part of this Storm Water Management Program. This BMP allows for direct public involvement and participation. This BMP will include developing a contact list for various community groups and annually updating that list. Staff may also consider communicating annually with the groups to offer the City's sponsorship of these activities.

The measurable goal for implementation of this BMP is to develop the contact list for various community groups by 12/31/07, annually reach out to these groups, and to have at least one stormwater quality activity performed each year. An educational component will be incorporated into these activities as possible (see MCM #1).

3. Illicit Discharge Detection and Elimination

3.1 Regulatory Requirement

40 CFR 122.34 (b)(3) -Develop, implement, and enforce a program to detect and eliminate illicit discharges into your small MS4. Develop a storm sewer system map, showing the location of all outfalls and the names and locations of all water of the U.S. that receive discharges from those outfalls. To the extent allowable under state, tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into your storm sewer system and implement appropriate enforcement procedures and actions. Develop and implement a plan to detect and address non-storm water discharges including illegal dumping to your system. Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. Address categories listed in 122.34(b)(3)(D)(iii) if you determine they are significant contributors of pollutants to MS4.

3.2 Current Programs

Currently, the City of Marshall prohibits the discharge of any dust, dirt, leaves, limbs or any refuse matter into sidewalks, streets, alleys and public ways. As most of these are assumed to be connected to the storm drainage system, the current ordinance minimally addresses some illicit discharge.

3.3 Selected BMPs for Illicit Discharge Detection and Elimination

3.3.1 Storm Sewer Map

The City of Marshall is developing a storm sewer system map, showing the location of all outfalls and the names and locations of all water of the U.S. that receive discharges from those outfalls. This map will eventually be GIS-based and will integrate any additional GIS data such as aerial photography, contour data, etc that is available. In the interim, staff is developing schematic information on paper to assist in the data collection that is underway and to be utilized as part of this program until the digital map is complete.

The measurable goal is to complete the schematic map by 3/10/08 and the GIS map by 12/31/09. This map will be reviewed and updated as necessary annually.

3.3.2 Illicit Discharge Ordinance

The City of Marshall is developing an ordinance to effectively prohibit non-storm water discharges into the storm sewer system and will implement appropriate enforcement procedures and actions. This will be completed by 3/10/08.

The measurable goal for implementation of this BMP is to document any investigations or enforcement actions that take place pursuant to this ordinance and report on them annually.

3.3.3 Program to Detect and Address Illicit Discharges

The City of Marshall will continue to develop a program to detect and address non-storm water discharges including illegal dumping into the storm sewer system. The City will receive information from the public via phone calls, mail, email and in person concerns (See MCM #2) and keep a log of the complaint, investigation, cleanup (if applicable) and enforcement measures taken.

The City will identify and visually screen 20% of all major outfalls each year. Staff will document any abnormal findings regarding color, odor, suds, oil sheen, algae growth and any other signs of human use such as litter and debris. Staff will determine if further chemical and physical properties need to be tested or monitored. The City will evaluate the detection program resource and training needs each year and acquire them to the maximum extent practicable.

3.3.4 Public Education on Illegal Discharges and Improper Disposal

The City of Marshall will continue to develop a public education effort to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. (This BMP also addresses the minimum control measure for public education and is part of Good Housekeeping in Municipal Operations.)

The City will acquire public education materials and will distribute them to the appropriate target audiences. See Section 1.4 for additional details.

3.3.5 Investigate cross-connection of sanitary and storm sewer systems

The City of Marshall will continue to investigate cross-connection of the sanitary sewer system through smoke testing and CCTV.

The City will develop a prioritization for investigation for cross-connections in conjunction with the wastewater program utilizing all the resources available for inspection.

3.3.6 Storm Drain Stenciling Program

See Section 1.5.10.

4. Construction Site Storm Water Controls

4.1 Regulatory Requirement

40 CFR 122.34 (b)(4) -Develop, implement and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Program must include: the development and implementation of (at a minimum) and ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, requirements for construction site operators to implement appropriated erosion and sediment control BMPs, requirements for construction site operators to control waste at the construction site, procedures for site plan review which incorporate consideration of potential water quality impacts, procedures for receipt and consideration of information submitted by the public.

4.2 Current Programs

Currently, the City of Marshall is considering adopting APWA standards for erosion and sediment control design. The City performs storm drainage plan review on occasion through outside contractors, performs regular inspections of construction sites and holds stop work order power.

4.3 Selected BMPs for Construction Site Storm Water Controls

4.3.1 Construction Site Runoff Control Ordinances

The City of Marshall is developing ordinances to require better stormwater pollution prevention at construction sites that disturb more than one acre, as well as providing sanctions to comply with the requirements, as part of this Storm Water Management Program. The ordinances and associated requirements or procedures will require construction site operators to implement appropriate erosion and sediment controls and to control wastes at construction sites.

The measurable goal for implementation is to review and properly document where construction site runoff controls are in the ordinances, review the existing policies and procedures relating to these ordinances and determine what modifications are necessary. Ordinances will then be drafted and presented to the Council for adoption prior to 3/10/08. The effectiveness of the ordinance will be reviewed once per general permit cycle.

4.3.2 Construction Plan Review

The City of Marshall has selected construction plan review for implementation as part of this Storm Water Management Program.

The measurable goal for implementation of construction plan review for new and re-development projects disturbing more than one acre is to complete these reviews in a timely manner and ensure that selected BMPs are appropriate for the site. The City may consider an open contract for engineering review of stormwater issues on larger projects. The number of plans reviewed will be documented annually.

4.3.3 Construction Site Inspection

The City of Marshall has selected construction site inspection for implementation as part of this Storm Water Management Program. Inspection procedures will be modified to require construction site operators to implement appropriate erosion and sediment controls and to control wastes at construction sites.

The measurable goal for implementation is to review current inspection procedures and checklists and complete whatever modifications are necessary by 12/31/08. The City will report annually on the level of enforcement actions.

4.3.4 Public Education on Construction Site Storm Water Control Requirements

The City of Marshall will inform construction site operators of the requirements for construction site storm water controls. The City will also have a component of their general public education program to inform the citizens about construction site runoff control. (This BMP also addresses the minimum control measure for public education.)

The City of Marshall will acquire public education materials and distribute them according to goals set forth in Section 1.4.

4.3.5 Receive public input on proposed and current construction projects

The City of Marshall has selected receiving public input for implementation as part of this Storm Water Management Program. This BMP coordinates with MCM #2 and can be integrated into existing activities through receipt of information from the public at the existing Planning and Zoning hearings and City Council meetings. Additional input can be received through the City web site and at the designated phone number and mailing address.

The measurable goal for implementation of receiving public input on proposed and current construction projects is to log the receipt of this information, respond within one business day where applicable and to document any inspection or enforcement actions taken.

4.3.6 Require stormwater pollution prevention on all capital improvements

The City of Marshall will require formal stormwater pollution prevention plans (SWPPP) be developed for all capital improvement projects that disturb greater than one acre. All smaller maintenance projects will also be required to install necessary BMPs for stormwater pollution prevention to the maximum extent practicable.

The measurable goal for implementation of this BMP is to have a SWPPP for each major capital improvement and to document BMPs used for smaller maintenance projects and report annually.

4.3.7 Add design criteria, standard details and specifications for BMPs to City standards

The City of Marshall has selected adding design criteria, standard details and specifications for BMPs to City standards for implementation as part of this Storm Water Management Program.

The measurable goal for implementation of is to complete the review of existing design criteria, standard details and specifications as they relate to stormwater best management practices by 12/31/08. These should be reviewed annually to ensure that any new technologies or practices are included.

4.3.8 Sample ESC plans for residential construction

The City of Marshall has selected sample ESC plans for residential construction for implementation as part of this Storm Water Management Program. The City will use the documents prepared by the APWA and will work with residential contractors to ensure the BMPs are installed properly.

The measurable goal for implementation is to document that sample plans are readily available to all residential contractors and to document any other assistance provided to this target audience in achieving better construction site runoff control.

5. Post Construction Storm Water Management for New Development/ Redevelopment

5.1 Regulatory Requirement

40 CFR 122.34 (b)(5) –Develop, implement and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects that are less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for your community. Use an ordinance or other regulatory mechanism to address post-construction runoff. Ensure adequate long-term operation and maintenance of BMPs.

5.2 Current Programs

Currently, the City of Marshall requires outside stormwater plan review on major developments. They are developing ordinances and design standards for stormwater management.

5.3 Selected BMPs for Post Construction Storm Water Management for New Development/Redevelopment

5.3.1 Detention Requirements

The City of Marshall will develop detention requirements and annually re-evaluate the effectiveness of these requirements. The City will address more frequent storms to control discharges known to stress natural stream systems. This will be completed by 12/31/08

5.3.2 Stream Buffer Requirements

The City of Marshall will develop stream buffer requirements and annually re-evaluate the effectiveness of these requirements. This BMP will provide filtration of runoff and stabilization of stream banks from new and re-development. This will be completed by 12/31/08.

5.3.3 Open Space Requirements

The City of Marshall will develop open space requirements and annually re-evaluate the effectiveness of these requirements. Planning staff will be integrally involved with this process. This will be completed by 12/31/08.

5.3.4 Parking Ordinances

The City of Marshall will review the current parking requirements and determine if any of the requirements are excessive and can be reduced in order to minimize impervious area. Modifications will be made by 12/31/08

5.3.5 Subdivision Ordinances

The City of Marshall will review the current subdivision requirements for way to minimize disturbance of soil and vegetation. Options to create incentives for developers to use Low Impact Development and other measure to protect water quality will be evaluated. Modifications will be made by 12/31/09.

5.3.6 Ensure ongoing effectiveness of existing and future post-construction structural BMPs

The City of Marshall has selected ensuring effectiveness of existing and future post-construction structural BMPs for implementation as part of this Storm Water Management Program. The City has drafted a modification to the code to more specifically place requirements on long term BMP operation and maintenance that is expected to be passed by 3/10/08.

Additional measurable goals for implementation of this BMP are to:

- Complete an inventory of post-construction structural BMPs by 12/31/08 and update annually
- Verify ownership and maintenance responsibility for each BMP
- Perform outreach to owners to educate them on requirements (also credited to MCM #1)
- Perform annual inspections of these facilities documenting any enforcement actions annually.

Note that it is expected that most current facilities are privately owned.

6. Pollution Prevention/Good Housekeeping for Municipal Operations

6.1 Regulatory Requirement

40 CFR 122.34 (b)(6) 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.

6.2 Current Programs

Currently, the City of Marshall:

- Performs nearly all fleet maintenance under cover
- Has maintenance schedules for City vehicles and equipment
- Recycles their waste oil through a commercial pickup service or through distribution to local businesses with waste oil heaters
- Picks up litter from the right-of-way and City parking lots
- Sweeps all streets at least twice a year with closer to monthly for streets in the business district
- Sweeps the City parking lots
- Requires stormwater pollution prevention measures in all City construction projects disturbing greater than one acre
- Dechlorinates the City's swimming pool before discharging to a vegetated area
- Uses smoke testing and CCTV inspection of sanitary sewers to identify cross-connection and potential for illicit discharge
- Regularly clean catch basins and report blockage or signs of illicit discharge

6.3 Selected BMPs for Municipal Operations

6.3.1 Employee training

The City of Marshall will maximize its pollution prevention related to its current activities especially in regards to fleet maintenance, facilities and parks maintenance, construction activities, and road maintenance. Policies and procedures will be documented and expanded wherever necessary. Staff training may be accomplished through incorporating stormwater quality topics into the monthly safety meeting, distribution of newsletters, workshops, informational brochures, or demonstrations.

The measurable goal for implementation of this BMP is to develop a list of training topics by 3/10/08 and complete training on at least four of those topics each permit year.

6.3.2 Develop, publish and distribute policy and procedure documentation

The City of Marshall has selected developing, publishing and distributing policy and procedure documentation for implementation as part of this Storm Water Management Program. This BMP will assist with the education of employees on expectations for Good Housekeeping in Municipal Operations.

The measurable goal for implementation of this BMP is to evaluate all areas of municipal operations for potential water quality impacts, draft policies and procedures for each of these areas, obtain input/buyin on the draft documents from affected employees, publish and distribute final documentation by 12/31/08.

6.3.3 Use it or lose it

The City of Marshall has selected "Use it or lose it" for implementation as part of this Storm Water Management Program. This BMP requires that all City departments evaluate their stockyards for items that will not be used for operations and have potential for pollution.

The measurable goal for implementation of this BMP is to have each department evaluate their storage yards annually for items that need to be disposed of and to document said disposal. Items that might need to be removed are discarded construction materials, empty chemical or paint containers, excess maintenance supplies that are not fit for use, outdated park equipment, etc.

6.3.4 Spill Prevention and Response

The City of Marshall will review the current policies and procedures for spill prevention and response by 12/31/08. Staff will identify areas where potential pollutants are stored and make recommendations for improvements. If necessary, policies and procedures may be developed, published and distributed part of this Storm Water Management Program. This BMP will assist with the education of employees on expectations for Good Housekeeping in Municipal Operations as it relates to the spill prevention and response.

The measurable goal for implementation of this BMP is to evaluate all areas of municipal operations for potential spills and make recommendations by 12/31/08.

6.3.5 Ongoing programs

The City of Marshall will continue and expand where pertinent ongoing municipal programs that impact water quality as part of their implementation of this Storm Water Management Program.

See Section 6.2 for the list of programs. By their nature these activities are ongoing and follow established schedules. However, documentation of any possible metrics shall be completed regularly and reported on annually.

7. General Rationale

7.1 Decision Process

The City of Marshall reviewed the General Permit requirements and selected each of the BMPs after reviewing research from notable sources such as the EPA and the Center for Watershed Protection. Programs from other communities were also examined. Various BMPs were selected based on the evidence that they will have a positive impact on targeted pollutants. City staff also examined each BMP for how it could fit into existing activities and mechanisms. The SWMP will be made available for public inspection and comment upon completion.

7.2 Responsible Person

The person responsible for the overall management and implementation of the permittee's stormwater management program is the City Administrator. Others will be involved in the execution of each of the individual activities in the program.

7.3 Evaluation

The City of Marshall will report annually on the level of achievement toward all measurable goals. Where applicable, metrics will be documented. Qualitative anecdotal evidence will also be documented where possible.

5.3.4 Parking Ordinances

The City of Marshall will review the current parking requirements and determine if any of the requirements are excessive and can be reduced in order to minimize impervious area. Modifications will be made by 12/31/08

5.3.5 Subdivision Ordinances

The City of Marshall will review the current subdivision requirements for way to minimize disturbance of soil and vegetation. Options to create incentives for developers to use Low Impact Development and other measure to protect water quality will be evaluated. Modifications will be made by 12/31/09.

5.3.6 Ensure ongoing effectiveness of existing and future post-construction structural BMPs

The City of Marshall has selected ensuring effectiveness of existing and future post-construction structural BMPs for implementation as part of this Storm Water Management Program. The City has drafted a modification to the code to more specifically place requirements on long term BMP operation and maintenance that is expected to be passed by 3/10/08.

Additional measurable goals for implementation of this BMP are to:

- Complete an inventory of post-construction structural BMPs by 12/31/08 and update annually
- Verify ownership and maintenance responsibility for each BMP
- Perform outreach to owners to educate them on requirements (also credited to MCM #1)
- Perform annual inspections of these facilities documenting any enforcement actions annually.

Note that it is expected that most current facilities are privately owned.

6. Pollution Prevention/Good Housekeeping for Municipal Operations

6.1 Regulatory Requirement

40 CFR 122.34 (b)(6) 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.

6.2 Current Programs

Currently, the City of Marshall:

- Performs nearly all fleet maintenance under cover
- Has maintenance schedules for City vehicles and equipment
- Recycles their waste oil through a commercial pickup service or through distribution to local businesses with waste oil heaters
- Picks up litter from the right-of-way and City parking lots
- Sweeps all streets at least twice a year with closer to monthly for streets in the business district
- Sweeps the City parking lots
- Requires stormwater pollution prevention measures in all City construction projects disturbing greater than one acre
- Dechlorinates the City's swimming pool before discharging to a vegetated area
- Uses smoke testing and CCTV inspection of sanitary sewers to identify cross-connection and potential for illicit discharge
- Regularly clean catch basins and report blockage or signs of illicit discharge

6.3 Selected BMPs for Municipal Operations

6.3.1 Employee training

The City of Marshall will maximize its pollution prevention related to its current activities especially in regards to fleet maintenance, facilities and parks maintenance, construction activities, and road maintenance. Policies and procedures will be documented and expanded wherever necessary. Staff training may be accomplished through incorporating stormwater quality topics into the monthly safety meeting, distribution of newsletters, workshops, informational brochures, or demonstrations.

The measurable goal for implementation of this BMP is to develop a list of training topics by 3/10/08 and complete training on at least four of those topics each permit year.

6.3.2 Develop, publish and distribute policy and procedure documentation

The City of Marshall has selected developing, publishing and distributing policy and procedure documentation for implementation as part of this Storm Water Management Program. This BMP will assist with the education of employees on expectations for Good Housekeeping in Municipal Operations.

The measurable goal for implementation of this BMP is to evaluate all areas of municipal operations for potential water quality impacts, draft policies and procedures for each of these areas, obtain input/buyin on the draft documents from affected employees, publish and distribute final documentation by 12/31/08.

6.3.3 Use it or lose it

The City of Marshall has selected "Use it or lose it" for implementation as part of this Storm Water Management Program. This BMP requires that all City departments evaluate their stockyards for items that will not be used for operations and have potential for pollution.

The measurable goal for implementation of this BMP is to have each department evaluate their storage yards annually for items that need to be disposed of and to document said disposal. Items that might need to be removed are discarded construction materials, empty chemical or paint containers, excess maintenance supplies that are not fit for use, outdated park equipment, etc.

6.3.4 Spill Prevention and Response

The City of Marshall will review the current policies and procedures for spill prevention and response by 12/31/08. Staff will identify areas where potential pollutants are stored and make recommendations for improvements. If necessary, policies and procedures may be developed, published and distributed part of this Storm Water Management Program. This BMP will assist with the education of employees on expectations for Good Housekeeping in Municipal Operations as it relates to the spill prevention and response.

The measurable goal for implementation of this BMP is to evaluate all areas of municipal operations for potential spills and make recommendations by 12/31/08.

6.3.5 Ongoing programs

The City of Marshall will continue and expand where pertinent ongoing municipal programs that impact water quality as part of their implementation of this Storm Water Management Program.

See Section 6.2 for the list of programs. By their nature these activities are ongoing and follow established schedules. However, documentation of any possible metrics shall be completed regularly and reported on annually.

7. General Rationale

7.1 Decision Process

The City of Marshall reviewed the General Permit requirements and selected each of the BMPs after reviewing research from notable sources such as the EPA and the Center for Watershed Protection. Programs from other communities were also examined. Various BMPs were selected based on the evidence that they will have a positive impact on targeted pollutants. City staff also examined each BMP for how it could fit into existing activities and mechanisms. The SWMP will be made available for public inspection and comment upon completion.

7.2 Responsible Person

The person responsible for the overall management and implementation of the permittee's stormwater management program is the City Administrator. Others will be involved in the execution of each of the individual activities in the program.

7.3 Evaluation

The City of Marshall will report annually on the level of achievement toward all measurable goals. Where applicable, metrics will be documented. Qualitative anecdotal evidence will also be documented where possible.