



NPDES Phase II
Stormwater Annual Report
Municipal Separate Sewer System
June 2013—June 2014

Presented by:
City of Branson, Missouri
July 2014



MO Form 780-1846 (Stormwater Annual Report – Small MS4s Permits)

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MO Form 780-2049 (Stormwater Annual Report – Small MS4s Permits Addendum – Water Quality Program Assessment)



Executive Summary:

The City of Branson applied for its first Municipal Separate Storm Sewer Permit in 2013. The City Engineer/Public Works Director is responsible for implementing the stormwater program. At this time, the City's stormwater program is primarily funded through the transportation fund.

The stormwater management plan was developed by city staff with input from a consultant and a citizen task force and was adopted by city ordinance by the Branson Board of Aldermen on April 9, 2013. This plan was submitted with the application for a permit on May 9, 2013. The City utilizes this plan as a guidance document to work towards compliance with all six minimum control measures. No program elements within the Stormwater Management Plan are being modified at this time.

The purpose of this report is to provide information related to the efforts of the City of Branson to reduce non-point source pollution through public education and participation, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control and good housekeeping in municipal operations. It is the City's intent to be as compliant as possible with the state and federal requirements set forth under NPDES Phase II. A summary table is enclosed which outlines the MCM's completed this first year of the permit.

The City of Branson views the stormwater management plan as an opportunity to expand on a vision for clean water within our jurisdiction. We recognize that this stormwater management plan is a starting point for effective non-point source pollution reduction and our residents and community leaders are committed to being proactive in protecting our water resources as we place great value on the water resources in our care.

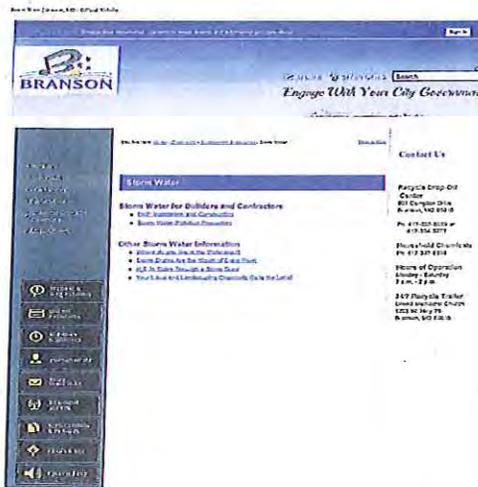


Minimum Control Measure #1 – Public Education

Summary: The City of Branson has developed a public education program through distribution of educational materials to the community and conducting outreach activities. The focus of these efforts is to educate the public with activities discussing the impact of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in storm water runoff.

Public Education Efforts

- Created and distributed four educational brochures for distribution to the public at City Hall, Public Works, Recycle Center and Utilities Department. Enhanced Facebook page to include water quality posts.
- Added 6 links to stormwater web page that is available to public, contractors, developers and builders.



- Promoted and co-sponsored the annual Ozarks Water Watch Week with a total of 19 water quality events being held. Two of which were sponsored by the City of Branson.
- Collected and disposed of 1.82 tons of household chemicals at the city's household collection facility.
- Developed watershed map and placed on city's website <http://www.bransonmo.gov/documentcenter/view/503>
- Continual updates to stormwater web page as needed or as materials become available.
- Completed the installation of a rain garden/parking lot at the Branson Chamber of Commerce for use as a future stormwater demonstration area for citizens, visitors, contractors and community leaders.
- Provided citizens with materials to install 600 storm drain decals.
- The City's Technical Specifications have been updated to include that all new storm





drain inlets are required to have "Drains to Stream" lids with water-related design.

- 1,932 door hangers distributed by citizens and volunteer groups to explain sources of stormwater pollution.
- "Low Impact Development Design Manual for Urban Areas" provided to senior planner, mayor, alderman, and planning assistants.



No SWMP elements have been changed or refined since permit application. All measurable goals have been met.

Overall Compliance with Permit Conditions:

The Best Management Practices (BMP's) in the City's Stormwater Management Plan (SWMP) seem to be effective for local population. There was multiple news coverage (print and radio interviews) regarding stormwater decals and positive citizen feedback. They have integrated well with local management procedures.

The City continues to make progress towards achieving the goal of reducing the discharge pollutants to the Maximum Extent Practicable (MEP). We have begun to make the public more aware of stormwater quality issues.

Stormwater Activities Planned During Next Reporting Cycle:

- Update existing educational materials and identify appropriate subjects for additional materials for distribution to public.
- Continue to update stormwater web page.
- Continue to promote and co-sponsor annual Ozarks Water Watch Week.
- Continue promotion of safe disposal of household chemicals at the Household Collection Facility.
- Distribute the biennial Business and Community Survey.

No changes are proposed to MCM #1's BMP's or measurable goals.



Minimum Control Measure #2 – Public Participation & Involvement

Summary: The City of Branson has actively involved the public in the development and implementation of the stormwater program.

The Stormwater Division of the Engineering Department has a strong relationship with the Public Relations Department as well as local newspapers and radio stations. These entities have been very active and supportive about promoting events and distributing stormwater information to the public via news releases announcing upcoming events. We have had individuals, families and groups such as the Boy Scouts take on specific tasks of laying permeable pavers and storm drain markers.

Public Involvement Efforts:

- Processed a total of 21,136 vehicles through the city's recycle center and safely disposed of 1.82 tons of household chemicals.
- Co-sponsored with Ozarks Water Quality a community wide clean up with a total of 44 volunteers who collected 30 tires and filled five 55 gallon drums with materials.
- Organized a total of 138 participants in marking 600 storm drains.



- Encouraged participation and organized the Adopt-a-Street program wherein we trained 80 participants.
- Organized and distributed 1,932 informational door hangers to businesses and neighborhoods.



- Maintained ten pet waste stations in city parks and at Branson Landing. Pet waste pick up signs have been posted throughout all of the City parks and trails reminding residents and visitors to pick up after their pets.
- The Lake Taneycomo Watershed Plan being written by Table Rock Lake Water Quality, Inc. is still in progress.
- Assisted Table Rock Lake Water Quality, Inc. in developing their request for proposal for the design and remodel of a parking lot in Kimberling City to reduce parking area, create better traffic flow and incorporate stormwater infiltration and bio-retention features and green space.



No SWMP elements have been changed or refined since permit application. All measurable goals have been met.

Overall Compliance with Permit Conditions:

The City of Branson is complying with permit conditions relating to Public Participation and Involvement. Residents can utilize the "Citizen's Comment" and "Public Hearing" portion of the City Council and Planning and Zoning meetings as well as post a citizen concern on the city's website.

Whenever a development is proposed in the City, public hearings are held at the Planning & Zoning meetings. The Planning and Zoning Commission is a volunteer board who are appointed by City Council. They review and approve all developments coming into the city and include in their discussion stormwater and other issues prior to approval of the development. Once approved by Planning & Zoning, their recommendation is forwarded to City Council for final approval where residents have another opportunity to provide questions or comments.

Stormwater Activities Planned During Next Reporting Cycle:

- Continue encouraging use of the city's recycle center to dispose of household chemicals and recyclable materials through promotion on Facebook and city website.
- Publicize participation in an annual storm drain marking event.
- Encourage groups and citizens to participate in the Adopt-a-Street program through the city website and social media.
- Continue distributing 100 "Dump No Waste, Drains to Stream" door hangers to city businesses and developments annually.
- Continue maintaining pet waste stations.
- Post the Lake Taneycomo Watershed Plan to the City's website upon completion.
- Distribute Biennial Business and Community Survey.

No changes are proposed to MCM#2 BMP's or measurable goals.



Minimum Control Measure #3 – Illicit Discharge Detection and Elimination

Summary: The City of Branson is striving to develop, implement and enforce a program to detect and eliminate illicit discharges into the MS4.

Illicit Discharge Detection and Elimination Efforts:

- City ordinances reviewed and city ordinance developed defining acceptable stormwater discharges and prohibiting non-stormwater.
- Completed mapping of Bee Creek outfalls.
- The GIS mapping division continues to map all recently constructed stormwater piping and has completed mapping of the remainder of the city storm sewer system. Currently, Branson has approximately 204,036 feet or 38.6 miles of storm sewer infrastructure mapped throughout the City limits.
- Trained 70 city employees from the Engineering, Public Works, Fire, Police, Parks, Utilities and Planning Departments concerning stormwater education by showing the "Rain Check Stormwater Pollution Prevention" for MS4s video.
- Inspected downtown sanitary sewers with closed circuit TV to identify any points for possible exfiltration or direct connection to the City's stormwater collection system.
- Created and put in place plans for quick response to citizen stormwater reports/concerns and possible pollution. Police dispatch and officers trained on computer assisted dispatching to investigate/respond to report of illegal stormwater discharge.

No SWMP elements have been changed or refined since permit application. All measurable goals were met. No changes are proposed for MCM #3 BMP's or its measurable goals.

Overall Compliance with Permit Conditions:

Branson is complying with permit conditions relating to Illicit Discharge Detection and Elimination. Our GIS stormwater map is being updated continuously to show stormwater discharge points. This map currently shows all developments within the city limits. Construction sites are monitored more closely by Construction Project Managers in the Engineering Department and Building Inspectors.

Results of Information Collected and Analyzed During Reporting Period:

- CCTV inspection testing of nearly 30,000 feet of sanitary sewers.
- Marked 600 storm drains and distributed 1,932 door hangers with illicit discharge related information.

Stormwater Activities Planned During Next Reporting Cycle:

- Complete additional 20% mapping of total storm sewer system.
- Enact city ordinance prohibiting non-stormwater discharges into storm sewer system.
- Continue stormwater education and training to 20% of city employees in Engineering, Public Works, Fire, Police, Parks, Utilities and Planning Departments.
- Spill response policy implemented by Fire Department.

Minimum Control Measure #4 – Construction Site Stormwater Runoff Control

Summary: Branson is striving to develop, implement and enforce a program to reduce pollutants in stormwater runoff from construction activities that result in disturbance of greater than one acre.

Construction Site Runoff Control Efforts:

- Plan review checklist created for reviewing/approving plans for Land Disturbance Permit.
- Landscape plan renamed and now labeled as construction permit.
- Construction plans for commercial construction were reviewed.
- Staff inspected construction sites and enforced construction site runoff control.
- Designed and supervised construction of culvert over Fall Creek Road to alleviate stormwater drainage into subdivision.



- Staff attended training at Missouri Floodplain and Stormwater Managers Association (MFMSA) conference held in Jefferson City September 2013.

No SWMP elements have been changed or refined since permit application. All measurable goals were met.

Overall Compliance with Permit Conditions:

Branson has been compliant with the continued implementation of construction site runoff controls by means of regulatory requirements and on-site inspections. There are also measures in place that require developers to submit a site improvement plan which addresses sediment and erosion control. We also reference the MDNR Protecting Water Quality Manual as a guide for site runoff control to engineers, developers and contractors. Other processes that need mentioned prior to construction commencing are that there are several plan review and planning and zoning processes that developers and builders must follow. All subdivision developments must be approved by the Planning & Zoning Commission via plat approval. Upon approval, they are forwarded to City Council for approval and recording. On individual lots and developments the developer/builder must submit their plans to the Engineering Department for review and approval of the stormwater aspects of their project. The project cannot move forward until the Engineering Department gives final for construction. Sites involving land disturbance activities over one acre in size are not approved until they are approved by



MDNR, when applicable.

Stormwater Activities Planned During Next Reporting Cycle:

- Review of model construction site runoff control ordinances.
- Continue to educate public, employees, contractors and developers regarding requirements for construction site runoff control.
- Document all inspections and enforcement actions.

Summary of the Number of Inspections:

- City staff reviewed seven building addition or alteration building permit applications making comments regarding stormwater controls where feasible.
- Staff reviewed twenty-two new commercial building and landscaping permit applications to ensure stormwater quantity and control was addressed.

No changes are proposed for MCM#4 BMP's or measurable goals.

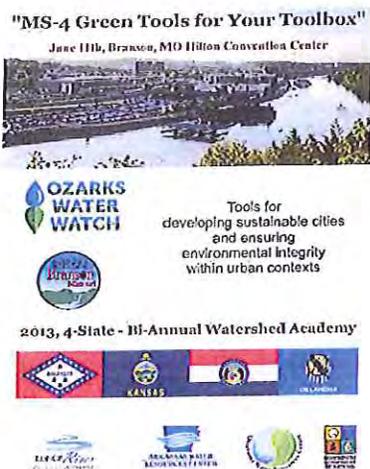


Minimum Control Measure #5 – Post-Construction

Summary: Branson is striving to develop, implement and enforce a program to address stormwater runoff from development and redevelopment projects that disturb greater than one acre. Various BMP's are used to control siltation and erosion of development areas until such time as vegetation can be re-established. The City of Branson requires all developments to meet stormwater detention or retention requirements to help minimize the impacts of flooding, post-construction runoff, including runoff from increased impervious areas created by the development.

Post-Construction Runoff Control Efforts:

- Evaluated 29 plans submitted to Administrative Review Team encouraging stormwater runoff control BMPs.
- 70 participants attended the MS4 "Green Tools" conference co-sponsored with Ozarks Water Watch and targeting developers and engineers.



- On-going review of the "Design Criteria for Public Improvement Projects" to incorporate appropriate and applicable BMP's for stormwater quality controls and watershed protection.
- Worked with property owners to provide guidance for operation and maintenance of detention basins.
- Managed construction of rain garden at Chamber of Commerce to treat runoff from new parking lot.

No SWMP elements have been changed or refined since permit application. All measurable goals were met.

Overall Compliance with Permit Conditions:

The BMPs in the City's SWMP seem to be effective for local population, appear to address some of the city's larger potential pollution sources and have integrated well with local management procedures. Branson continues to make the public as well as private development more aware of stormwater quality



issues as they relate to the post-construction environment. Plan review continues to recommend post construction methods for projects coming into the City as well as for capital improvement projects funded by the City.

Stormwater Activities Planned During Next Reporting Cycle:

- Prepare a model ordinance designed to regulate and enforce post-construction strategies in new and redevelopment projects.
- Evaluate potential non-structural BMP ordinances such as codes, policies, green parking lots, swales, open space requirements or stream buffers.
- Present a draft stream buffer plan for review by other city departments.
- Create a neighborhood newsletter that will include articles on stormwater and water quality topics.

No changes are proposed for MCM #5 BMP's or measurable goals.

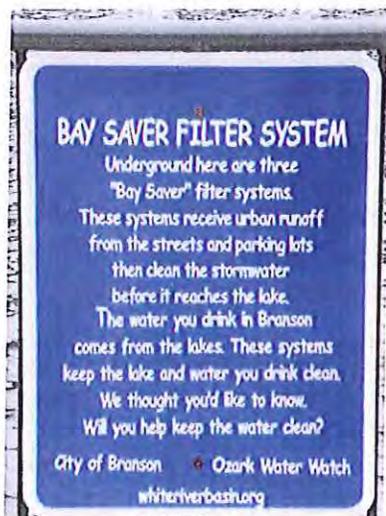


Minimum Control Measure #6 – Good Housekeeping for Municipal Operations

Summary: Branson is striving to 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.

Good Housekeeping Efforts:

- Eleven groups consisting of approximately 80 volunteers in 28 locations throughout the city participated in the Adopt-a-Street program.
- BaySaver units scheduled for cleaning July 2014.



- Continual street sweeping to reduce floatables – 41 miles this reporting cycle.
- Employee trained at MFSMA held in September 2013
- Trained 70 employees utilizing Excal Visual's "Rain Check Stormwater Pollution Prevention" video and quiz (Jan. – April, 2014)
- Used oil recycling – ongoing.
- Continued vehicle maintenance BMPs – new fuel systems installed, washing discharged to sanitary sewer, maintenance under cover.
- Continued salt storage under cover
- Continued removal of trash, salt and gravel debris from city right-of-way
- Continued discussion of stormwater issues at monthly MS4 team meetings and at weekly Administrative Review Team meetings.
- Continued use and promotion of non-coal tar sealants on parking lots or city streets.
- Installed roof to salt spreader storage area this past year to help alleviate solvents and oils from running off into adjacent creek.



No SWMP elements have been changed or refined since permit application. All measurable goals were met. No changes are proposed for MCM #6 BMP's or measurable goals.



Overall Compliance with Permit Conditions:

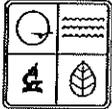
Branson's BMP's seem to be effective for local population, and have integrated well with local management procedures. Branson continues to make progress towards reducing the discharge of pollutants and have begun to make staff in all departments more aware of stormwater quality issues as they relate to municipal operations. Our Parks Department uses covers on materials such as mulch and topsoil to prevent unnecessary runoff. We continue to evaluate and improve our salt storage for snow removal operations. We have a covered area and tarps and bins in place over our outside storage which is monitored and maintained on a regular basis. Pollution prevention and good housekeeping measures are one function of each of our employees' job. This is a daily, on-going routine and employees are reminded to be aware of our own operation and maintenance practices to help and ensure a reduction in the amounts and types of wastes that collect on our streets, parking lots and maintenance areas. City staff also maintains compliance with contractors and developers sites by the enforcement of existing codes and ordinances that assist with prevention.

Results of Information Collected and Analyzed During Reporting Period:

- Approximately 41 miles of city streets swept as well as volunteering and sweeping the city streets of Rockaway Beach at their Makeover Week.
- Inlets/catch basins are inspected periodically and cleaned as needed.
- Approximately 780 gallons of used oil has been converted from waste to energy.
- 48 bags of trash removed from city right-of-way
- One employee trained at MFSMA conference.
- Attendance at StormCon (North American Surface Water Quality Conference & Exposition in August, 2013 in South Carolina. Attended sessions on sediment and erosion control practices, current techniques for meeting stormwater compliance challenges.
- 70 employees trained with Excal Visual Video/Quiz.

Stormwater Activities Planned During Next Reporting Cycle:

- Continue promotion of Adopt-a-Street program.
- Annual cleaning of BaySaver units.
- Weekly street sweeping to reduce floatables.
- Continued stormwater training of city employees.
- Development of an operation and maintenance program will be completed by various city departments.
- Identify any outside training opportunities for staff and send appropriate representatives.
- Attend StormCon 2014 in Portland, OR.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

**STORM WATER ANNUAL REPORT – SMALL MS4 PERMITS ADDENDUM - WATER
QUALITY PROGRAM ASSESSMENT (MUNICIPAL SEPARATE STORM SEWER SYSTEMS)**

INSTRUCTIONS

You are not required to complete this ADDENDUM. However, the Department of Natural Resources strongly recommends this form as a way to satisfy Section 2b of the Small MS4 Annual Report, or at a minimum thoroughly address the items included in this addendum.

The purpose of this report is to contribute information to an evaluation of the National Pollutant Discharge Elimination System, or NPDES, small municipal separate storm sewer system (MS4) permit program. Consistent with Missouri storm water regulations 10 CSR 20-6.200 and federal regulations 40 CFR §9, 122, 123, 124 the Department is evaluating the status of your program. A "no" answer to a question does not necessarily mean noncompliance with your permit or with the state and federal regulations. In order to establish the range of variability in the program, it is necessary to ask questions along a fairly broad performance continuum. The Department of Natural Resources may use some of this information as one component of compliance evaluation.

A. WATER QUALITY PRIORITIES

1. Does your MS4 discharge to waters listed as impaired on Missouri's most recently approved 303(d) list or to waters for which a TMDL has been approved by EPA and is currently in effect? For more information visit www.dnr.mo.gov/env/wpp/waterquality/303d.htm.
 Yes No

2. If yes, identify each impaired water, the impairment(s), whether a TMDL has been approved by EPA for each, and whether the TMDL identifies your MS4 as a source of the impairment.

Impaired Water	Impairment	Approved TMDL		MS4 Assigned to WLA	
Lake Taneycomo	Dissolved Oxygen	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

3. What specific sources of these pollutants of concern are you targeting? attributed entirely to upstream source - Table Rock Dam

4. Do you have discharges to any Wild and Scenic Riverways, drainages thereto, or Outstanding State Resource Waters? (a list of these waters can be found in 10 CSR 20-7.031 tables D and E).
 Yes No

5. Are you implementing additional specific provisions to ensure their continued integrity?
 Yes No

B. PUBLIC EDUCATION AND PUBLIC PARTICIPATION

1. Is your public education program targeting specific pollutants and sources of those pollutants?
 Yes No

2. If yes, which of the following pollutants did your public education program target this reporting period?

- | | | |
|--|--|--------------------------------------|
| <input type="checkbox"/> Suspended Solids | <input type="checkbox"/> Pesticides | <input type="checkbox"/> Temperature |
| <input type="checkbox"/> Nutrients/Fertilizers | <input type="checkbox"/> Oils and Greases | <input type="checkbox"/> Other |
| <input type="checkbox"/> Chlorides | <input type="checkbox"/> Polycyclic Aromatic Hydrocarbons (PAHs) | |

3. What sources of pollution did you target for these pollutants (for education) this reporting period?

4. Note specific successful outcome(s) (e.g., quantified reduction in fertilizer use; NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period.

5. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your storm water program?
 Yes No

C. CONSTRUCTION

1. Do you have an ordinance or adopted policies stipulating:

- Erosion and sediment control requirements?
 Yes No
- Other construction waste control requirements?
 Yes No
- Requirement to submit construction plans for review?
 Yes No
- MS4 inspection authority?
 Yes No
- MS4 enforcement authority?
 Yes No

C. CONSTRUCTION (CONTINUED)

2. Do you have written procedures for:
- a. Reviewing construction plans that include erosion and sediment control?
 Yes No
 - b. Performing erosion and sediment control inspections?
 Yes No
 - c. Responding to erosion and sediment control violations?
 Yes No

3. Identify the number of active construction sites ≥ 1 acre in operation in your jurisdiction at any time during the reporting period.
 Non-municipal 2 Municipal 0

4. How many of the sites identified in # 3 did you inspect this reporting period?
 Non-municipal 2 Municipal n/a

5. Describe, on average, the frequency with which your program conducts construction site inspections.
 Non-municipal weekly Municipal daily

6. Do you prioritize certain construction sites for more frequent inspections? Yes No
 If Yes, based on what criteria?

7. Do you require development of a storm water pollution prevention plan, or SWPPP, for construction activities, and ensure standards comply with NPDES Phase II requirements?
 Yes No

8. Do your municipal projects comply with state and local requirements for erosion and sediment control?
 Yes No

9. Identify which of the following types of enforcement actions you used during the reporting period for construction activities; indicate the number of actions or note those for which you do not have authority:

<input type="checkbox"/> Yes	Notice of Violation	# _____	No Authority <input type="checkbox"/>
<input type="checkbox"/> Yes	Administrative Fines	# _____	No Authority <input type="checkbox"/>
<input type="checkbox"/> Yes	Stop Work Orders	# _____	No Authority <input type="checkbox"/>
<input type="checkbox"/> Yes	Civil Penalties	# _____	No Authority <input type="checkbox"/>
<input type="checkbox"/> Yes	Criminal Actions	# _____	No Authority <input type="checkbox"/>
<input type="checkbox"/> Yes	Administrative Orders	# _____	No Authority <input type="checkbox"/>
<input type="checkbox"/> Yes	Other _____	# _____	

10. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results and enforcement actions of active construction sites in your jurisdiction?
 Yes No

11. What are the three most common types of violations documented during this reporting period?
 a. none
 b.
 c.

12. How often do municipal employees receive training about the construction program? annually

D. ILLICIT DISCHARGE ELIMINATION

1. Have you completed a map of all outfalls and receiving waters of your storm sewer system?
 Yes No

2. Have you completed a map of all storm drain pipes of your storm sewer system?
 Yes No

3. Identify the number of outfalls in your storm sewer system. 11

4. Do you have documented procedures, including frequency, for screening outfalls and open conveyances?
 Yes No

5. Of the outfalls identified in # 3, how many have been screened for dry weather discharges at any time since you obtained MS4 permit coverage? n/a

6. What is your frequency for screening outfalls for illicit discharges?
 a. Describe any variation based on size/type. n/a

7. Describe your approach to screening open conveyances for illicit discharges. n/a

8. Do you have an ordinance or other regulatory mechanism that effectively prohibits illicit discharges?
 Yes No

9. Do you have an ordinance or other regulatory mechanism that provides authority for you to take enforcement action or recover costs for addressing illicit discharges?
 Yes No

D. ILLICIT DISCHARGE ELIMINATION (CONTINUED)

10. During this reporting period, how many illicit discharges or illegal connections have you discovered? 0
11. Of those illicit discharges and illegal connections discovered or reported, how many have been eliminated?
12. How often do municipal employees receive training about the illicit discharge program? once per permit cycle

E. STORM WATER MANAGEMENT FOR MUNICIPAL OPERATIONS

1. Have storm water pollution prevention plans (or an equivalent plan) been developed for:
- a. All public parks, ball fields, other recreational facilities and other open spaces.
 Yes No
 - b. All municipal construction activities, including those disturbing less than 1 acre.
 Yes No
 - c. All municipal turf grass/landscape management activities.
 Yes No
 - d. All municipal vehicle fueling, operation and maintenance activities.
 Yes No
 - e. All public works, parks and other municipal maintenance yards.
 Yes No
 - f. All municipal waste handling and disposal areas.
 Yes No
 - g. Other municipal operations.
 Yes No
2. Are storm water inspections conducted at these facilities?
 Yes No
3. If Yes, at what frequency are inspections conducted? monthly
4. List activities for which operating procedures or management practices specific to storm water management have been developed? (such as road repairs, catch basin cleaning, landscape management, etc.)
road repairs, inlet cleaning, street sweeping
 Yes No
5. Do you prioritize certain municipal activities or facilities for more frequent inspections?
 Yes No
- a. If Yes, at what frequency are inspections conducted? during and after heavy rain events
6. On average, how frequently are catch basins and other inline treatment systems inspected? monthly
7. Do all municipal employees overseeing planning and implementation of storm water-related activities receive comprehensive training about storm water management?
 Yes No
8. If yes, do you also provide regular updates and refreshers?
 Yes No
- a. If so, how frequently or under what circumstances? training seminar twice yearly
9. How often do other municipal employees and contractors performing duties that can impact storm water receive training about storm water management? bi-annual

F. NEW AND REDEVELOPMENT (POST-CONSTRUCTION) STORM WATER MEASURES

1. Do you have ordinances or other mechanisms to require:
- a. Pre-site design meetings with developers?
 Yes No
 - b. Site plan reviews for storm water quality of all new and re-development projects of an acre or more?
 Yes No
 - c. Reasonable mimicking of pre-construction storm water runoff quality in all new development projects of an acre or more?
 Yes No
 - d. An incremental improvement of existing storm water runoff quality in redevelopment projects of an acre or more?
 Yes No
 - e. Long-term operation and maintenance of storm water management controls?
 Yes No
 - f. Retrofitting to incorporate long-term storm water management controls?
 Yes No
2. If you have retrofit requirements, what are the circumstances or criteria?
3. What are your criteria for determining which new/re-development storm water plans you will review for water quality? (such as all projects, projects disturbing greater than one acre, etc.) water quality criteria is currently being developed
4. Do your ordinance(s) or other regulatory mechanism(s) allow for:
- a. Non-structural site design options to allow for optimal water quality management in long-term storm water runoff? (such as minimized/disconnected impervious surfaces, cluster housing in exchange for green space, resource protection boundaries, etc.)
 Yes No
 - b. Structural contemporary, dispersed micro-infiltration/filtration practices such as grassed swales, sand filters, neighborhood roundabouts with rain gardens, etc.?
 Yes No

F. NEW AND REDEVELOPMENT (POST-CONSTRUCTION) STORM WATER MEASURES (CONTINUED)

5. Do you require water quality design standards or performance standards, either directly or by reference, be met for new development and re-development?

Yes No

6. Do these design standards/performance measures require pre-construction runoff conditions in new development be met for:

a. Flow volumes.

Yes No

b. Peak discharge rates.

Yes No

c. Discharge frequency.

Yes No

d. Flow duration.

Yes No

e. Water quality.

Yes No

7. Please provide the Web address/reference where all post-construction storm water management standards are located.

8. Do your zoning bylaws, ordinances or other regulatory processes allow or enable:

a. Flexible site design criteria such as smaller lot sizes, reduced setbacks and narrow streets in exchange for functional green space and optimal water quality management in storm water runoff.

Yes No

b. Established regulatory controls over tree clearance and removal of mature trees or forest stands?

Yes No

c. Green space residential developments (cluster development or conservation subdivision design)?

Yes No

d. The location of bioretention areas, rain gardens, filters strips, swales and constructed wetlands in required setback areas?

Yes No

e. Construction of low impact development, or LID, storm water management techniques (bioretention, swales, filter strips) on land held in common (when appropriate)?

Yes No

f. Use of permeable paving for parking stalls and spillover parking areas?

Yes No

g. Limited clearing within the right-of-way to the minimum necessary to construct roadway, drainage, sidewalk and utilities, and to maintain site lines?

Yes No

9. Does your review and approval process include using a water quality checklist?

Yes No

10. If yes to # 9, please check all of the following checklist items that apply:

a. Existing and proposed mapping and plans (recommended scale of 1" = 50') which illustrate:

1. Existing and proposed topography (minimum of 2-foot contours recommended).

Yes No

2. Compatibility with watershed plans, land use plans, comprehensive plans, (contemporary street standards) etc.

Yes No

3. Perennial and intermittent streams.

Yes No

4. Mapping of predominant soils from USDA soil surveys as well as location of any site-specific borehole investigations that may have been performed.

Yes No

5. Boundaries of existing predominant vegetation and proposed limits of clearing.

Yes No

6. Location and boundaries of resource protection areas such as wetlands, lakes, ponds and other setbacks (e.g., stream buffers, drinking water well setbacks, septic setbacks).

Yes No

7. Grading plan with location of existing and proposed roads, buildings and other structures.

Yes No

8. Location of existing and proposed utilities (e.g., water, sewer, gas, electric) and easements.

Yes No

9. Location of existing and proposed conveyance systems such as grass channels, swales and storm drains.

Yes No

10. Flow paths.

Yes No

11. Location of floodplain/floodway limits and relationship of site to upstream and downstream properties and drainages.

Yes No

12. Location and dimensions of proposed channel modifications, such as bridge or culvert crossings.

Yes No

13. Location, size, maintenance access and limits of disturbance of proposed structural storm water management practices.

Yes No

F. NEW AND REDEVELOPMENT (POST-CONSTRUCTION) STORM WATER MEASURES (CONTINUED)

14. Location of proposed community recreation/green space areas.

Yes No

15. Functional landscape plan.

Yes No

b. Narrative and supporting calculations describing:

1. Representative low-impact development techniques (with supporting evidence that technique is compatible with site characteristics) such as on-lot bioretention, tree clearing minimization, minimizing directly connected impervious surfaces, open section roads (also called roadside swales), etc.

Yes No

2. Zoning, acreage, types and amounts of land uses. (e.g., parking spaces, density, green areas, building footprint areas)

Yes No

3. Traffic analysis estimating average daily trips for street network and parking requirements.

Yes No

4. Site impervious area (including effective disconnections).

Yes No

5. Reforestation and/or resource conservation protection measures.

Yes No

6. Comparison of proposed development data with allowable density, land use, etc.

Yes No

7. Development phasing or implementation sequence.

Yes No

8. Other?

11. How many development and redevelopment project plans were reviewed during the reporting period to assess impacts to water quality and receiving stream protection?
38

12. How many of the plans identified in # 11 were approved? 38

13. How many privately owned permanent storm water management practices/facilities were inspected during the reporting period? 9

14. How many of the practices/facilities identified in # 13 were found to have inadequate maintenance? 0

15. How long do you give operators to remedy any operation and maintenance deficiencies identified during inspections? n/a

16. Do you have authority to take enforcement action for failure to properly operate or maintain storm water management practices/facilities? Yes No

17. How many formal enforcement actions (i.e., more than a verbal or written warning) were taken for failure to adequately operate or maintain storm water management practices/facilities? 0

18. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? Yes No

19. Do all municipal departments or staff (as relevant) have access to this tracking system? Yes No

20. How often do municipal employees receive training about the post-construction program? NONE

G. PROGRAM RESOURCES

1. What was the annual expenditure to implement MS4 NPDES permit requirements this reporting period? \$11,375

2. What is next year's budget for implementing the requirements of your MS4 NPDES permit and SWMP? \$46,000

3. This year what is your source(s) of funding for the storm water program and annual revenue (amount or percentage) derived from each?

Source: Transportation Budget - operating	Amount \$: 11,375	OR %:
Source:	Amount \$:	OR %:
Source:	Amount \$:	OR %:

4. How many full time equivalent employees does your municipality devote to the storm water program (specifically for implementing the storm water program versus municipal employees with other primary responsibilities)? 0

5. Do you share program implementation responsibilities with any other entities?

Yes No

Entity:	Activity/Task/Responsibility:	Your Oversight/Accountability Mechanism:
Entity:	Activity/Task/Responsibility:	Your Oversight/Accountability Mechanism:
Entity:	Activity/Task/Responsibility:	Your Oversight/Accountability Mechanism:

H. EVALUATING AND MEASURING PROGRESS

1. What indicators do you use to evaluate the overall effectiveness of your storm water management program? How long have you been tracking them and at what frequency? These are not measurable goals for individual management practices or tasks, but large-scale or long-term metrics for the overall program, such as in-stream macroinvertebrate community indices, measures of effective impervious cover in the watershed, indicators of in-stream hydrologic stability, etc.

Indicator	Began Tracking (year)	Frequency	Number of Locations
<i>Example: E. coli</i>	2003	Weekly April–September	20

2. What environmental quality trends have you documented over the duration of your storm water program? Reports or summaries can be attached electronically, or provide the Web address where they are located.

Best Management Practices by Year

Year	MCM	BMP Goal Selected	Measurement Method	Responsibility	% Complete	Comments
ALL	MCM 1	Existing educational materials will be identified and appropriate subjects selected for distribution. The City's existing social media pages will be enhanced to engage the public.	Materials assembled.	Engineering	100%	Four brochures available. FB page includes water quality posts.
	MCM 1	Stormwater web page will be updated as an educational tool. Related and supportive websites will be linked.	# links to related websites	Engineering	100%	6 links added in 2013
	MCM 1	Promote and Co-sponsor an annual Ozarks Water Watch Week with other organizational partners. Water Watch Week is a series of programs designed to engage citizens in water oriented activities that highlight the importance of water quality.	# of events during Water Watch Week	Engineering	2013-100%	2013: 19 water quality events, 2 sponsored by City of Branson
	MCM 1	Promote safe disposal of household chemicals at the Household Collection Facility using the "Household Chemical Collections: The Water Connection" brochure at the Household Collection Facility	# brochures distributed, # tons collected	Engineering	2013-1900+ HHW brochures distributed.	1.82 tons
	MCM 2	Citizens will be encouraged to use the City's recycling center to dispose of household chemicals & recyclable materials.	# vehicles accessing recycle center, # tons of chemicals disposed	Public Works	100%	21,136 vehicles accessed the RC in 2013. 1.82 tons of household chemicals disposed of.
	MCM 2	A community-wide lake cleanup will be organized by a partnering organization and co-sponsored by the City of Branson.	# of participants & waste volume	Engineering	100%	44 volunteers, 30 tires, 5 55-gallon drums
	MCM 2	Groups will be organized to participate in an annual storm drain marking event.	# of participants; # storm drains marked;	Engineering	100%	138 participants; 600 drains marked
MCM 2	Groups will be encouraged to participate in the adopt-a-street program through the City website and social media.	# participants	Public Works	100%	80 participants in 20 locations	

Best Management Practices by Year

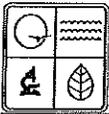
Year	MCM	BMP Goal Selected	Measurement Method	Responsibility	% Complete	Comments
ALL	MCM 2	Community groups will be provided with supplies and maps for distribution of 100 "Dump No Waste, Drains to Stream" doorhangers at businesses and communities.	# distributed	Engineering	100%	600 drains marked (exceeds total needed for 5 years)
	MCM 2	Ten pet waste stations will be maintained in city parks and at Branson Landing.	Total # pet waste stations maintained	Parks	100%	maintained
	MCM 5	Utilize the Administrative Review Team (ART) process to encourage stormwater runoff control BMP's.	# Plans evaluated by Administrative Review Team	ART	on-going	29
	MCM 6	"Adopt-A-Street" program promoted through press release to reduce floatables.	# participants	Public Works	on-going	83
	MCM 6	Annual Cleaning of BaySaver Units.	# units cleaned	Public Works		Set for cleaning July 2014
	MCM 6	Street sweeping to reduce floatables.	# of cleanings per year	Public Works	100%	10
YEAR 1	MCM 1	Watershed map will be developed and placed on the City's website to allow residents to determine the watershed in which they live. The watershed map will also be available for purchase.	Map developed & posted to website	GIS	100%	http://www.bransonmo.gov/documentcenter/view/503
	MCM 1	Develop stormwater web page. The website will provide information on watersheds, BMPs, disposal of household chemicals, non-point source pollution, proper used motor oil disposal, proper pet waste disposal, and the use of pesticides and herbicides on lawns.	Webpage developed	Engineering	100%	Updated as needed or as materials become available.
	MCM 1	Partner to install a rain garden/parking lot at the Branson Chamber of Commerce for use as a stormwater demonstration area for citizens, visitors, contractors, and community leaders.	Construction completed	Engineering	100%	Complete

Best Management Practices by Year

Year	MCM	BMP Goal Selected	Measurement Method	Responsibility	% Complete	Comments
YEAR 1	MCM 1	Citizens and groups provided with supplies for placement of metal storm drain decals.	# storm drains marked	Engineering	100%	600 decals placed by 138 volunteers
	MCM 1	All new storm drain inlets required to have "Drains to Stream" lids with water-related design.	Requirement added to city specifications	Engineering	100%	Specs Updated
	MCM 1	Citizens and groups provided with supplies to distribute door hangers to explain sources of stormwater pollution.	# distributed	Engineering	100	1,934 Distributed
	MCM 2	The Lake Taneycomo Watershed Plan being written by Table Rock Lake Water Quality, Inc., a non-profit watershed organization, will be posted to the City website. The public will be invited and encouraged to participate in the watershed plan's development and implementation.	Link created to Table Rock Lake, Inc.'s Watershed Management Plan by TRLWQ	Engineering	50%	In progress
	MCM 3	Review of model ordinances and development of City ordinance defining acceptable stormwater discharges and prohibiting non-stormwater.	Review completed	Public Works	100%	Ordinances reviewed, city ordinance developed
	MCM 3	Complete mapping of remaining 10% of Bee Creek outfalls.	Mapping completed	GIS, Public Works	100%	Complete
	MCM 3	Complete an additional 15% mapping of storm sewer system.	# Elements mapped	GIS, Public Works	100%	Complete
	MCM 3	Provide stormwater education/training to 20% of city employees in Engineering, Public Works, Fire, Police, Parks, Utilities & Planning.	# Employees trained	Public Works	100%	70 trained
	MCM 4	Create and adopt plan review checklist for reviewing/approving plans for Land Disturbance permit.	Checklist Created	Public Works, Engineering, Planning	100%	plan review checklist created and adopted

Best Management Practices by Year

Year	MCM	BMP Goal Selected	Measurement Method	Responsibility	% Complete	Comments
YEAR 1	MCM4	Landscape plan renamed and revised as municipal land disturbance permit.	Permit revised	Public Works, Planning	100%	Complete labeled construction permit
	MCM 5	Co-sponsor MS4 "Green Tools" Conference together with Ozarks Water Watch, targeting developers and engineers.	# Attendees	Engineering	100%	70 Attendees
	MCM 5	Evaluate potential funding mechanisms that will provide revenue for stormwater services in the City of Branson.	Evaluation performed	Engineering/ Consultant	0%	Will begin evaluation next reporting cycle
	MCM 5	Review city stormwater design regulations to incorporate appropriate and applicable BMP's for stormwater controls and watershed protection in the City's "Design Criteria for Public Improvement Projects (June 2009)" for construction.	Review completed	Public Works	25%	In progress
	MCM 6	Initiate stormwater training program for 20% of city parks, fire, police, utilities, public works, planning and engineering department employees.	Training program selected	Engineering	100%	Training held for 70 city employees
	MCM 6	Preventative fleet maintenance schedule.	# Vehicle inspections	Public Works, Garage	100%	Service Center responsible for inspections of all fleet vehicles when brought in for oil change
MCM 6	Coal tar sealants are prohibited on municipal parking lots or city streets.	Departmental Policy	Public Works	100%	Included in specs for city lots or streets. Two lots sealed in 2013 using non-coal tar sealant	



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
STORM WATER ANNUAL REPORT – SMALL MS4 PERMITS
 (MUNICIPAL SEPARATE STORM SEWER SYSTEMS)

Return completed form to:
 Water Protection Program
 P.O. Box 176
 Jefferson City, MO 65102-0176

This form may be reproduced. Additional copies may be printed at www.dnr.mo.gov/forms/index.html.
 Each section must be completed. Please print or type.

A. PERMITTEE INFORMATION

1. PERMITTEE (AGENCY NAME) City of Branson	CHECK BOX IF THIS IS A NEW NAME <input type="checkbox"/>
2. NAME OF CONTACT PERSON David H. Miller	
3. MAILING ADDRESS 110 W. Maddux, Suite 310	CHECK BOX IF THIS IS A NEW ADDRESS <input type="checkbox"/>
4. CITY, STATE AND ZIP CODE Branson, MO 65616	CHECK BOX IF THIS IS A NEW CITY, STATE, ZIP <input type="checkbox"/>
5. FACILITY TELEPHONE NUMBER WITH AREA CODE 417-337-8559	CHECK BOX IF THIS IS A NEW NUMBER <input type="checkbox"/>
6. PERMIT NUMBER Application pending	
7. HAVE ANY AREAS BEEN ADDED OR REMOVED FROM THE MS4 DUE TO ANNEXATION OR OTHER LEGAL MEANS SINCE THE MOST RECENT PERMIT APPLICATION WAS SUBMITTED? IF YES, INCLUDE UPDATED MAP. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8. WHAT IS THE CURRENT ESTIMATED POPULATION OF YOUR MS4 THIS REPORTING PERIOD? 11,064	
9. IF COUNTY MS4, WHAT IS THE CURRENT POPULATION OF YOUR MS4 WITHIN THE URBANIZED AREA?	

B. REPORTING PERIOD

(CHECK ONE) REPORT IS DUE BY JULY 28 OF EACH YEAR

- Jan. 01, 2008 to June 12, 2009
 - June 13, 2009 to June 12, 2010
 - June 13, 2010 to June 12, 2011
 - June 13, 2011 to June 12, 2012
 - June 13, 2012 to June 12, 2013
 - June 13, 2013 to June 12, 2014
- or alternative/agreed upon reporting period: _____ - _____

C. PROGRAM AREAS (ATTACHMENT)

As an attachment to this form, address each of the following items for each of the six program areas (public education, public participation/involvement, illicit discharge detection and elimination, construction, post-construction and good housekeeping for municipal operations.) The status of each program area must be addressed, even if the program area was completed and fully implemented in a previous reporting year. It is important to report on activity and task commitments identified in the Storm Water Management Program Plan, or SWMP, and provide an explanation for any changes to those commitments.

If another entity is a co-permittee, the annual report information under sections C and D of this form must also be provided for each such entity.

(Depending on the size of the municipality and the complexity of the programs, the attachments for this section will likely contain one to five pages per program area.)

1. Implementation status.
 - a. General summary
 - b. SWMP elements changed or refined since previous report or permit application. Include a summary of any changes made in accordance with Section 4.4 of the permit that have already been submitted to the Department, and any additions made in accordance with Section 4.4 of the permit.
 - c. Status of Measurable Goals
 - d. Provide:
 1. The completion date for any measurable goals completed during the reporting period.
 2. An explanation for any measurable goals scheduled for completion during the reporting period that were not completed. (Any modified goals/deadline should be listed in item 5, below.)
2. Overall compliance with permit conditions and SWMP.
 - a. Assessment of the appropriateness of the identified Best Management Practices, also known as BMPs. Factors to consider in determining appropriateness include, but are not limited to, effectiveness for local population, pollution sources, receiving water concerns and integration with local management procedures.

- b. Progress to achieve the statutory goal of reducing the discharge of pollutants to the maximum extent practicable. Include a general discussion on your assessment of the overall program effectiveness at protecting water quality. See Small MS4 Annual Report Addendum Water Quality Program Assessment for recommendations on completing this section. The form is available online at www.dnr.mo.gov/forms/780-2049.
3. Results of information collected and analyzed, if any, during the reporting period, including any monitoring data used to assess the success of the program at reducing the discharge of pollutants to the maximum extent practicable. Discharge monitoring is not a requirement under the general permit, unless otherwise directed by the Department (e.g. TMDL monitoring). However, if you did collect any monitoring data for storm water discharges within your jurisdiction, or if any program element included data collection of some sort, submit a short summary of the information and any analysis completed. Examples of data sources include survey or polling results, miles of riverbank cleaned up, number of hits on a Web site before and after a public education campaign, etc. (Data recorded under Item 1.c, Measurable Goals, does not need to be repeated here.)
4. Brief summary of storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule). Provide a short summary based on your existing Missouri State Operating Permit Storm Water Management Program implementation schedule. If any changes are planned from the original descriptions provided in the SWMP or previous reports, they should be summarized in item 5.
5. Proposed changes to the program area and documented SWMP.
- a. Changes to BMPs
 - b. Changes to Measurable Goals
- Provide a summary of proposed changes or additions to information previously submitted in reports or the permit application. Significant changes that involve replacing or deleting an ineffective or unfeasible BMP may require program review as outlined in Section 4.4 of the permit.

D. CERTIFICATION

I certify under penalty of law this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE OF PERMITTEE (LEGALLY RESPONSIBLE PERSON)

David H. Miller

DATE SIGNED

7/17/14

NAME (PRINTED or TYPED)

David H. Miller

TITLE

City Engineer/Director of Public Works