

AUG 19 2013

**BEFORE THE  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF MISSOURI**

**IN THE MATTER OF:**

)  
The City of Fulton )  
Wastewater Treatment Facility )  
 ) No. 2013-WPCB-1241  
 )

**SERVE:**

)  
 )  
The Honorable LeRoy Benton, Mayor )  
The City of Fulton )  
 )

**ABATEMENT ORDER ON CONSENT**

I. Upon the effective date of Abatement Order on Consent (AOC) No. 2013-WPCB-1241, AOC No. 2013-WPCB-1241 will supersede AOC No. 2011-WPCB-1122 issued on August 2, 2011. AOC No. 2011-WPCB-1122 is now null and void and of no further force of effect.

II. **NOTICE TO RECIPIENTS OF ABATEMENT ORDERS**

The issuing of this Abatement Order on Consent (AOC) number 2013-WPCB-1241, by the Missouri Department of Natural Resources, is a formal administrative action by the State of Missouri and is being issued because the wastewater treatment facility and its corresponding collection system serving the city of Fulton is in violation of the Missouri Clean Water Law (MCWL) and its implementing regulations. This AOC is issued under the authorities of Sections 640.130, 640.131, 644.056 and 644.079, RSMo. Failure to

comply with this AOC is, by itself, a violation of the MCWL Section 644.076.1, RSMo. Litigation may occur without further administrative notice if there is not compliance with the requirements of this AOC. This AOC does not constitute a waiver or a modification of any requirements for the MCWL, or its implementing regulations, all of which remain in full force and effect. Compliance with the terms of this AOC shall not relieve the city of liability for, or preclude the Department from, initiating an administrative or judicial enforcement action to recover civil penalties for any future violations of the MCWL, or to seek injunctive relief, pursuant to Chapter 644, RSMo.

### III. FINDINGS OF FACT

- A. The city is a municipality with a population of approximately 12,128. As part of the services it provides its citizens, the city owns and operates a wastewater treatment facility, located in the SE ¼, NW ¼, NE ¼, Section 21, Township 47 North, Range 3 East, in Callaway County, Missouri. The city's facility consists of an oxidation ditch with sludge holding tanks and aerobic digesters. The design population equivalent is 47,500; the design flow is 2.93 million gallons per day (MGD), with an actual flow of 1.7 MGD. The facility also consists of a single cell lagoon used for inflow and infiltration (I/I), with an actual flow dependent upon rainfall. The city also maintains sewer lines throughout the city that collect and carry wastewater from residential, commercial, and industrial sources to its facility.
- B. The Department issued Missouri State Operating Permit (MSOP) No. MO-0103331 to the city with an effective date of August 12, 2005. The August 12, 2005, MSOP No. MO-0103331 contains specific effluent limitations for Outfall's no. 001 and 002. Effluent from the city's facility discharges from Outfall no. 001 to Stinson Creek, a class C receiving stream, pursuant to the requirements of MSOP no. MO-0103331. Effluent discharges from the facility's single cell lagoon during wet weather events, through Outfall No. 002, into Stinson Creek, pursuant to the requirements of MSOP No. MO-0103331.
- C. Stinson Creek was listed on the 2008 303(d) list for low dissolved oxygen and organic sediment, but was removed from the 2012 303(d) list since the Total Maximum Daily Load (TMDL) has been written.
- D. Stinson Creek is waters of the state as defined by Section 644.016 (27) RSMo.
- E. On August 24, 2009, Department staff conducted a compliance inspection of the facility and collection system. During the inspection of the facility, Department staff observed that one baffle was missing on the outer ring on a rotor in the

oxidation ditch and observed partially treated wastewater leaking from clarifier no. 4 and onto concrete below the clarifier.

- F. Department staff also observed that the South lift station was only equipped with one operational pump; the Hawk Lake lift station did not contain an operational phone dialer alarm; and the fence surrounding the Hawk Lake lift station did not have warning signs posted on all four (4) sides.
- G. As part of this inspection, staff reviewed the city's Sanitary Sewer Overflow (SSO) records and Discharge Monitoring Reports and documented that the city's collection system experiences increased flows during wet weather events.
- H. On March 5, 2010, Department staff conducted an investigation of a reported SSO from the city's collection system and observed evidence that sewage had overflowed from the Route O lift station and nearby manhole, which entered Smith Branch.
- I. Smith Branch is waters of the state as defined by Section 644.016 (27), RSMo.
- J. On March 12, 2010, the Department received an SSO reporting form from the city estimating the volume of untreated wastewater discharged during the March 5, 2010, incident to be 846,000 gallons.
- K. Based upon the violations documented by Department staff during the March 5, 2010, investigation, the Department issued Notice of Violation (NOV) No. NER2010031514215166 to the city on April 6, 2010.
- L. MCWL and Section 644.096, RSMo, authorize the state, or any political subdivision or agency to recover actual damages, including all costs and expenses necessary to establish or collect any sums under Sections 644.006 to 644.141, RSMo, and the costs and expenses of restoring any waters of the state to their condition as they existed before violation, sustained by it because of any violation.
- M. The Department dispatched employees to investigate the March 5, 2010, SSO. In doing so, the Department incurred costs and expenses, including but not limited to, water sampling and analysis, photographs, and travel expenses. These costs incurred by the Department total three thousand two hundred thirty-eight dollars and seventy-eight cents (\$3,238.78).
- N. On December 13, 2010, the Department received a cashier's check in the amount of three thousand two hundred thirty-eight dollars and seventy-eight cents (\$3,238.78) made payable to the "State of Missouri" from the city as payment for the Department's investigative costs.

- O. On December 13, 2010, the Department received a cashier's check in the amount of twenty-thousand dollars and no cents (\$20,000.00) made payable to the "Callaway County Treasurer, as custodian of the Callaway County School Fund" from the city for payment of a civil penalty to resolve the past violations of the MCWL and its implementing regulations.
- P. On May 5, 2011, city representatives met with Department staff to discuss concerns regarding the draft of MSOP no. MO0103331, which was sent to the city for consideration on April 14, 2011. During this meeting, city officials explained that it's not beneficial for the city to invest its finances in completing the upgrades to its facility until the city determines the design flow after completing all the city's I/I reduction program. The city further requested an additional two (2) years to meet the final effluent limitations from Outfall no. 001 for Escherichia coliform (E. coli) and Total Ammonia Nitrogen (N).
- Q. On June 28, 2011, the city submitted to the Department, a formal request for extension to comply with the final effluent limitations for E. coli and Total Ammonia (N). In this correspondence, the city explained that the currently proposed final effluent limitations in the draft operating permit are not achievable within the timeframes proposed. In addition, the city requested that the Department allow additional time to reduce peak flows and to design a properly-sized and effective wastewater treatment system at a lower cost for the city. Finally, the city requested that AOC No. 1080 be modified to extend the timelines for obtaining compliance with the final effluent limitations for E. coli and Total Ammonia (N).
- R. On May 20, 2013, Department staff met to discuss the draft operating permit, sent to the city on April 19, 2013, which represents the first phase of implementation of the Stinson Creek TMDL. The phased adaptive management approach includes facility improvements followed by water quality studies to evaluate if water quality standards for Stinson Creek have been attained. The draft operating permit also includes a phased implementation for technology based nutrient limits. During this meeting, city representatives requested that improvements to the facility which enable the effluent to comply with final limits for E. coli and Total Ammonia as N and elimination of all discharges from Outfall No. 002 be completed by December 31, 2016. City officials also presented a schedule to the Department that includes timeframes for construction of disinfection facilities, ammonia improvements, and implementation of nutrient removal, which extends to the year 2035, if applicable, after implementation of the phased improvement(s). (see attached Exhibit "A")

#### IV. CONCLUSIONS OF LAW

The violations of the MCWL and its implementing regulations alleged herein and found to have been committed by the city at its facility and its collection system are as follows:

1. Placed or caused or permitted to be placed, water contaminants in a location where they are reasonably certain to cause pollution of waters of the state, in violation of Sections 644.051.1(1) and 644.076.1, RSMo; and
2. Failed to prevent a bypass of wastewater from the collection system of the facility, in violation of the Standard Conditions, Part III, Section C, of MSOP No. MO-0103331 and Section 644.076.1, RSMo.

#### V. AGREEMENT

- A. The Department and the city desire to amicably resolve all claims that might be brought against the city for the violations alleged above in Section IV, Conclusions of Law, without the city admitting the validity or accuracy of such claims.
- B. The provisions of this AOC shall apply to and be binding upon the parties executing this AOC, their successors, assigns, agents, subsidiaries, affiliates, and lessees, including the officers, agents, servants, corporations, and any persons acting under, through, or for the parties. Any changes in ownership or corporate status, including but not limited to any transfer of assets or real or personal property, shall not affect the responsibilities of the city under this AOC. If the city sells or otherwise transfers the Facility, then the city shall cause as a condition of such sale or transfer, that the buyer will assume the obligations of the city under this AOC in writing. In such event, the city shall provide thirty (30) days prior written notice of such assumption to the Department.
- C. The city shall complete improvements to its collection system to work toward eliminating incidents of SSOs from its collection system and discharges from Outfall No. 002. The city shall fully implement all of the requirements of Appendix A of this AOC, Wastewater Collection System and Treatment Facilities Correction and Management Program in accordance with the timeline submitted pursuant to Appendix A, Paragraph 3.A. All documents submitted to the Department pursuant to Appendix A, shall be subject to review and approval. By the Department and shall be fully implemented by the city upon approval. If the Department comments and/or requests modification of any documents submitted to the Department, pursuant to Appendix A, the city shall submit a written response to the Department to address and satisfy said Department comments.

The written response shall be submitted within thirty (30) days of receipt of said comments or within the time frame specified in the Department's correspondence, whichever is earlier. The city shall implement the I/I Assessment and Corrective Action Plan as approved by the Department on June 7, 2011, which became fully effective upon the date the Department approved the schedule in writing and the schedule shall be enforceable as a condition of compliance with this AOC.

- D. Immediately upon becoming aware that a deadline or milestone as set forth in this AOC will not be completed by the required deadline, the city shall notify the Department by telephone or electronic mail i) identifying the deadline that will not be completed; ii) identifying the reason for failing to meet the deadline; and iii) proposing an extension to the deadline. Within five (5) days of notifying the Department, the city shall submit to the Department for review and approval, a written request containing the same basic provisions of i, ii, and iii listed above. The Department may grant an extension if it deems appropriate. Failure to submit a written notice to the Department may constitute a waiver of the city's right to request an extension and may be grounds for the Department to deny the city an extension.
- E. Should the city fail to meet the terms of this AOC, including the terms set out in paragraph C and Appendix A, the city shall pay stipulated penalties in the following amount:

<u>Days of Violation</u>	<u>Amount of Penalty</u>
1 to 30 days	\$500.00 per day
31 to 90 days	\$1,000.00 per day
91 days and above	\$2,500.00 per day

Stipulated penalties will be paid in the form of a certified or cashier's check made payable to "Callaway County Treasurer, as custodian of the Callaway County School Fund." Any such stipulated penalty shall be paid within ten (10) days of demand by the Missouri Department of Natural Resources and shall be delivered to:

Accounting Program  
Missouri Department of Natural Resources  
P.O. Box 477  
Jefferson City, MO 65102-0176

- F. The stipulated penalties provided for in this AOC shall be in addition to any other rights, remedies or sanction available to the Department for the city's violation of this AOC.
- G. Nothing in this AOC forgives the city from future non-compliance with the laws of the state of Missouri, nor requires the Department or state of Missouri to forego pursuing by any legal means for any noncompliance with the laws of the State of Missouri. The terms stated herein constitute the entire and exclusive agreement of the parties. There are no other obligations of the parties, be they express or implied, oral or written, except those expressly set forth herein. The terms of this AOC supersede all previous memoranda or understanding, notes, conversations, and agreements, express or implied. This AOC may not be modified verbally.
- H. By signing this AOC, all signatories assert that they have read and understood the terms of this AOC, and that they have the authority to sign this AOC on behalf of their respective parties.
- I. The effective date of the AOC shall be the date the Department signs the Agreement. The Department shall send a fully executed copy of this AOC to the city for its records.
- J. The city shall comply with the MCWL, Chapter 644, RSMo and its implementing regulations at all times in the future.

#### VI. TERMINATION

Upon completion of all requirements contained in AOC No. 2013-WPCB-1241, the city may submit a written request to the Department to terminate the AOC. The termination request shall include documentation of all activities the city has undergone to complete all requirements and conditions of the AOC. In the event the Department fails to respond to the city's termination request within thirty (30) days receipt of the request, AOC No. 2013-WPCB-1241 shall hereby terminate. This AOC does not cover implementation of the TMDL, as outlined in the schedule contained in Exhibit "A".

#### VII. FINDING OF AFFORDABILITY

Pursuant to Section 644.145 (2) (c), the city hereby waives the requirement for the Department to develop an affordability finding with respect to the requirements required by this AOC No. 2013-WPCB-1241.

VIII. RIGHT OF APPEAL

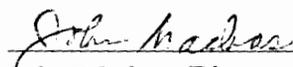
By signing this AOC No. 2013-WPCB-1241, the city consents to its terms and waives any right to appeal, seek judicial review, or otherwise challenge the terms and conditions of this AOC pursuant to Sections 621.250, 640.010, 640.013, 644.056.3, 644.079.2, Chapter 536 RSMo, 644.145, 10 CSR 20-1.020, 10 CSR 20-3.010, 10 CSR 20-6.020 (5), the Missouri Constitution, or any other source of law.

VIV. CORRESPONDENCE AND DOCUMENTATION

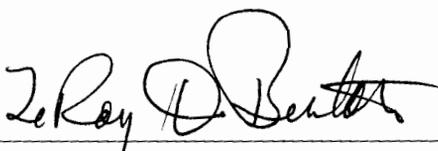
Correspondence or documentation with regard to conditions outlined in this AOC shall be directed to:

Ms. Joan Doerhoff  
Compliance and Enforcement Section  
Water Protection Program  
Department of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102-0176

Agreed to and Ordered this 21<sup>st</sup> day of August, 2013

  
\_\_\_\_\_  
John Madras, Director  
Water Protection Program  
Missouri Department of Natural Resources

Agreed to and Ordered this 13<sup>th</sup> day of August, 2013

  
\_\_\_\_\_  
The Honorable Mayor LeRoy Benton

Copies of the foregoing served by certified mail to:

The Honorable LeRoy Benton  
Mayor of City of Fulton  
East 4th Street  
P.O. Box 130  
Fulton, MO 65251-0130

CERTIFIED MAIL

- c. Ms. Diane Huffman, Environmental Protection Agency  
Mr. Chris Wieberg, Chief, Operating Permits Section  
Ms. Irene Crawford, Director, Northeast Regional Office  
Missouri Clean Water Commission

**APPENDIX A**  
**WASTEWATER COLLECTION SYSTEM AND TREATMENT**  
**FACILITIES CORRECTION AND MANAGEMENT PROGRAM**

**All documents required by Appendix A shall be submitted to the Missouri Department of Natural Resources for review and approval. Upon the date the Department approves of these documents the city shall implement the provisions of each document as a condition of compliance with the Abatement Order on Consent.**

**1. Definitions**

A. **Building/Private Property Backup.** Any release of wastewater from the city's Sanitary Sewer System to buildings or private property. The city is not responsible for any backup caused by blockages, flow conditions, or malfunctions of a private service connection or other piping/conveyance system that is not owned or operationally controlled by the city or overland flooding not emanating from the city's Sanitary Sewer System.

B. **Bypass.** The diversion of waste streams from any portion of a wastewater treatment facility or sewer system including any discharge from the wastewater treatment facility that receives less than secondary treatment, whether or not authorized by the MSOP.

C. **Collection System and Sanitary Sewer System.** The sewage collection and transmission system including all pipes, force mains, gravity sewer lines, pumping stations, manholes, and appurtenances thereto that are owned or operated by the city and designed to convey wastewater to the city's wastewater treatment facility or to one or more points of discharge.

D. **Infiltration.** Water other than wastewater that enters a Sanitary Sewer System, including entry through sewer service connections and foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes.

E. **Inflow.** Storm water that enters a Sanitary Sewer System, including service connections, from sources such as, but not limited to, roof leaders, cellar, yard, and area drains, manholes, cross connections between storm and sanitary sewers, catch basins, and cooling towers, and storm water surface runoff.

F. **Inflow and Infiltration (I/I).** The total quantity of water from inflow and infiltration without distinguishing the source.

G. **Private Service Connection.** The portion of the Collection System, not owned by the city, used to convey wastewater from building or buildings to that portion of the Collection System owned by the city.

H. **Sanitary Sewer Overflow (SSO).** An overflow, spill, diversion, or release of wastewater from the city's Collection System to waters of the state, as well as to public or private

property including Building/Private Property Backups. Wastewater backups into buildings that are caused by blockages, flow conditions, or malfunctions in a building lateral, other piping or conveyance system that is not owned or operationally controlled by the city or that are the result of overland, surface flooding not emanating from the city's sewer system, are not SSOs for the purpose of this AOC.

I. **Wastewater Treatment Facility (WWTF).** The sewage treatment plant operated by the city and all components of such sewage treatment plant.

## **2. Information Collection and Utilization**

**SSO, Bypass and Basement Backup Tracking and Data Management System (Tracking and Management System).** On May 10, 2011, the city submitted to the Department a description of a written or electronic Tracking and Management System that documents information regarding SSO events, bypasses and basement backups; and allows the city to organize and analyze information regarding SSO events, bypasses and basement backups collected by the city. On June 9, 2011, the Department sent correspondence to the city providing comments and approving the submitted Tracking and Management System. The city has been implementing the provisions of the Tracking and Management System since receiving the Department's approval and to the extent practicable, incorporating this system into a computer-based program that allows authorized city personnel access to the information.

The Tracking and Management System includes all information necessary for the city to establish an effective and useful information collection and management system for SSOs, bypasses, backup events, and response to such events. The Tracking and Management System is designed and operated in a manner that allows the city to use the system for operation and maintenance activities, long term management of the city's wastewater treatment system, and development of the I/I Assessment and Corrective Action Plan pursuant to Section 3 of this Appendix and the Maintenance and Repair Program provisions required by Section 4 of this Appendix. The Tracking and Management System also incorporates the quality assurance and quality control practices the city will follow to ensure the accuracy and reliability of data collected and managed. The Tracking and Management System includes, but is not limited to, the following:

- (1) The date and time (or best estimate) that the SSO, bypass or backup event began;
- (2) Precipitation data (including intensity and duration);
- (3) The source of information for the SSO, bypass or backup event, e.g., employee observation, electronic reporting or warning system, citizen complaint;
- (4) The specific and general location of the SSO, bypass or backup (i.e., street address and specific basin or geographic area of the city);
- (5) The best estimate (unless monitored) of the duration of the discharge, including the ending date and time;

- (6) The best estimate (unless monitored) of the volume discharged, including flow metering data, where applicable;
- (7) Sampling results from any sampling performed;
- (8) If applicable, the water body into which the wastewater was released;
- (9) The specific cause(s) of the discharge or backups, if known, whether it was caused by the city's collection system or private service connections;
- (10) Actions taken to respond to the discharge event and minimize the duration and/or impacts of the discharge;
- (11) The specific actions the city will use to prevent recurrence of the discharge;
- (12) The date and time a repair crew arrived on-site and the personnel involved, if repair was required; and
- (13) The date and time of notification to the Department's Regional Office.

### **3. I/I Assessment and Corrective Action Plan**

A. On May 27, 2011, the Department received a copy of the city's I/I Assessment and Corrective Action Plan which was developed by a professional engineer registered in the State of Missouri, to assess I/I. The I/I Assessment Plan divided the collection system into three (3) designated areas that were prioritized by the city based on known problem areas and included a schedule to inspect the lines in the designated areas. Sewer lines that were installed within the last fifteen (15) years may be excluded from the plan unless the city has reason to believe they are a major source of I/I. On June 7, 2011, the Department sent correspondence to the city providing comments and approving the submitted I/I Assessment Plan.

B. On December 6, 2012, the Department received correspondence from the city documenting that all the required work contained in the Department approved I/I Assessment Plan has been completed according to the approved Plan.

C. On April 4, 2013, the city submitted a Capital Improvement Plan (CIP) to the Department for review and approval. The CIP was developed by a professional engineer registered in the State of Missouri and recommends and prioritizes I/I improvements. The CIP also included a schedule to obtain construction permits, if necessary, and complete the recommended improvements and requirements of the I/I Assessment and Corrective Action Plan. On June 12, 2013, the Department sent correspondence to the city commenting on the CIP and on July 17, 2013, the city submitted a revised CIP to the Department for review and approval.

D. Within thirty (30) days of completing all of the activities of the CIP the city shall submit to the Department a letter certifying that all of the activities detailed in the CIP have been completed as approved by the Department.

E. The city agrees that its development and implementation of the I/I Assessment Plan will be considered as part of the city's efforts to address eliminating all discharges of effluent from Outfall No. 002 and the city shall complete all projects required to eliminate all discharges of effluent from Outfall No. 002 by December 31, 2016. In the event the city

demonstrates to the Department that its I/I improvements have showed significant progress toward reducing I/I in the collection system yet the city is unable to eliminate all discharges of effluent from Outfall No. 002 by December 31, 2016, the city shall submit to the Department, a written request for extension for eliminating the discharges from Outfall No. 002, that includes a detailed explanation for requesting the extension, within thirty (30) days prior to the due date for the completion schedule as stated above. Upon Department receipt of the request for extension, the Department will consider granting the city's request as it deems appropriate.

F. By October 1, 2013, the city agrees to submit to the Department, for review and approval, a Facility Plan developed by a professional engineer licensed to practice in the State of Missouri recommending upgrading or replacement of the city's facility to enable the effluent discharging from the facility to comply with the final permitted effluent limitations for Total Ammonia N and E. coli as contained in MSOP No. MO-013331 (see attached Exhibit "B").

G. Within 365 days of the date the Department's approval of the Facility Plan, the city agrees to submit to the Department, for review and approval, a complete application for a construction permit, including engineering plans and specifications, for providing upgrades or replacement of the city's facility to enable the effluent discharging from the facility to comply with all final permitted effluent limitations for Total Ammonia N and E. coli as contained in MSOP No. MO-013331 (see attached Exhibit "B").

H. By December 31, 2016, the city agrees to complete all construction activities and achieve compliance with the final permitted effluent limitations for Total Ammonia N and E. coli as set forth in MSOP No. MO-0103331 (see attached Exhibit "B").

I. Within fifteen (15) days of completing all construction activities, the city agrees to submit to the Department, a letter of authorization, Statement of Work Completed, or a certification of construction from a professional engineer registered in the State of Missouri certifying that the project has been completed in accordance with the approved plans and specification and a complete application to modify MSOP No. MO-0103331.

#### **4. Maintenance and Repair Program**

A. On February 6, 2012, the city submitted a Maintenance and Repair Program (M&R Program) for its wastewater collection system to the Department for review and approval. The M&R Program was based upon the United States Environmental Protection Agency's (EPA) Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (Document No. EPA 305-B-05-002). The city's M&R Program included a schedule for routine and systematic inspection, maintenance and repair of the collection system. B. The city's M&R Program included a process to reevaluate the assumptions, schedules, and conclusions of its M&R Program, including information developed through implementation of the I/I Assessment Plan, and revise the M&R Program as necessary to ensure it continues to function as a viable planning tool that enables the city to continue to effectively and efficiently operate its wastewater treatment system and comply with its MSOP.

The reevaluation process shall be planned no less frequently than every two years after preparation of the city's M&R Program.

## **5. Reporting and Record Keeping**

A. Immediate Reporting. The city shall verbally notify the Department within twenty-four (24) hours from the time the city becomes aware of any discharges from the WWTF that receives less than secondary treatment, regardless of whether or not the discharge is a violation of the city's MSOP and each SSO event, with the exception of backups that are contained within a building. The city also agrees to submit a written report to the Department within five (5) days from the time the city becomes aware of any dry or wet weather bypasses or SSOs.

1. The written report shall contain the date, time, location, and estimated volume of the event, precipitation amount and duration, if any, and any additional information the city determines helpful in explaining the event and its circumstances or impacts.
2. Reporting required under this Subsection to the Department is in addition to any reporting required by the city's MSOP.

B. Semi Annual Reporting. Within six (6) months of the effective date of this Agreement, and each six (6) month period thereafter, the city shall submit to the Department a status report on or before the 28<sup>th</sup> day of the month following the end of the six (6) month period. This report shall contain a summary of the progress and status of all projects and programs required by this Appendix, including, but not limited to:

1. A summary of information collected pursuant to Section 2 of this Appendix, including a tabulation of each SSO, bypass and backup event.
2. A list of all confirmed I/I sources, the date (best estimate) of confirmation, whether the I/I source is on private or public property, and the removal or correction date. If the source has not yet been removed or corrected then include the expected date. If the source is located on private property, identify all actions taken by the city and the date taken to secure the source(s) removal or correction.
3. A description of all preventative maintenance activities undertaken by the city. This shall include information identifying specific pipe segments, manholes, pump stations or other structures within the collection system which were inspected, cleaned, repaired or replaced. Where available, maps shall be submitted documenting the information provided in the report.
4. The status of implementation of all plans required by Sections 3 and 4 of this Appendix, including a statement as to whether specific scheduled milestone dates in the schedules included in each approved plan were met. Upon completion of a specific project in the approved plans, the city shall submit a certification that the

specified work has been completed, including the following documentation of the completed work to the Department:

- a. For work performed by a private contractor city personnel shall complete an inspection report for the completed project and certification by the city's Engineer that the specified work has been completed;
- b. For work performed by the city's personnel a copy of the work order for the project verified by the city's Engineer as complete; and
- c. A list of all MSOP violations occurring within the six (6) month period. This tabular listing shall include the date of the violation, the parameter exceeded, the permit limit, the reported concentration, and any additional relevant information included in each DMR, within the six (6) month period, or on the cover letter for the DMR (i.e., claim of upset, etc.).

C. The city shall maintain copies of all written submissions prepared pursuant to this Agreement and this Appendix for at least thirty-six (36) months.

#### **6. Requesting Termination of Reporting Requirements**

Upon successful completion of all construction activities identified within the approved I/I Assessment Plan under Section 3 of this Appendix; full and successful implementation of all action required pursuant to Sections 2 and 4 of this Appendix; and reporting as required by Section 5 of this Appendix, the city may submit a report to the Department demonstrating such compliance and implementation of the required actions and request termination of the reporting requirements contained in Section 5.B. of this Appendix. The Department will consider termination of the reporting requirements contained in Section 5.B. of this Appendix when all actions identified above have been completed and the city demonstrates that it has corrected deficiencies within the physical structures comprising the city's wastewater treatment system, has significantly improved operation and maintenance processes, data collection and utilization, and has eliminated, to the extent feasible, SSOs, bypasses and backups. The reporting requirements of this Appendix shall remain in effect until a written notice of termination is issued by the Department.

# EXHIBIT A



# EXHIBIT B

MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.	
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- \* - Monitoring requirement only.
- \*\* - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
- \*\*\* - Parameter not previously established in previous state operating permit.

**Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 1. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 3. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 4. Lagoon Policy                         | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 11. WET Test Policy                |
| 6. Dissolved Oxygen Policy               | 12. Antidegradation Review         |

**OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** In accordance with [40 CFR Part 122.44(i) (1) (ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Carbonaceous Biochemical Oxygen Demand (BOD<sub>5</sub>), Total Suspended Solids (TSS).**  
Technology based, advanced treatment limits are being placed in the permits of facilities that have to upgrade to meet very low CBOD/BOD limits with nutrient WLAs.

**Total Phosphorus, Total Nitrogen.**

The TMDL for Stinson Creek states that to address nutrient levels in Stinson Creek the EPA nutrient eco-region reference concentrations for the Southeastern Temperate Forested Plains and Hills Eco-region IX were used. These eco-regional values were used to establish a waste load allocation/permit limit for total N and total P in the TMDL. The intent of EPA’s recommended eco-regional nutrient criteria is to identify baseline conditions of surface waters that are minimally impacted by human activities and protect against the adverse effects of nutrient over enrichment from cultural eutrophication. These EPA recommended water quality criteria are suggested baselines which should be used by state and tribes to help identify problem areas, serve as a basis for state and tribal water quality criteria for nutrients, and evaluate relative success in reducing cultural eutrophication. The development document for the Eco region IX states that EPA does not recommend identifying nutrient concentrations that must be met at all times, rather a seasonal or annual averaging period (e.g., based on weekly measurements) is considered appropriate. Therefore the permit establishes an annual average limitation for total nitrogen and total phosphorus and requires weekly monitoring.

The application of annual average permit limits to nutrients is appropriate to reconcile consistent permit compliance requirements with biological nutrient removal system variability when attempting to achieve low effluent concentrations (WEF/WERF Study of BNR Plants Achieving Very Low N and P Limits: Evaluation of Technology Performance and Process Reliability<sup>1</sup>). Biological nutrient removal efficiency is particularly dependent on temperature, which must be accounted for in midwestern climates. The use of annual averages for nutrient limits is consistent with the nutrient permitting approaches in numerous states, including Kansas and Iowa (proposed) within Region 7.

<sup>1</sup>Bott CB, Parker DS, Jimenez J, Miller MW, Neethling JB. Water Sci Technol. 2012;65(5):808-15.

Tier 1 and 2 final limits have been established in this permit as part of the phased implementation of the Stinson Creek TMDL. These limits are technology based. Establishing appropriate permit limits that implement nitrogen and phosphorus waste load allocations that are based on eco-region nutrient values are different from setting limits for other parameters such as toxic or conventional pollutants. Toxics pollutants are subject to short term limitations to address acute toxicity and conventional pollutants are subject to technology based requirements which have been determined to be achievable as a short term permit requirement. The season nature of nutrients versus the constant loading of toxic and conservative pollutants also lends itself to innovative implementation. The TMDL sets waste load allocations beyond what can be achieved via the current treatment technologies economically available at the time of the permits issuance. The department has chosen to establish limitations that reflect what can be achieved via technology rather than the water quality based (eco-region) nutrient criteria/waste load allocations expressed in the TMDL. Given that the requirements expressed in the permit for nitrogen and phosphorus are technology based it is appropriate to establish the limit as an annual long term average.

Use attainment for nutrient impairment is appropriately evaluated annually given the long term nutrient biological and physical processes that occur in a stream receiving nutrient discharges. Therefore, developing effluent limitations require innovative implementation procedures. The efficiency of treatment of nutrients by biological nutrient removal is highly sensitive to ambient temperature and is not effective at lower temperatures. Thus, the effluent loading of nutrients is not constant due to seasonal temperature fluctuations in Missouri climates. Even a simple steady-state model for permit development such as

dividing the annual limit by 12 and establishing that value as the monthly limit is therefore, not appropriate. Such a limit does not account for seasonal fluctuations in effluent loading. Because of the effect of temperature on the treatment efficiency and the normal variation in ambient temperature over shorter time periods, it is impracticable to develop appropriate daily, weekly or monthly limits for nutrients.

**Tier 1 Improvements- Biological Nutrient Removal:**

Once the 2013 Facility Plan improvements are operational, it is proposed that the receiving stream (Stinson Creek) be allowed to assimilate and that the Water quality in Stinson Creek will be reassessed against applicable water quality standards to determine if biological nutrient removal is necessary. The biological nutrient removal improvements will consist of a RAS selector basin, aeration basin baffle walls and mixers, replacement of RAS pumps, aeration basin distribution box replacement, a chemical (e.g., alum) addition system, and site piping modifications. These improvements are expected to limit effluent concentrations to an annual average of 8 mg/L TN and 1.0 mg/L TP. The 2013 cost of the improvements is \$3,500,000. Biological nutrient removal improvements are proposed to be constructed by 2026. At a 3% cost inflation per year, the 2026 cost of the improvements is \$5,200,000.

**Tier 2 Improvements- Enhanced Nutrient Removal:**

Once the Tier 1 biological nutrient removal improvements are operational, it is proposed that Stinson Creek again be allowed to assimilate and that the Water quality in Stinson Creek will be reassessed against applicable water quality standards to determine if enhanced nutrient removal is necessary. The enhanced nutrient removal improvements will consist of a denitrifying sand filtration facility, an intermediate pumping station, and associated site work and site piping. These improvements are expected to limit effluent concentrations to an annual average of 4 mg/L TN and 0.1mg/L TP. The 2013 cost of the improvements is \$7,500,000. Enhanced nutrient removal improvements are proposed to be constructed by 2035. At a 3% cost inflation per year, the 2035 cost of the improvements is \$14,400,000.

A third tier of nutrient removal phase was considered but deemed impracticable and unaffordable. Tier 3 would consist of running half of the effluent flow through a membrane treatment plant. The combined effluent would likely have limits of 2 mg/L TN and 0.05 TP (Striking a Balance Between Nutrient Removal and Sustainability<sup>1</sup>). This would require the installation of microfiltration and reverse osmosis (RO) membranes. Additionally, the RO brine would require disposal. The estimated capital cost for a membrane plant to treat half of Fulton’s peak day flow would be approximately \$30-40 million dollars, in 2013 dollars, assuming deep well injection is an appropriate RO brine disposal method. The \$30-40 million dollars would be in addition to the disinfection and ammonia, Tier 1, and Tier 2 improvements, while representing very marginal nutrient removal (approximately 2 mg/L TN and 0.05 mg/L TP). Operating costs would double over the Tier 2 operating costs. The authors of the referenced paper cite that using RO to remove TN and TP is, “impractical due to high costs, significant impacts on GHG (greenhouse gasses), and brine disposal challenges.” (pg 635).

<sup>1</sup>Falk MW, Reardon DJ, Jimenez J, Neethling JB. Water Environment Federation. Presented at the Nutrient Recovery and Management Conference, 2011.

- **pH.** Effluent limitation range is  $\geq 6.5$  or 6.5 – 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.
- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU No mixing considerations allowed; therefore, WLA = appropriate criterion.

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

**Summer: May 1 – October 31**

Chronic WLA:  $C_c = ((4.5415 + 0.0)1.5 - (0.0 * 0.01))/4.5415$   
 $C_c = 1.5 \text{ mg/L}$

Acute WLA:  $C_c = ((4.5415 + 0.0)12.1 - (0.0 * 0.01))/4.5415$   
 $C_c = 12.1 \text{ mg/L}$

$LTA_c = 1.5 \text{ mg/L} (0.448) = 0.672 \text{ mg/L}$

[CV = 2.13, 99<sup>th</sup> Percentile, 30 day avg.]

$LTA_a = 12.1 \text{ mg/L} (0.112) = 1.4 \text{ mg/L}$

[CV = 2.13, 99<sup>th</sup> Percentile]

Use most protective number of  $LTA_c$  or  $LTA_a$ .

**APPENDIX #2 – RPA RESULTS:**

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range	CV***	MF	RP Yes/No
Total Ammonia as Nitrogen (Summer) mg/L	12.1	13.1	1.5	13.1	55	0.01-3.9	2.131	3.337	Yes
Total Ammonia as Nitrogen (Winter) mg/L	12.1	11	3.1	11	55	0.06-4	1.536	2.756	Yes
Copper, Total Recoverable	40.6	77.7	24	77.7	16	2.5-30	0.664	2.589	Yes

N/A – Not Applicable

\* - Units are (µg/L) unless otherwise noted.

\*\* - If the number of samples is greater than 10, then the CV value must be used in the WQBEL for the applicable constituent.

\*\*\* - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.

RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).

n – Is the number of samples.

MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.

RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

**Missouri Department of Natural Resources**  
**Water Protection Program**  
**Affordability Determination and Finding**  
(In accordance with RSMo 644.145)

**City of Fulton**

Residential Connections: 3,667

Commercial Connections: 626, including 15 Industrial and 25 City

Total Connections: 4,293

**Introduction & Scope**

Section 644.145 RSMo requires the Missouri Department of Natural Resources (Department) to make a “finding of affordability” when “issuing permits under” or “enforcing provisions of” state or federal clean water laws “pertaining to any portion of a combined or separate sanitary sewer system or publicly-owned treatment works.”

The City of Fulton (City) has entered into Abatement Order on Consent AOC No. 2013-WPCB-1241 with the Department, which requires the City to complete improvements to its collection system that will eliminate inflow and infiltration (I/I) and reduce the amount of Sanitary Sewer Overflows (SSOs) the wastewater treatment facility (facility) experiences. These improvements also include eliminating all discharges from the facility’s peak flow clarifier. In addition, the City will construct upgrades to its current facility that will enable the effluent to comply with all permitted effluent limitations contained in draft Missouri State Operating Permit (MSOP) No. MO-0103331. The AOC further provides an extension of time for the City to comply with Escherichia Coliform and ammonia limits as set forth in draft MSOP No. MO-0103331. The City has explained to the Department that it is not beneficial for the City to invest its finances in completing the upgrades to its facility until the City determines its design flow after completing I/I improvements to the collection system. The Department has not renewed the MSOP for the City’s facility at this time, as the financial affordability analysis from the Permitting Section has not been completed yet.

This affordability finding covers the City’s initial obligations to implement its I/I Program and complete upgrades to its facility that will enable the effluent to comply with all permitted effluent limitations contained in draft MSOP No. MO-0103331.

The City plans to spend at least \$693,000.00 for capital improvement items to address I/I in its collection system. The 2013 Facility Plan improvements consist of improvements which will address issues identified in the Abatement Order on Consent (AOC) No. 2011-WPCB-1122. Improvements include the elimination of Outfall 002 as well as ammonia and disinfection improvements. Improvements are also designed to meet the current draft operating permit which reduces the allowable BOD and TSS limits. While this project will decrease the effluent ammonia levels and will be capable of being operated to achieve some denitrification, it will not significantly decrease the effluent Total Nitrogen (TN) and Total Phosphorus (TP) effluent levels. The expected capital cost of the project (in 2013 dollars) is \$12,980,000.

Once the 2013 Facility Plan improvements are operational, it is proposed that the receiving stream (Stinson Creek) be allowed to assimilate and that the Stinson Creek TMDL be re-evaluated to determine if biological nutrient removal is necessary. If required, the biological nutrient removal improvements will consist of a RAS selector basin, aeration basin baffle walls and mixers, replacement of RAS pumps, aeration basin distribution box replacement, an alum system, and site piping modifications. These improvements are expected to limit effluent concentrations to an annual average of 8 mg/L TN and 1.0 mg/L TP. The 2013 cost of the improvements is \$3,500,000. Biological nutrient removal improvements are proposed to be constructed by 2026. At a 3% cost inflation per year, the 2026 cost of the improvements is \$5,200,000.

Once the Tier 1 biological nutrient removal improvements are operational, it is proposed that Stinson Creek again be allowed to assimilate and that the Stinson Creek TMDL again be re-evaluated to determine if enhanced nutrient removal is necessary. If required, the enhanced nutrient removal improvements will consist of a denitrifying sand filtration facility, an intermediate pumping station, and associated site work and site piping. These improvements are expected to limit effluent concentrations to an annual average of 4 mg/L TN and 0.1mg/L TP. The 2013 cost of the improvements is \$7,500,000. Enhanced nutrient removal improvements are proposed to be constructed by 2035, if required. At a 3% cost inflation per year, the 2035 cost of the improvements is \$14,400,000.

A third tier of nutrient removal phase was considered but deemed impracticable and unaffordable. Tier 3 would consist of running half of the effluent flow through a membrane treatment plant. The combined effluent would likely have limits of 2 mg/L TN and 0.05 TP (Striking a Balance Between Nutrient Removal and Sustainability<sup>1</sup>). This would require the installation of microfiltration and reverse osmosis (RO) membranes. Additionally, the RO brine would require disposal. The estimated capital cost for a membrane plant to treat half of Fulton’s peak day flow would be approximately \$30-40 million dollars, in 2013 dollars, assuming deep well

injection is an appropriate RO brine disposal method. The \$30-40 million dollars would be in addition to the disinfection and ammonia, Tier 1, and Tier 2 improvements, while representing very marginal nutrient removal (approximately 2 mg/L TN and 0.05 mg/L TP). Operating costs would double over the Tier 2 operating costs. The authors of the referenced paper cite that using RO to remove TN and TP is, "impractical due to high costs, significant impacts on GHG (greenhouse gasses), and brine disposal challenges." (pg 635).

<sup>1</sup>Falk MW, Reardon DJ, Jimenez J, Neethling JB. Water Environment Federation. Presented at the Nutrient Recovery and Management Conference, 2011.

**Statutory Criteria**

**(1) A community's financial capability and ability to raise or secure necessary funding**

Municipal Bond Rating (if applicable):	<u>No Bond Rating</u>
Bonding Capacity:	<u>\$10 Million</u>
(General Obligation Bond capacity allowed by constitution: cities=up to 20% of taxable tangible property sewer districts=up to 5% of taxable tangible property)	
Current outstanding debt:	<u>\$16.915 Million<sup>1</sup></u>

As of January 2012, the City has an obligation to pay \$2.165 million to the State Revolving Fund (SRF) for sewer projects. The City estimates that the remaining sewer SRF loan, in the amount of \$2,165,000, will be paid off in 2021 and the Drinking Water SRF loan will be paid off in 2029.

The City operates the Wastewater Department on the monthly charge for the average residential household using 5,000 gallons per month. The City passed a 25% rate increase in December 2010 and an additional rate increase of 25% was passed in December 2011. This gave the City approximately \$400,000.00 annually to spend towards I/I improvements in its collection system. Currently, the sewer rate is \$32.86 a month, not including a half-cent sales tax from the City's Capital Improvement Plan, which is approximately \$6.50 a month for sewer, and an additional \$6.50 per month for drinking water. According to the City, this rate structure is sufficient to pay for the I/I Improvements. Therefore the City has demonstrated financial capability to raise and secure the necessary funding.

**(2) Affordability of pollution control options for the individuals or households of the community**

Current annual operating costs (exclude depreciation):	<u>\$1,226,843.00</u>
Current user rate:	<u>\$39.36</u>
Estimated capital cost of pollution control options:	<u>\$33,273,000.00</u>
Annual costs of additional once 2016 upgrades completed	<u>\$1,600,000.00</u>
Annual costs of additional once 2016 upgrades completed	<u>Unknown</u>
Annual costs of additional once 2016 upgrades completed	<u>Unknown</u>
Estimated resulting monthly user rate after the 2016 upgrades:	<u>47.03</u>
Estimated resulting monthly user rate after the 2036 upgrades:	<u>\$73.21</u>
Adjusted Median Household Income:	<u>\$44,303.00</u>
Resulting User Rate as a percent of Median Household Income:	<u>1.98%</u> (does not include future operational cost increases for Tiers 1 and 2 for nutrient removal)

(Annual Rate/MHI)

	Financial Impact	Residential Indicator (Usage Rate as a percent of Median Household Income)
	Low	Less than 1% MHI
	Medium	Between 1% and 2% MHI
X	High	Greater than 2% MHI, (The percentage of MHI as calculated above does not consider operational costs of nutrient removal therefore it is assumed that the percentage is greater than 2%)

The residential user rate is 1.98% of MHI and will be a medium burden for most customers.

**(3) An evaluation of the overall costs and environmental benefits of the control technologies**

Under the Missouri Clean Water Law and the Federal Clean Water Act, SSOs are prohibited because they cause public health and environmental hazards. Effective June 30, 2010, a revision to 10 CSR 20-7.015, Effluent Regulations eliminated the provision

<sup>1</sup> Per e-mail from City on 3/14/2012

that allowed facilities to discharge effluent from their peak flow clarifiers, because these discharges bypass secondary treatment, a requirement of the Clean Water Act. Additionally, draft MSOP No. MO-0103331 requires disinfection to treat bacteria, and establishes stringent effluent limitations on the receiving stream, Stinson Creek, a Class C receiving stream, which is protected for warm water aquatic life, human health-fish consumption, whole body contact recreation, and livestock and wildlife watering. Stinson Creek was also on the 2008 Missouri 303(d) list for low dissolved oxygen and organic sediment and is now subject to the Stinson Creek TMDL. The City plans to spend approximately \$12,980,000 toward I/I improvements and facility upgrades over the next 13 years.

- (4) **An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low and fixed income populations:**

Potentially Distressed Populations	
Unemployment <sup>2</sup> for [Fulton, Callaway County]	6.8%
Adjusted Median Household Income <sup>3</sup> [Fulton, Callaway County]	\$44,303.00
Percent Population Growth/Decline <sup>4</sup> (1990-2010)	+25.8%
Percent of Households in Poverty <sup>5</sup>	13.0%

- (5) **An assessment of other community investments relating to environmental improvements**  
The City has no other obligations under this AOC.

- (6) **An assessment of factors set forth in the United States Environmental Protection Agency's (EPA) guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards**

See Section (2) of this analysis for the residential indicator as outlined in the above-referenced EPA guidance.  
**Secondary indicators for consideration:**

Socioeconomic, Debt and Financial Indicators				
Indicators	Strong (3 points)	Mid-Range (2 points)	Weak (1 point)	Score
Bond rating indicator <sup>6</sup>	Above BBB or Baa	BBB or Baa	Below BBB or Baa	N/A <sup>6</sup>
Overall net debt <sup>7</sup> as a % of full market property value <sup>8</sup>	Below 2% 1.58%	2% - 5%	Above 5%	3
Unemployment Rate	>1% below Missouri's average	± 1% of Missouri's average	>1% above Missouri's average	2
Median household income	More than 25% above Missouri's MHI	± 25% of Missouri's MHI	More than 25% below Missouri's MHI	2
Property tax revenues <sup>9</sup> as a % of full market property value	Below 2% 0.5%	2% - 4%	Above 4%	3
Property tax collection rate <sup>10</sup>	Above 98% 106.4%	94% - 98%	Below 94%	3

<sup>2</sup> Unemployment data from Missouri Department of Economic Development for December 2011 - <http://www.missourieconomy.org/pdfs/ure1112.pdf>

<sup>3</sup> Median Household Income data from American Community Survey – Median income in the past 12 months <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

Note: The median household income is adjusted for inflation according to the method suggested in the EPA CSO guidance for financial capability assessment and schedule development (<http://www.epa.gov/npdcs/pubs/csocf.pdf>)

<sup>4</sup> 2010 Census Population Data - <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

2000 Census Population Data - <http://www.census.gov/popest/data/cities/totals/2009/tables/SUB-EST2009-04-29.xls> 1990 Census Population Data – <http://www.census.gov/prod/cen1990/cp1/cp-1-27.pdf>

<sup>5</sup> Poverty data – American Community Survey - <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

<sup>6</sup> City of Fulton has never had a bond rating (per Mayor Benton on 3/14/2012)

<sup>7</sup> 2010 Fulton Comprehensive Annual Financial Report (Table 13 -- page 73)

<sup>8</sup> 2010 Fulton Comprehensive Annual Financial Report (Table 13 -- page 73)

<sup>9</sup> 2010 Fulton Comprehensive Annual Financial Report (Table 9 – page 69)

<sup>10</sup> 2010 Fulton Comprehensive Annual Financial Report (Table 9 – page 69)

Average Score for Financial Capability Matrix: 2.6

Residential Indicator (from Criteria #2 above): 1.98% (The percentage of MHI as calculated above does not consider operational costs of nutrient removal therefore it is assumed that the percentage is greater than 2%)

**Financial Capability Matrix**

Financial Capability Indicators Score from above ↓	Residential Indicator (User rate as a % of MHI)		
	Low (Below 1%)	Mid-Range (Between 1.0% and 2.0%)	High (Above 2.0%)
Weak (below 1.5)	Medium Burden	High Burden	High Burden
Mid-Range (1.5 – 2.5)	Low Burden	Medium Burden	High Burden
Strong (above 2.5)	Low Burden	Low Burden	X Medium Burden

Suggested Financial Burden: Medium Burden

**(7) An assessment of any other relevant local community economic condition**

Fulton’s population grew 25.8% from 1990-2010. In terms of economic strength, Callaway County is fairly above average when compared to other counties in the State. The percentage of labor force is 2% above the State average, the per capita wealth<sup>11</sup> is 2% above the State average, and per capita income is 23% below the State’s average.

In terms of retail sales, Callaway County loses retail customers to surrounding counties and the County residents spend less than the state average on retail goods and services. The buying power index of Callaway County residents is about average when compared to the rest of the regional economy<sup>12</sup>.

**Conclusion**

As a result of reviewing the above criteria, the Department hereby finds that the action described above will result in a medium burden with regard to the community’s overall financial capability and a financial impact for most individual customers/households.

**New Permit Requirements or Requirements Now Being Enforced:**

The proposed new permit requirements may require the design, construction and operation of new technology. The facility is required to; upgrade to meet TMDL effluent limits for Carbonaceous Biochemical Oxygen Demand, Total Suspended Solids, Total Nitrogen and Total Phosphorus.

<sup>11</sup> Per capita wealth is calculated by taking a sum of appraised value of residential property, mobile homes and motor vehicles and this sum is then divided by County population.

<sup>12</sup> Source: [http://www.missourieconomy.org/pdfs/central\\_wia\\_retail\\_trade\\_analysis.pdf](http://www.missourieconomy.org/pdfs/central_wia_retail_trade_analysis.pdf)