STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

December 18, 2009

Mr. William A. Spratlin
Water, Wetlands and Pesticides Division
United States Environmental Protection Agency
Region 7
901 North 5th Street
Kansas City, KS 66101

RE: Hinkson Creek Total Maximum Daily Load (TMDL), Boone County, Missouri

Dear Mr. Spratlin:

The Water Protection Program of the Department of Natural Resources has been working to develop TMDLs for the 28 water body segments remaining on the Missouri TMDL Consent Decree. The Department appreciates the assistance provided by the Environmental Protection Agency (EPA) toward the review and development of models, waste load allocations, and documents for these TMDLs. A continuous dialogue between EPA and Department staff have made it possible for our agencies to remain on schedule for TMDL development and submittal. The Department intends to submit or public notice the majority of these remaining TMDLs by the December 31, 2009 deadline established by the Memorandum of Understanding between the Department and EPA.

It has come to our attention that one TMDL in particular may need additional time to ensure sufficient opportunity for stakeholder involvement. Hinkson Creek in Boone County, Missouri is impaired for the Protection of Warm-Water Aquatic Life use due to unknown pollutants. The Department is using a reduction in storm water runoff as a surrogate for any pollutant of concern in its calculation of the TMDL. This approach has been approved by EPA Region 7 staff and used successfully for storm water impairments in EPA Region 1.

On behalf of the City of Columbia, Boone County, the University of Missouri and other local stakeholders, the Department would like to request an extension of time to complete the Hinkson Creek TMDL. We are working with the local stakeholders to ensure comments and concerns submitted during and following the first public notice are incorporated into the document. We also want to make certain that watershed improvements and protection projects implemented by the city, county, and university, (included in the enclosed letter from David Shorr) since the initial impaired listing of this

water body are included into our second draft TMDL. The Department's coordination with these stakeholders has been very beneficial and we want to include development of an updated monitoring study to determine present-day conditions in the watershed and whether additional implementation measures are needed.

The Department would like to establish a schedule for completion of the Hinkson Creek TMDL, and any other outstanding TMDLs, with EPA Region 7 in early 2010. We believe such a schedule will lead to the successful resolution and completion of the remaining work under the Consent Decree. Department staff and management appreciate EPA's consideration of this request and look forward to working with you in the coming months. If you should have questions, please contact Mr. John Hoke of my staff at (573) 526-1446 or at john.hoke@dnr.mo.gov.

Sincerely,

WATER PROTECTION PROGRAM

Scott B. Totten
Acting Director

ST:jh

Enclosure

c. Karen Miller, Boone County Commission
Todd Houts, University of Missouri
Steve Hunt, City of Columbia
David Shorr, Lathrop and Gage

LATHROP & GAGE LLP

DAVID A. SHORR
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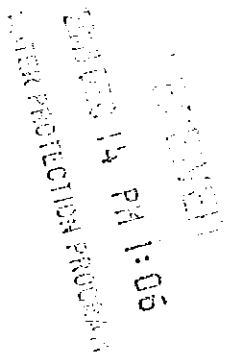
December 8, 2009



VIA E-MAIL AND U.S. MAIL

Mr. Scott Totten, Acting Director
Water Protection Program
Missouri Department of Natural Resources
PO Box 179
Jefferson City, MO 65102

Re: Hinkson Creek TMDL

Dear Mr. Totten:

The undersigned represents the City of Columbia, the County of Boone, the University of Missouri, and the Boone County Regional Sewer District.

Thank you for your efforts and willingness to reconsider issues relating to the Hinkson Creek Total Maximum Daily Load (TMDL). We appreciate the Department's efforts to meet with various interested parties to discuss our concerns relating to the strategy and direction originally presented by the Department and our objections and concerns relating to the strategy.

We provide the following comments and concerns and examples of activities that have occurred since the posting of Hinkson Creek to the 303(d) list. This correspondence supplements materials provided on December 1, 2009. It also provides additional information from the Boone County Regional Sewer District and information from quasi-public agencies (such as Transportation Development Districts). We believe these support our position that (a) data collection is inadequate and dated, (b) Hinkson Creek may meet the required water quality standards, and (c) the broad-based approach employed by the proposed TMDL is unnecessary. For reasons stated herein, we request that the TMDL for the Hinkson Creek be reopened and that the current approach be reconsidered.

The sampling data relating to Hinkson Creek is dated and does not reflect current activities.

The last data collection on Hinkson Creek was conducted in the Spring of 2006. Since that time, numerous activities have taken place within the watershed as a result of concerns expressed by the 303(d) listing. These actions, including significant regulatory changes locally, are specifically delineated later in this letter. It is our position that prior to imposing a broad-based strategy to address "unknown" pollutants that have not been properly quantified, the Department is obligated to re-test to determine the current status and take all steps necessary to delineate the "unknown" designation.

Since the original designation of Hinkson Creek to the 303(d) list, numerous activities have taken place in an effort to reduce potential impacts on Hinkson Creek.

Since the original listing of the Hinkson Creek on the 303(d) list, numerous activities have taken place within the watershed that address numerous impacts. Each of the public entities in the watershed have taken steps to enhance the water quality in the watershed. These include improvements by quasi-public entities. A summary of each area's activities is below.

1. Improvements reducing or eliminating impacts to the Hinkson Creek watershed by the Boone County Regional Sewer District appear in Exhibit A.

2. Improvements reducing or eliminating impacts to the Hinkson Creek watershed by the City of Columbia appear in Exhibit B.

3. Improvements reducing or eliminating impacts to the Hinkson Creek watershed by the University of Missouri appear in Exhibit C.

4. Improvements reducing or eliminating impacts to the Hinkson Creek watershed by Boone County appear in Exhibit D

5. Activities by private or quasi-public agencies appear in Exhibit E.

The activities presented in the exhibits clearly demonstrate **SIGNIFICANT** actions on the part of the public to enhance Hinkson Creek and to reduce impacts. Despite these improvements, no additional studies have been conducted. Additional sampling and evaluation is justified to determine if a problem still exists.

Because the TMDL is based on data that may not reflect the current condition of Hinkson Creek, because activities to improve the creek have been implemented (see Exhibits A through E), and because the pollutants are still unknown, we formally request the reopening of this TMDL and the abandonment of the current strategy proposed.

We request a comprehensive sampling analysis, a pollutant specific TMDL which presents a triage approach to address the "unknown" pollutants, and a reasonable methodology which incorporates the activities currently being conducted by this community and our efforts to protect Hinkson Creek.

Your attention to this matter and support of the process currently moving forward is most appreciated. Please contact me at (573) 761-5005 with any questions.

Very truly yours,

LATHROP & GAGE LLP

By: David A. Shorr

DAS/jf
Attachments
cc: Karen M. Miller

EXHIBIT A

BOONE COUNTY REGIONAL SEWER DISTRICT
ACTIONS TO ENHANCE HINKSON CREEK WATERSHED
POST 303(D) LISTING

1. Closed the Fairway Meadows West Lagoon by installing a pump station and pumping flows to the City of Columbia. The Fairway Meadows West Lagoon discharged into a tributary of the north fork of the Grindstone, which is a tributary to Hinkson Creek.

2. Closed the Fairway Meadows East Lagoon by in installing a pump station and pumping flows to the City of Columbia. The Fairway Meadows East Lagoon discharged into the north fork of the Grindstone, which is a tributary to Hinkson Creek.

3. Closed the Lake of the Woods Wastewater Treatment Plant by installing a gravity sewer that connected to the City of Columbia's wastewater collection system. The Lake of the Woods Wastewater Treatment Plant discharged into the north fork of the Grindstone, which is a tributary to Hinkson Creek.

4. Closed the El Chaparral Lagoon by installing a gravity sewer that connected to the City of Columbia's wastewater collection system. The El Chaparral Lagoon was the largest remaining wastewater treatment plant in the Hinkson Creek watershed controlled by the public. It discharged into the south fork of the Grindstone, which is a tributary to Hinkson Creek.

5. Closed the Sunrise Estates Wastewater Treatment Plant by installing a gravity sewer that connected to the City of Columbia's wastewater collection system. The Sunrise Estates Wastewater Treatment Plant discharged into the south fork of the Grindstone, which is a tributary to Hinkson Creek.

6. Closed the OTSCON Wastewater Treatment Plant by installing a gravity sewer that connected to the City of Columbia's wastewater collection system. The OTSCON Wastewater Treatment Plant discharged into the south fork of the Grindstone, which is a tributary to Hinkson Creek.

7. Boone County voters approved a $21 million revenue bond issue in April, 2008, to further improvements to Hinkson Creek. These will close additional discharges to the Hinkson Creek watershed and/or improve wastewater treatment at existing Boone County Regional Sewer District facilities. These include the closure of the Sun Valley Lagoon, the Hillview Acres Lagoon, the Lake Capri Lagoon, the Fall Creek Recirculating Sand Filter, and the Sheraton Hills Wastewater Treatment Plant in 2011. All these facilities are in the Hinkson Creek watershed and are located along State Highway HH. The closure of these facilities will be accomplished by the construction of about five pump stations and forced mains along Highway HH with connection to the City of Columbia's wastewater collection system.

8. In 2010, the budget calls for closure of the Shaw Wastewater Treatment Plant by installing a gravity sewer that connects to the City of Columbia's wastewater collection system. This is a joint project with the City of Columbia. The Shaw Wastewater Treatment Plant discharges into the north fork of the Grindstone, which is a tributary to Hinkson Creek.

These improvements will result in the removal of over 700,000 gallons per day design capacity from discharging into the Hinkson Creek watershed, removing various pollutant loads and bacteria from the watershed, reducing impact.

The District has also increased its sewer system maintenance activities to reduce risk to sewer integrity, which might result in discharges to the environment during peak events and enhancing the integrity of the system.

EXHIBIT B

CITY OF COLUMBIA
ACTIONS TO ENHANCE HINKSON CREEK WATERSHED
POST 303(D) LISTING

1. A significant sewer line has been repaired, which had a direct impact on Hinkson Creek.

2. New storm water, illicit discharge, and stream buffer ordinances were passed from late 2004 to early 2007. A new Storm Water and Water Quality Manual was released in early 2007 and was revised in early 2009.

3. New ordinances require scoring for water quality treatment, which are established up front for development or redevelopment projects. The developer is required to add water quality treatments to the plan until the required score is achieved for the site. These include storm water best management practices that address volume reduction and hydrology modification.

4. All projects, both redevelopment and new development, are impacted by the new ordinance. These include modifications to impervious surfaces, BMP's, volume reductions, and hydrological modifications. Improvements such as rain gardens and bio-retention cells are included in the alternatives to provide scoring.

5. New rules encourage the use of edge buffer outfalls, which work together with the stream buffer ordinance. Water is dispersed through the buffer before reaching the stream so that more water is absorbed and stored in the buffer soil.

6. The point system provided in the rules encourages the preservation of existing soil strata and vegetation through point reductions.

7. The new rules allow for the use of channel protection detention rather than traditional detention in order to modify the hydrograph. The new rules and ordinances have resulted in significant extended detention wetlands being installed behind businesses on Conley Road (just west of Highway 63 and south of I-70) that were identified as hot spots in the original 303(d). These basins treat a significant amount of impervious area and can be expected to have significant beneficial effects on the Hinkson Creek watershed.

8. A number of other private businesses have been required to retrofit storm water treatment practices in the Hinkson Creek watershed as a result of the manual. Some examples include:

   A. Rain gardens and a wetland have been added and the stream buffer enhanced at Stevens Lake Park along the main reach of Hinkson Creek.

   B. Pervious pavement and underground detention are being installed at the Columbia City Hall development and redevelopment along the Flat Branch, which is a tributary to the Hinkson Creek.

C. Pervious pavement and a large bio-retention cell was installed with the help of grants at the City's new Fire Station No. 7, which discharges to Mill Creek, which is in the Hinkson Creek watershed.

D. Rain gardens were installed on the Harvard Drive Rehabilitation project, which discharges to County House Branch, a tributary to the Hinkson Creek.

E. MKT Trail Head Park redeveloped a former industrial area in downtown Columbia, removing contaminated soil and stabilizing stream banks with large rocks and planting. A rain guard was installed in the most recent phase. These all impacted the Flat Branch, which is a tributary to the Hinkson Creek.

CITY SANITARY SEWER CHANGES IN THE HINKSON CREEK WATERSHED

1. The City has implemented sanitary sewer changes that have benefited Hinkson Creek, which include the construction of interceptors that eliminate small treatment facilities and performed pipe and manhole rehabilitation projects. They include:

   A. The South Grindstone Interceptor and the Lake of the Woods Mobile Home Park Lagoon Interceptor removed several small treatment plants from the watershed and connected them to the City's sewer system. These were in cooperation with the Boone County Regional Sewer District.

   B. The City has implemented a program involving cured-in-place linings of old pipes and manholes. These projects stopped sewage from leaving old systems as well as preventing overflows by preventing storm water from entering the system.

   C. The City has undertaken an effort to eliminate "private sewer systems" that were prone to bad repair and overflow problems. An example is the Sewer District 154 Project in the Flat Branch watershed, which eliminated 20+ acres of failing sewers. The City has methodically taken over and rehabilitated private sewers that especially impacted the Hinkson Creek system.

2. The City has a history of eliminating wastewater treatment plants and direct discharges to Hinkson Creek. These include both City plants and County plants in an effort to improve the watershed. This began in the early 1970's and continues to this day.

EXHIBIT C

UNIVERSITY OF MISSOURI
ACTIONS TO ENHANCE HINKSON CREEK WATERSHED
POST 303(D) LISTING

1. Best Management Practices at the University Power Plant in conjunction with its NPDES permit have resulted in extremely low Total Suspended Solids (TSS) in spite of the Power Plant sitting directly on the Flat Branch, which is a tributary to the Hinkson Creek. A comprehensive street sweeping program at the Power Plant takes place every day coal is delivered, and there are numerous controls that have been established at storm sewer inlets in the area near the Plant.

2. Each of the University's large aboveground fuel storage units has individual NPDES permits, which require strict controls on discharge of storm water that accumulates in secondary containment. The University continues its history of having no illicit discharges from any of its AST's. The University has three Spill Prevention Containment and Control Plans covering parts of the watershed. These plans provide formal procedures to prevent release to waters of the state of any oil products, which include both inorganic and organic oils and fats.

3. All construction on the University Campus is coordinated by a designated land disturbance permitting authority on the campus. The campus has dedicated employees that provide weekly and post-rain event inspections on all University construction for compliance. Additional inspections are provided by University Environmental Health and Safety, and audits are conducted of all open land disturbance events.

4. The University's Master Plan for the entire campus, which is reviewed and revised annually, incorporates storm water concerns. All campus storm and sanitary sewers are mapped and are in the process of being inspected via in-line cameras.

EXHIBIT D

COUNTY OF BOONE
ACTIONS TO ENHANCE HINKSON CREEK WATERSHED
POST 303(D) LISTING

Boone County has taken significant administrative steps to pass ordinances, including stream buffer protection, that directly impact the quality of Hinkson Creek. None of these appear considered in the TMDL.

1. The County has passed a stream buffer ordinance. This ordinance has a setback requirement depending on stream size. Streams are categorized by USGS topographic maps. Blue line streams are categorized as Type 1 streams. They are required to have a setback of 100 feet from the ordinary high water mark. Type 2 streams (USGS-blue lines) and Type 3 streams (unmarked tributaries with drainage areas greater than 50 acres) have 50-foot and 30-foot setbacks respectively. Each of those setbacks is divided into two zones. The stream-side zone or "no-mow" zone is for undisturbed native vegetation. The outer zone can have managed landscape areas but no new structures. The ordinance went into effect in the county in 2009. The ordinance is not retroactive, but will prevent new structures from being built adjacent to the creek and increase stream bank vegetation and stabilization.

2. The County is in the final stages of a public review of a storm water ordinance that addresses the consequences and impacts of urban runoff and protects waterways from storm water-related pollutant load.

3. The county ordinance is based on the Center of Watershed's Protections model ordinance. The County uses a nested approach to storm water management to treat different runoff volumes. The details of the county ordinance, which is currently going through appropriate public participation, can be found on the County's website.

EXHIBIT E

ACTIVITES BY PRIVATE OR QUASI PUBLIC AGENCIES TO ENHANCE HINKSON CREEK WATERSHED POST 303(D) LISTING

1. The County has partnered with the City of Columbia and the University of Missouri on a 319 project in the Hinkson Creek watershed. The restoration project is updating the watershed management plan so that all of EPA's nine key elements are included. The project has developed a feasibility study to examine and provide cost estimates for retrofitting areas in the impaired section of the Creek. The next step in the 319 grant is to approach landowners to cost share the placement of retrofits that will reduce peak flows to the Creek in the impaired section.

2. The City, County, and University have worked cooperatively on clean-up activities. The last event was held on October 17, 2009. Over 400 local citizens volunteered at least two hours of time to clean up Hinkson Creek and remove debris.

3. University hydrology study of the Creek was initiated in 2008. The researcher has collected data for about one year. That data will be extremely helpful in the triage process, enhancement of the TMDL strategy, and validating the changes in the watershed due to the storm water ordinances and stream buffer regulations. It will assist in providing baseline information.

4. The Missouri Department of Transportation has relocated salt domes and distribution facilities. The facilities were formerly located off Conley Road on the banks of Hinkson Creek. They have been relocated with state-of-the-art storm water control structures. Chlorides have long been a suspect of concern, and they have had a major source removed.

5. Columbia Country Club has provided greater buffer zones along its golf course adjacent to Hinkson Creek.

6. The Conley Road Transportation Development District has constructed significant detention, treatment, and control facilities in an area suspected of impacts to Hinkson Creek. The area has significant parking lots with large impervious square footage and substantial roof structures.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

JAN 2 8 2010

Mr. Scott Totten
Acting Director
Water Protection Program
Missouri Department of Natural Resources
P. O. Box 179
Jefferson City, Missouri 65102

RE: Hinkson Creek Total Maximum Daily Load (TMDL), Boone County, Missouri

Dear Mr. Totten:

On December 23, 2009, the United States Environmental Protection Agency (EPA) received your letter requesting a time extension to complete the Hinkson Creek TMDL in order to provide an additional opportunity for stakeholder involvement. After careful consideration, EPA chooses not to seek an extension of time to allow for the completion of the Hinkson Creek TMDL.

As you know, Hinkson Creek is an impaired water body subject to the 2001 *American Canoe Association v. EPA* Consent Decree, which sets forth milestones and a final backstop date of December 31, 2010, for development of TMDLs for specific impaired waters in Missouri. EPA is obligated by the milestones and final date set forth by the Consent Decree; however, EPA does retain the discretion to seek an extension from the Plaintiffs or to seek modification from the Court. EPA does not believe an extension request is warranted at this time, because an appropriate modeling approach and sufficient data exist to support a TMDL for Hinkson Creek.

EPA has prioritized the timely completion of TMDLs for all impaired waters included within the Consent Decree, including the TMDL for Hinkson Creek. Hinkson Creek originally appeared on the 1998 Missouri Clean Water Act § 303(d) list as impaired for unspecified pollutants due to urban nonpoint runoff, and remains on Missouri's 2008 303(d) List for the same impairment.

Using existing data, the EPA and the Missouri Department of Natural Resources (MDNR) TMDL Programs collaborated to develop a modeling approach for the Hinkson Creek TMDL. The modeling results indicate that a reduction in storm water runoff will address the unknown pollutant of concern. This runoff reduction approach has been used in other EPA regions to address unknown pollutants in urban settings.

EPA's regulations state that TMDLs can be expressed in several ways. Expressions can include terms of toxicity, which is a characteristic of one or more pollutants, or by some "other appropriate measure." 40 C.F.R. § 130.2(i). EPA's regulations also state that TMDLs may be established using a biomonitoring approach as an alternative to the pollutant-by-pollutant approach. 40 C.F.R. § 130.7(c)(1). This flexibility in the expression of TMDLs supports reliance on a surrogate where, as in this case, there is a reasonable rationale and the TMDL is designed to ensure attainment with water quality standards.

TMDLs provide the information and tools necessary to help direct and target watershed priorities. EPA agrees that coordination with local stakeholders is important for the successful implementation of a TMDL and watershed protection projects. However, settling all outstanding implementation issues is not required prior to establishing a TMDL. MDNR may request assistance from EPA programs to assist the Hinkson Creek stakeholders with funding and organizing implementation priorities after the TMDL has been established. EPA also agrees that new data and updated studies would be valuable in modeling current conditions. If and when new data becomes available, MDNR may choose to revise the Hinkson Creek TMDL.

EPA appreciates MDNR's efforts to finish TMDLs to meet the demands of the 2001 Consent Decree. We look forward to a continued collaborative relationship with MDNR as we work together to complete these TMDLs.

If you would like to further discuss EPA's decision, please contact me at (913) 551-7401, or John DeLashmit, Chief of the Water Quality Management Branch at (913) 551-7821.

Sincerely,

William A. Spratlin

William A. Spratlin
Director
Water, Wetlands and Pesticides Division

cc: John Hoke, MDNR
Refaat Mefrakis, MDNR

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

FEB 2 2 2010

The Honorable Karen M. Miller
County Commissioner
Boone County Commission
801 East Walnut, Room 245
Columbia, MO 65201-7732

RE: Hinkson Creek Total Maximum Daily Load, Boone County

Dear County Commissioner Miller:

At the request of the Boone County Commission, the University of Missouri, and City of Columbia, the Department of Natural Resources (Department) submitted a letter to the Environmental Protection Agency (EPA) requesting additional time to develop the Hinkson Creek Total Maximum Daily Load (TMDL) and provide greater opportunity for stakeholder involvement. On January 28, 2010, the Department received a response from EPA Region 7 indicating they would not be seeking an extension of time for the Hinkson Creek TMDL.

EPA indicated the reason for the denial was that Hinkson Creek TMDL is subject to the 2001 American Canoe Association v. EPA Consent Decree which must have TMDLs completed by December 31, 2010. EPA also indicated that the Department has selected an appropriate modeling approach and that sufficient data exists to support a TMDL; therefore, EPA does not believe the Department needs an extension of its December 31, 2009 deadline for submission of the TMDL to EPA as found in the Memorandum of Understanding between EPA and the Department. Because the request for extension of time to complete the TMDL has been denied, the Department must now proceed with finalizing the draft Hinkson Creek TMDL for public notice.

To this end, the Department was pleased to receive the January 14, 2010 submission of the Joint MS4 Proposed TMDL Final Draft entitled "Total Maximum Daily Loads for Biological Impairment by Toxicity or Unknown Pollutants, Hinkson Creek, Boone County, Missouri." The additional information on beneficial actions taken since the Department's last water quality studies and the phased approach toward implementing storm water flow reductions was greatly appreciated. However, the Joint MS4 Proposed TMDL Final Draft in its present form does not contain all of the required elements to be a stand alone TMDL. The draft TMDL is missing water quality modeling that indicates a

1% reduction in the volume of the one-year average annual storm (Wasteload Allocation) and a goal of 4% volume reduction for the one-year average annual stream flow (Load Allocation) will result in attainment and maintenance of the aquatic life beneficial use in Hinkson Creek. Additionally, a TMDL margin of safety must be explicitly stated where conservative assumptions have not been used to establish an implicit margin of safety. Adaptive monitoring and modeling in lieu of an explicit or implicit margin of safety would not be approvable by EPA. However, the Department does agree that a phased, adaptive implementation approach and continued monitoring and modeling are appropriate strategies for the implementation section of the Hinkson Creek TMDL.

The Department appreciates the interest and involvement of the Boone County Commission, the University of Missouri, and City of Columbia in the development of the Hinkson Creek TMDL. A revised draft Hinkson Creek TMDL will be sent to you and other stakeholders by February 24, 2009 to provide opportunity for a 10 day pre-public notice review of the document. Following the pre-public notice review, the Hinkson Creek TMDL will be placed on public notice for 45 days, during which time official comments from interested stakeholders are welcome. If you should have questions, please feel free to contact me at (573) 751-6721 or Mr. John Hoke at (573) 526-1446 or by mail at the Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102.

Sincerely,

WATER PROTECTION PROGRAM

Scott B. Totten
Acting Director

SBT:jhl

Enclosure

c: Mr. John Glascock, City of Columbia
Mr. Peter Ashbrook, University of Missouri