

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION VII**  
**901 NORTH FIFTH STREET**  
**KANSAS CITY, KANSAS 66101**

07 MAY -7 AM 9:25  
 ENVIRONMENTAL PROTECTION  
 AGENCY-REGION VII  
 REGIONAL HEARING CLERK

**BEFORE THE ADMINISTRATOR**

**IN THE MATTER OF** )  
 )  
 THF Grindstone Development, L.L.C. )  
 )  
 and )  
 )  
 Emery Sapp & Sons, Inc. )  
 )  
 Respondents )  
 Proceedings under Section 309(a) of the )  
 Clean Water Act, 33 U.S.C. § 1319(a) )

) FINDINGS OF VIOLATION  
 ) ORDER FOR COMPLIANCE  
 ) ON CONSENT

) Docket No. CWA -07-2007-0001

07 MAY -7 AM 9:25  
 ENVIRONMENTAL PROTECTION  
 AGENCY-REGION VII  
 REGIONAL HEARING CLERK

**I. FINDINGS OF VIOLATION**

**Jurisdiction and Preliminary Statement**

1. The FINDINGS OF VIOLATION are made and ORDER FOR COMPLIANCE ON CONSENT (“Order on Consent”) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency, by Section 309(a) of the Clean Water Act (“CWA” or the “Act”), 33 U.S.C. §1319(a), as delegated by the Administrator to the Regional Administrator, EPA Region VII, and further delegated to the Director, Water, Wetlands and Pesticides Division, EPA Region VII.

2. Respondent THF Grindstone Development L.L.C. is a limited liability company, organized under the laws of Missouri for the purpose of, among other things,

purchasing real property and engaging in activities related to commercial development of real property. Respondent Emery Sapp & Sons, Inc. is a corporation organized under the laws of Missouri, engaged in construction of commercial and residential projects.

3. The EPA has reason to believe that THF Grindstone Development, L.L.C. and Emery Sapp & Sons, Inc. (“Respondents”) violated Section 301 of the CWA, 33 U.S.C. §1311, through discharge of fill material into waters of the United States when conducting activities at the Grindstone Plaza Construction Site, located in Section 30, Township 48 North, Range 12 West, Boone County, Columbia, Missouri (the “Site”). Specifically, Respondents discharged dredged or fill material into navigable waters of the United States without obtaining the necessary permits required by Section 404 of the CWA, 33 U.S.C. §1344.

3. The EPA and Respondents, having determined that settlement of this matter is in the best interest of all parties, come now and enter into this Order on Consent.

**Statutory and Regulatory Framework**

4. Section 301(a) of the CWA, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants, by any person except in compliance with, inter alia, Section 404 of the CWA, 33 U.S.C. § 1344.

5. Section 404 of the CWA, 33 U.S.C. § 1344, provides that the discharge of dredged or fill material into a “navigable water” of the United States, as these terms are defined by Section 502 of the CWA, 33 U.S.C. § 1362, occur in accordance with a permit issued under that Section.

6. Section 404 of the CWA, 33 U.S.C. § 1344, provides that the Secretary of the Army, acting through the Chief of Engineers, may issue permits for the discharge of dredged or fill material into navigable waters at specified disposal sites, after notice and opportunity for public comment.

7 Section 502(12) of the CWA, 33 U.S.C. § 1362(12), defines “discharge of a pollutant” to include “any addition of any pollutant to navigable waters from any point source.”

8. Section 502(6) of the CWA, 33 U.S.C. § 1362(6), defines “pollutant” to include, inter alia, dredged spoil, rock, sand and cellar dirt.

9. Section 502(7) of the CWA, 33 U.S.C. § 1362(7), defines “navigable waters” as “...the waters of the United States, including the territorial seas.”

10. Section 502(14) of the CWA, 33 U.S.C. § 1362(14), defines “point source” as “...any discernible, confined and discrete conveyance...from which pollutants are or may be discharged.”

11. 40 C.F.R. §§ 232.2 and 33 C.F.R. Part 328 define waters of the United States, in part, as, “...lakes, rivers and streams, ...wetlands.”

12. Section 502 of the CWA defines “person” to include an individual and a corporation.

13. Except as provided in Section 404(f) of the CWA, Section 404 of the CWA requires a person to obtain a permit from the United States Army Corps of Engineers (“Corps”) prior to any discharge of dredged or fill material into the navigable waters of the United States.

**Factual Background**

14. At all times relevant to this action, Respondents were owners and/or operators of the Site.

15. Between October 2005 and June 2006, Respondents, or ones acting on their behalf, using a track hoe, discharged earthen fill and concrete into an unnamed tributary to Hinkson Creek. Discharges were in the form of concrete footings approximately 18 inches wide and 18 inches tall inside three arched culverts and a concrete blanket approximately 28 feet long and nine feet wide along the right descending bank of the unnamed tributary between the upstream and middle arched culverts. The track hoe used by Respondents or ones acting on their behalf, acted as a “point source” within the meaning of Section 502(14) of the Act, 33 U.S.C. § 1362(14).

16. The earthen fill and concrete that were discharged into the area described in Paragraph 15 above between October 2005 and June 2006 are “pollutants” within the meaning of Section 502(6) of the CWA, 33 U.S.C. § 1362(6).

17. The unnamed tributary to Hinkson Creek where earthen fill and concrete were discharged, flows into Hinkson Creek, which flows into the Missouri River. The Missouri River is a navigable water within the meaning of Section 502(7) of the CWA, 33 U.S.C. § 1362(7) and a water of the United States as defined by 40 C.F.R. § 232.2 and 33 C.F.R. § 328.3.

18. The discharge of earthen fill and concrete into waters of the United States constitutes the “discharge of pollutants” within the meaning of Section 502(12) of the CWA, 33 U.S.C. § 1362(12).

19. Respondents did not obtain a 404 permit prior to conducting the activities described in Paragraph 15 above.

**Findings of Violation**

20. The facts stated in paragraphs 14 through 19 above are herein incorporated.

21. The use of a track hoe referenced in Paragraph 15 above indicates that Respondents, or ones acting on their behalf, discharged pollutants into a water of the United States by using earth-moving equipment without obtaining a Section 404 permit.

22. Respondents' failure to obtain a Section 404 permit prior to conducting activities described in Paragraph 15 above is a violation of Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

**B. ORDER FOR COMPLIANCE ON CONSENT**

**Specific Provisions**

Based on the authority of Section 309(a) of the CWA, 33 U.S.C. § 1319(a), Respondents CONSENT and are hereby ORDERED as follows:

23. Respondents agree to complete Mitigation which is described in Appendix A, attached hereto and incorporated herein, and consisting of i) the "Proposed Mitigation Project for Stream Impacts at Grindstone Plaza THF-Grindstone Development L.L.C." by Paul M. Mehrle, Ph.D., dated March 8, 2007, and ii) letter by EPA dated February 13, 2007 from Audrey Asher to Frank Hackmann.

24. Respondents agree that it shall be in EPA's sole discretion to determine whether Respondents have fully implemented Mitigation. In making this determination, EPA will take into account Respondents' good-faith efforts as well as any factors beyond Respondents' control.

25. Respondents agree that this Order on Consent shall not constitute a permit under the CWA. Compliance with the terms of this Order on Consent shall not relieve Respondents of their responsibility to obtain any required local, state, and/or Federal permits.

26. Within 30 days of the Effective Date of this Order on Consent, Respondents shall initiate steps to obtain a conservation easement, consistent with the **Conservation Easement** section of Appendix A, and shall submit to EPA a letter describing the steps taken. Respondents shall file the conservation easement with the Boone County Register of Deeds and shall simultaneously provide a copy of the filed conservation easement to EPA.

27. Within 45 days of the Effective Date of this Order on Consent, Respondents shall submit to EPA a detailed design for the planting of trees, shrubs and grasses in the riparian corridor that is described in Appendix A. Within 30 days of receipt of EPA's comments on the detailed design, Respondents shall modify the design consistent with EPA's comments and submit the modified design to EPA. Respondents shall implement the EPA-approved design within ~~eight~~ <sup>twelve</sup> months of the Effective Date of this Order on Consent.

28. Respondents shall arrange with the property owner of the riparian corridor where the Mitigation Project will be implemented ("Property") for EPA, the Corps, and their representatives to have access onto the Property in order to observe the Mitigation Project.

29. Respondents shall submit annual reports to EPA, beginning on the first anniversary of the Effective Date of this Order on Consent and continuing until EPA notifies Respondents in writing that the Mitigation Project is complete. The annual reports shall be consistent with the **Mitigation Project Monitoring & Reporting** section of Appendix A, and shall outline the status of the project and corrective actions, if any, that will be taken to maintain the original vegetation. If, at the conclusion of five years from the first anniversary of the Effective Date, 80% success of restoration is not achieved, Respondents shall implement revegetation efforts to achieve at least 80% success rate.

30. Respondents agree that no changes shall be made to the Mitigation without prior written approval from EPA.

31. Respondents shall submit the deliverables required by this Order on Consent to EPA at the following address:

Delia Garcia, PhD., Compliance Officer  
Water, Wetlands, and Pesticides Division  
U. S. Environmental Protection Agency – Region VII  
901 N. Fifth Street  
Kansas City, Kansas 66101

**General Provisions**

32. Respondents admit the jurisdictional allegations in this Order on Consent and agree not to contest EPA's jurisdiction in this proceeding or any subsequent proceeding to enforce the terms of the Order on Consent.

33. Respondents neither admit nor deny the factual allegations contained in this Order on Consent.

34. Nothing contained in the Order on Consent shall alter or otherwise affect Respondents' obligations to comply with all applicable Federal, state, and local environmental statutes and regulations and applicable permits.

35. Compliance with the terms of this Order on Consent shall not relieve Respondents of liability for any violations of the CWA not addressed in this Order on Consent or in the Consent Agreement/Final Order, Docket No. CWA-07-2007-0006. In addition, nothing in this Order on Consent shall prohibit EPA from seeking additional injunctive relief for matters not covered herein pursuant to Section 309 of the CWA, 33 U.S.C. § 1319.

36. Nothing in this Order on Consent shall limit EPA's right to obtain access to the area where the Mitigation was performed and to request additional information from Respondents, pursuant to the authority of Section 308 of the CWA, 33 U.S.C. § 1318 and any other authority.

37. If any provision or authority of this Order on Consent, or the application of this Order on Consent to Respondents, is held by Federal judicial authority to be invalid, the application to Respondents of the remainder of this Order on Consent shall remain in force and effect and shall not be affected by such a holding.

38. The signatories below certify that they are fully authorized to enter into the terms and conditions of this Order on Consent.

39. The terms of this Order on Consent shall be effective and enforceable against Respondents on the Effective Date, which is the date this Order on Consent is signed by EPA.



*In the Matter of THP Grindstone Development, L.L.C. and  
Emery Sapp & Sons, Inc. Docket No. CWA-07-2007-0007*

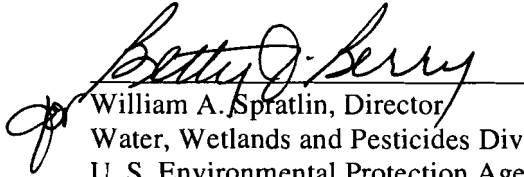
40. This Order on Consent may be modified by mutual agreement of the parties.

Such modification shall be in writing.

41. This Order on Consent shall remain in effect until a written notice of termination is issued by an authorized representative of EPA. Such notice shall not be given until all of the requirements of this Order on Consent have been met.

**For the United States Environmental Protection Agency – Region VII**

05/04/07  
Date

  
\_\_\_\_\_  
William A. Spratlin, Director  
Water, Wetlands and Pesticides Division  
U. S. Environmental Protection Agency Region VII

*In the Matter of THP Grindstone Development, L.L.C. and  
Emery Sapp & Sons, Inc. Docket No. CWA-07-2007-0007*

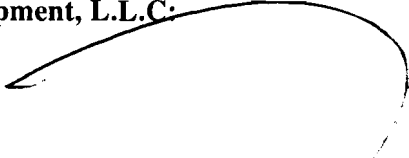
5/1/07  
Date

Audrey B. Asher  
Audrey B. Asher  
Senior Assistant Regional Counsel  
U. S. Environmental Protection Agency Region VII

The undersigned representative of THF Grindstone Development, L.L.C. certifies that he or she is authorized to enter into this Order For Compliance on Consent and to execute and legally bind THF Grindstone Development, L.L.C. to the terms and conditions of this Order For Compliance on Consent and meets the requirements for authorized signatory found in 40 C.F.R. § 122.22.

**For Respondent THF Grindstone Development, L.L.C.:**

4/16/07  
Date

  
\_\_\_\_\_  
Michael H. Staenberg  
2127 Innerbelt  
Bus. Ctr. Dr. #200  
St. Louis, MO 63114

*In the Matter of THP Grindstone Development, L.L.C. and  
Emery Sapp & Sons, Inc. Docket No. CWA-07-2007-0007*

The undersigned representative of Emery Sapp & Sons, Inc. certifies that he or she is authorized to enter into this Order For Compliance on Consent and to execute and legally bind Emery Sapp & Sons, Inc. to the terms and conditions of this Order For Compliance on Consent and meets the requirements for authorized signatory found in 40 C.F.R. § 122.22.

**For Respondent Emery Sapp & Sons, Inc.:**

4/27/07                      C. Sapp, Jr., CEO  
Date

# **APPENDIX A**

**PROPOSED MITIGATION PROJECT FOR STREAM  
IMPACTS AT GRINDSTONE PLAZA  
THF-GRINDSTONE DEVELOPMENT L.L.C.**

**Prepared by  
Paul M. Mehrle, Ph.D.  
ENTRIX  
March 8, 2007**

During a site inspection by the Corps of Engineers (Corps) in March 2006, it was determined that 340 linear feet of an unnamed tributary of Hinkson Creek were impacted by activities associated with the construction of three arched culverts on Grindstone Plaza property. In a subsequent site visit by U.S. EPA Region VII in June 2006, it was estimated that 368 linear feet of stream were impacted. The U.S. EPA has indicated that in order to mitigate for the impact, 736 linear feet of stream with a 50-foot riparian corridor on each side of the stream must be included in the mitigation project. This mitigation requirement will be at a 2:1 ratio to mitigate for the impacts to the 368 linear feet of stream impact. The Hinkson Creek watershed in Columbia, Missouri, is the focus of the proposed Mitigation Project by THF-Grindstone Development L.L.C.

This proposed Mitigation Project incorporates the recommendations provided by EPA in the letter dated February 13, 2007, from Audrey Asher to Frank Hackmann. In addition, the proposed Mitigation Project incorporates the recommendations of the Corps of Engineers and EPA provided in a conference call on March 1, 2007, relative to the area and types of mitigation acceptable for the stream impacts at the Grindstone Plaza property.

The Hinkson Creek is approximately 17 miles long starting north of Columbia and converging with Perche Creek southwest of Columbia. Hinkson Creek receives runoff from approximately 60% of the City of Columbia. During the past decades, the Hinkson Creek has experienced increased flows due to agricultural and urban runoff in the watershed which has resulted in streambank erosion, increased sedimentation, and decreased water quality. Numerous restoration activities along Hinkson Creek have been implemented during the past several years to stabilize streambanks, improve riparian corridors, and enhance aquatic habitats. The following is a Mitigation Project consisting of riparian corridor restoration and enhancements that will provide additional positive benefits to the Hinkson Creek watershed in Columbia, MO.

**Enhance Hinkson Creek Riparian Corridor Adjacent to Scott Boulevard City Park**

In southwest Columbia, the City of Columbia has a major recreational park area located on Scott Boulevard. There are nature areas, walking trails, and recreational fields for public use. The Hinkson Creek is adjacent to the southern boundary of the park. The

watershed along this segment of Hinkson Creek has experienced significant growth in the past several years resulting in greater upstream runoff from residential and commercial developments. In the lower segments of Hinkson Creek near Scott Boulevard, there is considerable streambank erosion that has been occurring over the past decade. In addition, the Scott Boulevard City Park area adjacent to the Hinkson Creek has potential to experience impacts from streambank and riparian corridor instability which could result in future impacts to the recreational areas as well as to Hinkson Creek. The proposed restoration activities will provide enhancements and stability to the riparian corridor for this area of the Hinkson Creek watershed as well as to the City park recreational area. The proposed Mitigation Project will include riparian corridor restoration enhancements and will be implemented along 750 linear feet of the northern streambank of Hinkson Creek within the Scott Boulevard park area on property owned by the City of Columbia and managed by the City's Parks and Recreation Department. The area for the mitigation project within the City park site is depicted in Figure 1.

To stabilize and enhance the riparian corridor along the Hinkson Creek, native grasses, shrubs and trees will be planted within the riparian corridor area along approximately 750 linear feet on the northern side of Hinkson Creek. The riparian area is an irregularly shaped area along the northern streambank with the riparian area being approximately 100 feet wide along 650 linear feet of the stream and at the western edge of the corridor approximately 200 feet wide along 100 linear feet of stream. The riparian corridor area proposed for restoration enhancements is approximately two (2) acres. Figure 2 depicts the approximate area proposed for restoration enhancements. The EPA and Corps of Engineers typically expect protection and enhancement of 50 feet of riparian buffer on each side of stream as part of mitigation projects. The proposed Mitigation Project provides restoration enhancements to only the northern riparian corridor of this segment of Hinkson Creek. The riparian corridor on the south of Hinkson Creek contains dense mature hardwood trees along the majority of the targeted stream segment and is not in need of restoration enhancements compared to the riparian area to the north of Hinkson Creek. Focusing on the northern riparian area along this 750 linear feet segment of Hinkson Creek will provide more long term benefit to the Hinkson Creek and also protect future erosion of the City park recreation area.

The riparian corridor area is a relatively flat area that slopes north-to-south toward Hinkson Creek and is covered by various densities of grasses. The grasses are less dense at the western and eastern areas of the corridor area. There are mature hardwood trees near the top of the streambank along the Hinkson, and approximately 60 feet to the north of the streambank in the middle section of the corridor there are immature cottonwoods and hardwoods. The majority of the corridor has minimal trees and few shrubs. Figures 3, 4, & 5 are photographs depicting the current vegetation in the riparian corridor. The majority of the proposed tree plantings will be in the open areas within the corridor, and the proposed shrub plantings will be spaced within the new tree plantings as well as within the existing trees. A goal of the restoration enhancements is to provide a biologically diverse riparian corridor along this segment of Hinkson Creek.

A combination of upland and transition zone trees native to Missouri will be planted within the riparian corridor. The more mature trees will be RPM trees (3-5 gallon size) planted on 8x20 spacing, and bare root trees/whips will be planted on 4x6 spacing. The species of trees considered for planting are as follows:

Red Oak (*Quercus rubra*)  
White Oak (*Quercus alba*)  
Shagbark Hickory (*Carya ovata*)  
Eastern Redbud (*Cercis Canadensis*)  
Green Hawthorne (*Crataegus viridis*)  
Common Hackberry (*Celtis occidentalis*)  
River Birch (*Betula nigra*)

Bare-root shrubs will be planted within the new tree plantings as well as within the existing trees in the corridor. Shrubs will be planted on 6x12 spacing. The species of native Missouri shrubs considered for planting are as follows:

Sumac (*Rhus aromatica*)  
Witch Hazel (*Hamamelis vernalis*)  
Buttonbush (*Cephalanthus occidentalis*)  
Serviceberry (*Amelanchier Canadensis*)  
Golden Currant (*Ribes aureum*)

A native seed mix will be applied in areas throughout the riparian corridor. The seed mix will be applied at the rate of approximately 20 pounds/acre depending on the area and the existing grass cover. The native seed mix will include the following (scientific names of native grass varieties will be provided in the final planting design):

Prairie Dropseed  
Virginia Ryegrass  
Paradoxa Fescue  
River Oats  
Switchgrass (Missouri native only)  
Yellow Coneflower

A detailed planting design for the trees, shrubs, and grasses will be presented to EPA for approval prior to implementation of the plantings. The detailed planting design will show existing vegetation, proposed placement of trees, species & sizes of trees, shrubs and grasses as well as details of the planting methods, soil amendments, fertilizers, and source of vegetative plantings. Every effort will be made to achieve a beneficial biological diversity within the riparian corridor that is similar to other areas of the Hinkson Creek watershed. Based on the availability and quality of the vegetative species available at the time of implementation, the planting design may change, but any changes will be submitted to EPA for review and approval prior to implementation.



## **Mitigation Project Monitoring & Reporting**

The riparian corridor restoration will be monitored for five (5) years after implementation. A monitoring report to document the success of the restoration will be reported to the U.S. EPA annually. If 80% success of the restoration is not achieved over 5 years, revegetation efforts will be implemented so to achieve at least 80% success.

Each year a site survey of the planted acreage will be conducted to document vegetation success metrics. The following metrics will be used to gauge the success of this project:

- Percent Cover (grasses & scrubs)
- Percent survival (tree species)
- Observation of invasive species
- Observation of naturally occurring (non-invasive) species
- Changes in biological diversity
- Possible factors affecting success

Upon completion of these observations, a report will be made detailing the findings and submitted to EPA. All observations made at the site will be documented both in notebooks and visually through photodocumentation. Consultation with EPA will be done as necessary. If 80% success in the vegetative plantings is not achieved, then revegetation efforts will take place during the appropriate seasons of the year. Dr. Paul Mehrle of ENTRIX will be the point of contact for the annual monitoring surveys and be responsible for implementing the annual monitoring activities.

## **Implementation Process**

Every effort will be made to avoid impacts to the stream and riparian corridor during implementation of the project. Inadvertent adverse impacts to Hinkson Creek and the riparian corridor will be corrected to pre-implementation conditions. The work activities and access to Hinkson Creek will be coordinated with the City of Columbia Parks & Recreation Department who is responsible for maintaining and managing the City property adjacent to the Hinkson Creek. In addition, the proposed Mitigation Project will not overlap with the Mitigation Plan area described in the Compensatory Mitigation Plan for Centerstate Properties LLC approved by Corps of Engineers (Permit No. 200400082).

## **Implementation Schedule**

The schedule for implementation will be based on several factors with one of the most important factors being the climate conditions most conducive to success of the vegetative plantings. Other factors that play into the implementation schedule are: 1. Obtaining approval of the Mitigation Plan by the U.S. EPA; 2. Obtaining the Conservation Easement from the City Council of Columbia; and 3. Availability of quality native vegetative species, as well as sufficient quantities, during the time of the year most conducive to planting. Every effort will be made to implement the Mitigation Project in

the most expeditious manner that will result in a successful restoration project. Assuming that the necessary approvals from EPA and the City are obtained, the Mitigation Project will be implemented in Spring 2007 unless climate conditions cause delays until Fall 2007.

### **Conservation Easement**

In cooperation with the City of Columbia, a Conservation Easement will be obtained for the riparian corridor area included in the Mitigation Project. It is proposed that the Conservation Easement will contain the following restrictions which will require City Council approval:

The City shall not:

- Conduct any tilling or planting of agricultural row crops or vegetables;
- Place any dredge or fill materials or any other materials classified under the Clean Water Act, P.L. 99500, as waste;
- Dump or store debris/items such as tires, rocks, yard wastes, equipment, vehicles
- Pasture or graze domestic animals;
- Construct or place any buildings except otherwise approved by the U.S. Environmental Protection Agency;
- Alter the contour or hydrology except as otherwise approved by the U.S. Environmental Protection Agency;
- Sanction or allow the operation of all-terrain or off-road vehicles except as necessary to 1. maintain the property consistent with the approved Mitigation Project; 2. maintain the riparian corridor by the City of Columbia; 3. maintain any current or future utility easements; and 4. establish and maintain nature trails or nature observation areas.
- Construct roads for vehicles or other motorized machinery or equipment;
- Harvest vegetation and trees except for activities necessary to maintain an appropriate biological diversity consistent with the approved Mitigation Project and the management of the City of Columbia's nature areas.

Figure 1. Area for proposed Mitigation Project within Scott Boulevard park site along the north streambank of Hinkson Creek. The Yellow line on the aerial photograph identifies the riparian area (approximately 750 linear feet) for proposed restoration enhancement activities.

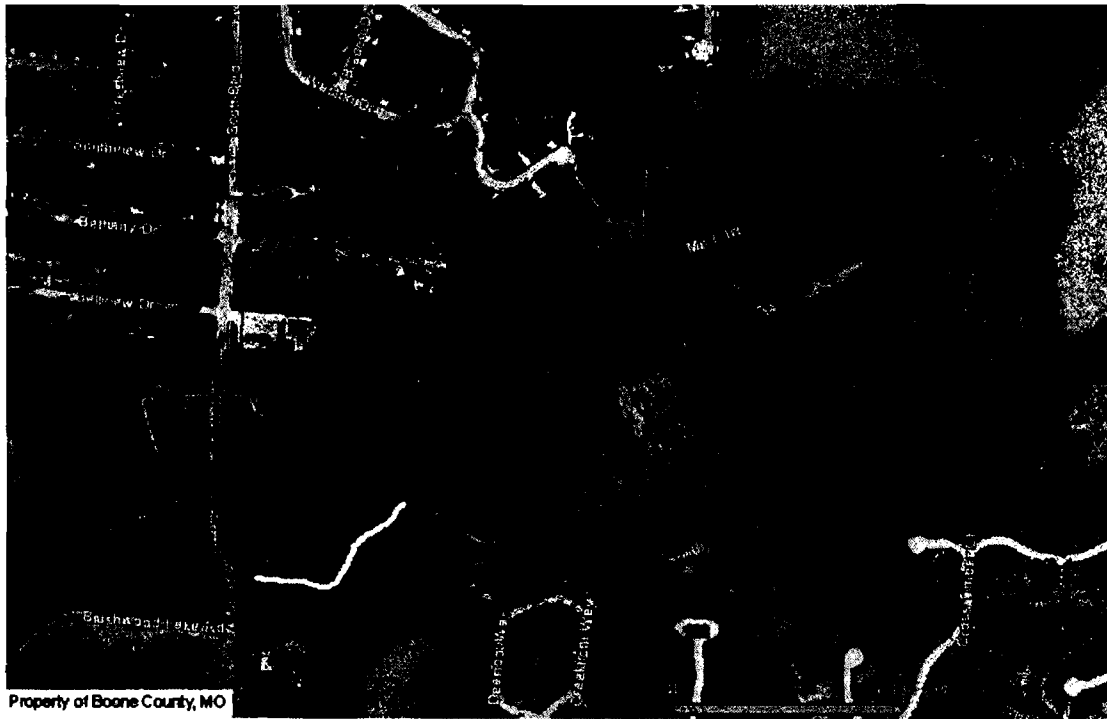
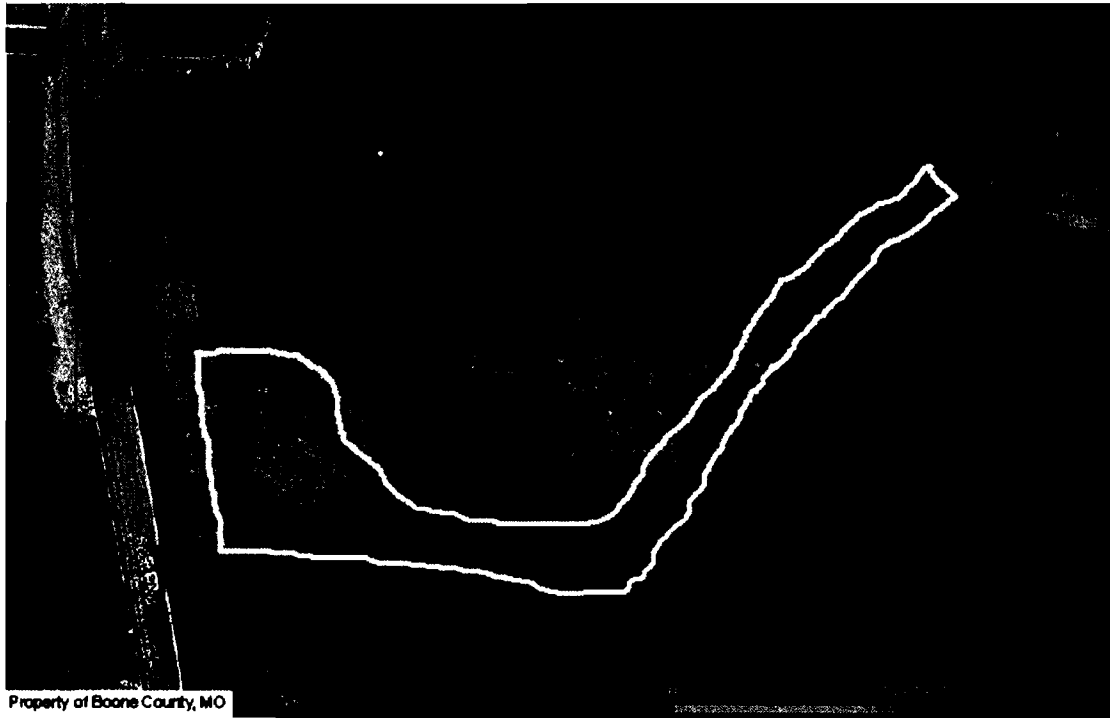


Figure 2. Aerial photograph showing the approximate area of the irregularly shaped riparian corridor (outlined in Yellow) proposed for restoration enhancements.



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To stabilize and enhance the riparian corridor along the Hinkson Creek, native grasses, shrubs and trees will be planted within the riparian corridor area along approximately 750 linear feet on the northern side of Hinkson Creek. The riparian area is an irregularly shaped area along the northern streambank with the riparian area being approximately 100 feet wide along 650 linear feet of the stream and at the western edge of the corridor approximately 200 feet wide along 100 linear feet of stream. The riparian corridor area proposed for restoration enhancements is approximately two (2) acres. Figure 2 depicts the approximate area proposed for restoration enhancements. The EPA and Corps of Engineers typically expect protection and enhancement of 50 feet of riparian buffer on each side of stream as part of mitigation projects. The proposed Mitigation Project provides restoration enhancements to only the northern riparian corridor of this segment of Hinkson Creek. The riparian corridor on the south of Hinkson Creek contains dense mature hardwood trees along the majority of the targeted stream segment and is not in need of restoration enhancements compared to the riparian area to the north of Hinkson Creek. Focusing on the northern riparian area along this 750 linear feet segment of Hinkson Creek will provide more long term benefit to the Hinkson Creek and also protect future erosion of the City park recreation area.

The riparian corridor area is a relatively flat area that slopes north-to-south toward Hinkson Creek and is covered by various densities of grasses. The grasses are less dense at the western and eastern areas of the corridor area. There are mature hardwood trees near the top of the streambank along the Hinkson, and approximately 60 feet to the north of the streambank in the middle section of the corridor there are immature cottonwoods and hardwoods. The majority of the corridor has minimal trees and few shrubs. Figures 3, 4, & 5 are photographs depicting the current vegetation in the riparian corridor. The majority of the proposed tree plantings will be in the open areas within the corridor, and the proposed shrub plantings will be spaced within the new tree plantings as well as within the existing trees. A goal of the restoration enhancements is to provide a biologically diverse riparian corridor along this segment of Hinkson Creek.

A combination of upland and transition zone trees native to Missouri will be planted within the riparian corridor. The more mature trees will be RPM trees (3-5 gallon size) planted on 8x20 spacing, and bare root trees/whips will be planted on 4x6 spacing. The species of trees considered for planting are as follows:

Red Oak (*Quercus rubra*)  
White Oak (*Quercus alba*)  
Shagbark Hickory (*Carya ovata*)  
Eastern Redbud (*Cercis Canadensis*)  
Green Hawthorne (*Crataegus viridis*)  
Common Hackberry (*Celtis occidentalis*)  
River Birch (*Betula nigra*)

Bare-root shrubs will be planted within the new tree plantings as well as within the existing trees in the corridor. Shrubs will be planted on 6x12 spacing. The species of native Missouri shrubs considered for planting are as follows:

Sumac (*Rhus aromatica*)  
Witch Hazel (*Hamamelis vernalis*)  
Buttonbush (*Cephalanthus occidentalis*)  
Serviceberry (*Amelanchier Canadensis*)  
Golden Currant (*Ribes aureum*)

A native seed mix will be applied in areas throughout the riparian corridor. The seed mix will be applied at the rate of approximately 20 pounds/acre depending on the area and the existing grass cover. The native seed mix will include the following (scientific names of native grass varieties will be provided in the final planting design):

Prairie Dropseed  
Virginia Ryegrass  
Paradoxa Fescue  
River Oats  
Switchgrass (Missouri native only)  
Yellow Coneflower

A detailed planting design for the trees, shrubs, and grasses will be presented to EPA for approval prior to implementation of the plantings. The detailed planting design will show existing vegetation, proposed placement of trees, species & sizes of trees, shrubs and grasses as well as details of the planting methods, soil amendments, fertilizers, and source of vegetative plantings. Every effort will be made to achieve a beneficial biological diversity within the riparian corridor that is similar to other areas of the Hinkson Creek watershed. Based on the availability and quality of the vegetative species available at the time of implementation, the planting design may change, but any changes will be submitted to EPA for review and approval prior to implementation.

## **Mitigation Project Monitoring & Reporting**

The riparian corridor restoration will be monitored for five (5) years after implementation. A monitoring report to document the success of the restoration will be reported to the U.S. EPA annually. If 80% success of the restoration is not achieved over 5 years, revegetation efforts will be implemented so to achieve at least 80% success.

Each year a site survey of the planted acreage will be conducted to document vegetation success metrics. The following metrics will be used to gauge the success of this project:

- Percent Cover (grasses & scrubs)
- Percent survival (tree species)
- Observation of invasive species
- Observation of naturally occurring (non-invasive) species
- Changes in biological diversity
- Possible factors affecting success

Upon completion of these observations, a report will be made detailing the findings and submitted to EPA. All observations made at the site will be documented both in notebooks and visually through photodocumentation. Consultation with EPA will be done as necessary. If 80% success in the vegetative plantings is not achieved, then revegetation efforts will take place during the appropriate seasons of the year. Dr. Paul Mehrle of ENTRIX will be the point of contact for the annual monitoring surveys and be responsible for implementing the annual monitoring activities.

## **Implementation Process**

Every effort will be made to avoid impacts to the stream and riparian corridor during implementation of the project. Inadvertent adverse impacts to Hinkson Creek and the riparian corridor will be corrected to pre-implementation conditions. The work activities and access to Hinkson Creek will be coordinated with the City of Columbia Parks & Recreation Department who is responsible for maintaining and managing the City property adjacent to the Hinkson Creek. In addition, the proposed Mitigation Project will not overlap with the Mitigation Plan area described in the Compensatory Mitigation Plan for Centerstate Properties LLC approved by Corps of Engineers (Permit No. 200400082).

## **Implementation Schedule**

The schedule for implementation will be based on several factors with one of the most important factors being the climate conditions most conducive to success of the vegetative plantings. Other factors that play into the implementation schedule are: 1. Obtaining approval of the Mitigation Plan by the U.S. EPA; 2. Obtaining the Conservation Easement from the City Council of Columbia; and 3. Availability of quality native vegetative species, as well as sufficient quantities, during the time of the year most conducive to planting. Every effort will be made to implement the Mitigation Project in



the most expeditious manner that will result in a successful restoration project. Assuming that the necessary approvals from EPA and the City are obtained, the Mitigation Project will be implemented in Spring 2007 unless climate conditions cause delays until Fall 2007.

### **Conservation Easement**

In cooperation with the City of Columbia, a Conservation Easement will be obtained for the riparian corridor area included in the Mitigation Project. It is proposed that the Conservation Easement will contain the following restrictions which will require City Council approval:

The City shall not:

- Conduct any tilling or planting of agricultural row crops or vegetables;
- Place any dredge or fill materials or any other materials classified under the Clean Water Act, P.L. 99500, as waste;
- Dump or store debris/items such as tires, rocks, yard wastes, equipment, vehicles
- Pasture or graze domestic animals;
- Construct or place any buildings except otherwise approved by the U.S. Environmental Protection Agency;
- Alter the contour or hydrology except as otherwise approved by the U.S. Environmental Protection Agency;
- Sanction or allow the operation of all-terrain or off-road vehicles except as necessary to 1. maintain the property consistent with the approved Mitigation Project; 2. maintain the riparian corridor by the City of Columbia; 3. maintain any current or future utility easements; and 4. establish and maintain nature trails or nature observation areas.
- Construct roads for vehicles or other motorized machinery or equipment;
- Harvest vegetation and trees except for activities necessary to maintain an appropriate biological diversity consistent with the approved Mitigation Project and the management of the City of Columbia's nature areas.

Figure 1. Area for proposed Mitigation Project within Scott Boulevard park site along the north streambank of Hinkson Creek. The Yellow line on the aerial photograph identifies the riparian area (approximately 750 linear feet) for proposed restoration enhancement activities.



Figure 2. Aerial photograph showing the approximate area of the irregularly shaped riparian corridor (outlined in Yellow) proposed for restoration enhancements.

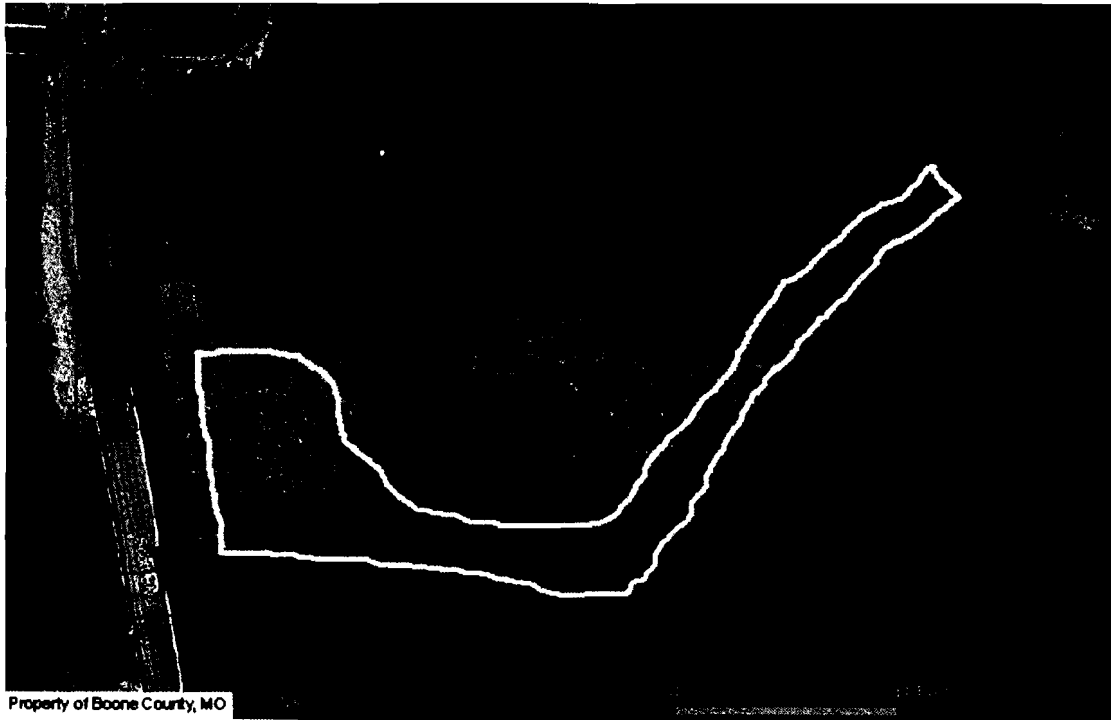


Figure 3. Photo of current riparian buffer facing west near Scott Blvd road. Hinkson Creek is on the left. This area is approx. 200 feet east from Scott Blvd.



Figure 4. Riparian buffer along north bank of Hinkson Creek facing east. Hinkson Creek is on the right. This area is approx. 400 feet east from Scott Blvd.



Figure 5. Riparian buffer along north bank of Hinkson Creek facing west. Hinkson Creek is on the left. This area is approx. 700 feet east of Scott Blvd.



IN THE MATTER OF THF Grindstone Development, L.L.C., Respondent  
Docket No. CWA-07-2007-0007

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing Findings of Violation/Order for Compliance on Consent was sent this day in the following manner to the addressees:


Copy hand delivered to  
Attorney for Complainant:

Audrey B. Asher  
Senior Assistant Regional Counsel  
Region VII  
United States Environmental Protection Agency  
901 N. 5<sup>th</sup> Street  
Kansas City, Kansas 66101

Copy by Certified Mail Return Receipt to:

Frank H. Hackmann, Esq.  
Sonnenschein Nath & Rosenthal LLP  
One Metropolitan Square, Suite 3000  
St. Louis, Missouri 63102-2741

Dated: 5/7/07

  
Kathy Robinson  
Hearing Clerk, Region 7