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AGRICULTURE  
  
FOREST  
SERVICE  
  
SOUTHERN REGION  
  
DANIEL BOONE  
NATIONAL FOREST  
  
KENTUCKY

# East Fork of Indian Creek Stream Restoration Project

## Decision Notice, and Finding Of No Significant Impact For the Environmental Assessment

August, 2010



Prepared By  
Cumberland Ranger District  
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## **Decision**

I have decided to implement **Alternative 2-Proposed Action** as described in the environmental assessment for the East Fork of Indian Creek Stream Restoration Project. Three sections of the East Fork of Indian Creek will be restored that involve taking the following actions(See Figures 2 and 3):

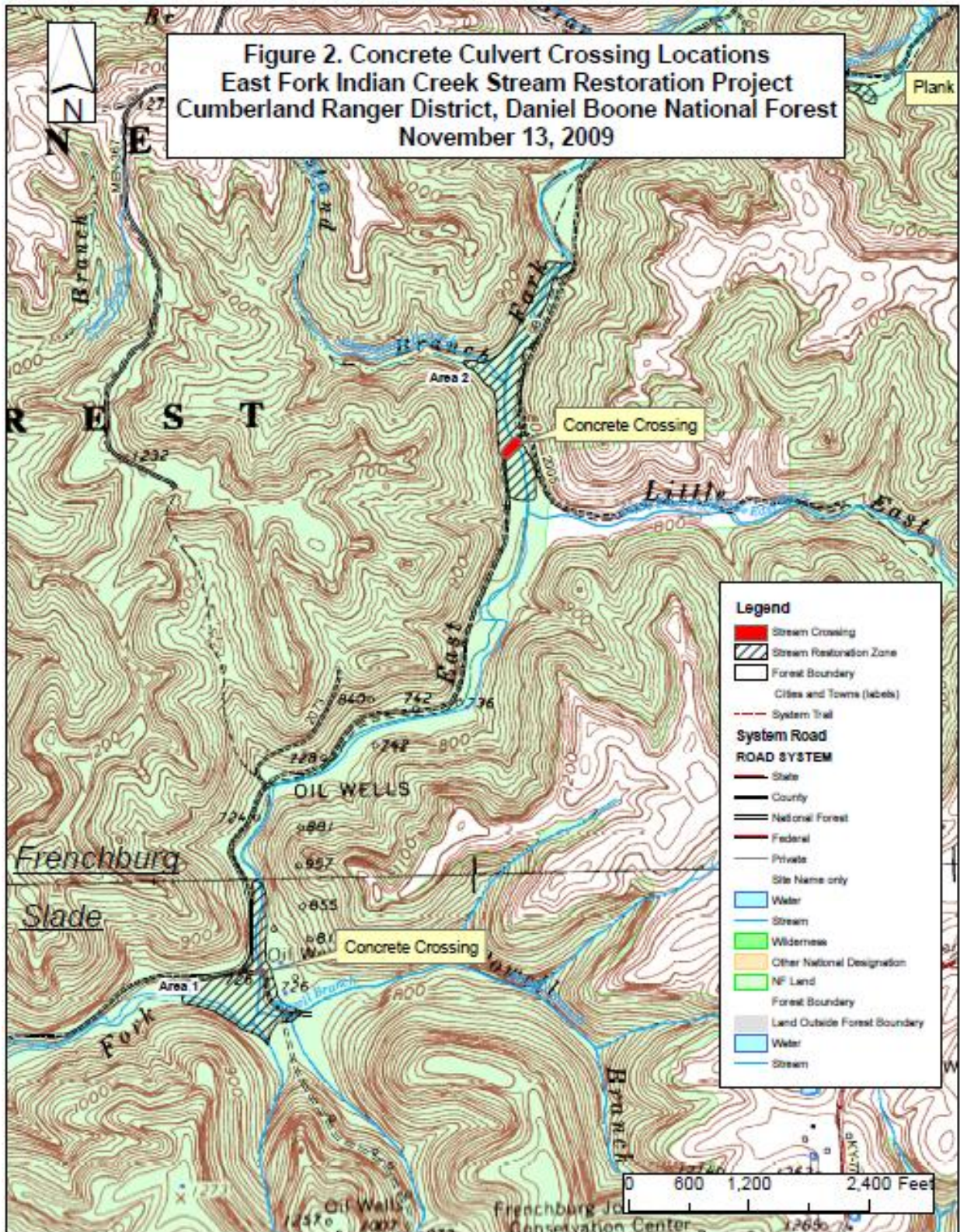
1. Remove two concrete culvert stream crossings along with the sediment accumulated behind them (Areas 1 and 2).
2. Remove two concrete plank stream crossings that have partially washed away. (Areas 3 and 4).
3. Relocate and reshape three previously channeled sections of stream. Approximately 550-feet of channeled stream will be replaced by 660-feet of restored stream at the downstream concrete culvert crossing, 1,907-feet of channeled stream will be replaced with 2,288 feet of restored stream at the upstream concrete culvert crossing, and an additional 300-feet of channeled stream will be replaced with 360-feet of restored stream at the upstream concrete plank crossing. The total length of restored stream will be approximately 3,308-feet. Portions of channeled streams will be changed into wetlands.
4. Restrict public motor vehicle access to the end of Forest Development Road (FDR) 9B (approximately 0.9 miles) by the installation of a gate following the removal of the concrete culvert crossing at Area 2.
5. Improve existing designated dispersed camping in Area 1 using material removed during the stream restoration.
6. Improve and designate up to 4 dispersed camping sites within the Areas 1 and 2. Areas for designation will consider existing non-designated sites before designating new areas.
7. Replace existing chemical toilets in Area 1 with a vault toilet.
8. Construct a vault toilet in Area 2.
9. Provide designated parking in Area 2.
10. Decommission Powell Branch Road (FDR 2011).

Heavy equipment such as dozers, excavators, and dump trucks will be used to accomplish the stream restoration. The restored sections of stream will be completed before channeled sections of stream are blocked. Stream flow will be returned to the restored creek sections after landscaping is complete, rock and gravels are added, and vegetation is established to prevent erosion. Best Management Practices will be used to reduce erosion, such as staged construction, installation of silt fences, seeding to wheat, mulching with straw, and use of straw bales. Native grasses, wildflowers, river cane, shrubs, and trees will be used to plant areas of exposed soil.

The width and depth of the restored stream will vary throughout, and may involve multiple, braided channels. Basically, the main channel for the restored creek will be narrower with deeper pools and lower banks than the existing channeled creek area. Trees will be felled after November 15 and before April 1 to avoid and minimize impacts to



Indiana bats. If trees are to be felled outside this season, US Fish and Wildlife Service protocol will be followed.





A mixture of ephemeral and emergent wetlands will be established along the restored stream sections. Portions of the wetlands will be designed to contain zones of wet-meadow, forested, and shrub wetlands. The ephemeral wetlands are likely to dry naturally each fall, while the emergent wetlands, which are deeper, should contain water year round. These wetlands will be supplied by surface and/or groundwater.

The wetlands will be shaped to physically appear and function like natural wetlands that were once present in the area. They will be built with heavy equipment, such as a dozer and excavator that will be cleaned of soil prior to starting work to reduce the possibility of spreading non-native plants. Water will enter the wetlands naturally, not from artificial pumps. Erosion will be controlled by seeding exposed soils to wheat and mulching with straw. Those soils exposed above the water level in the wetlands and stream will be seeded to a mixture of native grasses and legumes such as Indian grass, big bluestem, switch grass, wild rye, partridge pea, and river cane. A diversity of native trees and shrubs will be planted within and around wetlands created for the project.

### **Rationale for this decision**

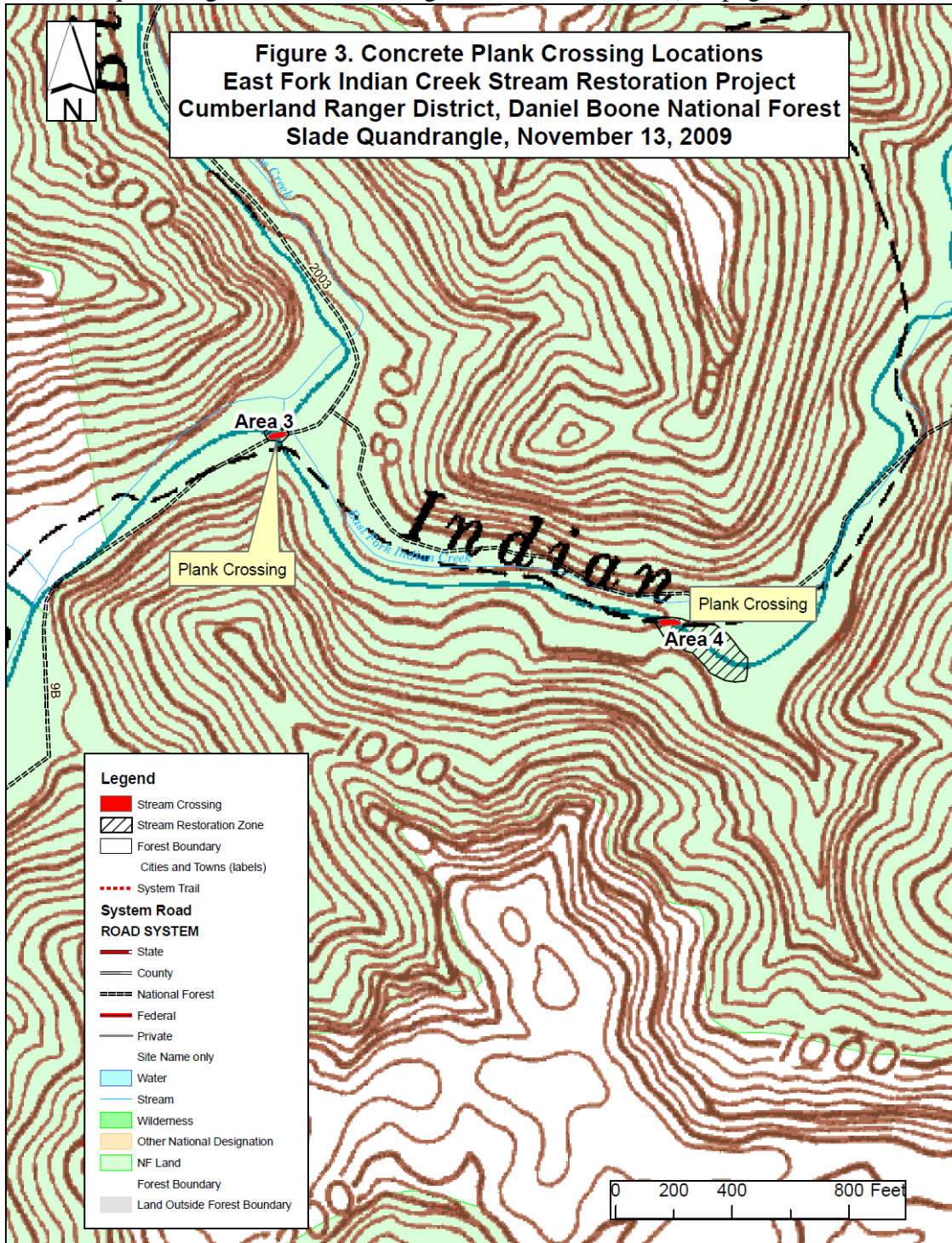
This decision is based not just on a review of the EA. I also reviewed the Forest Plan, comments received during scoping and as a result of a 30-day review of the EA by the public, and a review of the analysis record that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk. This review included the biological evaluation, cultural resource report, and engineering design prepared for this project.

I have made this decision to reduce erosion and improve fish and wildlife habitat by returning the stream to a stable geometry, reconnecting it to the floodplain, and restoring riparian areas impacted by the concrete stream crossings. The restoration will increase channel sinuosity, decrease slope, and promote the development of a cobble and gravel bed. Constructed in-stream features using large woody debris and rock will improve bank stability and create aquatic habitat. Step pools will stabilize the stream reach and prevent head-cuts. Constructed ephemeral and emergent wetlands, some of which will be directly connected and others that will be separated and only connected during flood events, will play a vital role in filtering sediments and nutrients, reducing flood levels, providing water to the stream under low flow conditions, and habitat for waterfowl, mammals, amphibians, and reptiles. (EA page 14)

The project is specifically expected to benefit two fish species of special concern to the Commonwealth of Kentucky, the emerald darter and the frecklebelly darter. (EA page 13) The creek is managed by the Kentucky Department of Fish and Wildlife Resources for trout, and the restoration actions will improve habitat for trout and increase fishing opportunities.



The two existing concrete culvert stream crossings (Areas 1 and 2) are acting as low-head dams; preventing the movement of fish and aquatic organisms up and down the stream, altering stream flow that causes erosion, and blocking sediment transport, impairing spawning habitat for fish. These crossings are probably migration barriers for the emerald darter and the frecklebelly darter. The two concrete plank stream crossings (Areas 3 and 4) have failed; they are causing erosion of stream banks, preventing the movement of fish and aquatic organisms, and altering natural stream flow. (EA page 22)





Wetlands will be established along the restored stream sections to provide fish and wildlife habitat and increase viewing opportunities for birds, mammals, amphibians, and reptiles. The wetlands can be expected to be used as nurseries for juvenile fish. The channeled streams will also be changed into wetlands to provide habitat for plants and animals, capture sediments, and provide water to the creek under low flow conditions.

Heavy equipment such as dozers, excavators, and dump trucks are needed to move soil, rock, and trees for this project. These large and heavy materials cannot be safely or efficiently moved by hand. Hand labor will be used for many portions of the project from design, construction monitoring, seeding, planting, placement of small woody debris, and effectiveness monitoring.

Because the existing concrete structure will be replaced by a low water crossing, gating FDR 9B is needed to reduce the frequency of vehicle crossings that introduce sediment, oil, gas, antifreeze, and non-native plants. People will continue to be invited to walk into this area.

Powell Branch Road (FDR 2011) is not being used by vehicles and has grown up to trees and shrubs. A travel analysis completed by the Forest Service found that the road is not needed for management of the area. Therefore the road will be decommissioned following removal of the concrete crossing at Area 1 as is directed in Goal 12 in the Forest Plan.

Currently dispersed camping is popular in the project area. The ability to car-camp near a stream is a unique opportunity not available in the adjacent Red River Gorge Geological Area. The existing dispersed camping sites (designated and undesignated) are adding sediment, human waste, and garbage to the East Fork of Indian Creek affecting water quality, human health, and aquatic habitat. The proposed designation and improvements, such as campsite hardening and improvement of toilet facilities, of dispersed campsites is designed to reduce these impacts as is directed in 1.E-Goal 7 in the Forest Plan.

Finally, scoping revealed concerns related to the production of green house gases related to equipment used to restore the stream channel and its potential impacts on the areas ability to respond to changing climates. Based upon the analysis related to the vegetative and aquatic community's responses expected following the completion of the project. (EA page 22 and 27) It is clear that the area will be better able to respond to changes in climate following the completion of the project than it is now. Additionally, the recovering ecosystems should be better able to absorb carbon and other atmospheric gases due to increased vegetative vigor and aquatic organism abundance.

### **Alternatives considered**

The following Alternatives were considered:

- Alternative 1- No Action
- Alternative 2-Proposed Action

The following Alternative was considered but eliminated from further consideration for the reasons provided:



- Installing a bridge over East Fork of Indian Creek: This alternative was considered in order to provide the current access to the end of FDR 9B without the impacts associated with the existing condition. This alternative was dropped from further consideration due to the difficulty in designing a bridge in that location that would be able to accommodate storm flows.

### **Public involvement**

On May 29, 2008 the public scoping process was initiated when information regarding the proposed action was mailed to approximately 160 interested individuals, agencies and organizations on the mailing list maintained for project notification on the Cumberland Ranger District. On May 30, 2008 the same information describing the project was sent to 150 individuals and organizations involved with the Red River Gorge LAC (Limits of Acceptable Change) mailing list. The purpose of these mailings was to inform the public of the proposed project and to request comments regarding the proposed project.

The project scoping letter and associated maps were posted on the *Project Planning: Cumberland District Projects* page of the Daniel Boone National Forest's public website. The proposed project was published in the Daniel Boone National Forest July 1, 2008 Schedule of Proposed Action, where it has appeared quarterly in each issue since.

The proposed project was discussed at the following meetings which were open to the public:

- 1) KYOVA Chapter of Trout Unlimited, November 4, 2008
- 2) Kentucky Federation of Garden Clubs Limestone District Meeting, October 20, 2008
- 3) Rowan County Wildlife Club Meeting, December 18, 2008
- 4) Eighth District of the Wildlife Federation Meeting, January 15, 2009

On March 31, 2009 a news release describing the proposed project was sent to 15 newspaper and radio stations serving the area where the project is located.

An interdisciplinary team (ID Team) composed of six Forest Service employees reviewed the comments received from the public and agency employees. The Responsible Official approved one significant issue as a result of this evaluation. They are:

1. The stream restoration would potentially affect the use and/or location of existing dispersed camp sites located in Area 1 and 2.

The detailed consideration of comments and identification of issues can be found in the appendix.

The public was provided an opportunity to review the Environmental Assessment for thirty days following the publication of a legal notice in the Lexington Herald-Leader newspaper on December 3, 2009. One comment was received in response to this notice. The comment and an analysis of the comment are in the Appendix. In addition, a phone



call was received on January 26, 2010. A summary of the phone call and analysis is also in the Appendix.

## **Finding of No Significant Impact (FONSI) for Alternative 2**

### **Reasons for Finding of No Significant Impact**

In consideration of the analysis documented in the environmental assessment and the reasons below, the preferred alternative, Alternative 2 will not constitute a major Federal action that will significantly affect the human environment. Therefore, an EIS will not be prepared. My determination is based on the following.

#### **Context**

Alternative 2 will be limited in geographic context (40 CFR 1508.27(a)) to a small portion of the Cumberland Ranger District in Menifee County, Kentucky.

#### **Intensity**

1. I have determined that evaluation of both beneficial and adverse effects are disclosed in Alternative 2 (40 CFR 1508.27(b)(1)), and find them to be without significant impact.
2. Alternative 2 will not significantly affect public health or safety (40 CFR 1508.27(b)(2) (EA p. 29).
3. Alternative 2 will not significantly affect any unique characteristics of the geographic area (40 CFR 1508.27(b)(3)).
4. Alternative 2 does not involve effects to the quality of the human environment that are likely to be highly controversial (40 CFR 1508.27(b)(4)), (EA p. 30).
5. Alternative 2 will not impose highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)).
6. Alternative 2 will not establish a precedent for future actions with significant effects and does not represent a decision in principle about future consideration (40 CFR 1508.27(b)(6)).
7. Alternative 2 is not related to other actions with individually insignificant but cumulative significant impacts (40 CFR 1508.27(b)(7)).
8. Alternative 2 does not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant, cultural, or historic resources (40 CFR 1508.27(b)(8)), (EA pp. 28-29).
9. Alternative 2 will not adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)), (EA pp. 16-18)



10. Alternative 2 does not threaten a violation of Federal, State or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)), (EA pp. 29-30).

### Determination

On the basis of the information and analysis contained in the environmental assessment and all other information available as summarized above, it is my determination that adoption of the preferred alternative, Alternative 2, does not constitute a major Federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement (EIS) is not necessary.

### **Findings required by other laws and regulations**

#### **Forest Plan Consistency (National Forest Management Act)**

The actions of Alternative 2 are consistent with the Land and Resource Management Plan. The following paragraphs are my reasons for this finding:

As discussed on pages 9-11, 15, 18-22, 35 and 39 of the Environmental Assessment (EA), the actions of this project are consistent with forest-wide Standards on pp. 2-20 to 2-27 in the Forest Plan, and the Standards for the Riparian Corridor Prescription Area.

Soil, slope, or other watershed conditions will not be irreversibly damaged. Soil loss from projected stream sedimentation is less with Alternative 2 – Proposed Action than under the No Action alternative. Furthermore, the species sediment load index from the Forest Plan for this watershed would be in the excellent range (EA, p. 13-16), (16 U.S.C. 1604(g) (3)(E)(i)).

#### **Endangered Species Act**

See section 9 above “Finding of No Significant Impact”.

#### **Sensitive Species (Forest Service Manual 2670)**

This Manual direction requires analysis of potential impacts to sensitive species, those species for which the Regional Forester has identified population viability concern. Potential effects of this action on sensitive species have been analyzed and documented in a Biological Assessment-Evaluation. This decision will have *no impact* on 66-Sensitive Species and *beneficial impact* on two Sensitive Species, the Rafinesque’s big-eared bat and eastern small-footed bat.

#### **Clean Water Act**

This Act is to restore and maintain the integrity of waters. The Forest Service complies with this Act by using Best Management Practices. This decision incorporates Best Management practices to ensure protections of soil and water resources.

#### **Wetlands (Executive Order 11990)**

This Order aims to minimize the destruction, loss or degradation of wetlands as well as to preserve and enhance the natural and beneficial values of wetlands. This project will result in the restoration of wetlands, working to meet the intent of the order.

#### **Floodplains (Executive Order 11988)**



This Order seeks to reduce the impacts of floods on human health and safety and to preserve and promote the beneficial values of floodplains. This project is designed to reconnect the East Fork of Indian Creek to the floodplain and restore natural characteristics of floodplains to the area.

**National Historic Preservation Act, Archaeological Resources protection Act, native American Graves Protection and Repatriation Act**

A cultural resource survey was completed for Alternative 2 to help insure compliance with the National Historic Preservation Act of 1966. Implementing Alternative 2 would not affect Cultural Resource sites that are listed or eligible for listing in the National Register of Historic Places.

**Migratory Bird Treaty Act**

The Migratory Bird Treaty Act is designed to prevent the exploitation of most transient songbirds for economic or other reasons. It makes it unlawful to take, trap, kill or possess any migratory bird, nest or egg. While this project may harm individuals, nests, eggs, the courts have declined to extend the statute well beyond its language and the Congressional purpose behind its enactment. The actions in this decision are consistent with the Act.

**Environmental Justice (Executive Order 12898)**

This Order requires consideration of whether projects will disproportionately impact minority or low-income populations. Public involvement occurred for this project, the results of which I have considered in making this decision. Public involvement did not identify any adversely impacted local minority or low-income populations. However, this project will alter the location and access to dispersed camping sites which are generally used by lower-income forest visitors. These changes will be temporary and the end result will be an improvement in these opportunities following project implementation. Visitors will have less exposure to human waste and safer camping spots. Therefore, this decision is not expected to disproportional impact minority or low-income populations.

**National Environmental Policy Act**

This Act requires opportunity for public involvement and consideration and disclosure of potential environmental effects. The entirety of documentation for this decision supports compliance with this Act.

**Administrative review or appeal opportunity**

This decision is subject to appeal pursuant to 36 CFR 215.11. A written appeal, including attachments, must be postmarked or received within 45 days after the date this notice is published in the Lexington Herald-Leader newspaper, Lexington, Kentucky. This newspaper is published daily. Appeals must meet content requirements of 36 CFR 215.14. Send the Notice of Appeal to:

Frank Beum, Forest Supervisor, Appeal Deciding Officer  
Attn: Appeals & Litigation  
USDA-Forest Service, Southern Region  
Daniel Boone National Forest  
1700 Bypass Road



Winchester, Kentucky 40391

Appeals may be faxed to (859) 744-1568. Hand-delivered appeals must be received within normal business hours of 8:00 a.m. to 4:30 p.m. at the Forest Service office in Winchester, Kentucky. Appeals may also be mailed electronically in a common digital format to: *appeal-southern-daniel-boone@fs.fed.us*

**Implementation date**

If no appeal is received, implementation of this decision may occur on, but not before, 5 business days from the close of the appeal filing period. If an appeal is received, implementation may not occur for 15 business days following the date of appeal disposition.

**Contact Person**

For further information on this decision, contact Tom Biebighauser, US Forest Service, 2375 Kentucky Highway 801 South, Morehead, KY 40351, phone (606) 784-6428 ext. 102.

*/s/ James David Manner*

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JAMES DAVID MANNER  
District Ranger

*August 10, 2010*

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Date