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Forest Service
Hoosier National Forest
Tell City Ranger District
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File Code: 1950
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Greetings Forest Stakeholders:

The Hoosier National Forest (The Hoosier) is proposing a project that would improve the sustainability of the oak-hickory ecosystem, regenerate native hardwood communities by removing non-native pines, while also improving overall forest health and wildlife habitat. The project will be known as the Buffalo Springs Restoration Project and is an implementation of the 2006 Hoosier National Forest Land and Resource Management Plan (Forest Plan), with the goal of moving the Forest toward its identified desired future condition.

The purpose of this letter is to invite the public to provide early and meaningful participation on this proposed action prior to a decision being made by the Responsible Official.

Proposed Project Location
Most of the project area is in Orange County on the Tell City Ranger District. A small portion overlaps into northern Crawford County. All proposed treatments would occur on National Forest System (NFS) lands. Prescribed fire could be applied where adjoining U.S. Army Corps of Engineers land and private landowners express interest and are willing to enter into an agreement.

The legal descriptions for the project area include:

- T1N, R2W, Section 26
- T1N, R1E, all or portions of Sections 10, 14, 15, 20, 21, and 23-36
- T1N, R1 E, all or portions of Sections 21-23 and 25-36
- T1N, R2 E, Section 30
- T1S, R2E, all or portions of Sections 1-6, 8, 9, 12-17, 21, and 22
- T1S, R1W, all or portions of Sections 1-3, 9-17, 19-25, 27, 28, 30, and 34-36
- T1S, R2W, all or portions of Sections 1, 2, 12, and 23-25

Please refer to the attached maps for specific locations of proposed activities. Maps can also be viewed at our website at https://www.fs.usda.gov/project/?project=60940.

Current Conditions
The project area is currently dominated by mature forest. Inventory data in the proposed silvicultural treatment area shows no stands in the 0-to-9-year age class, therefore the desired amount of early-successional forest habitat described in the Forest Plan (4-12%) is not being met. Many stands are dominated by mixed-oak and oak-hickory canopies, but competitive oak regeneration does not exist across most of the project area. As fire and other disturbances were excluded from ecosystems in the early- to mid-20th century, oak-hickory seedlings no longer held a competitive advantage and are now being replaced. Understories and mid-stories in these stands typically consist of shade tolerant species such as American beech and sugar maple,

leaving very few areas where oak or hickory species can compete to be a part of a future stand. This trend is typical of areas that have not experienced periodic disturbance, as they did historically through the actions of fire, wind, ice and wildlife activity.
Most stands in the area are overstocked or too crowded for the water and sunlight resources available, leading to greater competition. This often leads to stagnated growth and makes trees more susceptible to attacks from forest pests and pathogens.

The Forest Plan tells us "Without ecological restoration in the form of silvicultural treatments, oak systems will continue to decline (in terms of species richness and ecological function), converting from oak to mesophytic forests within a generation. Native wildlife species dependent on trees producing large-seeded acorns and nuts may be imperiled. To maintain the oak component, silvicultural systems need to be matched to the site characteristics combining harvest systems with regeneration treatments such as prescribed burning*"* (USDA FS 2006 p. B9).

Pure and mixed stands of shortleaf pine, Virginia pine, and eastern white pine currently comprise 27% of the silvicultural treatment area. These pines are not native to the Hoosier National Forest. Pine plantations provide less suitable habitat and less biodiversity than native forests.

Nearly 77% of hardwood stands in the area currently average 60 years of age or older. Only 3.7% are less than 30 years of age. With the forest containing only 0.1% less than 10 years of age, early successional habitat is underrepresented in the area.

Tables 1 and 2 display specific vegetation information included in forested stands in the silvicultural treatment area.

Table 1: Forest Type

Forest Type	Acres	Percentage
Mixed Pine	197	2%
Eastern White Pine	1,162	11%
Shortleaf-Virginia Pine	645	6%
Oak-Pine	857	8%
Oak-Hickory	6,172	59%
Elm-Ash-Sycamore	4	0%
Maple-Beech	1,463	14%
Totals	**10,500**	**100.0%**

Table 2: Age Class

Age Class (years)	Acres	Percentage
0-9	8	0.1%
10-19	54	0.5%
20-29	259	2.5%
30-39	1,068	10.2%
40-49	931	8.9%
50-59	1,369	13.0%
60-69	1,580	15.0%
70-79	1,395	13.3%

80-89	1,071	10.2%
90-99	1,204	11.5%
100-109	565	5.4%
110-119	524	5.0%
120-129	276	2.6%
130-139	99	0.9%
140+	97	0.9%
Totals	**10,500**	**100.0%**

The project area falls within watersheds that contribute to Patoka Lake. Patoka Lake is a municipal watershed. Several culverts have been identified that need repair to facilitate fish passage and improve water flow. The Forest Plan emphasizes the stabilization of soils within municipal watersheds. Healthy forests that are resilient to disease and our changing climate also contribute to improved water quality.

Desired Conditions and Management Direction
Much of the project is in Management Area 2.8. The desired conditions include maintaining 4 to 12 percent of the area in young forest habitat and a diversity of age class and associated forest structure. The Forest Plan states, "Habitat in these areas is best suited to wildlife that uses large hardwood trees and a mosaic of different-aged hardwood forests. The Forest manages the area primarily for plant and animal habitat diversity and timber harvest is an appropriate tool for use in this area" (USDA FS 2006 p. 3-28).

Prescribed fire can create habitat conditions that are conducive to oak and hickory regeneration. Forest Plan guidance states, "use prescribed fire to accomplish silvicultural objectives such as oak regeneration" (USDA FS 2006 p. 3-12).

Portions of Management Areas 2.4, 6.2, 7.1, 8.2 and 8.3 are included for prescribed burning, recognizing linkages between natural communities regardless of Management Area. This increases the likelihood that a feature such as a road or stream can be used as a prescribed fire boundary.

Purpose of and Need for Action

<u>Restoring Sustainable Ecosystems</u>
The Buffalo Springs Restoration Project proposed action is based on and would fulfill Forest Plan direction associated with the goal of maintaining and restoring sustainable ecosystems.

Purpose:
Meet Forest Plan direction to promote tree growth, reduce insect and disease levels and move the landscape toward historic conditions and increase the resiliency and structure of forested areas (stands) by restoring the composition, structure, pattern, and ecological processes necessary to make these ecosystems sustainable. Take actions, where needed, to meet the above stated purpose.

Need:

- There is a need to provide a mosaic of forest conditions dominated by hardwoods and restore dry hardwood forest ecosystems that have not experienced periodic disturbance due to fire or other naturally occurring events.

  As maturing oaks and hickories age and die, they are being replaced by trees such as maple and beech. It is important to keep the oak-hickory community on the landscape as many wildlife species have evolved with it and depend on it. The oak and hickory provide hard mast-acorns and nuts-that are critical food for many wildlife species. Oak-hickory ecosystems need management activities to regenerate due to severe competition by shade tolerant species.

  A lack of fire in the area is also causing oak-hickory seedlings to be suppressed by a shade tolerant mid-story. Reintroducing fire would promote regeneration and maintenance of mast producing oak and hickory.

- There is a need to reduce the amount of non-native pine in the project area to provide more suitable habitat to a wider array of wildlife species by restoring native hardwood communities.

  Pines were planted from the 1930's to the mid 1980's to aid in erosion control. Pines are not native to the Hoosier National Forest. As the pine stands mature, the canopy grows closer together and reduces the amount of sunlight reaching the forest floor. The ground beneath the stands, in many places, has little (if any) other plants growing to provide cover or food sources for wildlife.

  By removing the pine plantations, the amount of forested habitat that is between 0 and 9 years of age would increase. The Forest Plan states the desired condition of this area is to maintain 4 to 12 percent of the area in young forest habitat. This creates important early successional habitat required by a wide variety of songbirds, as well as ruffed grouse and American woodcock - both are Regional Forester Sensitive Species (See figures 1 and 2). To provide for diversity in wildlife species, a range of habitats should occur across the landscape. Many wildlife species do not find browsing and other foraging habitat in mature and maturing forests. Instead, they find the fruits, seeds, insects, and other food items they seek mostly in early successional habitat.

- Stand density is very high in portions of the project area and mortality is occurring. The proposal would reduce the density of the trees, improving forest health. Promoting healthy forest conditions and improving stand structure within the project area would improve the overall health of vegetation in the project area, making the ecosystem more resilient and reduce the effects of insects, disease, and climate change.

- There is a need to control the oak wilt that is occurring in the project area. Oak wilt is a disease caused by a fungus; it is especially damaging to oaks in the red oak group. Forest staff have found pockets of oak wilt in the project area that are killing red oak. Once a

tree has been infected, there is nothing that can be done other than remove it to prevent the disease from spreading to nearby healthy oak trees. The proposal would remove infected oak trees.

- There is a need to utilize the Paoli Experimental Forest for research. The Forest Plan states, “Research at the Paoli Experimental Forest takes an integrated, multidisciplinary approach to research problems in the Central Hardwood Forest from the landscape level to individual stand management. Vegetation management will be used to meet research objectives.”

  Research is needed to advance our understanding and ability to predict outcomes from innovative use, new combinations, and novel sequencing of forestry practices to achieve desired future conditions during restoration and management of sustainable forest ecosystems on the Hoosier. Research supports the Hoosier by assessing management effects on vegetation, wildlife habitat, invasive species, native biodiversity, and watershed condition under a changing climate and increasing environmental and ecological threats to forests. Research aids in the development of successful management systems to achieve forest goals, and in monitoring ecosystem responses to inform adaptive management needs, strategies, and methods.

- There are also opportunities to repair poorly maintained roads and eroded areas to reduce sediment deposition into streams and lakes in the project area. Additionally, roads and trails in the project area may be better located to reduce sedimentation and increase viability of aquatic organisms. These actions may include relocating, reconstructing, or obliterating roads and possible placement of aquatic organism passages in the project area.

Figures 1 and 2 are images of early successional forest habitat created as part of the Oriole Restoration Project on the Tell City Ranger District.

Figure 1. Early successional habitat created by non-native pine removal two years prior

Figure 2. Early successional habitat created by non-native pine removal four years prior

Proposed Action

Approximately 1,223 acres of even-aged management, 2,689 acres of thinning in both pine stands and hardwoods, 957 acres of selection harvest in hardwood stands, and 255 acres of stand improvement are proposed. The enclosed map displays the proposed treatments in the project area.

Additional treatments are proposed where timber is removed to promote oak and hickory regeneration. The tools used in these treatments include, but are not limited to, midstory removal, prescribed fire, and herbicide treatment.

Table 3 lists the proposed activities. These figures are approximate and represent the maximum.

Table 3: Proposed Actions in the Project Area

Proposed Activity	**~ Unit of Measure**
Clearcut (Pine)	707 acres
Shelterwood	516 acres
Thinning (Pine)	1,558 acres
Thinning (Hardwood)	1,131 acres
Selection	957 acres
Stand Improvement	255 acres
Herbicide Spot Treatment	771 acres
Prescribe Fire	12,135 - 15,100 acres
Road Construction	6 miles
Road Reconstruction	13 miles
Road Decommission	4 miles
Aquatic Organism Passages	8 structures

The proposed action would use herbicide for stand improvement activities to promote growth of the targeted tree species. Proposed herbicides would include only those identified for use under the previous Tell City Barrens Restoration decision (10/22/2018), in which a Finding of No Significant Impact (FONSI) was prepared.

Prescribed fire is proposed to create habitat conditions that are conducive to oak and hickory regeneration and reduce fuels created through timber harvest. Depending on adjacent landowner participation, approximately 12,135 to 15,100 acres of prescribed burning is proposed. Not all available acreage would be burned during any given year. The burn acreage would be split up into smaller units. These treatments would be repeated periodically to reach and then maintain the desired condition. Burning under a suitable prescription would return the vegetation to a vigorous condition that would benefit wildlife and promote oak and hickory regeneration.

The boundaries for these treatments would take advantage of topography and other features such as roads and trails. Fire lines that are necessary to control fire on the landscape would primarily be constructed using non-ground disturbing tools such as leaf blowers and chainsaws. While creation of fire lines in this manner changes habitat in the short-term, the area quickly returns to its previous state. In only limited situations would line be installed with heavy equipment when no other options are available. These tools allow crews to remove fuels from the forest floor and above, reducing the chances that a fire would be carried outside of the desired burn location.

To access the areas proposed for treatment and provide access for future management opportunities, approximately 6 miles of new road construction would be needed, as well as road

reconstruction for approximately 13 miles. All standards and guidelines prescribed in the Forest Plan related to this type of work would be followed. Proposed lengths of roads are estimates.

When practical, roads would be rehabilitated to reduce erosion, correct drainage problems, and reduce illegal access from all-terrain vehicles. Roads no longer needed would be removed from the system by either obliteration or decommissioning.

There is an opportunity to replace up to eight undersized culverts and concrete structures with appropriately sized structures that would allow for aquatic organism passage (AOP) and allow natural material transfer that is currently stored unnaturally upstream. Removal and replacement of these crossings is needed because the structures do not allow for upstream passage for native fish species as well as other aquatic organisms. Proper sized crossings also restore a more natural flow regime with less impedance. Natural flow regime promotes less excessive bank erosion and helps mitigate channel incision. The implementation of these AOPs would help improve approximately 14 miles of upstream habitat and improve hydrologic flow regime reducing sedimentation and erosion near these undersized stream crossings. The eight proposed AOPs are located within the municipal Patoka River Watershed. See the enclosed map for locations.

This project proposes to use the Paoli Experimental Forest to take an integrated, multidisciplinary approach to research questions by using vegetative management techniques to complete research objectives. Research projects could be developed by the Northern Research Station and the Hoosier.

Tree plantings will be part of the proposal within the project area. This would allow a possible research project associated with climate change and a mitigation strategy known as assisted migration.

The project proposes to use sections of trails during the timber harvests potentially affecting approximately 2 miles of the 12-mile Springs Valley Trail and 8 miles of the 13-mile Youngs Creek Trail. During project implementation, we would close certain sections of these trails for safety. We would stage project implementation appropriately to minimize impacts on trail use. Upon completion of the project, contractors would be required to return the trail to its original state as much as possible. The analysis may uncover opportunities to improve sections of poorly located trails. All debris resulting from vegetative management and prescribed fire use would be treated to maintain the visual foreground along frequently traveled roads, trails, and streams to meet visual quality objectives defined in the Forest Plan.

It is expected that project implementation would begin in 2022, be staged over time, and may take several years to complete. The work would be completed using contracts as well as Forest Service employees.

Comments

We are interested in your comments, suggestions, and recommendations for achieving the purpose and need for the Buffalo Springs Restoration Project. Your concerns and comments become part of the analysis as we identify issues that may lead to changes in the proposed actions, develop alternatives, or develop mitigation measures to be applied during

implementation. It is most helpful to phrase comments so that they describe your concern or issue in a "cause and effect" relationship related to the proposed action.

Additional information about this project can be found on the Hoosier National Forest webpage: https://go.usa.gov/xAn24.

To view *A Citizen's Guide to the NEPA – Having Your Voice Heard*, visit: https://go.usa.gov/xMHxP.

Objections Process and How to Comment

The Buffalo Springs Restoration Project is an activity implementing a land management plan and is not authorized under the Healthy Forest Restoration Act; therefore, is subject to the pre-decisional administrative review (objection) process found in 36 CFR 218, Subparts A and B. This scoping period is one of the designated opportunities for public participation. Anyone who submits timely, specific written comments during any designated opportunity for public participation (including the scoping period and 30-day comment period) will be eligible to file an objection based on the final analysis and a draft decision document. For the purposes of this rule, specific written comments should be within the scope of the proposed action, have a direct relationship to the proposed action and must include supporting reasons for the responsible official to consider (36 CFR 218.2).

Other eligibility requirements are identified 36 CFR 218.25(a)(3) and include name, postal address, title of the project, identity of the individual or entity who authored the comments, and signature or other verification of identity upon request.

You may submit your comments in writing by mail or to the email address provided below. Currently, the Hoosier National Forest offices are only intermittently open due to the COVID pandemic.

For your comments to be considered in the next stage of analysis, they should be submitted by November15, 2021.

In your comments, please include the following information:

- Your name, address, email address (if available) and telephone number
- The project you are commenting on: Buffalo Springs Restoration Project
- Site specific comments about the proposal along with supporting information you believe will help identify issues, develop alternatives, or predict environmental effects of our proposal

Written comments:

- Mail to Hoosier National Forest, ATTN: Buffalo Springs; 811 Constitution Ave., Bedford, IN 47421
- FAX: (812) 279-3423, ATTN: Buffalo Springs Restoration Project
- Email: Electronic comments must be submitted in a format such as an email message, plain text (.txt), rich text (.rtf), Word (.doc or .docx) or Portable Document Format (.pdf) to comments-eastern-hoosier@fs.fed.us. Please include the subject header "Buffalo

Springs Restoration Project" in your email. Comments must have an identifiable name attached or verification of identity will be required. A scanned signature may serve as verification on electronic comments.

Comments received, including the names and addresses of those who comment, will become part of the public record for this project and will be available for public inspection.

If you have no comments currently but wish to remain on the mailing list for this project, please write or e-mail to show your interest.

If you would like more information or have any questions regarding the commenting process, please contact Kevin Amick at (812) 276-4746, kevin.amick@usda.gov.

Thank you for your interest in the management of the Hoosier National Forest.

Sincerely,

CHRISTOPHER THORNTON

Digitally signed by CHRISTOPHER THORNTON
Date: 2021.10.14 05:21:54 -05'00'

CHRISTOPHER THORNTON
District Ranger

Enclosures (2)

References Cited:

U.S. Department of Agriculture, Forest Service (USDA FS). 2006. Land and resource management plan - Hoosier National Forest. Eastern Region. Bedford, IN: Hoosier National Forest. 85 p. + appendices.