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August 24, 2019

To: Michelle Paduani, District Ranger, Hoosier National Forest
From: Sherry Mitchell-Bruker, President, Friends of Lake Monroe
Subject: Houston South Vegetation Management and Restoration Project draft EA
CC: Michael Chaveas, Mary Madore, Richard Harris, Cheryl Munson, Jim Krause, Shelby Hoshaw, Dave Simcox, U.S. Senator Michael Braun, State Senator Mark Stoops, County Commissioner President Julie Thomas, Mayor John Hamilton, City Council President Dave Rollo, County Council President Shelli Yoder

Ms. Paduani,

Friends of Lake Monroe is submitting the attached comments to the Draft Environmental Assessment for the Houston South Vegetation Management project. Please note that we are very concerned about the Forest Service response to public comments and the Forest Service contention that there are “no unresolved conflicts”. We expect that Hoosier National Forest will recognize that the Houston South project lies within the Lake Monroe watershed and that non-point source loading from the project could contribute to cumulative effects on the water supply of Bloomington, Indiana. We ask the Forest Service to limit vegetation management within the Lake Monroe watershed to that necessary to provide user safety and eliminate invasive species.

We welcome the chance to meet with you and other Forest Service representatives to discuss alternatives to the project and identify ways to reduce nutrient and sediment loading in the Lake Monroe watershed.

Sincerely,

Sherry Mitchell-Bruker, Ph.D., President

Richard Harris, Treasurer
Jim Krause, Secretary
Kevin Dogan, Board Member
Mary Madore, Board Member
Cheryl Munson, Board Member
Shelby Hoshaw, Board Member



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Key Objections:

Hoosier National Forest's Response to Scoping Comments and the Draft Environmental Assessment for the Proposed Houston South Vegetation Management and Restoration Project

1. The USFS claims in the draft Environmental Assessment (EA) that there are no unresolved conflicts that warrant development and analysis of additional alternatives, in spite of public requests to consider new options. The proposed action remains virtually unchanged since the initial November 2018 scoping letter in spite of over 500 comments; of which more than 90% expressed concerns or outright opposition from citizens, local business, environmental organizations, and local government units representing more than 10,000 people in the State of Indiana.
2. The Hoosier National Forest (HNF) draft environmental assessment and response to comments failed to recognize the important role that HNF plays as the largest land manager in the Lake Monroe watershed, dismissing with minimal and flawed analysis, public concerns related to the potential impact of the project on the water quality of a municipal water source. The draft EA cumulative effects analysis was incorrectly based on developing a monitoring plan in a sub-watershed of Lake Monroe and did not comply with NEPA directives and public requests to identify and evaluate the potential direct, indirect, and cumulative social, economic, physical, and biological effects of the proposed action and its alternatives, particularly non-point source impacts to Lake Monroe. Citing agriculture as a significant sediment runoff problem (without evidence) does not relieve the USFS from its obligation to consider the proposed action's contribution to non-point source pollution in the currently impaired Lake Monroe watershed and the impaired South Fork Salt Creek watershed. The USFS needs to consider planned or foreseeable public and private logging, burning and herbicide applications in the LM watershed in analyzing the impact of the proposed action along with consideration of:
 - Logging and oak restoration in the region;
 - Projected loss of current oak/hickory and maturing forest in the region;
 - Timber harvest and other activities in the Lake Monroe watershed by IDNR, The Nature Conservancy (TNC), TNC private landowner program and other private timber harvests; and
 - Development in the project area and the edge habitat created in areas developed since the studies made for the 2006 Forest Plan.

To anticipate these effects, the proposed action should include a schedule of proposed logging, burning, and herbicide activities to compare to other planned or anticipated activities in the watershed.



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3. Unresolved conflicts identified in comments and the draft EA include:
- The draft EA relies heavily on the 13-year-old Forest Management Plan and EIS which pre-dates vital information (referred to in public comments) related to Lake Monroe water quality and climate change.
 - Harmful algae blooms have been the cause of recreational advisories for Lake Monroe for each year of the past nine years. The Indiana Department of Environmental Management (IDEM) lists timber harvesting among the common causes of non-point source pollution that feeds blue-green algae blooms. Unlike many watersheds, the Lake Monroe watershed is heavily forested, and nutrient loading cannot be solely attributed to agriculture.
 - Failures in implementing oak-hickory regeneration projects have been well documented since 2006.
 - Understanding of the impacts, timing, and importance of climate change has increased dramatically since the 2006 Forest Plan was developed and the most recent report from the International Panel on Climate Change (IPCC) states that we have 12 years to turn reverse net carbon release in the atmosphere. In this context, short-term releases cannot be mitigated by long-term benefits. Using the SERA 2011 assessment to evaluate glyphosate safety does not consider recent findings. These and many other "unresolved conflicts" must be addressed.
4. With no or minimal analysis or provided scientific basis, the draft EA dismisses short term impacts as insignificant, including the following:
- Loss of carbon-sequestering trees;
 - Release of greenhouse gas from burning;
 - Impact on migratory neo-tropical and ground-nesting birds;
 - Effects on human health and air quality from prescribed burning;
 - Recreational and economic impacts to horse riders, hikers and businesses resulting from trail closures, including the highly valued Knobstone Trail;
 - Increased soil erosion and movement from road construction;
 - Removal of roosts for endangered Indiana and other bats; and
 - Loss of vegetation and subsequent erosion and nutrient release from prescribed burning.
- Each of these issues requires analysis and scientific support for the claims made in the draft EA.
5. The finding of no significant impact relies heavily on successful implementation and effectiveness of best management practices (BMPs), which is not consistent with past HNF records or with the personnel resources available. The USFS did not adequately address comments requesting the level of trained personnel available for oversight and evaluation of BMPs.



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Additional Alternatives:

Friends of Lake Monroe contends that the proposed action and accompanying purpose and need narrowly defines the objectives of the 2006 Forest Plan and omits important goals and objectives identified in the Forest Plan and Record of Decision (ROD). The description of the 2.8 management area in the Forest Plan (Appendix A) recognizes “The area is general forest with **large areas of old forests** and scattered openings associated with a variety of forest plant communities. **A variety of tree species is present, but shade tolerant species may dominate some forest communities over time.**” The forest plan further states “**Habitat in these areas is best suited to wildlife that uses large hardwood trees and a mosaic of different-aged hardwood forests**”. Forest-wide and Management area 2.8 goals also include:

- Conservation of Threatened and Endangered Species Habitat
- Maintain and Restore Sustainable Ecosystems
- Maintain and Restore Watershed Health
- Provide for Visually Pleasing Landscape
- Provide for Recreation Use in Harmony with Natural Communities
- Provide for Human and Community Development

With this more complete view of Forest Plan goals in mind we request that HNF eliminate logging and prescription burns from the Lake Monroe watershed and revise the purpose and need statement to consider and analyze the following alternatives:

Alternative 1. Vegetation management in Management Area 2.8 and 3.3 outside the Lake Monroe Watershed

This alternative would focus on actions to maintain and restore watershed health by identifying and evaluating areas of MA 2.8 and 3.3 outside of the Lake Monroe watershed where vegetation management may be used to provide a mix of age classes and forest structure.



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Alternative 2. Lake Monroe Watershed Health Protection and Enhancement

This alternative would focus on actions to maintain and restore watershed health by protecting and enhancing the health of Lake Monroe and its tributaries. Management actions may include:

- Road decommissioning
- Restoration of eroded or degraded sites on HNF land
- Acquisition of additional HNF acreage in the watershed, and restoration of degraded lands that may be acquired
- Collaboration with neighboring landowners (private and public) on land and water restoration projects including stream and wetland restoration projects
- Collaboration with IDNR, US FWS and US COE to restore and improve aquatic habitats in the Lake and its tributaries

Alternative 3. HNF Forest Recreation

This alternative would provide for recreation use in harmony with natural communities. Recognizing that Lake Monroe and the surrounding public lands (HNF, IDNR, COE) represent a major concentration of outdoor recreation lands and water, focus management actions on providing and enhancing sustainable outdoor recreation opportunities: trails, backcountry campsites, fishing and hunting access points, canoeing and kayaking access.

- Restore and improve existing recreation facilities and decommission sites or trails that cannot be adequately maintained because of poor design or location.
- Ensure that recreation facilities are safe for users.
- Limit vegetation management to that necessary to provide user safety and eliminate invasive species.

Detailed comments and objections follow below.



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Detailed Objections to Hoosier National Forest (HNF) Response to Scoping Comments and the Draft Environmental Assessment for the Proposed Houston South Project

NB: References in () refer to HNF response to comments (e.g. 79-1.7) or the draft EA (e.g. EA-64).

1. Numerous Responses Were Not Adequately Addressed

- *HNF erroneously concludes that the project is not within a Municipal watershed (60-2.9)*
HNF now acknowledges that the project is in the Lake Monroe watershed (*Herald Times* 8-11-19) and so must adjust analysis to consider impact on Lake Monroe and the City of Bloomington Municipal water supply, including eliminating conclusions that recreational and economic impacts on Lake Monroe are outside the scope of the Project (60-2.7, 79-1.7).
- *Draft EA did not adequately address concerns regarding global controversy and literature cited in comments with respect to glyphosate safety. (2-5,54-1.13,54-1.14).*
- *Draft EA did not consider new information available since the 2006 Forest Plan and EIS.*
 - 13 years since the 2006 Forest Management Plan was issued and new information that is available was not used, tying rigidly to the 2006 Forest Plan and EIS.
 - Harmful Algae Blooms in Lake Monroe (54-1.9).
 - New understanding of overall climate change impacts (54-1.26, IPCC 8-18 Report, IN Climate Change Assessment 2018), impact on forests (66-1.2, 80-1.9) and impact on algae (88-1.5).
 - Claims of no significant impact to municipal water supply tied to the 2006 Forest Plan EIS which relies on BMP's to fully mitigate, did not address comments related to past history of BMP implementation. (46-1.2, 54-1.10, 54-1.11, 88-1, 80-1.5, 60-2.3).
- *HNF did not alter project to address public concerns;*
 - No evidence provided that alternate locations were seriously considered by HNF, despite many requests to do so (14.22, 60-2.9 and EA p8).
 - Claims of no "unresolved conflicts" are incorrect (54-1.31).
 - No additional alternative offered to address concerns of citizens, local government and environmental organizations. The Project has remained essentially unchanged since November 2018 in spite of over 500 comments with over 90% expressing concerns and outright opposition, including organizations representing over 10,000 people.
 - Under Council of Environmental Quality guidelines, when there are unresolved conflicts as demonstrated throughout, a FONSI cannot be issued and alternatives must be explored.



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B. The Draft EA Analysis is Insufficient or Incomplete

- *No data to support the conclusion that the Project will not have significant impact on Lake Monroe water quality. (60-2.5).*
 - Insufficient description of project location with respect to steep slopes and bottomlands. We have heard from Forest Supervisor Michael Chaveas that the project will change once it is approved. The project needs to be fully understood and mapped in advance of approval, with specified conditions for areas that would not be treated and areas that would be treated.
 - Reliance on a paired watershed study with agricultural effects on control (Moss 1995). Because the control site for this study was downgradient of an agricultural area, the results of this study are not a reliable indicator of BMPs. Moreover, in a study like this, the BMP implementation is expected to be at its highest achievable level, a condition that is not expected in HNF, given past records of BMP implementation and evaluation.
 - Misinterpretation of literature related to agricultural impacts (54-1.9, SPARROW). We have attached a map of the Midwest sites included in the SPARROW model (Figure 1). As you can see, all of the sites, except controls, are in agricultural settings. The author's conclusion that agriculture contributes to nutrient loading in the Midwest is indisputable, however HNF's interpretation that agriculture is responsible for most sediment and nutrient loading in the South Fork of Salt Creek is not supported by this research. Jones et al (1997) modeled Phosphorus loading in the Lake Monroe watershed based on land use and estimated 47.2% of P loading came from forested land while 48.5% came from agricultural land. While the P loading rate from agriculture is generally higher than forested land, agriculture comprises only 7.7% of the watershed and the steep slopes and highly erodible soils present in the forested areas of the watershed contribute a significant amount of Phosphorus to Lake Monroe.
- *Heavy reliance on outdated Hoosier National Forest revised Land and Resource Management Plan (2006 Forest Plan).*
 - Climate change assessments worsening, no negative short-term impact is acceptable. (66-1.2).
 - Does not consider net carbon release data on the need to maintain mature forests. (66-1).



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- *Does not address cumulative effects for other activities in the Lake Monroe watershed, as required under NEPA (54-1.4, EA-32, 60-2.9).*
 - Spatial boundary for cumulative effects chosen for future monitoring does not reflect the well-established importance of non-point source pollution in the Lake Monroe watershed (EA-64). Lake Monroe is listed as impaired by the EPA. Citing agriculture as the major sediment runoff problem does not relieve the USFS from its obligations to consider other activities in the Lake Monroe watershed (88-1.2). The cumulative effects analysis should consider public and private harvest, burning and herbicide applications in the Lake Monroe watershed whether or not they are controlled by HNF.
 - Consider logging and oak restoration, loss of current oak/hickory, loss of maturing forest and other activities in the Lake Monroe watershed by IDNR, The Nature Conservancy (TNC), TNC private landowner program and other private timber harvests.
 - Consider effects of development in the project area and the creation of edge habitat in developed areas.
 - Need schedule of project proposed logging, burning and herbicide activities to compare to other planned or anticipated activities in the watershed EA, p.19).
 - Impact on Non-Native Invasive Plant Species (NNIPS) by private landowners (EA, p.19).
 - Sustained prescribed burning impact on air quality (EA, p.16) and carbon emissions (EA, p.20).
- *Dismissing numerous short-term impacts as Not Significant.*
 - Impact on migratory neo-tropical and ground nesting birds (80-1.15 & 1.16)
 - Human health and air quality from prescribed burning (EA, p.16,17)
 - Horse riders and economic impact and hikers including the Knobstone Trail (60-2.6, 61-1, EA p26)
 - Road construction on soil erosion and movement (EA, p.20)
 - Removal of roosts for the Endangered Indiana and other bats (80-1.1). Loss of vegetation and subsequent erosion and nutrient release from prescribed burning.
- *Herbicide Use Defers to Dated Evaluations (SERA 2011).*
 - Does not consider recent data on glyphosate impact on non-targets like bees, amphibians and micro biota (54-1.12,1.13,1.14,1.15).
 - Does not address sediment bound glyphosate fate in the creek and Lake bottoms (<https://doi.org/10.3389/fenvs.2019.00022>).
 - Does not consider recent court decisions and testimony related to human health concerns about glyphosate (21-1.3).
 - Has provided no quantitative analysis of herbicide movement or fate (21-1.2).
 - Does not address the unintended consequences and risk associated with future discoveries regarding pesticide safety and environmental impact, including the effects on Lake Monroe's water quality and water treatment costs that City of Bloomington would need to cover for the utility that provides drinking water to 120,000 people.



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- *Draft EA does not consider public concerns and controversy related to purpose and need.*
 - Controversy regarding natural history of Oak/hickory in project area (70-1.8).
 - Draws conclusions from national scale theoretical fire models which conflict with local fire scar evidence (Guyette et al, 2009, 2012).
 - The national model of fire intervals mapped by Guyette and used by HNF fire specialists to determine a fire interval was displayed at the HNF open house on August 2019. This model uses three variables (temperature, pressure and partial pressure of oxygen) to model fire frequency. According to the author, “(the) Model’s primary purpose is related to understanding the physical chemistry related to climate and fire.” The author acknowledges that other important factors that determine fire frequency were not considered in the model. There is no evidence in the project area that historical fire was frequent or widespread.
 - We consider the responses to comments (66-1.2 & 80-1.9, 54-1.26) to be incomplete and unscientific.
 - Further inquiries to HNF reveal the reason that there are no trees in the 0-9 age class is that all of the trees in that age group are growing under taller trees, and a "stand" is defined by the tallest trees in an area. So that listing is not telling us that there are no trees in that age group growing in the forest, but that there haven't been any clearcuts in the last several years to make that age group into a stand. So, while there may be young oaks in the 0-9 age class, they have been excluded by the methodology chosen for the analysis and consequently have biased results and interpretations drawn from them.
 - Spread of Non-native invasive species will damage the health of the forest. Forest Service confirms that this project will increase the spread of non-native invasive species and will require additional use of herbicides to mitigate (EA, p.17-18).

C. Mitigation is Insufficient

- *History of Best Management Practices (BMP) Shows Inadequate Performance (HNF Biennial Monitoring and Evaluation Forest Report for FY 2016 and 2017, HNF Monitoring and Evaluation FY 2011-2014, HNF Monitoring Postponement Dec 6, 2017).*

While we agree that employees of the Hoosier National Forest are professionals and are dedicated to the conservation of our natural resources, this response does not adequately address our concern about the level of staffing needed to enforce BMPs. We ask again that HNF evaluate the availability of professional foresters and scientists on the HNF staff to properly oversee implementation and include in their analysis site maps with detailed



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locations of roads and skid trails that are in accordance with State of Indiana BMPs and HNF standards and guidelines (54-1.11).

- *Did not address commenter supplied IDNR reports citing local problems with BMP reliance (60-2.5),*
- *Did not address effects from predicted increases in rainfall events (88-1.5, IN Climate Change Assessment 2018).*
- *USFS Did not address requests for protecting trails for recreational uses (60-2.6 & 61-1).*
- *USFS did not provide recreational user survey (60-2.6).*



Figure 1. Sample sites from USGS SPARROW study and model.



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Appendix A: Management Area 2.8

From Draft Houston South EA:

“The majority 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 diversity of age class and forest structure.”

From 2006 Forest Plan:

Desired Condition of Management Area

“The area is general forest with **large areas of old forests** and scattered openings associated with a variety of forest plant communities. **A variety of tree species is present, but shade tolerant species may dominate some forest communities over time.** A natural variety of other tree species intermediate in shade tolerance is perpetuated, and in other forest communities they may dominate. This area provides a variety of forest types, reflecting different ecological sites and management activities. Openings in the canopy result in different canopy levels and animal communities associated with vertically diverse, shade-tolerant vegetation, as well as different successional stages of vegetation. There is a higher percentage of edge habitat in this management area than in most of the forest. Site-specific decisions result in many variations within this management area. These areas include scattered blocks of NFS land. There is ample evidence of human activities, most of which blends well with the natural environment. Visual quality and recreation opportunities are protected and enhanced. Interaction among visitors is frequent. **Habitat in these areas is best suited to wildlife that uses large hardwood trees and a mosaic of different-aged hardwood forests.** The desired condition of this area is to maintain 4 to 12 percent of the area in young forest habitat and up to an additional 3 percent as openings. The Forest manages the area primarily for plant and animal habitat diversity and timber harvest is an appropriate tool for use in this area. **Viewing scenery, hunting, fishing, dispersed camping, gathering forest products, horseback and mountain bike riding, and hiking are key recreation activities. Due to the diversity provided by the area, bird watching, berry picking, and mushroom gathering and other forest products are also common uses of this management area. Some of the areas are surrounded by private lands, but most are generally accessible by foot travel and State and county roads. Large trees with a continuous canopy characterize much of this area.** This area allows a wide variety of management techniques, each resulting in a slightly different visual character. In areas of fragmented ownership, the visual character is that of islands of large diameter trees. There is often a visual distinction between private and NFS lands.”



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From 2006 Forest Plan Record of Decision:

“Management Area (MA) 3.3 was created in response to the results of our species viability evaluation (SVE). We identified that there was a high risk that viable populations of early successional species could not be maintained unless some part of the Hoosier National Forest was managed with an emphasis on providing habitat for early-successional species.

Management Area 3.3 was created from lands that were previously MA 2.8 (General Forest Lands), and was designed to emphasize diversity for wildlife species requiring a mix of early and late successional vegetative types and age classes. It will better provide habitat requirements for a suite of wildlife species represented in the species viability evaluation by American woodcock, ruffed grouse, and yellow-breasted chat.”