[redacted]

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RE: Comment on the Sunny Oaks Environmental Assessment

Dear Ms. Reed,

On behalf of the [redacted], we respectfully submit these comments to the U.S. Forest Service concerning the agency's analysis in its Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) of the Sunny Oaks Project on the Ironton Ranger District of the Wayne National Forest.

The [redacted] the oldest environmental organization in the United States with a membership of 2.4 million nationally. The [redacted] maintains a membership of over 20,000 people who frequent public lands in Ohio, and specifically use the Wayne National Forest and have a vested interest in maintaining and improving its ecological integrity. Several of our members regularly participate in Wayne National Forest planning efforts and reside in nearby communities, which is why we have a specific interest in the Sunny Oaks Project.

Under Alternative 2, the Forest Service proposes a variety of timber harvest across 2,450 acres, potentially more after conducting a re-inventory of 100 acres. Other planned activities include timber stand improvements, with an unspecified amount of herbicide application, manual tree felling and prescribed fire throughout the 25,000 acre project area (between 2,000 acres and 4,000 acres occurring annually). Connected actions include approximately 60 acres of constructed log landings, 180 acres of skid roads, 10 miles of new road construction, 17 miles of road reconstruction, and 41 miles annually of new firelines (23 miles constructed with a dozer). It is important to note this project has a 20 year lifetime, which suggests the total amount of prescribed fire could reach a combined 80,000 acres with 820 miles of firelines, of which 460 miles would be dug with a dozer.

## I. Failure to demonstrate compliance with the Wayne National Forest Plan and the National Forest Management Act

Under the National Forest Management Act (NFMA), specific projects must be consistent with

the the Wayne National Forest 2006 Land and Resource Management Plan (hereafter Forest Plan). 16 U.S.C. § 1604(i).

The EA fails to demonstrate the Sunny Oaks project will maintain viable populations of management indicator species (MIS). While the wildlife analysis focused on threatened and endangered species, and Regional Sensitive Species, it failed to include sufficient analysis of the Forest Plan MIS. The EA did include some limited discussion of ruffed grouse, but omitted the Louisiana Waterthrush located in the River Corridor MA, or the Pine Warbler and the Yellow-breasted Chat in the FSM MA. The EA was unclear how project activities may affect other MIS or including those reliant on late successional habitat and old forest conditions such as such as the Pileated Woodpecker.

Next, the EA failed to provide sufficient evidence and analysis for how even-aged management such as clear cutting and shelterwood harvest in areas greater than Forest Plan guidelines (i.e. above 30 acres) is the optimal method to regenerate oak and hickory forest stands and establish early successional habitat conditions, what the EA refers to as "young, brushy forests." While the FSM MA in the project area does not meet the Forest Plan Desired Future Conditions (DFS) for oak and hickory forest types or early successional habitat, the EA fails to provide sufficient analysis or evidence demonstrating that even-aged harvest prescriptions ***outside*** of the Forest Plan direction are necessary. Specifically, the harvest prescriptions require departing from the following Forest Plan direction:

> **G-FSM-WLF-1:** Temporary openings in the forest canopy, resulting from even-aged timber harvest, should vary in size from 2 to 30 acres to provide habitat for a variety of early successional species, including those that do not use smaller openings. 21 harvests would be over 30 acres.
>
> **GFW-VEG-2:** Locate even-aged, final regeneration harvests in time and space so that temporary openings are at least 500 feet apart. Regenerated stands following even-aged timber regeneration harvest, such as clearcuts, two-aged cuts, and shelterwood harvests, will no longer be considered openings when trees in the new stand have reached a height of 20 feet.
>
> **GFW-SM-68:** Allow no more than 30 contiguous acres of a clear-cut or seed-tree regeneration area with a leave-tree basal area of less than 10 square feet per acre to be visible from the travel-way (open road or trail).
>
> **GFW-SM-69:** Avoid numerous even-aged regeneration areas in close proximity (no closer than 500 feet) during the same planning cycle.
>
> **GFW-SM-73:** No more than 15 contiguous acres of a clear-cut or seed-tree regeneration area should be visible from any given point on a travelway.

The rationale for departing from these directions is primarily urgency, which is repeated several times in Presentation 4 and the Mitigation/Design Criteria document. Land ownership patterns are also cited, but the EA does not explain how actions on private land justifies the need to depart from the Forest Plan, rather it simply states that planning teams have to consider private

land ownership.

The EA also states this project will have a 20 year lifetime, which is an exceptionally long project timeframe and most certainly will require re-evaluation under NEPA. Given the length of the project and implementation of the harvest activities, the claim of urgency falls short. How much longer would the project require if it adhered to all the Forest Plan standards and guidelines? The EA provides no discussion or comparison in this regard. Another justification for departing from the Forest Plan is that forested travel corridors will meet the intent of limiting the size of clearcuts:

> The implementation of the forested travel corridors in the larger timber harvests, which connect riparian filterstrips to mature, forest on the other side of the harvest, will meet the intent of the 40-acres threshold by taking potentially larger clearcut areas and breaking them up into smaller patches separated by forested strips.
> EA, Mitigation/Design Criteria, p. 4

The EA fails to support this rationale with any evidence that such travel corridors will ensure the protection of natural resources. Simply breaking up a clearcut with forested strips is still a clearcut in terms of its adverse environmental effects. The NFMA requires the Forest Service to promulgate regulations which will insure that even-aged management be used in national forests only when certain conditions are met.[1] For all methods of even-aged management, the agency must insure that "such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource. Clearcutting, the most common and controversial method of even-aged management, was a primary focus of Congress at the time NFMA was enacted. Specifically, NFMA provides that for clearcutting to be used, it must be "determined to be the optimum method ... "[2] In dismissing an alternative that adhered to the Forest Plan direction, the EA once again invoked the flawed "intent" rationale:

> ...what we found is that we were meeting the intent of why we would want to have a smaller harvest areas through the implementation of the riparian filter strips and forested travel corridors, which break up larger areas into smaller patches of habitat.
> Presentation 4 Transcript, p. 14

Not only does this fail to provide evidence or analysis demonstrating clearcuts are the optimal method to restore early successional habitat, it arbitrarily and capriciously dismisses a viable, reasonable alternative. The Sunny Oaks planning team also dismissed analyzing an alternative that only utilized thinning or selection harvest methods:

> Another member of the public suggested that we only thin or select harvest stands. That type of

[1] 16 U.S.C. § 1604(g)(3)(F)(i)-(v). The statute states that clearcutting, seed-tree cutting and shelterwood cuts are examples of even-aged management, but suggests that the test for whether a particular harvest technique is even-aged management is whether the goal of the harvest method is to regenerate an even-aged stand of trees. See 16 U.S.C. § 1604(g)(3)(F).
[2] 16 U.S.C. § 1604(g)(3)(F)(i).

> treatment will not lead to young brushy forest and it also will not lead to regenerating oak forest so it was eliminated from detailed study.
> Presentation 4 Transcript, p. 14-15

Even if timber harvest methods other than clear cutting do not produce the Forest Plan's desired future conditions, (a claim in which we do not agree), the EA lacks sufficient discussion, evidence or analysis demonstrating why alternate harvest methods were not optimal. This is especially problematic since even-aged management (i.e shelterwood harvest) is unsupported and inappropriate where oak seedlings are scarce and underdeveloped.[3] Therefore, not only are departures from the Forest Plan guidelines a violation of the NFMA when the EA fails to demonstrate clearcutting is the optimal harvest method, but the WNF also failed to consider a reasonable range of alternatives in violation of NEPA.

Another deficiency in the EA is the lack of a Management Area map, which is especially concerning since the project proposes activities in three different MAs. In fact, the EA focuses solely on the Forest and Shrubland Mosaic (FSM) MA where timber harvest would take place, but it fails to discuss the River Corridor MA and Handley Branch SMA where each alternative proposes an unspecified amount of prescribed burning. The WNF planning team fails to provides maps showing the burn areas or where firelines will be constructed with dozers or by other means. In fact, the EA offers no rationale why prescribed fire is necessary in these MAs, other than to provide a vague need for more young, brushy forests. While the video provided a table showing how much early successional habitat was under-represented in the FSM MA, no such table was shown for the other two MAs.

Prescribed burning in the River Corridor MA is questionable given the Forest Plan direction is to emphasize, "...retaining, restoring, and enhancing the inherent ecological processes and functions associated with riverine systems." Forest Plan, p. 3-35. Additionally, the desired future conditions for even age management in the River Corridor MA is 12-20%, with 8% early successional hardwood habitat, 32% late-successional forest (60-120 years), and 20% older forest habitat (>120 years). The DSF is 75-80% for all-aged, multi-layered hardwood or hardwood/pine forest. Wayne Forest Plan, p. 3-35. The EA does not explain how prescribed burning in this MA will meet the purpose and need or achieve the desired future condition. The EA also fails to explain how each alternative will adhere to the following Forest Plan guideline:

> **G-RC-VEG-6**: Manage even-aged portions of the management area on a 120 year rotation for hardwoods and 60 years for pine. Hardwood stands may be regenerated starting at 60 years of age and pine stands at 30 years to meet wildlife, visual, or other objectives

We have the same concerns with prescribed burning in the Handley Branch SMA. The Forest

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[3] See Iverson, L. R., T. F. Hutchinson, M. P. Peters, and D. A. Yaussy, "Long-term response of oak-hickory regeneration to partial harvest and repeated fires: influence of light and moisture." Ecosphere 8(1) (2017). See also Steiner et al., "Oak Regeneration Guidelines for the Central Appalachians," Northern Journal of Applied Forestry 25(1), at 11 (2008).

Plan provides specific standards and guidelines that the EA failed to discuss:

> **S-SA-VEG-1:** Manage vegetation only to maintain the conditions for which the area was established, except for vegetation along roads and trails. Manage vegetation along trails and roads as necessary to provide a safe environment for Forest visitors.
>
> **G-SA-FH-1:** Consider prevention or control of pests, diseases, and/or non-native invasive species (NNIS) to:
>
> - Prevent spread of NNIS already present in the area
> - Eradicate non-native invasive species that are present but not yet well established (e.g., removal of ash trees to eradicate the emerald ash borer or herbicide treatment to eradicate a NNIS plant species that is not widely established within the management area)
> - Prevent the spread of outbreaks onto adjacent private land.
>
> **G-SA-FH-2:** Limit treatment of NNIS to the immediate area of the NNIS infestation consistent with the purpose for which the area was designated.
>
> **G-SA-TRANS-3:** Decommission unauthorized roads or system roads no longer needed for administration of National Forest system lands.
>
> (Forest Plan, p. 3-50,51)

The Forest Plan explains the special qualities found in the Handley-Branch MA and the reason for its designation:

> Significant for a quality Oak Barren community (white oak-black oak) and for having one of two Ohio populations of the State-endangered blue scorpionweed (the second population also occurs in Lawrence County). The population numbers in the thousands with several sub-populations within the area. Three other rare species include: the endangered Sampson's snakeroot, the State-threatened balsam squawweed, and the potentially threatened lesser ladies' tresses. (Forest Plan, p. 3-49,50)

The EA failed to discuss how prescribed burning and connected actions (i.e. firelines) maintains the conditions for which the area was designated. The project proposes no road decommissioning and the EA's analysis in the plant section simply states project implementation will include surveys for non-native invasive species (NNIS) and suggests treatment will occur per a separate decision for forest-wide herbicide use. Presentation 8 Transcript, p. 8. Absent is any discussion of the Handley Branch SMA, and the Mitigation/Design Criteria fails to include any direction for treating NNIS in this SMA.

## II. The Sunny Oaks Purpose and Need should include ecosystem services

Our scoping comments raised the issue of ecosystem service in reference to the the Forest Service Global Change Research Strategy 2009-2019 and the development of best management practices for forests to address climate change; "[t]hese actions are taken to sustain ecosystem health, adjust management for ecosystem services and increase carbon

sequestration under changing climate conditions," (USDA FS-917a, p. 4, 2009). The WNF response did not address any adjustments in management activities in regards ecosystem services in the context of climate change. **To be clear, the [redacted] believes improving, maintaining and restoring ecosystem services is part of the Forest Service's response to climate change, and we also believe the issue of ecosystem services is a stand-alone issue that must be considered at the project level.**

To explain, the concept of ecosystem service is not new to the Forest Service as it is one of the components of the 2012 NFS planning rule. (36 C.F.R. §219.1(c)). The Forest Service Land Management Planning Handbook defines ecosystem services "a product of functioning ecosystems that affect social, cultural, and economic conditions both within the plan area, in the area(s) of influence and the broader landscape." (FSH 1909.12 §13.12). That same section provides the following examples:

> *Ecosystem services.* Benefits people obtain from ecosystems, including:
>
> (1) *Provisioning services,* such as clean air and fresh water, energy, fuel, forage, fiber, and minerals;
>
> (2) *Regulating services,* such as long term storage of carbon; climate regulation; water filtration, purification, and storage; soil stabilization; flood control; and disease regulation;
>
> (3) *Supporting services,* such as pollination, seed dispersal, soil formation, and nutrient cycling; and
>
> (4) *Cultural services,* such as educational, aesthetic, spiritual and cultural heritage values, recreational experiences and tourism opportunities. (36 CFR 219.19).

**One purpose of including ecosystem services in the planning rule is to elevate their importance to the same level as other multiple uses, such as timber production. In fact ecosystem services can support local and regional economies much better than timber sale receipts and we urge the WNF to include the improvement, maintenance and restoration of ecosystem services in its purpose and need statements.**

While the above references are from the NFS Planning Rule and implementing directives, incorporating ecosystem services at the project level is the natural extension and outcome of these rules and directives. Though the WNF is in the midst of its forest plan revision, it is not too early to consider ecosystem services in the Sunny Oaks project by referencing the planning rule. In fact, a Forest Service general technical report provides an explanation for how to consider ecosystem services at the project level and provides rationale for doing so:

> Ecosystem services can support the proposal development phase of NEPA by making connections between ecological conditions, goods and services, and the purpose and need for action. In other words, ecosystem services can help "tell the story" of what's occurring on the landscape and why management is needed in meaningful terms. Several Forest Service units are engaging the public earlier in planning processes to strengthen participation in project design.

> Ecosystem services can be applied in these efforts to underscore connections between the land and peoples' values, and demonstrate how USFS management actions relate to those values. (USDA FS GTR PNW-GTR-943, 2017, p.21-22)

The economic value of our national forests goes beyond extractable resources, and the lords of yesterday (timber, mining, grazing) need to be put behind us.[4] Oak ecosystems in particular provide essential services, such as carbon regulation:

> The US Forest service estimates that oaks sequester more carbon than any other woody group in the continental US, with an estimated live carbon mass of 2.98 billion metric tons (data provided by Chris Woodall, US Department of Agriculture, Forest Service, Northern Research Station) based on forest inventories in rural forests, that can be assigned an annual value of nearly $13 billion, using an internationally agreed upon carbon annual value and discount rate (Kossoy et al. 2015). (Cavender-Bares J. 2016)

However, it is critical to keep the oaks that are currently sequestering these great amounts of carbon rather than removing current trees and stands in hope of future generation and sequestration. The climate crisis in its present form demands this. Regionally, forested watersheds are essential for providing clean drinking water. In fact, the Forest Service's own project titled *Forests to Faucets* provides a GIS model and map of the US displaying areas most important to surface drinking water and the attached map illustrates the importance of watersheds in the project area.[5]

The incorporating ecosystem services into project planning is essential, especially in terms of preserving and increasing biodiversity.

> Increased biodiversity can lead to increased rates of pollination, increased rates of pest control and reduced pest populations, increased productivity, and greater resilience in forest and agroforest ecosystems. In other words, not degrading the ecosystem will improve or maintain the flow of goods and services that the system is capable of producing.
> (Thompson, Ian D., et. al. 2011)

For these reason we urge the WNF to assess how the Sunny Oaks project alternatives may affect the variety of ecosystem services defined in the Forest Service directives.

## III. Failure to prepare an Environmental Assessment (EA) useful to facilitate planning, decision making, and public disclosure

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[4] See Lord of Yesterday discussion in "Crossing the Next Meridian" Critical Survey of Contemporary Fiction Ed. Frank Northen Magill. eNotes.com, Inc. 2005 eNotes.com 15 Jan, 2019 <http://www.enotes.com/topics/crossing-next-meridian#summary-crossing-next-meridian-1>

[5] The map is also included as an attachment and was generated from the FS project website at https://www.fs.fed.us/ecosystemservices/FS_Efforts/forests2faucets.shtml

In its news release inviting public comment on the Sunny Oaks EA, the Wayne National Forest (WNF) explained the following:

> "The Wayne National Forest invites the public to view the environmental assessment through 11 video presentations that cover the background and potential effects to various resources within the project area," said Slone. "We believe this new approach for delivering our analysis will produce increased public engagement and understanding of our work." [6]

Certainly the intent to increase public understanding and engagement in Forest Service work is laudable, and the video presentations would be a useful supplement to an actual document that members of the public could request or obtain on the project website. Unfortunately, the videos do not supplement such a written EA, but rather replace it altogether. This is problematic for several reasons.

First, in relying only on videos the agency assumes all interested parties have the ability to adequately view them on the WNF Sunny Oaks project webpage or through downloading the video (MP4) files. To be clear, in order to view these videos one must have high-speed internet access on a computer that can appropriately display them. In order to download the video file, one has to see the option on each of the video pages and have a program to watch them. This assumes a level of technical access and proficiency that not all people possess. Additionally, even if someone has access to high-speed internet, the service is not always reliable especially in rural areas of Ohio. In fact, the [redacted] has members and volunteers who frequently experience technical difficulties in using their high-speed internet when trying to stream videos, download content or use online conferencing programs.

Second, transcripts do not serve the same function as a written EA because they do not offer the reader an opportunity to view maps, charts, tables or graphs frequently used by the presenters. In some cases, those materials are not clear enough to actually see. and in other instances the presenter states these materials are available on the project webpage, when in fact they are not. The following illustrates this point:

- The transcript for Presentation 4 states, "Before I get into the specifics of the project I want to note that this presentation along with specific resource presentations, maps and other material are all available on a public webpage,which is found at the web address showing on your screen right now, then by clicking on the Sunny Oaks title.." Page 1. However, on page 3 the transcript refers to a map specific to insects and disease. Not only is this map not available of the project webpage, even with full screen mode the text of the map is illegible and the areas too small to make out clearly.
- The transcript for Presentation 4 refers to a table summarizing the proposed action. Page 7.
    - The table is unavailable on the project webpage and provides a crucial list of information not stated by the presenter anytime during the presentation. For example it shows there proposed action contains 180 acres of skid roads and 41

[6] See Release No.: FY19091403

miles of fireline annually, 23 miles constructed by a dozer. Alternative 2 contains these actions as well, but this is the only opportunity to see the specific numbers.

- The transcript for Presentation 5 states, "Following are just some maps to give you an idea of where everything is located....To the right as you can see the Symmes Creek subbasin is divided into three watersheds...And finally to the right you will see the localized catchments we drew for the purposes of analysis for this project." Page 3.
    - These watershed maps are not available on the project webpage.
- The transcript for Presentation 7 refers to bat survey data maps, "If you look at the information, you will see that we have caught quite a few northern long eared bats, that's in yellow. In purple or blue, the Indiana bat: we have not caught as many. So that is important for future slides I will be presenting."
    - These maps are not available of the webpage, and simply reading the transcript without being able to see them severely limits the ability to understand the analysis.

The only maps available on the project webpage are specific to the harvest units showing stream buffers, harvest type, reinventory or if a portion was dropped. Absent are any of the maps shown in the videos as well as the graphs and tables necessary to understand the analysis and provide meaningful public input.

We acknowledge that regulations allow the agency to prepare an EA, "in any format useful to facilitate planning, decision making, and public disclosure as long as the requirements of paragraph (b) of this section are met. The EA may incorporate by reference information that is reasonably available to the public." 36 C.F.R. § 220.7(a). We contend the video-transcript format does not provide useful public disclosure, especially for members of the public that lack technological resources to clearly view the EA videos.The associated transcripts reference information that is not reasonably available to members of the public because they are not on the WNF Sunny Oaks Project webpage. Due to these limitations, the video-transcript format restricts the WNF officials from involving the public in preparing and implementing their NEPA procedures as required by regulations. 40 C.F.R. § 1506.6(a). Furthermore, regulations bring into question the Forest Service's latitude in determining the EA's format. Specifically, the Council on Environmental Quality (CEQ) regulations defining an environmental assessment refers only to a "document:"

> **40 C.F.R. § 1508.9 Environmental assessment.**
> *Environmental assessment:*
>
> **(a)** Means a concise public document for which a Federal agency is responsible that serves to:
>
> **(1)** Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

In sum, the lack of an environmental assessment document, complete with all associated maps, tables, graphs, and charts violates the aforementioned regulations, and in doing so the WNF has actually reduced, not increased, the public's understanding of the agency's work and opportunity to meaningfully engage in the NEPA process.

## IV. Failure to prepare an environmental assessment that provides sufficient evidence and analysis of environmental impacts

CEQ's NEPA regulations directs that information used to inform NEPA analysis "must be of a high quality" and that "[a]ccurate scientific analysis . . . [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b). In order to ensure Forest Service officials meet this standard, further Forest Service regulations provide further direction for environmental assessments:

> **(3)** Environmental Impacts of the Proposed Action and Alternative(s). The EA:
>
> **(i)** Shall briefly provide sufficient evidence and analysis, including the environmental impacts of the proposed action and alternative(s), to determine whether to prepare either an EIS or a FONSI ( 40 CFR 1508.9);
>
> **(ii)** Shall disclose the environmental effects of any adaptive management adjustments;
>
> **(iii)** Shall describe the impacts of the proposed action and any alternatives in terms of context and intensity as described in the definition of "significantly" at 40 CFR 1508.27;
>
> **(iv)** May discuss the direct, indirect, and cumulative impact(s) of the proposed action and any alternatives together in a comparative description or describe the impacts of each alternative separately; and
>
> **(v)** May incorporate by reference data, inventories, other information and analyses.

36 C.F.R. § 220.7(b)(3)(i - v).

In these duties the WNF failed to conduct sufficient analysis for several resources, failed to adequately consider the effects of climate change, and fails to provide evidence supporting its heavy reliance on mitigation and design criteria to address potential adverse environmental effects.

### a. Failure to consider effects of climate change

A robust body of evidence and scientific study exists demonstrating the significant effects climate change is having on northeast forests and the ecosystem services they provide. As we noted, carbon storage and sequestration is one such service, and studies show allowing old-growth forests to recover provides the largest benefit in this regard (see McGarvey et al. 2015; Liebman et al. 2017; Stephenson et al. 2014; Burrascano et al. 2013; Lichstein et al. 2009). Soils provide a large portion of carbon storage services, and timber harvests result in a loss of carbon in the organic soil horizon (see James and Harrison 2018). Forest Service research also finds that, "[c]limate change affects the distribution and abundance of many wildlife species in the region through changes in habitat, food availability, thermal tolerances, species interactions such as competition, and susceptibility to parasites and disease," (Rustad, Lindsey et. al. 2012).

Our scoping comments urged the WNF appropriately analyze the Shady Oaks Project in the context of climate change citing several sections of the Forest Service Global Change Research

Strategy 2009-2019. In response to our comments, the WNF explains that oak and hickories are well suited to regional climate change scenarios:

> This statement was in reference to the Central Appalachians Forest Ecosystem Vulnerability Assessment and Synthesis (Butler et. al. 2015), a Forest Service Northern Research Station technical report produced through a partnership of the U.S. Forest Service, Michigan Tech, and the Northern Institute of Applied Climate Science. This assessment evaluates the vulnerability of forest ecosystems present on the Wayne National Forest, and when used in combination with the Forest Adaptations Resources workbook (Swanston et. al. 2016), assists land managers in assessing the vulnerability of ecosystems and determining strategies/responses to make climate-informed management decisions. The planning team completed this exercise ("climate change workbook") in 2015 for the Sunny Oaks project-area, and reviewed it in 2018. This is available in the project record along with a write-up of consideration of the greenhouse gas emissions from implementing the project.
> (Response to Comments, p. 8.)

This response if problematic in significant ways. First, it fails to provide evidence or demonstrate the analysis used to evaluate environmental impacts. It could be the planning team appropriately quantified greenhouse gas emissions, but the EA fails to provide the analysis. Simply referencing a workbook exercise in the project record that is not available on the WNF website violates NEPA because the public is unable to provide meaningful, informed comment on the project in regard to the climate change analysis. Next, it appears the WNF focuses on just oak and hickory response, and greenhouse gas emissions. Certainly these are important issues, but by no means a sufficient exploration of actual effects directly related to this project. In fact, direct effects come from increased storm events and elevated rainfall above historic conditions. The U.S. EPA provides the following observations:

> Changing the climate is likely to increase the frequency of floods in Ohio. Over the last half century, average annual precipitation in most of the Midwest has increased by 5 to 10 percent. But rainfall during the four wettest days of the year has increased about 35 percent, and the amount of water flowing in most streams during the worst flood of the year has increased by more than 20 percent. During the next century, spring rainfall and average precipitation are likely to increase, and severe rainstorms are likely to intensify. Each of these factors will tend to further increase the risk of flooding.
> (US EPA 430-F-16-037 2016)

Additionally, the NOAA National Centers for Environmental Information provided a detailed evaluation of Ohio's climate patterns with a summary (see Appendix) that demonstrates the state has been experiencing an increased number of extreme precipitation events since 1994. Increased storm events and the associated rainfall should be a primary consideration in evaluating the effectiveness of filter strips used to mitigate erosion and sedimentation, as well as the water yield analysis. Yet, the EA fails to consider annual precipitation in its watershed analysis.

**b. <u>Failure to analyze prescribed burning, inappropriate use of prescribed fire, exaccerbates climate change</u>**

Throughout our comments we note how the EA failed to properly analyze or discuss the use of prescribed burning, but we also question its widespread and unspecified use in the project area. As noted in the proposed action that is carried over to Alternative 2, the use of prescribed fire could potentially cover 80,000 acres over a 20 year period. Obviously this is larger than the size of the project area, which means some acres would experience multiple controlled burns and firelines would persist for years. Overall, the EA fails to analyze such extensive use of prescribed fire in each of its resource sections, and such a systemic omission certainly requires additional analysis in the preparation of an environmental impact statement (EIS). As we previously noted, not only does the EA fail to provide sufficient analysis for prescribed burning, it also fails to explain how its use is consistent with the Forest Plan, and meets the project's purpose and need. Such an action will act to exacerbate climate change through carbon storage losses and releases, during the time period in which the FS proposes that Oak stands will be regenerated ( Boerner, et al. 2008 ).

The use of prescribed fire in the deciduous eastern forest has been researched in the peer review literature. Glenn Matlack, PhD, Ohio University researched literature regarding the use of prescribed fire in the eastern forest and concluded:

> The majority of forests of the eastern United States were little affected by burning before European settlement. Use of prescribed burning assumes that most forest species are tolerant of fire and that burning will have only a minimal effect on diversity. However, common adaptations such as serotiny, epicormic sprouting, resprouting from rhizomes, and smoke-cued germination are unknown across most of the deciduous region. Experimental studies of burning show vegetation responses similar to other forms of disturbance that remove stems and litter and do not necessarily imply adaptation to fire. The general lack of adaptation could potentially cause a reduction in diversity if burning were introduced. These observations suggest a need for a fine-grained examination of fire history with systematic sampling in which all subregions, landscape positions, and community types are represented. Responses to burning need to be examined in noncommercial and non-woody species in rigorous manipulative experiments. Until such information is available, it seems prudent to limit the use of prescribed burning east of the prairie–woodland transition.
> (Matlack, Glenn. 2013. Glasgow, L.S. and G.R. Matlack 2007)

Wildland fire is not a common natural occurrence in the eastern forests and prescribed burns, particularly on the large scale proposed in this project, are outside the historic range of variation, especially in riparian areas such as those in the River Corridor MA and the Handley-Branch SMA.To quote from ODNR Division of Forestry's 1999-2009 Shawnee Wilderness Area Management Plan,

> Forest fires in this region of Ohio are not a naturally occurring phenomena [sic]. Virtually all wildfires in Ohio are man-caused, in contrast to the western United States where dry lightning is a significant cause of fire...[D]iscussion of the 'natural role of fire,' which is so important to western forest and wilderness fire plans, simply cannot be applied to a wilderness in an Appalachian hardwood forest...Fires may be a significant contributor to non-point source pollution in Ohio's hill country, as the fires remove the soil's protective cover. Large trees are at least scarred by these ground fires, and sometimes, killed.

Certainly there is a body of research showing Native Americans utilized fire for a variety of uses and likely shaped mixed-oak forests throughout the eastern United States, (Day 1953; Whitney 1994). Through a review of published articles, Forest Service researchers found that based on dendrochronology studies the mean pre-European settlement fire-interval was 5.8 years in the Appalachian Mountains, (Brose, Dey, Brose,Waldrop 2014, p.13). However, sedimentary evidence of fire suggests that modern fire intervals are within historical ranges, (Matlack, 2013). Certainly, Native Americans initiated fires, but there is an obvious fallacy of using historical anthropogenic burning as support for modern prescribed burns, simply because conditions today do not match those during the time before European settlement. Certainly fires started by Native Americans burned differently in the vast stretches of forest that once dominated the eastern United States. Put another way, would the fires started by Native Americans have burned the same way as those proposed in the Sunny Oaks Project, especially in riparian areas? We caution the WNF against using conflicting and unsettled pre-European fire history as justification for its intense prescribed burning activities.

Fire harms our native forest species, which are not adapted to fire because they have not evolved with frequent fire, (Matlack, 2013; Pilliod, et al. 2003). Fire encourages many invasive plant species, a growing threat to our native forests, (Glasgow & Matlack 2007b; Mandle et al. 2011).Other documented negative effects include (but are not limited to) increased air pollution and greenhouse gas emission and consequent threats to human health and well being, reduced carbon storage, increased soil pH, increased soil temperature and decreased soil moisture, loss of nutrients, increased sediment loads in streams, increased water temperature and pH, and reduced populations of non-target species. Again, the EA fails to properly consider these effects and the WNF should prepare an EIS to provide sufficient analysis.

c. **Failure to provide evidence supporting reliance on guidelines, best practices, mitigation and design criteria**

The WNF fails to analyze many potential adverse environmental effects associated with this project based on its assertion they will be mitigated through best management or standard timber practices, mitigations, design criteria or adherence to Forest Plan guidelines. In most instances the EA does not even describe what these are, and even if such assertions were valid, the EA must provide some evidence or analysis demonstrating their effectiveness. Unsupported broad and and conclusory statements do not satisfy requirements under NEPA. This is especially true when such mitigation may not have adequate funding for their implementation, would be completed at some unspecified date, and/or would require ongoing maintenance for which there is insufficient funds. Several sections of the EA erroneously assert standard timber practices, best management practices, design criteria and mitigation will address any concerns:

- "Standard timber harvest practices are specifically designed to address erosion and sedimentation issues. That is why we will need to make sure we do things properly and make sure we implement the best management practices and focus efforts there...The

erosion and sedimentation isn't much of a big issue with proper implementation of best management practices would further reduce the concerns in this particular area." Presentation 5 Transcript, p. 7.

- "For the analysis, of the erosion, rutting displacement and compaction chances, the standard timber harvest best management practices are designed specifically to address these issues. So we will be ensuring proper implementation of these best management practices and as well focusing attention towards trying to prevent damage from happening." Presentation 6 Transcript, p. 4.
- "We also know that there are young nestlings or slower moving wildlife species that may be unable to move. We assume that mitigation measures designed to protect wildlife will be implemented during the project.." Presentation 7 Transcript, p. 2.
- "We assume that applicable contract clauses are designed to protect our TES species are incorporated into the contract. We assume that all applicable standards and guidelines regarding bats, aquatics, and even age management will be put into place within treatment management." Presentation 7 Transcript, p. 2"
- "With everything, the mitigation measures, these standards and guidelines, the potential adverse effect that could take place is not thought to be at a level to result in jeopardy to the existence of the species or the destruction of critical habitat." Presentation 7 Transcript, p. 6
    - We note,the mitigation/design criteria provided on the Sunny Oaks project webpage did not contain any practices specific to Indiana bats which this sentences refers.
- If they [species] do occur there on Ironton Ranger District, there are best management practices put in place, in particular to the aquatic species that may be in the Symmes Creek watershed, that our project will be putting into implementation and they should not be affected from the project." Presentation 7 Transcript, p. 6
- "There is a group of species that do have a potential of having adverse effects happen to them. That is the amphibians...We know that we will be putting them at risk, however, there are some mitigation measures we can put into place to lessen those risks." Presentation 7 Transcript, p. 6.
    - Here it is important to note, the mitigation/design criteria provided on the Sunny Oaks project webpage did not contain any practices specific to amphibians.
- "The second assumption we make here is where possible, mitigation measures will be used to protect known rare plant occurrences within the project area." Presentation 8 Transcript, p. 1.
    - We note here, the mitigation/design criteria provided on the Sunny Oaks project webpage did not contain any practices specific to rare plants except for Coville's phacelia.

Due to the EA's over-reliance on these vague and unsupported statements, it fails to properly analyze potential adverse environmental effects from each alternative throughout the resources sections. For this reason, we urge the WNF to prepare an EIS to provide proper analysis and demonstrate compliance with all requisite laws and regulations, and adherence to Forest Service directives.

d. **Failure to sufficiently analyze watersheds**

The watersheds presentation begins by providing a brief explanation of the authorities governing and guiding agency actions in regards to projects and their potential effects on watershed resources. Among this guidance is direction from the Forest Service Manual Service Issuance 2520 that provides a policy to "[u]se an integrated approach to identify specific watersheds as a priority for protection and management and for improvement." FSM 2521.03. To help implement this policy the Forest Service developed its Watershed Condition Framework. This includes the Watershed Condition Classification (WCC) system that, "...offers a systematic, flexible means of classifying watersheds based on a core set of national watershed condition indicators," (USDA FS Technical Guide 978, p.1) The WCC system uses the the 6th-level hydrologic unit (typically 10,000 to 40,000 acres in size) and evaluates the 12 watershed condition indicators to arrives at a score of watershed functionality or integrity: Class 1 = Functioning Properly, Class 2 = Functioning at Risk, Class 3 = Impaired Function, (*Id)*. Table 1 below was adapted from the Watershed Condition Classification Technical Guide and illustrates these indicators. We include this table and reference to the Watershed Condition Framework (WCF) to provide a set of criteria in which the WNF should use to evaluate the direct, indirect and cumulative effects of the Sunny Oaks Project. Though the WCC system uses the 6th level hydrologic unit, the Forest Service refined its watershed mapping and assigned scores at the 12th level hydrologic unit. Had the WNF provided all the 12th HUC names and numbers for what it calls "localized catchments," we could align the project area to the WCC scores. Still, the project map on the WNF website and reference in the video to three subwatershed allows us to evaluate WCC rankings for those watersheds, though others are likely included in the project area.

Table 1.

Watershed Condition Indicators - (12 Indicator Model)

| **Aquatic Physical (weighted 30%)** | |
|---|---|
| ***Indicator*** | ***Attribute(s)*** |
| Water Quality | Impaired waters (303d listed), Water quality problems (not impaired) |
| Water Quantity | Flow characteristics |
| Aquatic Habitat | Habitat fragmentation, Large woody debris, Channel shape & function |
| **Aquatic Biological (weighted 30%)** | |
| Aquatic Biota | Life form presence, Native species, Exotic and/or invasive species |
| Riparian/Wetland Vegetation | Vegetation condition |
| **Terrestrial Physical (weighted 30%)** | |
| Roads and Trails | Open road density, Road maintenance, Proximity to water, Mass wasting |
| Soils | Productivity, Erosion, Contamination |
| **Terrestrial Biological (weighted 10%)** | |
| Fire Regime or Wildfire | Wildfire condition class OR Wildfire effects |
| Forest Cover | Loss of forest cover |
| Rangeland Vegetation | Vegetation condition |
| Terrestrial Invasive Species | Extent & rate of spread |
| Forest Health | Insect & disease, Ozone |

Looking at the USDA Forest Service Watershed Condition and Prioritization Interactive map, and the project area map it appears the project falls within some of the 12th level hydrologic units displayed in Table 2 with the corresponding class and indicator rankings. This table is meant to illustrate an additional analysis method for the Sunny Oaks project area and not a complete listing of all subwatersheds.

Table 2. Watershed Condition Class Rankings for Sunny Oaks Project Area

| HUC12_CODE | 050901011004 | 050901010801 | 050901010903 | 050901011003 |
|---|---|---|---|---|
| HUC12_NAME | Aaron Creek-Symmes Creek | Dirtyface Creek | Camp Creek-Symmes Creek | Pigeon Creek-Symmes Creek |
| USFS_COND | Functioning at Risk | Functioning at Risk | Functioning at Risk | Functioning at Risk |
| TOT_ACRES | 37333.5 | 8612.4 | 25756.3 | 11843.4 |

| | | | | |
|---|---|---|---|---|
| USFS_PERC | 20 | 63 | 41 | 13 |
| NONFS_PERC | 80 | 37 | 59 | 87 |
| AQ_BIOTA | Fair | Fair | Fair | Fair |
| RIPARIAN | Fair | Fair | Good | Fair |
| WATER_QUAL | Good | Good | Poor | Good |
| WATER_QUAN | Good | Good | Fair | Good |
| AQ_HABITAT | Fair | Fair | Poor | Fair |
| ROAD_TRAIL | Poor | Poor | Poor | Poor |
| SOIL_COND | Poor | Poor | Poor | Poor |
| FIRE_COND | Good | Poor | Fair | Good |
| FOREST_COV | Good | Good | Good | Good |
| FOR_HEALTH | Good | Good | Good | Good |
| TER_INV_SP | Poor | Poor | Poor | Poor |

Each watershed is functioning at risk and it is clear that soils, roads, trails and invasive species are a large reason why. The Camp Creek-Symes Creek watershed has poor water quality and aquatic habitat conditions, while the others have only fair aquatic habitat conditions. All have poor road, trail and invasive species conditions. The Sunny Oaks EA should have used the WCF and rankings to provide a description of each watershed's current condition and how each alternative would affect the rankings. Had the EA included a No Action Alternative, the WNF could have better illustrated both the positive and negative effects from the proposed action and Alternative 2. Ultimately, this project should seek to implement actions that will improve these rankings.

Rather than utilizing the WCF, the EA relies, in part, on the Ohio EPA's 2018 Integrated Report which does not account for all the WCC indicators and only provides a narrow look at watershed conditions. For example, the EA explains:

> They look at four different assessments. They talk about aquatic life use, recreational use, public drinking water supply, and fish tissue assessment. What each of these does is that they rate and look at the water quality for aquatic life it assesses whether or not the water quality is good enough for sustained aquatic life. Fish, amphibians, other aquatic wildlife that use the waterways. (Presentation 5 Transcript, p. 4).

The Ohio EPA is responsible for assessing waters of the state to determine compliance with the Clean Water Act, and if water quality meets applicable standards, criteria and designated uses.

This certainly is useful information for describing the current condition of water quality in the Sunny Oaks project area. However it is not sufficient to rely on just the Integrated Report to determine aquatic and riparian habitat conditions. Many other factors affect both in-stream and streamside habitats, which is why we urge the WNF to utilize the WCC indicators to evaluate the Sunny Oaks project. One failure of relying on the Integrated Report relates to the EA's lack of analysis regarding potential significant effects on aquatic habitat, and especially on fish species. While the wildlife section discussed some species of salamanders, the EA relies wholly on the Integrated Report to address the issue of fish and other aquatic species. In this regard the EA lacks sufficient analysis because the discussion focuses only on the Black Fork watershed and its impairment status for aquatic life. This suggests the WNF believes because the current condition for the remaining watersheds are full or partial attainment, then the EA does not need to analyze them. The EA does not list specific fish species present in the project area, their habitat conditions, population trends, or how each alternative may affect aquatic habitats. The same is true for riparian areas that provide habitat for frogs, toad and other aquatic species. The EA does state that, "[i]n most of the subwashesheds within the Symmes Creek subbasin, it is mostly in full or partial attainement for aquatic life use except for Black Fork. Where there is impairment in that fish do not thrive and other aquatic life do not thrive as well." Presentation 5 Transcript, p. 5. This general statement helps describe the current condition by the Ohio EPA, however it does not provide sufficient evidence or analysis of aquatic habitat required in an EA. Does the WNF believe that Ohio EPA Integrated Report findings alleviate the agency from providing required analysis of its project alternatives? If so, the WNF is in error. If anything, the fact that water quality is in attainment for a majority of streams in the Symmes Creek basin necessitates the WNF to demonstrate how each alternative will prevent degradation of waters of the state.

*Erosion and water quality*

Looking at other analysis parameters the WNF did employ, they are informative but the EA did not provide the level of detail necessary for sufficient analysis. For example, in using the erosion hazard ratings the EA provides the following explanation:

> For our methodology and assumptions, we are looking at where these proposed harvests are located , near water bodies where they are 100, 75 or 50 feet from proposed activity...We will be looking at how far sedimentation can possibly be transported. They are only physically detectable downstream to another confluence with a stream or tributary of the same size or larger. Beyond that there is too much variability to be able to accurately track or determined if sedimentation is as a result of management activities upstream.
> (Presentation 5 transcript, p. 3-4)

The WNF seems to assert it cannot predict the potential for erosion, that sedimentation is only detectable at stream confluences and there are no methods to accurately determine how management actions in upstream watersheds may increase sedimentation delivery rates in waterways adjacent to harvest areas or downstream absent physical detection. As such the EA provides no analysis of the potential erosion and sediment yields in the alternatives. Yet, the Forest Service has tools and resources to provide sufficient analysis, if not at 100 percent

accuracy, then at least at levels that can inform management actions. Specifically, the Forest Service can predict erosion rates and sediment delivery through the Water Erosion Prediction Project (WEPP) model using input values for various forest conditions.[7] One key factor affecting watershed are road densities and the proximity of roads to waterways. Roads cause serious watershed degradation as indicated in the Watershed Condition Framework score. The EA failed to provide evidence, analyze or sufficiently discuss how the current road system affects watershed conditions or how adding and reconstructing 27 miles of road under the action alternatives will change these conditions. The Forest Service provides direction and resources to analyze this issue at the project scale. "The San Dimas Technology and Development Center (SDTDC) of the Forest Service, U.S. Department of Agriculture, developed the soil and water road-condition index (SWRCI) to provide a road condition assessment tool for watershed- and project-scale analysis," (USDA FS Field Guide. 0877 1806—SDTDC. p.1). The agency also provides the Geomorphic Road Analysis and Inventory Package (GRAIP) as a process and a set of tools for analyzing the impacts of roads on forested watersheds. GRAIP combines a road inventory with geographic information systems (GIS) analysis to predict sediment production and delivery, mass wasting risk from gullies and landslides, and fish passage at stream crossings, (*Id*). It is clear the WNF has the tools to analyze the extent sedimentation may result from management activities, and statements that it cannot do so with reasonable accuracy are arbitrary and capricious and a violation of NEPA.

*Prescribed Burns*

The EA also appears to limit most of its analysis to just the harvest areas, and arbitrarily limits the temporal extent for erosion and sedimentation related to prescribed burns to just one year even though the EA project timeframe is 20 years:

> As far as erosion and sedimentation, we are looking at the same localized catchments for the spatial extent. For the temporal extent for different things, we've split it out. For a prescribed burn it is one growing season because once the vegetation starts growing back the effects from a prescribed burn normally is no longer visible or noticeable.
> (Presentation 5 transcript, p. 3)

The EA states the risk of sedimentation and erosion from prescribed fires is low based on past monitoring of harvest-related best management practices. However, the EA provides no explanation of those monitoring activities and how they are applicable in the prescribed burn areas, nor does it provide the monitoring data collected supporting this conclusion, or that conditions observed in the areas monitored are applicable in all other prescribed fires locations. In fact, the EA states that the risk of erosion and sedimentation from prescribed fire is low throughout the entire forest:

> [M]onitoring of these best management practices in the past have showed us in cases where we are only doing prescribed fires, they have very low risk of contributing to erosion and sedimentation on the -- Wayne national Forest. That is for prescribed fires there's very low risk.

[7] See USDA Forest Service website at https://www.fs.fed.us/rm/boise/AWAE/projects/water_erosion_prediction_project.shtml

Presentation 5 Transcript, p. 7.

Certainly, such a statement requires some supporting evidence and analysis. However, the EA fails to quantify erosion and sedimentation risks related to prescribed burning within the one year timeframe, and it fails to provide any evidence or documentation supporting the EA's assertion that once vegetation begins growing back that erosion and sedimentation will no longer pose a significant risk. Even if this were true (an assumption we completely reject), the EA does not explain to what extent regrowth would need to occur to prevent erosion and sedimentation. The project website does provide maps showing the local catchments, harvest units, harvest treatments and proposed filter strips, but it does not show where prescribed burns will take place, or list streams and tributaries potentially affected. It also fails to locate, describe or measure potential erosion and sedimentation related to the extensive firelines related to the prescribed burns, even though the EA estimates these could reach 41 miles annually of new firelines (23 miles constructed with a dozer).

*Road Impacts*

The EA fails to consider potential significant effects of sedimentation and erosion related to the construction of 180 acres of skid roads, 10 miles of new road construction, and 17 miles of road reconstruction; we question why skid road were measured in acres rather than miles. Given the WCC indicators show poor ratings for roads and trails, the potential for further watershed degradation from road related activities should have been analyzed. The EA and project webpage lacked any discussion of how these roads may affect watershed conditions, their proximity to streams, the number of stream crossings, or even provide maps showing their location. Road related activities are a significant cause of erosion and sedimentation, especially at stream crossing and where culverts no longer function properly, which certainly affects fish. We provide an appendix providing extensive evidence and discussion related to forest roads and routes supporting the need for analysis.

*Timber Harvest*

Finally, looking at erosion and sedimentation from harvest treatments, the EA fails to provide sufficient evidence or analysis of the alternatives. The video displays a table, not available on the project webpage or included in the transcript, showing, "...where the land that are close to the streams and other of waterbodies that could potentially contribute to erosion and sedimentation,..." Presentation 5 Transcript, p. 7. The EA explains the "acres contributing" shown in the table are those in proximity to nearby waterways (100ft, 75ft, 50ft), and equates low percents with low risk by citing research from 1994.

> Looking at some of that research done back in 1994, in most cases , you need at least a 50 foot filterstrip to protect water bodies. They also found that 100 foot filterstrips are effective in removing anywhere from 75% to 80% of sediment from storm water runoff.

The EA should have explained how that research applies to the project, and if conditions today are the same as they were during the initial research. For example, were those filter strips

effective on soils with high and severe erosion hazard ratings? If so, are they effective for nine years, which is the temporal scale for the EA analysis? The WNF only provides general and conclusory statements without providing the requisite evidence and analysis. It is also interesting to note that 1994 is when Ohio began seeing increased rainfall events according to the NOAA bringing into question the validity of using this research to validate filterstrip widths.

*Water Yield*

In regards to the water yield analysis, the EA again fails to provide the necessary evidence and analysis to determine if the alternatives will have a significant environmental effect. The video presenter provided the following observation regarding the localized catchments:

> Looking at some of these areas I went out and did some field work and looked around, the streams and riparian areas of these locations have been subject to both historic and recent disturbances and alterations, and many localized catchments are not functioning properly from a natural hydrologic standpoint. The current conditions may not be able to absorb the increased water yield if indeed there is increase in water yield. Therefore an increased risk for higher flood frequency from that..
> Presentation 5 Transcript, p. 6

Previously in the presentation, the EA explained the temporal range for analyzing water yield was nine years:

> "The long term is nine years, related back to the water yield temporal extent of nine years. Because with increase water yield there is a chance for increased bank erosion. That is where the long-term nine years comes into play."
> Presentation 5 Transcript, p. 3

This suggests that not only would the analysis consider increased water yield over a nine year period, but that it would also include some evaluation of the potential for bank erosion, especially since the EA explained there are no best management practices to address water yields:

> Specifically there is no known best management practices that helps to address water yields. Design criteria and mitigation measures could be used to help address these issues. Such as spread harvests over time in nine year intervals. The nine years being the time it takes for water yields to return to the baseline levels. We could also possibly conduct stream restoration and enhancement activities to improve flood attenuation. Or reduce the size of treatment areas. What is flood attenuation? During flood events, riparian buffers and wetlands along streams can slow runoff and absorb excess water. What this does is reduce peak flows and can help lessen flooding downstream.
> Presentation 5 Transcript, p. 6

In comparing the alternatives, the video provides a table showing minimal water yield increases based on the percent of the local catchment area harvested. However, the table only shows this for the first year instead of the full nine years that is supposed to be the length of analysis methods. It may be the small water yield increases in the first year means there will be few

increases in subsequent years, but this was not fully explored in the EA. Such an assumption lacks any evaluation of variations due to climate change effects on rainfall, the effect on water yield estimates, or if such increased rainfall requires lowering the 25% harvest removal threshold used in the analysis.

While the EA proposed methods to help address water yields, Alternative 2 lacks any stream restoration or enhancement activities. Given the Watershed Condition Class rankings, it seems this project is missing an opportunity to improve watershed function.

Finally, the EA lacks any evidence or analysis of how prescribed fire will affect water yields, which is especially concerning in regards for the potential of increased bank erosion in areas adjacent to waterways.

**e. Failure to sufficiently analyze soils**

We discussed many of our concerns related to soils in the watershed sections, and specifically the lack of proper analysis related to erosion and sedimentation. The soils section includes some additional failures and discrepancies. Foremost, it lacks any discussion regarding soil productivity, and potential effects each alternative may have on it. This section must demonstrate how each alternative will adhere to the Forest Plan guideline:

> GFW-WSH-10: Modify resource management practices according to soil characteristics and slope to protect soil productivity and minimize erosion and sedimentation. Refer to soil map unit descriptions and appropriate interpretive tables in the Wayne National Forest Soils Inventory (based on the USDA County Soil Surveys).
> (Forest Plan, p. 2-7)

We also note the EA explains that the temporal scale utilized in for soils in this section is 20 years, while the scale used in watersheds was nine years. The difference was not explained, and even had the watersheds sections properly analyzed soils, the EA fails to address potential adverse environmental effects on soils past the nine year scale even though, "impacts such as compaction, rutting and displacement can take upwards of 20 years to recover." Presentation 6 Transcript, p. 2. Rather, the soil section dismisses those impacts and limits it effects analysis to "detrimental disturbance," which it defines as those persisting past the 20 year time frame. This arbitrarily and capriciously discounts harmful effects soils may experience for up to 20 years, and fails to provide an adequate comparison of alternatives since the EA focused only on detrimental disturbances.

The EA also explains in reference to erosion, rutting, displacement and compaction, that "[t]his is the type of disturbance that can generally be found on old road beds and really heavily trafficked skid roads. We have best management practices and protocols in place to try to prevent this kind of disturbance occurring anywhere else besides roads and skid roads." Presentation 6 Transcript, p. 2. As we noted, the WNF cannot simply rely on best management practices as a rationale for excluding necessary analysis required under NEPA. Moreover, even with the admission that BMPs do not address roads and skid roads, the analysis falls short

because it does not address soil disturbances and associated effects from road construction, road reconstruction, skid roads, harvest landings or firelines. The EA does not provide evidence or discussion of how these factors fit within the comparison of alternatives. This is especially concerning since the EA notes, "[t]he soil rutting hazard indicates the likelihood of the surface ruts to form through operation of forest harvesting equipment." Presentation 6 Transcript, p. 3. This suggests there will likely be significant erosion and soil loss in harvest areas, especially since the EA explains there are no BMPs to address disturbances on skid roads. Though it does not provide specific examples, the EA explains there is Forest Plan guidance to "...minimize the number of skid trails we use while optimizing the number of passes on these trails." Presentation 6 Transcript, p. 4. Even so, the proposed action and Alternative 2 still propose approximately 180 acres of skid roads. It is unclear how many miles this may be or where these roads will be established. As such, there is no analysis regarding the extent skid roads, or any others, will have on soil resources.

In addition, we noted previously the EA fails to address how increased rainfall and storm events will affect soil disturbances in the context of climate change. The WNF should also explore the role of carbon sequestration in soil horizons, along with the effects harvests and prescribed burning will have on the ability of soils to store carbon, given their importance in the context of climate change, as we noted above, (James, J., Harrison, R 2016).

Finally, recent research demonstrates the increased role and importance of mycorrhizal networks in forest soils, especially in providing subsurface networks that allow trees to share nutrients, carbon, water, electrical signals, and biochemical information, (Gorzelak, Monika A. et al 2015). The WNF should consider this important issue by preparing an EIS that fully explores how each alternative would affect these mycorrhizal networks.

### f. Failure to sufficiently analyze wildlife

**Wildlife on the WNF has the potential to be significantly affected by the proposed action and Alternative 2.**

The EA discloses that each alternative may affect, and will likely adversely affect threatened and endangered species, specifically the northern long eared and Indiana bats. Presentation 7, p. 5. Yet, the EA continues to explain that, "the potential adverse effect that could take place is not thought to be at a level to result in jeopardy to the existence of the species or the destruction of critical habitat," because of the project will be "...following all standards and guidelines that the Fish and Wildlife Service have put in place during our biological opinion, so these are used to minimize those adverse effects." Presentation 7, p. 6. However, the WNF did not provide the biological opinion for public review thereby precluding our ability to provide meaningful comments, and demonstrate that USFWS standards and guidelines will ensure compliance with the Endangered Species Act. The EA correctly notes, that the WNF must engage in consultation under section 7(a)(2) of the ESA to insure that the Sunny Oaks Project is not likely to jeopardize the continued existence of the Indiana and NLE bats and will not destroy or adversely modify critical habitat. It is not clear if the WNF completed the required consultation, and secured approval of its biological opinion, or if this is still pending.

The EA fails to address the ecological and population decline of the Indiana Bat (*myotis sodalis*) due to continued cumulative effects of land use impacts on habitat as well as white nose syndrome.
The most recent population analysis by USFWS (2017) indicates significant declines. Largest Net Loss of Indiana Bats since 2007 (2017 pop. within parentheses):
1. Indiana: -57,485 (180,583)
2. New York: -40,086 (12,693)
3. West Virginia: -13,669 (1,076)
4. Kentucky: -13,025 (58,141)
5. Tennessee: -6,333 (2,573)
6. Ohio: -4,739 (2,890)
7. Pennsylvania: -1,015 (23)

Clearly, the Indiana Bat is in critical peril in Ohio. Yet the analysis of the Sunny Oaks project fails to address this pending calamity and in fact, does not address current cumulative effects on the Wayne. This is a violation of NEPA and the cumulative impacts that are to be analyzed as required by Council on Environmental Quality (CEQ) regulations (USEPA, 2019)
What is clear, as we already stated, the WNF cannot rely on vague mitigation or best management practices without demonstrating their past effectiveness for the activities under the proposed action and Alternative 2.

Though it is not in the transcript or provided on the project website, the video displays a table of species "to be carried through the analysis" with several determination that the project's alternatives, "may impact individuals but is not likely to cause a trend to federal listing or loss of viability." Perhaps these determinations were based on biological assessments or evaluations of some sort. The video does not make it clear how the planning team made these determinations, and any supporting documentation was not available on the project website. Certainly a tabled displayed in a video does not constitute evidence or analysis required by NEPA. This is especially concerning since the table included an important Forest Plan MIS, the Cerulean Warbler that requires stands with large trees and sufficient tree canopy to thrive, (Newell, Felicity L. and Rodewald, Amanda D. 2011; Boves, Than J. et. al. 2013; Nemes, Claire E. and Islam, Kamal. 2017). While the EA included some discussion of other species displayed on the table, it lacked sufficient evidence or analysis supporting the determinations. If the WNF carried forward analysis to support the table's conclusions, but did not provide them in the EA, then the public does not have a meaningful opportunity to comment.

The EA goes on to explain that other species will not be part of the analysis because they are not present in the project area, not known to be present, or because best management practices will be put in place that so, "they should not be affected from the project." Presentation 7 Transcript, p. 6. As we noted previously, the WNF cannot rely on vague and unsupported claims that mitigation is going to address any potential effects from the project's alternatives. Species excluded from analysis because of this arbitrary and capricious reliance on best management practices include the western lake chubsucker, and three mussel species -

the little spectaclecase, round hickorynut and salamander. The Ohio Division of Natural Resources provides this description, "[l]ake chubsuckers, because of the destruction of much of the permanent wetlands this species relies on, are one of the rarest sucker species found in Ohio."[8] The ONDR considers this fish and each of the mussel species as species of the greatest conservation concern in its State Wildlife Action Plan.[9] At the very least, these species should have been carried forward for analysis.

As we noted in our watershed section, the EA failed to provide any analysis of fish species or other aquatic wildlife that may be affected by the project's alternatives, and we question what other species the planning team failed to carry through its analysis that may be in the planning area or has the potential to be present. It appears the criteria for analysis is that they must have been documented in past monitoring because the EA cites the presence of two state threatened species (the green and Mud salamanders) and a state species of concern - the four-toed salamander from past surveys. The implication is that survey results were the reason for including them in the EA. Certainly, other sources of information should also inform the decision to analyze species such as previous studies, wildlife modeling and state data. However, the EA fails to provide any other rationale for not including other species for its analysis.

Even when the EA does provide some discussion of specific species, such as the three salamanders, the transcript provides only vague references to each species distribution such as the maps shown in the video. This is a useful starting place for additional analysis of how each alternative may affect the three species, and the EA notes, the mud and three-toed salamanders may be within the prescribed burn units, "so those will be carried through the analysis." Presentation 7 Transcript, p. 6-7. Again, the EA fails to provide any of that analysis, or show how each species may be affected under the alternatives. In fact, the EA simply says that future surveys will be completed for the green salamander before conducting harvests in units that are adjacent to where the species is known to occur. Presentation 7 Transcript, p. 6. Simply referencing future surveys does not rise to the level of analysis necessary under NEPA. The EA should at the very least show how much salamander habitat could be affected by the prescribed burns, along with some measure of how they will affect populations in the analysis area. However, the EA is silent in this regard.

The WNF attempts to characterize this project as beneficial to species that depend on early successional habitat, such as the ruffed grouse. Should the alternatives achieve this goal, no doubt there would be some benefit, Unfortunately, the EA fails to adequately consider how each alternative will affect ruffed grouse (or other species that will supposedly benefit) over the 20 years during which this project is to occur?

Rather than provide some evidence and analysis demonstrating potential effects from each alternative to ruffed grouse, shrubland birds or other species that stand to benefit, the EA simply states, "[t]his project, while it may have short-term effects, in the long term it will be very

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[8] See http://wildlife.ohiodnr.gov/species-and-habitats/species-guide-index/fish/lake-chubsucker

[9] http://wildlife.ohiodnr.gov/Portals/wildlife/pdfs/proposed%20rule%20changes/OHIO%202015%20SWAP.pdf

beneficial for all the wildlife species out there that require early successional habitat." Presentation 7 Transcript, p. 7.

The EA fails to adequately consider those short term effects, or even clearly define the timeframe for "short-term" in the context of a 20 year project. What actions in each alternative will cause those short term effects, and how will the species respond in the interim? The EA suggests that prescribed fire has the potential to harm shrubland bird nests, "[w]e know that burning can enhance the brooding habitat, but we do need to be careful of when we are burning because they do nest on the ground." Presentation 7 Transcript, p. 7. What potential adverse effects will prescribed fire have on bird nests or populations in the burned area? The EA fails to provide any analysis or discussion beyond this statement.

The EA also fails to provide any analysis of game species such turkey and deer, other than to claim prescribed fire will increase hunting opportunities, "[i]t also helps enhance new vegetation which would attract more wildlife, such a deer and turkey to the area, resulting in better hunting opportunities for hunters." Presentation 10 Transcript, p. 8. The EA fails to provide any evidence to support this statement, or how each alternative may improve hunting opportunities. Will increased road densities and road utilization have any effect on game species, shrubland birds, or any of the other species mentioned in the EA?

The EA falls far short in its analysis of wildlife effects, it fails to provide sufficient comparison of alternatives, and does not provide biological assessments or opinions thereby precluding the opportunity to provide meaningful comments; all in violation of NEPA.

### g. Failure to sufficiently analyze plants

In reviewing the plant section, we expected further discussion of the project area, particularly current habitat conditions, in order to support the project's need. However, this section lacks sufficient evidence or analysis about the current distribution of forest types represented on the Ironton District or in the project area. Rather, the EA focused its discussion on the current condition and desired future condition of early successional even-aged hardwood and pine forests in the Forest and Shrubland Mosaic Management Area (FSM). While the EA did display a table in Presentation 4 (that is not available on the project webpage) showing the desired vs actual habitat composition for different age classes in the FSM MA, the EA failed to analyze how the alternatives would affect those different age classes. This lack of discussion is significant because the table showed even-aged hardwood forest older than 100 years also does not meet the desired future condition, where they currently represent 13.9% and need to reach between 15%-17%. Certainly, this age class is not as under represented as early successional habitats, but the EA should have provided an analysis of how each alternative would affect age class distribution, especially if they result in a decrease of the older habitat type. It should have also provided some discussion of the current habitat conditions in the River Corridor MA and Handley-Branch SMA to support the need for prescribed burning to reach desired future conditions. In regards to the SMA, the EA fails to discuss the three species for which, in part, the area was designated as an SMA: the endangered Sampson's snakeroot, the State-

threatened balsam squawweed, and the potentially threatened lesser ladies' tresses.(Forest Plan, p. 3-49,50).

The EA again provides determinations about federally threatened and endangered species, and regional forester sensitive species (RFSS) without providing the supporting biological assessment thereby precluding an opportunity to provide meaningful comments. Table 1 shown in the Plants video presentation shows the endangered running buffalo clover may be effected, but not likely adversely effected, but it is not clear if the USFWS has been consulted on this project, or if consultation is underway. In fact, the methods for analyzing plants make it unclear when the WNF may consult with the USFWS:

> The Methodology. All survey personnel will be trained to identify relevant plant species. Surveys are conducted during optimal detection times for the species. Areas will be surveyed multiple times if optimal suitable habitat is present. All disturbance corridors will be surveyed. All species occurrence data will be recorded and uploaded into forest service databases. Finally we'll consult with U.S. Fish and Wildlife service and other experts as needed.
> Presentation 8 Transcript, p. 1.

To be clear, the time for the WNF to consult with the USFWS is before the decision notice, not some time in the undefined future over the course of a 20 year project if a species happens to be found during plant surveys.

Next the EA explains three assumptions without providing evidence or analysis justifying their use in constraining plant analysis:

> Assumptions made for this project. The first one is species that require disturbance, open forest, or prescribed fire application will benefit. The second assumption we make here is where possible, mitigation measures will be used to protect known rare plant occurrences within the project area. The third assumption that we have made is that woody invasive plant infestations will be treated pre-and post- project implementation as needed.
> Presentation 8 Transcript, p. 1.

As we explained in our comments on the EA's wildlife section, the WNF cannot simply forego analyzing potential effects to species because the project may provide an unspecified benefit at some point in the future. The plant analysis uses a 15 year timeframe with a 100 meter buffer around individual units, (we assume harvest units since the WNF provided no prescribed fire maps). At what point during the 15 year period will plants benefit and what impacts will occur in the meantime that may affect local populations? While mitigations measure may protect rare plant occurrences, the EA fails to provide evidence they will be successful. In addition, the methods section establishing the 15 time frame for the analysis appears to rest on the time of harvests and growth rates of woody invasive species. Presentation 8 Transcript, p. 2. However, the project time frame is 20 years, and it is not clear how prescribed burn activities were included in developing the analysis methods. In regards to running buffalo clover, the EA explains, "[p]re-implementation surveys have been carried out for planned 2019 and 2020 timber sale units and also for 2019 prescribed fire units....To this date, we have not done 2021 and 2022 timber units." Presentation 8 Transcript, p. 3. This suggests that forest officials survey

prescribed burn and harvest areas before implementing project activities, what is not clear is if these surveys were completed for all harvest and prescribed burn areas under each Sunny Oaks project alternatives. The WNF appears to suggest such surveys occur before implementation, but after the responsible official issues a project decision. The NEPA requires plant analysis occur before issuing a final decision (including data collection) in order to determine potential effects from each alternative. Unfortunately, in comparing alternatives the EA fails to provide sufficient analysis, instead it simply states there are slight differences:

> There will be a slight increase in disturbance, slight decrease the total available light. There would be a slight decrease in the probable invasive plant competition because we are instituting just a little bit less disturbance across the project area.
> Presentation 8 Transcript, p. 4

The WNF should have made some effort to quantify these variables in each harvest and prescribed burn unit. Relying on such vague and unquantified description does not satisfy the analysis requirements under NEPA.

In regards to the RFSS that may be negatively affected, the EA does provide some useful information such as the fact that several species has the potential to be impacted by prescribed fire, "[i]n this grouping we have Deam's threeseed mercury, we have the large sedge, we have the Louisiana sedge, we have Dichelyma moss, and we have Coville's phacelia." Presentation 8 Transcript, p. 5. Unfortunately, the EA fails to provide any prescribed fire maps or measure the areas where these species might overlap with the burns. Rather, the EA describes generally where these species may occur, and then explains how to mitigate potential impacts:

> We want to minimize the intensity of the fire around these known populations. We may also protect these populations with a protection line around the population so the fire does not get established within the protection line and within the population. We want to directly avoid lighting those stream-side corridors and use techniques that are going to minimize fire intensity and will allow fire to back down to those areas were populations may occur.
> Presentation 8 Transcript, p. 5-6.

While these mitigation techniques may reduce the potential negative effects from each alternative, the EA provides no further discussion or evidence of they actually will. Even more troubling, except for the Coville's phacelia, the mitigation/design criteria document lacks any of the mitigation measures the EA describes. These same flaws repeat for RFSS that may be negatively affected by timber harvest: Campylostelium moss and littleflower alumroot. The EA fails to include sufficient analysis of the negative impacts these species may experience under the project's alternatives. The EA does acknowledge that three RFSS could be impacted by all planned activities (the butternut, the pinxter flower and the rock skullcap), Presentation 8 Transcript, p. 6. We assume such activities are a reference to connected actions, namely road construction, reconstruction, skid trails and firelines, however, the EA does not specify which of these actions threatens these species. The EA should provide better details about how each connected action could potentially affect RFSS, in particular new road construction, road reconstruction and building firelines. Clumping all the connected actions together and then relying on mitigation activities that are not actually included in the mitigation/design criteria

document fails to meet NEPA's requirements and could threaten the species viability in the planning area.

Finally, the EA fails to provide sufficient analysis or discussion regarding non-native invasive species (NNIS). As we mentioned in our comments above, the Forest Plan contains specific NNIS guidelines that the EA fails to adequately discuss. It also fails to demonstrate how the unspecified mitigation actions will meet those guidelines. This failure stems, in part, from the lack of analysis on the current extent of NNIS in project area or discussion of how each alternative would affect NNIS distribution. This section just gives examples of NNIS treatments, which fails to answer some basic questions. How does timber harvesting, prescribed burning and connected actions affect the spread of NNIS? Are all harvest and prescribed burn units equally susceptible, or are some located in areas that put them more at risk? What is the current level of infestation in the project area, if not the individual units. The EA lacks specific data that can support any claims that the project meets Forest Plan guidelines or contains enough analysis to determine whether or not the alternatives would have a significant effect.

## V. The Sunny Oaks Project fails to identify and move the forest closer to a minimum road system

Applicable statutory and regulatory requirements should shape a project's statement of purpose and need. When the agency takes an action "pursuant to a specific statute, the statutory objectives of the project serve as a guide by which to determine the reasonableness of objectives outlined in an EIS." *Westlands Water Dist. v. U.S. Dept. of Interior,* 376 F.3d 853, 866 (9th Cir. 2004). Under subpart A of its travel rule, the Forest Service has a substantive duty to address its over-sized road system. *See* 36 C.F.R. § 212.5. Identifying a resilient future road system is one of the most important endeavors the Forest Service can undertake to restore aquatic systems and wildlife habitat, facilitate adaptation to climate change, ensure reliable recreational access, and operate within budgetary constraints. This underlying substantive duty must inform the scope of, and be included in, the agency's NEPA analysis. Please see the attached literature review that explains the harmful effects from a poorly maintained and unsustainable road system. After more than 15 years since finalizing the subpart A rules, the Forest Service can no longer delay in addressing this duty.

1. Identify the minimum road system.

The WNF must identify a resilient future road system within the Sunny Oaks project area, especially in light of the fact that several watershed have poor rankings in the Watershed Condition Classification. The WNF must demonstrate how it is implementing its forest-wide travel analysis report that identifies the minimum road system, based on the factors defining a minimum road system as set forth in subpart A of the Forest Service's travel rules. 36 C.F.R. § 212.5(b)(1).[10]

[10] "The minimum road system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36 CFR part 219), to meet applicable statutory and regulatory requirements, to reflect long-term

The Sunny Oaks EA fails to even mention the minimum road system and is not consistent with its own regulations. Forest units must analyze each project's proposed action and alternatives in terms of whether, per 36 CFR 212.5(b)(1), the resulting road system is needed to:

- Meet resource and other management objectives adopted in the relevant land and resource management plan;
- Meet applicable statutory and regulatory requirements;
- Reflect long-term funding expectations;
- Ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance.

The road system that will result under any of the Sunny Oaks action alternatives is not justifiable under the minimum road system factors.

Identifying a resilient future road system that is economically and environmentally sustainable is one of the most important endeavors the Forest Service can undertake to restore aquatic systems and wildlife habitat, facilitate adaptation to climate change, ensure reliable recreational access, and operate within budgetary constraints. And it is a win-win-win approach: (1) it's a win for the Forest Service's budget, closing the gap between large maintenance needs and inadequate (and declining) funding through congressional appropriations; (2) it's a win for wildlife and natural resources because it reduces negative impacts from the forest road system; and (3) it's a win for the public because removing unneeded roads from the landscape allows the agency to focus its limited resources on the roads we all use, *improving* public access across the forest and helping ensure roads withstand strong storms.

Because the EA failed to identify a minimum road system or provide any analysis of the WNF's current road system and the presence of unauthorized routes, we urge the agency to take a closer look at its road system especially any road failures in the project area that have yet to be addressed, and the resulting effects to the watershed and wildlife that depends on connected habitat and high water quality.

The Forest Service's proposal to add forest roads to the official road system without considering its forest-wide travel analysis report or consider whether the roads are needed based on factors from its own regulations runs contrary to Forest Service policy. *See, e.g.*, 66 Fed. Reg. 3206 (Jan. 12, 2001) ("The intended effect of this final rule is to help ensure that additions to the National Forest System network of roads are those deemed essential for resource management and use; that, construction, reconstruction, and maintenance of roads minimize adverse environmental impacts; and finally that unneeded roads are decommissioned and restoration of ecological processes are initiated"). In the very least, if the Forest Service decides not to identify the minimum road system for this project area, it must respond to these comments and this comment to explain why not.

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funding expectations, to ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance."

2. Prioritize unneeded roads for decommissioning

In addition to identifying a minimum road system, the WNF should take the next logical action, and actually implement it by decommissioning unneeded roads in the project area. Subpart A of the Forest Service's own travel rules requires it to identify unneeded roads to prioritize for decommissioning or to be considered for other uses. 36 C.F.R. § 212.5(b)(2). Additionally, the Handley-Branch SMA includes specific direction to decommission roads.[11] But here, the Forest Service fails to consider whether the forest roads within the project area are needed, and subsequently fails to identify unneeded roads for decommissioning. The agency's approach runs contrary to the Forest Service's own rules and policy. *See, e.g.*, 66 Fed. Reg. 3206 (Jan. 12, 2001) ("The intended effect of this final rule is to help ensure . . . that unneeded roads are decommissioned and restoration of ecological processes are initiated"). Based on natural resource conditions, assessed risks from the existing road network, road densities across the landscape to protect grizzly bear security core, the agency's limited resources, and long-term funding expectations, the Forest Service should identify at least some forest roads within the project area for decommissioning.

Subpart A of the Forest Service's own travel rules requires it to identify unneeded roads to prioritize for decommissioning or to be considered for other uses. 36 C.F.R. § 212.5(b)(2). *See also Center for Sierra Nevada v. U.S. Forest Service*, 832 F. Supp. 2d 1138, 1155 (E.D. Cal. 2011) ("The court agrees that during the Subpart A analysis the Forest Service will need to evaluate all roads, including any roads previously designated as open under subpart B, for decommissioning."). A decision to decommission roads should also consider recommendations from the WNF's forest-wide travel analysis report. 36 C.F.R. § 212.5(b)(2) (requiring decisions about which roads are needed to be based on "a science-based roads analysis at the appropriate scale.").

*3. Do Not Add New Miles to the Road System*

Instead of working to reduce the miles of system roads on the landscape, consistent with the agency's overarching policy, here the Forest Service proposes to add 10 miles to the system and reconstruct 17 more miles. The Forest Service should not add roads to its system, but instead should focus on establishing a right-sized, affordable road network. The EA fails to provide any discussion about the risks and benefits of roads. Forest Service policy directs the agency to carefully consider and document the road management objectives, environmental impacts, and social and economic benefits associated with any proposed addition before adding roads to its system. *See* Forest Service Handbook 7703.26(1). It also directs the agency to consider long-term road funding opportunities and obligations as part of any decision to add road miles to the system. *Id.* 7703.26(2). *See also* FSM 7715.03(7) (noting that "Ranger Districts should avoid adding routes to the Forest transportation system unless there is

[11] G-SA-TRANS-3: Decommission unauthorized roads or system roads no longer needed for administration of National Forest system lands.

adequate provision for their maintenance"). The Forest Service fails to analyze these factors in its analysis.

## VI. The Sunny Oaks project violates Environmental Justice

Environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies. Meaningful involvement means that people have an opportunity to participate in decisions about activities that may affect their environment and/or health; The public's contribution can influence the regulatory agency's decision; Community concerns will be considered in the decision making process; and decision makers will seek out and facilitate the involvement of those potentially affected. (US EPA, 2019 Environmental Justice)

The Sunny Oaks project takes place in Gallia, Lawrence and Jackson counties of the Wayne NF Ironton district. As counties in Appalachia, the Appalachian Regional Commission uses an index-based county economic classification system to identify and monitor the economic status of Appalachian counties. Gallia and Jackson counties are designated at risk while Lawrence county is considered transitional.[12]

The 20 year Sunny Oaks project will create an economic, environmental and health burden with forest removal and prescribed burns impacting air and water quality, thereby challenging the economic vitality and environmental quality of a region disproportionately impacted by past extraction and current economic challenges.

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12 ARC (2019) County Economic Levels. Each Appalachian county is classified into one of five economic status designations, based on its position in the national ranking. Distressed counties are the most economically depressed counties. They rank in the worst 10 percent of the nation's counties. At-Risk counties are those at risk of becoming economically distressed. They rank between the worst 10 percent and 25 percent of the nation's counties. Transitional counties are those transitioning between strong and weak economies. They make up the largest economic status designation. Transitional counties rank between the worst 25 percent and the best 25 percent of the nation's counties. Competitive counties are those that are able to compete in the national economy but are not in the highest 10 percent of the nation's counties. Counties ranking between the best 10 percent and 25 percent of the nation's counties are classified competitive. Attainment counties are the economically strongest counties. Counties ranking in the best 10 percent of the nation's counties are classified attainment.

## VII. The Sunny Oaks project includes significant actions and requires an environmental impact statement

It is clear the Sunny Oaks project may have a significant impact on the environment and thus the Forest Service must prepare an Environmental Impact Statement (EIS) for the project. The Council for Environmental Quality's (CEQ) regulations require agencies to prepare an EIS if a project may significantly affect the human environment. CEQ's regulations define significance in terms of context and intensity, which includes inter alia the scope of beneficial and adverse impacts, unique characteristics of the geographic area, degree of controversy, degree of uncertainty, and degree to which an action may affect species listed or critical habitat designated under the Endangered Species Act. 40 C.F.R. § 1508.27 (defining "significantly"). This project may significantly affect the human environment because, inter alia, it:

> **(1)** Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

Though the EA failed to properly analyze potential beneficial and adverse effects, the discussion it did provide clearly demonstrates the Sunny Oaks project will have both. This was demonstrated in several resource sections, in particular the wildlife and plant sections where the EA explained Regional Forester Sensitive Species may be adversely effected, and other species would benefit from early successional habitat.

> **(2)** The degree to which the proposed action affects public health or safety.

Certainly the proximity of prescribed burns to private land and the inherent risks involved rise to the level where the proposed action could affect public health and safety. Not only from the risk of burns escaping their firelines, but also from the air pollution local residents may face. Several comments on the proposed action during the scoping phase also raised concerns about flooding and the EA acknowledged the increased risk in two drainages from elevated water yields. This was without taking into account more frequent storm events as a result of human-induced climate change.

> **(3)** Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The EA explains the project area contains a site that is eligible for the national register, "[i]t is located along Cambria Creek in Jackson County in the northern end of the project area and it is Cambria iron furnace. It is the remains of a 19th century iron furnace that contributed to the iron production of the Hanging Rock Iron Region." Presentation 9 Transcript, p. 2. Part of the project also includes the Handley-Branch Special Management Area with three unique plant species.

> **(4)** The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The Sunny Oaks project is undoubtedly controversial based on the scoping comments, and the fact that it covers such a large area of the Ironton District and will authorize action for a 20 year period, which is unreasonably long. The idea of creating "young, bushy forests" through clearcuts that exceed Forest Plan guidelines that also required an extended comment period proves the WNF is courting controversy. Using even-aged management to "regenerate" oak forests, specifically shelterwood cuts that removes about 60% of the forest canopy from the stand is hardly based on settled science, and fails to address conflicting scientific research. Conducting unspecified prescribed burns in river corridors and possibly other riparian areas, as well as, in the Handley-Branch SMA compounds this controversy. Authorizing up to 80,000 acres of prescribed burning in one decision certainly rises to the level of highly controversial. Finally, the wholesale reliance on mitigation, best practices, design criteria or other guidelines as a means to address the wide variety of potential adverse impacts also raises the level of controversy this project creates.

**(5)** The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

Again we point to the 20 year duration of the Sunny Oaks project as exhibit A for why the effects are highly uncertain and involve unknown risks. The potential adverse effects on wildlife, fish and other aquatic species is highly uncertain, especially since the EA failed to even analyze potential effects on streams and tributaries from increased erosion and sedimentation related to road construction and reconstruction, as well as increased rainfall from more frequent storm events. Relying on unsupported and vague mitigation, best practices, design criteria or other guidelines to address potential adverse impacts increases the level of uncertainty. The controversy over using clearcutting and shelterwood harvest to create early successional habitat and regenerate oak forests also stem from the fact that the outcome of these harvest treatments are highly uncertain.

**(6)** The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

Should the WNF authorize such an expansive project with so much uncertainty and controversy, it will no doubt establish a precedent for future projects resulting in more clearcuts, shelterwood harvest and expansive, unspecified prescribed burning, all while relying on vague mitigation practices to address adverse environmental impacts.

**(7)** The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

As stated above, the project area includes a site that is eligible for the national register.

**(8)** The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The EA states the Sunny Oaks project may adversely affect federally endangered and threatened species, specifically the Indiana bat, and the northern long eared bat. The EA did not

explain if the USFWS concurred with the determination that the project may affect, but not adversely affect buffalo clover. Regardless, "[a] project need not jeopardize the continued existence of a threatened or endangered species to have a 'significant' effect on the environment." Klamath-Siskiyou Wildlands Center v. U.S. Forest Service, 373 F. Supp. 2d 1069, 1080 (E.D. Ca. 2004).

Taken together, each of these issues combines to make a clear case that an EIS is warranted, especially when combined with the EA's failure to conduct sufficient analysis required under NEPA.

For these reasons, and those described throughout these comments, we strongly urge the WNF to prepare an EIS that expands the purpose and need to include:

- Climate change science and research as a foundational approach to such a project,
- Endangered species with demonstrated collaboration with USFWS biological opinions, using the most recent population data and analysis, addressing the climate disruption impacts to species,
- An analysis that address cumulative impacts of such an action,
- Addresses current and impacted ecosystem services of the proposed area,
- Demonstrates compliance with the 2006 Forest Plan,
- Fully analyzes each of the WNF's natural relationships and systems,
- Addresses the potential adverse effects from the preferred alternative,
- Addresses Environmental Justice burdens,
- Identifies and implements a minimum road system.

Respectfully submitted,

**Attachments**

A. The Wilderness Society, 2014 Literature Review Forest Roads
B. ArcGIS Map - Surface Drinking Water Importance - Index of Forest Importance to Surface Drinking Water
C. NOAA National Centers for Environmental Information | State Summaries 149-OH

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