State of Utah

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U.S. Forest Service
Denver Federal Center
Building 40
Lakewood, CO 80215

Subject: **Forest Service Manual 2470, Silvicultural Practices**
RDCC Project No. 86233

Dear Ms. Miller:

The state of Utah ("State"), through the Public Lands Policy Coordinating Office (PLPCO), has reviewed the Forest Service Manual 2470, Silvicultural Practices, on National Forest System lands, published in the Federal Register on August 29, 2024. The State submits the following comments for your consideration.

The Utah Division of Forestry, Fire, & State Lands (FFSL) recognizes the value of silvicultural practices and actively managing forested land to reduce fuel loading, insects, and disease, and to promote overall forest health. FFSL supports active and adaptive management practices in the Draft Forest Service Manual 2470 to promote native species and diversity and also to improve watershed health, water yields, wildlife habitat, and forage for livestock. FFSL also supports reducing fuel loads to decrease the chance of uncharacteristic wildfires to mitigate impacts on state resources. FFSL is actively involved with Wood for Life and would like to continue this partnership with the Forest Service. We strongly encourage the Forest Service to coordinate and collaborate with FFSL on the management of wildland fires, forests, and state lands for better outcomes for stakeholders and the public.

The State understands that the revised directive ("Directive") would update the manual to focus on managing forests for climate change, old-growth, and the use of Indigenous Knowledge; including additional information specific to the REPLANT Act; and streamlining the silviculture certification process.

I. Consistency with the State Resource Management Plan

The State has adopted a Resource Management Plans (RMP), which include findings and policies for many aspects of public land management, including forest management (see: https://rmp.utah.gov/). These policies promote active, adaptive management of the forests of the State to improve forest health, watershed health, and water yields, improve wildlife habitat and forage for livestock, reduce fuel loads, and decrease the chance for uncharacteristic wildfire and the resultant impacts on air and water quality. Active forest management will also promote the growth of tree stands that can efficiently produce oxygen, store carbon, and eventually be harvested to meet the needs of our nation for lumber and other forest products. The State requests that actions taken by the Forest Service to amend Forest Service Manual 2470 be consistent with State RMP findings and policies to the greatest degree possible.

The State RMP contains several Fire Management policies that are applicable to the Directive. The State finds that the Directive is consistent with the following State policies to the extent that the Directive and Manual will facilitate forest treatments that reduce fuel loads:

- *The State will pursue opportunities to conduct and assist other partners with fuel reduction work including mechanical treatments and prescribed fire.*

- *The State will advocate for forest management practices that promote species diversity and overall ecosystem health.*

The State RMP contains several findings associated with Forest Management, including the following:

> *"A healthy forest is one that provides a multitude of benefits including, but not limited to; increased oxygen production and cleaner air, watershed protection, wildlife habitat, wood and other forest products, livestock grazing, recreation opportunities, and beauty. When too many trees and plants are competing for space, sunlight, water, and minerals in the soil, the trees can become stressed. Stressed trees are more susceptible to insect and disease outbreaks. Much like plants in a garden, some trees occasionally need to be removed (thinned) to provide for the health of those that remain. Fire is nature's way of thinning the forest. With an ever-increasing*

number of people building homes in the forest, as well as an emphasis on fire suppression, natural fire regimes have largely been removed from the system.

Some forests have too few trees or too few species of trees to provide the full range of ecological and economic benefits. This may be a result of fire, insect or disease outbreak, or human activities such as excessive visitation, motorized vehicle use, excessive logging, or overgrazing.

Accumulation of large amounts of woody debris and increased fuel loads coupled with mortality-causing disturbance regimes (e.g. fire, insects and pathogens) exacerbate the potential for catastrophic wildfire. Research shows these conditions are often inconsistent with historical patterns of forest development. Some far-reaching impacts include changes in hydrologic function, nutrient cycling, and introduction of noxious and invasive species.

According to data from 2014, the average net annual growth of trees in Utah is -4,556 thousand cubic feet per year. This shows that trees are dying faster than they are growing.

Significant issues impacting the timber resources in Utah include declining forest health, productive capacity of forest ecosystems, fragmentation, and socio-economic concerns. Due to a lack of active vegetation management, forests in Utah have become more susceptible to intense wildfire, insects, and diseases. By ensuring that forests are managed and kept healthy, they will continue to provide benefit to the public."

The Directive is consistent with the State Forest Management findings above to the extent that the Directive will promote healthier forest conditions.

The State RMP contains several Forest Management policies that are applicable to the Directive. The State finds that the Directive is consistent with the following State policies:

- *Support the sustainable removal of conifers to promote the establishment of aspen and attendant grass, forbs and shrubs where appropriate.*
- *Encourage timber harvesting to prevent fuel load and biomass buildup.*

- *Encourage prompt removal and salvage of drought, fire, and beetle killed timber and reseed or replant as appropriate to maintain healthy forests and watersheds.*

- *Support the use of all appropriate silvicultural methods to reduce the risk of damage due to insects, disease and fire.*

- *The State encourages Agencies to adopt and maintain scientifically sound forest management policies based on current, high quality data to pursue multiple use of public forest resources to provide sustainable yield of timber, forage, firewood, wildlife, fisheries, recreation, and water.*

- *Encourage and promote cooperation by other land management agencies (State, private and federal,) employing ecosystem management, forest health and stewardship principles.*

- *Support the management of forestlands not suitable for commercial harvest to maintain forest cover species with emphasis on production of other forest resources and uses.*

- *Support harvest of forest products when the activity would improve water production and/or does not adversely affect water quality.*

- *Encourage where feasible, the harvest of forest products in areas of proposed or existing vegetation treatments to offset costs of treatments and reduce the need for additional site entries.*

- *Support the use of mechanical or chemical means or fire to alter or perpetuate forests and increase herbaceous yield where timber harvest is impractical or demand does not exist.*

II. Air Quality. The State RMP finds that:

"Summer air quality can be impacted by levels of particulate matter generated by wildfires. Wildfire smoke is composed of a complex mixture of gases, fine particles, and water vapor that form when organic matter burns. Particulates from smoke are a mixture of solid particles - pieces of wood and other burning solids - and liquid droplets. They tend to be quite small, generally less than 2.5 micrometers in diameter, or approximately 1/70th the size of human hair.

> *The biggest health threat from smoke comes from fine particles. Because they lodge more deeply in the lungs, they are a greater health concern than larger particles. Fine particulates get into the eyes and respiratory system, where they can cause health problems such as burning eyes, runny nose, and illnesses such as bronchitis. They can also aggravate chronic heart and lung diseases.*
>
> *Finally, the incomplete burning of wood or other organic materials produces carbon monoxide, the gas in smoke. Its levels are highest during the smoldering stages of a fire."*

Implementation of the Directive will reduce fuels which will reduce the risk of uncharacteristic wildfire, which will reduce wildfire-related smoke and air quality impacts.

III. Water Yield.

The vegetation treatments called for in the Directive should also increase water yields from the forest, which is critical during seasons of drought. Randy Julander, retired USDA Snow Survey Hydrologist and published author of numerous articles on Utah's water and watersheds, made a recent presentation to a Utah legislative caucus and stated: "…forest management has a critical role in producing stream flow" (see: https://www.sltrib.com/news/environment/2023/01/20/are-trees-enemy-some-utah/).

Julander explained that a watershed is like a bucket with many straws sucking water out of it. "The more straws (trees) you have sucking, the less water you have for stream flow. The stream flow reflects what is left after all these straws have had their share. "At the turn of the century, forests were much different than they are today. The forests we have today have way too many trees. Back at the turn of the century, you might have had 10 to 20 trees per acre, today you might have 100 to 200 trees per acre." Referring to the trees in the thinner forests at the turn of the last century, he stated, "They were more resilient and more capable of producing water".

Julander indicated that our present forests are not as resilient as they used to be, "Too many trees, wrong kind of trees". Today, he said, "You have all these conifers. I see conifers as the problem. We are paying the price for the management system we have in place." Julander also explained that open meadows are essential for retaining and capturing our snowpack. "Go from an open meadow to conifers, and you will lose 40 to 50% of snowpack into the atmosphere."

"But, we don't have to cut all the conifers to get a significant benefit, " Julander continued "You don't have to treat the whole forest, you have to treat the water-producing areas. Cut circular patterns in the conifer forests, you will increase, in that open area right there, the snowpack that you lost (to evaporation of the conifer branches), that 40%, and pick up another 10 to 20% above that".

The State supports the Directive because of its potential to increase water yields from forest treatments on national forest lands.

IV. Flood after Fire.

The State RMP found in recent years:

> *"Utah has seen a new kind of flood risk emerge that includes flooding and debris flows related to watersheds damaged by wildfire. This type of flooding is distinctly different from the floods normally seen. Post fire related flooding results from enhanced runoff from fire damaged watersheds, having significant impacts on water quality. As fires burn, they destroy vegetation and often leave soils in a hydrophobic state, altering the hydrology of the watershed and producing greater peak flows."*

Debris flows have been experienced in the State as a result of unplanned wildfire disturbance. By implementing the Directive and reducing fuels, the risk of such debris flows in the future will be lessened.

V. Wildfire Costs

The State RMP notes that:

> *"The millions of dollars spent to extinguish large wildfires are widely reported and used to underscore the severity of these events. Extinguishing a large wildfire, however, accounts for only a fraction of the total costs associated with the event. Residents in the wildland-urban interface (WUI) are generally seen as the most vulnerable to fire, but a fuller accounting of the costs of fire also reveals impacts to all Utah residents and gives a better picture of the losses incurred when our lands burn.*

A full accounting considers long-term and complex costs, including impacts on watersheds, ecosystems, wildlife habitat, infrastructure, businesses, individuals, and the local and state economy. Specifically, these costs include property losses (insured and uninsured), post-fire impacts (such as flooding and erosion), air and water quality damages, healthcare costs, injuries and fatalities, lost revenues, infrastructure shutdowns (such as highways, airports, and railroads), post-fire rehabilitation, and a host of ecosystem service costs that may extend into the distant future.

A study completed in 2017, "Wildfire in Utah, The Physical and Economic Consequences of Wildfire" as required by H.B 464, assesses the economic impacts of wildfire and provides a quantifiable analysis of the impact of wildfire on livestock and grazing, water quality, recreation and tourism, and air quality (see: https://ag.utah.gov/home/blog/706-usu- wildfire-study.html)."

The State supports the Directive because of its potential to reduce fuel loads and the damage caused by wildfire and encourage forest health treatments on national forest lands.

VI. Comments on the Directive

The State offers comments regarding the following components of the Directive:

- *"The proposed directive would update sections of the directive to include, Climate Change, working with the Office of Climate and Sustainability, climate change considerations were added throughout the manual." "It includes direction on assisted population migration, assisted range expansion, and assisted species migration. Assisted migration will be well justified and documented in silvicultural prescriptions and tracked to monitor for the performance of non-local seed."*

  Comment: The State cautions the Forest Service to tread lightly when making decisions based on "projected changes in climate"; especially when attempting to foresee climate conditions "20 to 50 years in the future". For example, pages 45-47, and 53 of the Directive contain references to climate change when considering species migration, appropriate seeds, and tree genetics. However, it has been proven time and time again that climate changes are difficult; if not impossible to predict; especially 20 to 50 years into the future. The latest example of this uncertainty occurred in early September of this year when climate scientists were forced to admit that their dire predictions of a very active Atlantic hurricane season, attributed to "climate change," were inaccurate (see:

https://www.nytimes.com/2024/09/04/weather/hurricane-season-forecast-september.html).

- *"The harvest component was moved to the end and reforestation moved to the front to highlight managing for healthy and resilient forests."*

  Comment: The State agrees that the Forest Service should highlight the critical need nationwide to proactively manage forests to reduce fuel loads, protect watersheds, and promote forest health.

- *"Working with the Mature and Old Growth (MOG) team, additional information on managing for old growth during thinning, improvement cutting and during interdisciplinary input were added. This direction is consistent with the direction being worked on by the MOG and leaves room for more detailed policy to be drafted by the MOG team."*

  Comment: The State has been a Cooperating Agency with the Forest Service during its efforts to establish land management plan direction for old-growth forest conditions across the national forest system. While the Forest Service appears to have good intentions to proactively steward and manage old-growth forests to promote their health and resiliency, the State foresees unintended consequences associated with this effort. The old-growth forest DEIS and plan amendment text provide additional ammunition for litigious NGOs to continue their assault on proactive forest management, in favor of their misguided approach to let nature take its course. This will perpetuate the wildfire crisis and enlist judges to be the forest managers.

- *"Support for Indigenous Knowledge is now integrated within the revised manual consistent with the Forest Service "Strengthening Tribal Consultations and Nation-to-Nation Relationship.""*

  Comment: The Directive defines Indigenous Knowledge but fails to recognize state sovereignty and the role of traditional ecological knowledge in land management, obtained from the many generations who have worked and stewarded the forests since settlement in the 1800's.

The State of Utah, as noted in the Utah Code section below, is a sovereign entity:

63G-16-101. State sovereignty and rights of set-off.

(1) Pursuant to the Ninth and Tenth Amendments of the Constitution of the United States of America, the state of Utah does solemnly affirm its state sovereignty and fully and unconditionally reserves and asserts all rights and powers, directly and indirectly related to those rights and powers.

(2) This affirmation, reservation, and assertion includes rights and claims set-off by the state of Utah for any amounts it claims to have been inequitably or unlawfully caused or imposed by the federal government.

The knowledge of state forestry agencies (in our case, the Utah Division of Forestry, Fire and State Lands) is not recognized in the Directive. The State also cautions the Forest Service in the use of Indigenous Knowledge as this knowledge is based more on beliefs and traditions as opposed to peer-reviewed science.

- *"Added language to support greater integration, collaboration, and communication between the Silviculturists and Fuels Specialists."*

  Comment: The State suggests that the Directive also encourage collaboration and communication with state and local forestry and fire officials, when prescribed burns are being considered, in the spirit of shared stewardship.

- **Section 2471.4 - Forest Vegetation Monitoring and Evaluation**

  "Monitor the stand over time to ensure it is progressing on its planned trajectory. (See FSH 2409.17, ch. 80.4). Evaluate treatments to determine if implementation was consistent with the silvicultural prescription and if prescribed future treatment sequence needs to be modified. The project interdisciplinary team should participate in monitoring or review the monitoring results as a feedback mechanism to improve future similar projects. Follow Regional standards concerning valid sampling techniques to support evaluation and monitoring requirements in land and resource management plans."

Comment: The State prefers that the project interdisciplinary team (IDT) participate in the monitoring rather than review the monitoring results. The Forest Service should be cautious in using third parties to conduct monitoring instead of the IDT. There is room for bias to creep into monitoring results if not done under strict controls overseen by the IDT.

- **Section 2472.1 - Reforestation Plans and Reports**

  "Plan reforestation treatments to meet the prescribed stocking levels and timeframes consistent with land management resource plans. Determine reasonable assurance of adequate restocking within five years of harvest…"

  Comment: The State supports the requirement to ensure restocking within five years of timber harvest and suggests that the Forest Service consider a similar time frame for restocking in areas suitable for timber harvest affected by uncharacteristic wildfires or other unplanned events.

- **Section 2472.6 - Natural Recovery**

  "Not all National Forest System lands require prompt regeneration following a natural disturbance. Natural recovery represents a silvicultural diagnosis that follows land management plan guidelines to count on natural processes for reestablishment of forest vegetation."

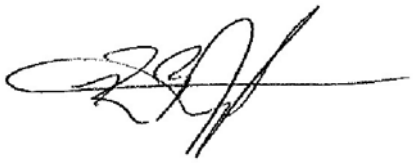
  Comment: The State encourages the Forest Service to carefully evaluate whether natural processes can lead to the reestablishment of forest vegetation in a timely manner. In the best interests of watershed health and wildlife habitat, it may be prudent to intervene rather than let nature take its course.

VII. Conclusion

Based on the consistency of the Directive with the State RMP and because of the anticipated benefits to forest health, the State supports the proposed Directive amending Forest Service Manual 2470. As noted above, the State suggests some additional considerations be made before the amendments are finalized. The State supports all active forest management efforts. A "hands-off" or "let nature take its course" approach to forest management will not produce the desired results.

The State appreciates the opportunity to provide comments. Please contact me if you have any questions.

Sincerely,



Redge B. Johnson
Director