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Comments: To Whom it May Concern,

The Pando Tree, (aka "Pando Aspen Clone", aka "Pando"), is one of the oldest and largest trees of any kind in the world. Located in Fishlake National Forest in south-central Utah, The Pando Tree is simultaneously the largest tree of any kind by weight (13.2 Million Pounds), the largest tree by landmass (106 acres) and, is the largest aspen clone in the world confirmed by genetic testing (2008, DeWoody, Mock, Hipkins, Rowe). In plain terms, Pando's ancient and vast root system coordinates energy production, defense and regeneration via a network of 47,000 genetically identical trunks (ramets) that has been active for some 9,000 years using the best methods we have to determine the tree's age today (Novak et al, 2022). A wonder in itself, Pando is the oldest and the largest tree of any kind managed and protected by the US Forest Service. A tree that has benefitted from principles of adaptive management.

Under Executive Order 14702, The Pando Aspen Clone was inventoried as a mature forest landscape, but the tree itself has no special designations nor protections that can secure its care where adaptive management is needed. Dating back to 1987, 11 years after the tree's initial discovery, Fishlake National Forest and independent scientists both, have concluded that to protect and care for the Pando Tree, we must employ adaptive management strategies like the proposed. Strategies that have shown success in the care of Pando. Between 1987 to 1993, and again between 2012-2014, work was undertaken to install 8ft wildlife fences to protect 53 acres of the 106-acre tree from herbivory by mule deer, elk and cattle, after which work to remove diseased wood, conifer and stimulate regeneration got under way. In the last century, trees were coppiced to remove diseased growth and promote regeneration and health. Work between 2012-2014 expanded protective systems and employed coppicing, root ripping, conifer removal and prescribed fire to promote the tree's health and stimulate regeneration. Both programs showed positive results for the tree's health and sustainability. A 2012 paper by Fishlake National Forest staffer Alan Henninson (supported by former Fishlake Ecologist, Robert Campbell) demonstrates the effectiveness of methods used between 1987 and 1993. Independent scientists confirmed positive results of the 2012-2014 restoration effort campaign in 2017 (Rogers and Gale, 2017). Despite the success of these programs, other work to care for the tree has been sporadic and remains incomplete as adaptive management strategies like the proposed have not been adopted, supported nor consistently applied to protect and care for the tree. According to low-elevation LiDAR data collected by Friends of Pando and our partners at Fishlake National Forest, today, Pando's landmass contains conifer across 40% of its 106-acres landmass. Those conifers (both bushes and trees) choke out arable land that Pando's shade-intolerant new growth cannot overcome, while also littering mineral-laden biomass into the soil that further disadvantages Pando health and sustainability. In short, work to remove such growth, remove diseased trees and downed wood, means work to protect the tree remains incomplete. In all, absent adaptive management strategies that are consistently prioritized and applied, we now stand near a brink that threatens Pando's health and sustainability.

According to a paper on Aspen Management in the Intermountain West published by USDA in 2019, and the work of independent scientist Paul Rogers published by the BLM in 2014, adaptive management of aspen is of critical concern in the Intermountain West. Minding that, we support the proposed, as it would open up opportunities for land management agencies to care for the Pando Tree proactively, rather than reactively. Consistently, rather than sporadically. In the past, Pando's study and care have been fraught; building consensus has involved both bureaucratic and social constraints that have led to inconsistent and incomplete work to care

for the tree. This, as adaptive management strategies for old growth, mature, and special trees has not been codified nor, fully recognized across the agency. The methods proposed can and have been used with meaningful success for Pando, and we support all efforts to employ the principles to protect this wonder, and other trees like it.

Under the proposed, Pando can be honored and cared for in a way that is consistent with the gifts this wonder bestows upon us. The Pando Tree protects us as we face drought, protecting 86 Million Gallons of water each year (2024, Friends of Pando). The Pando protects us from wildfires as its landmass forms a 0.67 by 0.45 mile wide natural fire break (2024, Friends of Pando, Google Earth Maps). Pando has overseen 5 cultural epochs; from the Mammoth Hunters to the Pioneers and all their children in the present day. (2024, Capitol Reef National Park Website, Fishlake National Forest Website). Pando sequesters carbon; the tree ingests 148,000 pounds of carbon dioxide each year. Pando eats sunlight to power 70,000 homes and by doing so, creates enough oxygen to sustain 1 out of every 2 inhabitants in the region (2024 Friends of Pando, 2022, Clean Power Research). More than that, Pando serves as a popular icon of Utah and trees the world over; it is the subject of award-winning book (*The Overstory*), movies (*Strange World*), Tv shows (*The Blacklist*), is the subject of its own US Postage Stamp (2006), and a symphony (Nancy Ives, 2024). Adaptive management is the key to Pando's protection and care. Agencies empowered by adaptive management principles will be empowered to do more to protect special, mature, and old-growth forests--including Pando.