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Comments: Please see attached comment letter from the Washington Department of Fish and Wildlife

The Washington Department of Fish and Wildlife (WDFW) is pleased to provide the following comments and recommendations for the USDA Forest Service and DOI Bureau of Land Management request for information on federal old-growth and mature forests (Executive Order 14072) #NP-3239. Since 1890, WDFW and its predecessor agencies have worked to steward Washington's fish and wildlife as a public trust resource. Our mission is to preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities.

Mature and old-growth forests on federal lands provide critical habitat for multiple species listed under the federal Endangered Species Act including northern spotted owl, marbled murrelet, Canada lynx, salmon, steelhead, and bull trout. These forests also provide important habitat for game species, recreational, cultural, and commercial opportunities, as well as protecting water quality and water quantity for downstream communities. WDFW supports conservation and management of mature and old-growth forests to benefit fish, wildlife, and people.

1. What criteria are needed for a universal definition framework that motivates mature and oldgrowth forest conservation and can be used for planning and adaptive management?

A universal definition framework for mature and old-growth forests must include considerations of fish and wildlife needs in addition to the needs of people and communities to motivate conservation. Washington hosts multiple forest ecosystems with generally wet forests on the western side of the state, subalpine forests in mountainous areas, and dry forests on the eastern side of the state. Historically fire played a major role developing forest structure with high frequency, low-severity fires in warm, dry forests and low frequency, high-severity fires in cold and wet forests (Reilly and Spies 2015). These forests vary in climate, geology, disturbance history, dominant tree species, the fish and wildlife that call them home, and the needs and values of people who live, work, and recreate in them. WDFW and stakeholders have created Washington's State Wildlife Action Plan (SWAP) (WDFW 2015), which includes Ecological Systems of Concern, Habitats of Greatest Request for information on federal old-growth and mature forests (Executive Order 14072) Conservation Need, and Species of Greatest Conservation Need. We recommend that you consult this documentation and future updates to consider the relationship among systems, habitats, and species related to mature and old-growth forests.

2. What are the overarching old-growth and mature forest characteristics that belong in a definition framework?

Multiple reports have concluded that one definition of mature and old-growth does not fit all forests (Rapp 2003, Franklin et al. 2005, Van Pelt 2007, Van Pelt 2008, Davis et al. 2015). The Northwest Forest Plan (NWFP) uses an old growth structure index (OGSI) to identify mature and old-growth forests. The OGSI incorporates the following forest structure elements: density of large live trees, diversity of live tree size classes, density of large snags, and percentage of cover of down woody material (Davis et al. 2015). In addition to the NWFP, the state forestry agency, Washington Department of Natural Resources (DNR), has worked on multiple efforts with forest ecologists, WDFW, and other partners to develop definitions of mature and old-growth forests and conduct inventories on state lands (Franklin et al. 2005, Van Pelt 2007, Van Pelt 2008). These reports could inform the effort to inventory mature and old-growth forests on federal lands. WDFW recommends aligning definitions and inventory methods with states to support shared stewardship of forests across boundaries. We also recommend exploring new remote sensing tools to assess forests including LiDAR and Google Earth Engine. Washington has extensive, though not complete coverage of LiDAR data and is planning on collecting additional data (DNR 2022).

3. How can a definition reflect changes based on disturbance and variation in forest type/composition, climate, site productivity and geographic region?

We recommend incorporating climate science and model projections to predict what the natural range of variability may look like as ecosystems adapt to climate change. Advances in remote sensing techniques should aid in assessing forest conditions. The old growth structure index (OGSI) or similar tool could be applicable across landscapes, but the parameters may need to be adjusted to account for variations in forest type, climate, site productivity, fish and wildlife values, and geographic region. For instance, mature and oldgrowth forests in western Washington are much different than mature and old-growth forests in much of eastern Washington in density of large live trees, diversity of live tree size classes, density of large snags, and percentage of cover of down woody material, so fish and wildlife uses will be different.

4. How can a definition be durable but also accommodate and reflect changes in climate and forest composition?

Mature and old-growth forests are important to many species of fish and wildlife in Washington. We support conservation of these forests that allows for management flexibility and conserves system functions as a mature or old-growth forest which provides sustainable and persistent habitat for fish and wildlife. In some cases such as eastern Washington dry forests, decades of fire suppression and past management led to overstocked forests and Request for information on federal old-growth and mature forests (Executive Order 14072) shifts in dominant tree species. These forests are increasingly susceptible to drought, wildfires, insects, and disease. Many of these forests need active management to reduce tree densities and select for species that are fire resistant and adapted to climate change. Management planning, strategy, and individual actions need to consider and work toward a desired future condition within the natural range of variability that can support mature or oldgrowth forests in certain geographies, landscapes, and of scale to provide values for fish and wildlife that depend on these mature systems (see State Wildlife Action Plan for examples).

5. What, if any, forest characteristics should a definition exclude?

WDFW recommends not including first generation forests that have invaded ecological systems where they didn't historically occur because of human interference (e.g., prairies where trees have been planted, or invasion was assisted by prolonged fire suppression). These forests have in many instances adversely affected the persistence and sustainability of grassland and open community species including Mazama pocket gopher, streaked horned lark, western gray squirrel, and pollinators.

Thank you for the opportunity to provide input on developing a definition framework to inventory mature and old-growth forests. We would be interested in commenting on your draft framework prior to its application. Please reach out to WDFW if you have questions about our suggestions or would like assistance in State Wildlife Action Plan interpretation. We look forward to continuing to engage as the Forest Service and Bureau of Land Management work on the inventory and develop land management policies and conservation strategies for mature and old-growth forests.

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