Rim Country Project Purpose and Need

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Summary

The Four Forest Restoration Initiative (4FRI) is a planning effort designed to restore forest resiliency and ecosystem function in ponderosa pine forests across four national forests in Arizona including the Coconino, Kaibab, Apache-Sitgreaves, and Tonto National Forests. In 2015, the Record of Decision for the first 4FRI environmental impact statement (EIS) for the northern portion of the Coconino National Forest (NF) and the Kaibab NF was signed. The Rim Country EIS continues the ecosystem restoration effort on about 1,240,000 acres on the Mogollon Rim and Red Rock Ranger Districts of the Coconino NF, the Black Mesa and Lakeside Districts of the Apache-Sitgreaves NF, and the Payson and Pleasant Valley Districts of the Tonto NF. Of the total acreage, about 100,000 acres will be excluded from analysis because they are not National Forest System lands, or are included in other full restoration NEPA projects that already have decisions. The project area includes portions of Coconino, Yavapai, Gila, and Navajo Counties.

Purpose of and Need for Action

The purpose and need for the Rim Country Project was determined by comparing the existing conditions in the project area to the desired conditions in the land and resource management plans (forest plans)[1] related to forest and ecosystem function and resiliency. In addition, relevant research, the best available science and information, and the landscape restoration criteria found in the Omnibus Public Land Management Act of 2009 (P.L. 111-11, Title IV Forest Landscape Restoration) were used to develop the purpose and need. These criteria for landscape-scale restoration address community, wildlife habitat, and forest protection while retaining as many large trees as possible. National direction found in Forest Service Manual 2020 and 4000 was used to evaluate the needs for the Long Valley Experimental Forest.

The purpose of the Rim Country Project is to reestablish and restore forest structure and pattern, forest health, and vegetation composition and diversity in forest ecosystems to conditions within the natural range of variability, thus moving the project area toward the desired conditions. The outcome of improving structure and function is increased system resiliency. Resiliency increases the ability of an ecosystem to survive natural disturbances such as fire, insects and disease, and climate change (FSM 2020.5) without changing its inherent function (SER 2004). This project is needed to:

- Increase forest resiliency and sustainability
- Reduce risk of uncharacteristic fire effects
- Improve wildlife and aquatic species habitat
- Improve the condition and function of streams and springs
- Restore woody riparian vegetation
- Preserve cultural resources

Forest Resiliency and Sustainability. Resiliency increases the ability of the ponderosa pine and mixed conifer-frequent fire forest types to survive natural disturbances and stressors such as fire, insect and disease outbreaks, and climate change (FSM 2020.5). There is a need to restore the frequent low-severity

[1] The Apache-Sitgreaves NF revised its forest plan in 2015 and the Coconino NF is expecting to have a final revised plan in 2017. Although the Tonto NF is in the midst of revising its plan, this project will apply the 1985 forest plan as amended.

fire regimes in which the forest in the Rim Country project area evolved. The Rim Country Project is expected to move over 1,000,000 acres toward comprehensive, landscape-scale restoration.

There is a need to move tree group pattern, interspaces, and stand density toward the natural range of variability. This is a sum of reference conditions that provides a mix of open, moderately closed, and closed canopy conditions at the fine (group) to landscape (ponderosa pine forest cover type) scales as defined by the Forest Plans. There is a need to manage forest density, structure, and composition to increase forest health and reduce adverse effects from bark beetles or dwarf mistletoe, while also providing a diversity of habitat types and features. In the oak woodland and shrubland forest types, there is a need to stimulate new growth, maintain vigor in large-diameter trees, encourage faster growth in young smaller oaks, and provide for a variety of shapes and sizes of trees across the forest cover types. Where aspen is found in the frequent fire forest cover types, there is a need to stimulate growth, reduce conifer encroachment, and increase individual tree recruitment. In grassland forest cover types, there is a need to reduce or remove tree encroachment, which has decreased the size and function of these systems that were historically grasslands and functionally connected montane meadows.

There is a need to improve the condition of native plant communities, improving the resiliency of rare species. There is also a need to improve understory vegetation to provide food and cover for wildlife where it is absent under dense forest stands where fire has been excluded.

The Rim Country Project includes extensive areas where the ponderosa pine and mixed conifer forest cover types interface with the pinyon-juniper and evergreen oak types. Because of this close association, some incidental treatments may be needed in these other forest cover types to facilitate and increase the effectiveness of treatments to restore the frequent fire forest structure.

Uncharacteristic Fire Effects. There is a need to reduce the risk of uncharacteristic fire behavior and effects, which currently pose a threat to ecosystem function and services, and human safety, lives, and values. Restoring forest and grassland structure will decrease the risks of post-fire flooding and debris flows that cause loss of soil productivity, water quality, and watershed function. Reducing the potential for uncharacteristic fire effects and reducing excessive fuel loadings will protect wildlife and aquatic species habitat, including areas within and adjacent to Mexican spotted owl habitat. Protected activity centers currently contain high fuel loadings due to limited management.

Wildlife and Aquatic Species Habitat. There is a need to move the Rim Country project area toward desired conditions for snags, coarse woody debris, forest structural stages, and stream habitat complexity that are currently deficit. There is a need to retain as many old and large trees as possible, recognizing the ecological and socio-political importance of these trees. Where restoration activities occur in the ponderosa pine and dry mixed conifer forest types, there is a need to maintain and promote the development of old growth characteristics and components. There is a need to maintain or improve aquatic habitats to meet needs for fish, frogs, and garter snakes, recognizing the ecological and socio-political importance of these streams and associated riparian areas.

Streams and Springs. There is a need to improve the condition and function of riparian areas, wet meadows, streams, and springs in the Rim Country project area in order to sustain these features and aquatic habitat. Reducing road density and improving road and stream crossings would maintain natural flow regimes, provide connectivity for aquatic species and habitats, and reduce sedimentation.

Woody Riparian Vegetation. Restoring native riparian vegetation, including large conifers and willows in some forest types, would reduce sedimentation to stream habitat, provide stream shading, maintain cool-water conditions, and provide large wood recruitment to streams to improve habitat complexity. This may include maintaining and promoting existing vegetation, reducing conifer tree encroachment and

noxious weeds, planting desirable species such as willows where they have been extirpated, and returning fire to riparian areas.

Roads. There is a need to have adequate access for project implementation, but then decommission temporary roads after use. In addition, there is a need to decommission unauthorized routes identified during the forest Travel Management Rule review processes.

Cultural Resources. There is a need to reduce threats to cultural resources caused by overly dense vegetation and soil erosion. Though most archaeological sites can tolerate low severity fire, all are very vulnerable to the effects of high severity fire in unnaturally high fuel loads and to the soil loss that occurs in post-fire flooding. In particular, there is a need to reduce fuels accumulation around cultural resources to reduce threats to these non-renewable resources.

Plan Amendments. To meet the project's purpose and need, the existing Tonto and Coconino Forest Plans would need to be amended to provide for areas of grass, forbs, and shrubs interspersed with tree groups and allow for treatments to move tree group patterns, interspaces, and stand density toward the natural range of variability. Amending these forest plans would allow for treatments that improve Mexican spotted owl nesting and roosting habitat as defined in the Mexican spotted owl recovery plan. The desired conditions related in the project's purpose and need are consistent with the revised Apache-Sitgreaves Forest Plan. Amendments to the Tonto NF and Coconino Forest Plans would provide consistency in meeting desired conditions for ponderosa pine and mixed conifer forest across the Rim Country project area.