United States Department of Agriculture **Forest Service** **Coconino National Forest, Supervisor's Office**

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File Code: 3000
Date: March 5, 2021

Co-Chairs of the 4FRI Stakeholder Final Environmental Impact Statement (FEIS) Working Group,

Thank you for your letter on September 20, 2020, requesting that the 4FRI Board consider 1) Including the old tree age criterion in the 1st 4FRI EIS into Rim Country, and 2) Including the list of prioritized restoration projects in Appendix II of the FEIS. Additionally, the SHG collaborated with the Rim Country IDT on proposed revisions to the definition and application of Stands with a Preponderance of Young Large trees (SPYLT) and Category 8 of the Large Tree Implementation Plan (LTIP).

At the October 26, 2020 board meeting, the Board unanimously decided to replace the definition of an "old tree" from Section D (p. 617) of the RC DEIS as "Established prior to 1870, predating Euro-American settlement" with the following language from the 1st EIS: "Approximately 150 years and older" The board also decided to include the list of prioritized restoration projects (Appendix II) in the FEIS as guidance.

At the January 26, 2021 board meeting, the board decided unanimously to adopt the proposed revisions to the definition and application of SYPLT and Category 8 of the LTIP. The adopted revisions are detailed in the attached memo.

Thank you for your sustained support and continued engagement in 4FRI and specifically the Rim Country EIS. We appreciate and value the work that the SHG put forth for the DEIS and in all aspects of 4FRI. We look forward to a strong continued partnership on this important effort.

Sincerely,

/S/JEREMY KRUGER

JEREMY KRUGER
Chief Executive

Attachments:

Salt/LTIP memo

FOUR FOREST RESTORATION INITIATIVE

Apache-Sitgreaves, Coconino, Kaibab, Tonto National Forests

4FRI BOARD MEMO

To: 4FRI Board
From: Jeremy Kruger, CE 4FRI
RE: SPLYT/SALT
Date: 1/5/21

Introduction

One remaining issue from collaboration with the SHG is proposed revisions to the definition and application of SYPLT and Category 8 of the LTIP. The Board will need to decide whether to accept the changes to SPYLT, and Category 8 of the LTIP.

I. Stands with a Preponderance of Large, Young Trees (SPLYT)

Background

- The Rim Country DEIS included a collaboratively developed definition of SPYLT that used stand data to identify and map occurrence of SPLYT stands across the Rim Country[1].
- However, this definition was hard to measure in the field, and therefore hard to use the conditions-based management/mechanical flexible toolbox approach on SPLYT stands.
- Additionally, the similarly named exception category in the Large Tree Implementation Plan (LTIP) presented semantic confusion as well as potentially contradictory direction to implementers with respect to retention of large trees.
- A small group including members of the planning team and the SHG[2] reconvened over the last 2 months to resolve these concerns.
- Patrick and Mark developed and analyzed several alternative definitions, which were compared to results from the initial analysis. These were field-verified in stands on the Rim Country analysis area and a final definition was selected.
- They also developed recommended language to capture the revised approach, remove ambiguity in the LTIP exception category, and provide consistency with other FEIS changes developed collaboratively by the working group.

Current Version in DEIS-*Stands with a Preponderance of Large Young Trees (SPLYT)*

[1] Section D, p. 638

[2] Primarily Todd Shulke and Joe Trudeau from CBD, Amy Waltz from ERI, and Steve Rosenstock from Grand Canyon Trust

The iterative spatial analysis and field validation effort undertaken by the Forest Service and stakeholders yielded an initial filter for SPLYT located outside of MSO PACs, MSO recovery habitat, and wildland urban interface (WUI).

For ponderosa pine SPLYT, criteria are that:

a) The Quadratic Mean Diameter (QMD) of the top 20 percent of trees is greater than 15 inches diameter at breast height (DBH), and

b) There is more than 50 square feet/acre of basal area (BA) in trees greater than 16 inches DBH.

All stands would be field-verified prior to mechanical thinning. Stands (or portions thereof) meeting SPLYT criteria, including those not captured by the data filter, would be treated at the lowest range of intensity within the identified silvicultural prescription.

Recommended Revision-*Stands with an Abundance of Large Trees (SALT)*

For ponderosa pine SALT, criteria are that:

a) Greater than 40 square feet/acre of basal area (BA) in ponderosa pine trees greater than 18 inches diameter at breast height (DBH).

- These are ponderosa pine stands located outside of MSO PACs, MSO recovery habitat, and the wildland urban interface (WUI), that have a well-developed component of large young trees >16" dbh ("blackjacks') and often older trees as well.
- These stands can also have patches of interconnected and multi-layered canopy that support canopy-dependent wildlife species.
- The nomenclature from the first 4FRI EIS (Stands with a Preponderance of Large Trees, "SPLYT") has been changed to prevent confusion with the similarly-named Large Tree Implementation Plan (LTIP) exception category #8.

All stands would be field-verified prior to mechanical thinning. Stands (or portions thereof) meeting SALT criteria, including those not captured by the data filter, would generally be treated at the lowest range of intensity within the identified silvicultural prescription. In order to meet Desired Conditions reflecting the full range of historical forest structure and avoid "managing for the minimum," treatment intensity could be further reduced. This support the CBM, giving implementers the ability to asses if a stand is SALT when they get out in the field

Outcome of Recommended Revision

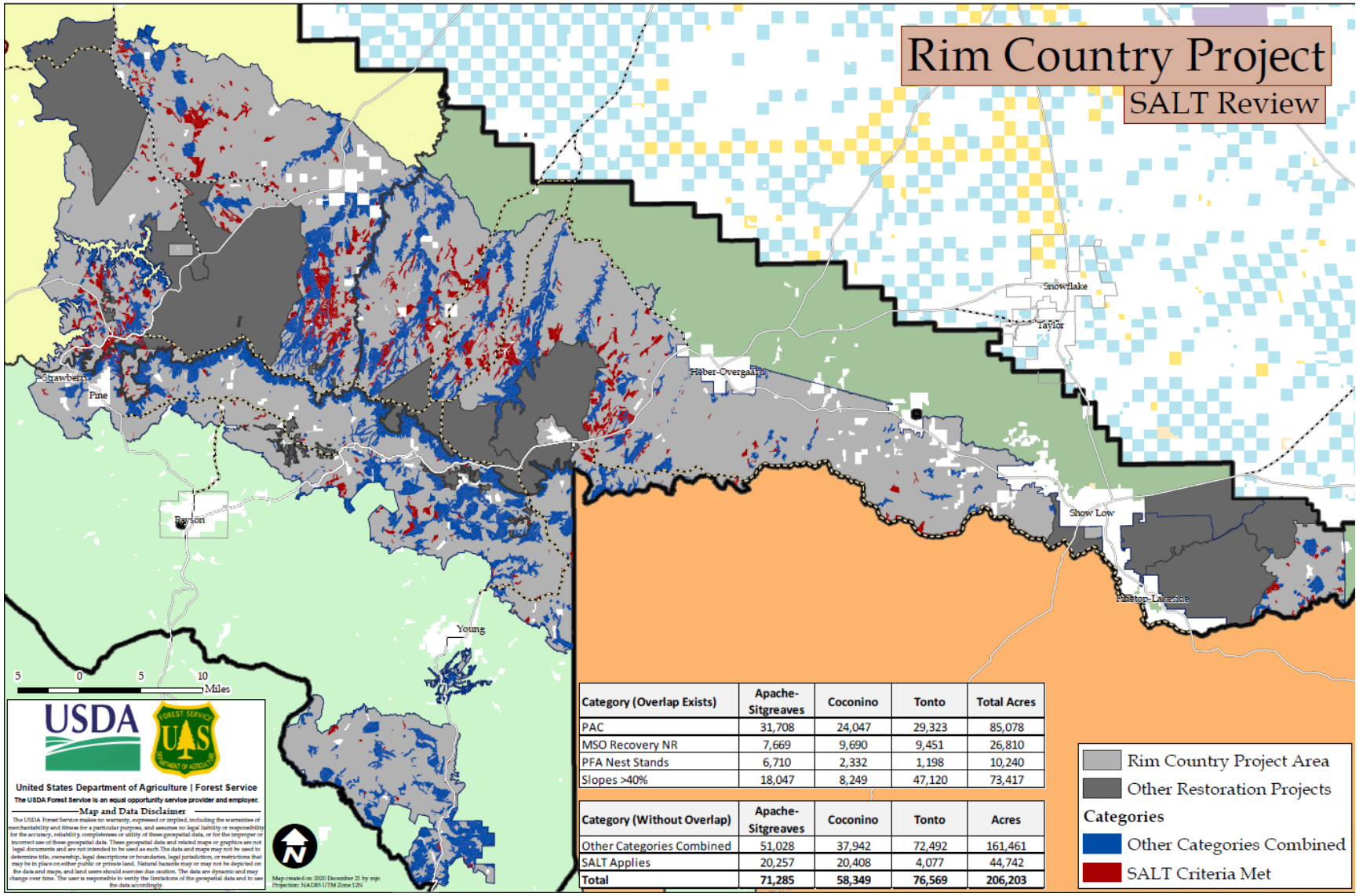
There is concern regarding the number of acres that will result in closed canopy conditions post-treatment in the Rim Country EIS. The table below quantifies these acres as a result of PAC, MSO Recovery NR, PFA nest stand and steep slope conditions. Considering overlap of these conditions (e.g. some acres are PACs on steep slopes), closed canopy conditions **may** occur on ~161,000 acres across the project area. However it is important to note that not all of these acres will result in

closed canopy conditions. For example, most of the ~47,000 acres of steep slopes on the TNF fall just below the rim and are not vegetated. Some of the other acres (PACs, MSO Recovery and PFA nest stands) currently have open canopies and will not result in closed canopy conditions post-treatment.

Approved of the revised definition of SALT will result in an additional ~44,700 acres in closed canopy conditions across the three forests. The recommended revision does not include a limit or cap on the number of acres that could be identified as SALT. Though stand data indicates this to be ~44,700 acres, the number of acres that meet this definition could be greater or lesser than this estimate.

Category (Overlap Exists)	Apache-Sitgreaves	Coconino	Tonto	Total Acres
PAC	31,708	24,047	29,323	85,078
MSO Recovery NR	7,669	9,690	9,451	26,810
PFA Nest Stands	6,710	2,332	1,198	10,240
Slopes >40%	18,047	8,249	47,120	73,417

Category (Without Overlap)	Apache-Sitgreaves	Coconino	Tonto	Acres
Other Categories Combined	51,028	37,942	72,492	161,461
SALT Applies	20,257	20,408	4,077	44,742
Total	**71,285**	**58,349**	**76,569**	**206,203**



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LTIP Exception Category #8 - Current Version in DEIS

Heavily-Stocked Stands (with High Basal Area) Generated by a Preponderance of Large, Young Trees

- In some areas, the increase in post-settlement trees has been so rapid that current stand structure is characterized by high density and high basal area in large, young trees.
- These stands or groups of stands exhibit continuous canopy which promotes unnaturally severe fire effects under severe fire weather conditions.
- At the fine scale, the management approach would apply on a case-by-case basis.
- The removal of large trees may be necessary to meet site-specific ecological objectives that are listed below.
- For example, the removal of large trees may be necessary in order to reduce the potential for crown fire to spread into communities or important habitats that include MSO and/or goshawk nest stands.

Ecological Objectives-Large trees may need to be removed to meet these

- Natural heterogeneity of forest, savanna, and grasslands occurs at the landscape scale and within stands.
- Groups are restored by retaining the largest trees on the landscape to reestablish old growth structure in the shortest timeframe possible.
- Decreased shading and interception from the canopy, decreased needle litter and duff, and surface fire restore and maintain a mosaic of natural vegetative communities.
- Decreased shading and interception from the canopy fuels allow the growth of continuous herbaceous surface fuels to carry surface fire.
- Reduced horizontal and vertical canopy fuels reduce the potential for crown fire.
- Fire may be used with other methods to maintain forest structure over time.
- Regeneration openings and interspaces contribute to the ecological objective of natural heterogeneity of historical forest structure, age class diversity, and open space.

In stands where pre-settlement evidences, restoration objectives, community protection, or other ecological restoration objectives indicate much lower tree density and basal area would be desirable, large post-settlement conifers may need to be removed to achieve post-treatment conditions consistent with a desired restoration trajectory.

Where evidence indicates higher tree density and basal area would have occurred pre-settlement, only a few large conifers may need to be removed. Many of these areas would support crown fire and, thus, require structural modification to reduce crown fire potential and restore understory vegetation that supports surface fire.

LTIP Exception Category #8 - Recommended Revision

Heavily-Stocked Stands (with High Basal Area) Generated by a Preponderance of Large, Young Trees

- While relatively uncommon, there are areas where dense stands of large young ponderosa pine trees occur.
- These stands exhibit continuous canopy which in some limited cases can promote unnaturally severe fire effects under extreme weather conditions.
- At the fine scale, this management approach would apply on a case-by-case basis, where cutting of large young trees is essential to meet site-specific ecological objectives.
- This exception will not be applied in stands or portions of stands meeting the "Stands with an Abundance of Large Trees" (SALT) criteria, unless necessary to reduce high severity fire behavior and potential spread into adjacent WUI, critical infrastructure, or important habitats such as Mexican spotted owl habitat and/or goshawk nest stands.

Ecological Objectives

- Natural heterogeneity of forest, savanna, and grasslands occurs at the landscape scale and within stands.
- Old growth structure is restored by retaining the largest trees on the landscape.
- Decreased shading and interception from the canopy, decreased needle litter and duff, and surface fire restore and maintain a mosaic of natural vegetative communities.
- Decreased shading and interception from the canopy fuels allow the growth of continuous herbaceous surface fuels to carry surface fire.
- Reduced horizontal and vertical canopy fuels reduce the potential for crown fire.
- Fire may be used with other methods to maintain**/develop desired** forest structure over time.
- Openings and interspaces contribute to the ecological objective of natural heterogeneity of historical forest structure, age class diversity, and open space.