4FRI Rim country Project
Draft Environmental Impact Statement

Apache-Sitgreaves, Coconino, and Tonto National Forests
Coconino, Yavapai, Gila, and Navajo Counties, Arizona

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Abstract: The Four Forest Restoration Initiative (4FRI) is a Collaborative Forest Landscape Restoration Project covering portions of four national forests in Arizona that meets the requirements of the Omnibus Public Lands Management Act of 2009. The first 4FRI Environmental Impact Statement (EIS) was completed and the Record of Decision was signed in 2015. Implementation of the treatments analyzed in the 1st EIS are currently being implemented. The 4FRI Rim Country analysis continues this collaboration effort. Below are specific portions of the Omnibus Public Lands Management Act of 2009 that speak to eligibility of projects under the Collaborative Forest Landscape Restoration Program and also project implementation:

> (b) Eligibility Criteria- To be eligible for nomination under subsection (c), a collaborative forest landscape restoration proposal shall--
>
> (1) be based on a landscape restoration strategy that--
>
> (A) is complete or substantially complete;
>
> (B) identifies and prioritizes ecological restoration treatments for a 10-year period within a landscape that is--
>
> (i) at least 50,000 acres;
>
> (ii) comprised primarily of forested National Forest System land, but may also include land under the jurisdiction of the Bureau of Land Management, land under

the jurisdiction of the Bureau of Indian Affairs, or other Federal, State, tribal, or private land;

(iii) in need of active ecosystem restoration; and

(iv) accessible by existing or proposed wood-processing infrastructure at an appropriate scale to use woody biomass and small-diameter wood removed in ecological restoration treatments;

(C) incorporates the best available science and scientific application tools in ecological restoration strategies;

(D) fully maintains, or contributes toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth conditions characteristic of the forest type, taking into account the contribution of the stand to landscape fire adaptation and watershed health and retaining the large trees contributing to old growth structure;

(E) would carry out any forest restoration treatments that reduce hazardous fuels by--

(i) focusing on small diameter trees, thinning, strategic fuel breaks, and fire use to modify fire behavior, as measured by the projected reduction of uncharacteristically severe wildfire effects for the forest type (such as adverse soil impacts, tree mortality or other impacts); and

(ii) maximizing the retention of large trees, as appropriate for the forest type, to the extent that the trees promote fire-resilient stands; and

(F)(i) does not include the establishment of permanent roads; and

(ii) would commit funding to decommission all temporary roads constructed to carry out the strategy;

(2) be developed and implemented through a collaborative process that—

(A) includes multiple interested persons representing diverse interests; and

(B)(i) is transparent and nonexclusive; or

(ii) meets the requirements for a resource advisory committee under subsections (c) through (f) of section 205 of Public Law 106-393 (16 U.S.C. 500 note)

(g) Program Implementation and Monitoring-

(2) PROJECT IMPLEMENTATION- Amounts transferred to the Secretary from the Fund shall be used to carry out ecological restoration treatments that are—

(A) consistent with the proposal and strategy; and

(B) identified through the collaborative process described in subsection (b)(2).

This draft environmental impact statement (DEIS) documents the analysis of three alternatives, including a "no action" alternative, which were developed for the Rim Country Project on the Apache-Sitgreaves, Coconino, and Tonto National Forests. Alternative 2, the modified proposed action, is the preferred alternative. The project proposes to conduct restoration activities over a 20-year period or until proposed activities are completed. Alternative 1 is the no-action alternative. Alternative 2, the modified proposed action, would mechanically treat vegetation on up to 889,340 acres and would treat up to 953,130 acres with prescribed fire; alternative 3 would mechanically treat up to 483,160 acres and burn up to 529,060

acres. Both of the action alternatives propose significant Forest Plan amendments that would amend the 1985 Tonto National Forest Plan. They are considered significant amendments because they are being considered in an Environmental Impact Statement (EIS).

Reviewers should provide the Forest Service with their comments during the review period of the DEIS. This will enable the Forest Service to analyze and respond to the comments at one time and to use information acquired in the preparation of the final environmental impact statement, thus avoiding undue delay in the decision-making process. Reviewers have an obligation to structure their participation in the National Environmental Policy Act process so that it is meaningful and alerts the agency to the reviewers' position and contentions. Environmental objections that could have been raised at the draft stage may be waived if not raised until after completion of the final environmental impact statement. Comments on the draft environmental impact statement should be specific and should address the adequacy of the statement and the merits of the alternatives discussed (40 CFR 1503.3).

The 90-day public comment period begins on the day after the Environmental Protection Agency publishes a notice of availability for the draft EIS in the Federal Register. Comments, including anonymous comments, will be accepted at any time. However, comments posted after the close of a designated comment period may not be able to be given full consideration. Anonymous comments and comments submitted after the close of the designated comment period will not provide the commenter standing for administrative review. In order to ensure full consideration of your comments, please submit them before the close of business on the last day of the comment period. Comments, including attachments, may be submitted using the web form at https://cara.ecosystem-management.org/Public/CommentInput?project=48210. Comments may also be submitted by email, mail, fax, or in person (8am-4:30pm M-F). E-mail electronic comments, including attachments, in Word (.doc or .docx), portable document format (.pdf), rich text format (.rtf), text (.txt), and hypertext markup language (.html) to 4fri_comments@fs.fed.us. Mail or hand deliver to: 4FRI Rim Country DEIS c/o Coconino National Forest Supervisor's Office, 1824 S. Thompson St., Flagstaff, AZ 86001. Fax to: (928) 527-3620.

Summary

The Rim Country Project is a project of the Four Forest Restoration Initiative (4FRI). 4FRI is a planning effort designed to restore ponderosa pine forest resilience and function across four national forests in Arizona: the Apache-Sitgreaves, Coconino, Kaibab, and Tonto National Forests (Figure S-1). In 2015, the Record of Decision for the first 4FRI EIS for the northern portion of the Coconino National Forest and the southern portion of Kaibab National Forest was signed.

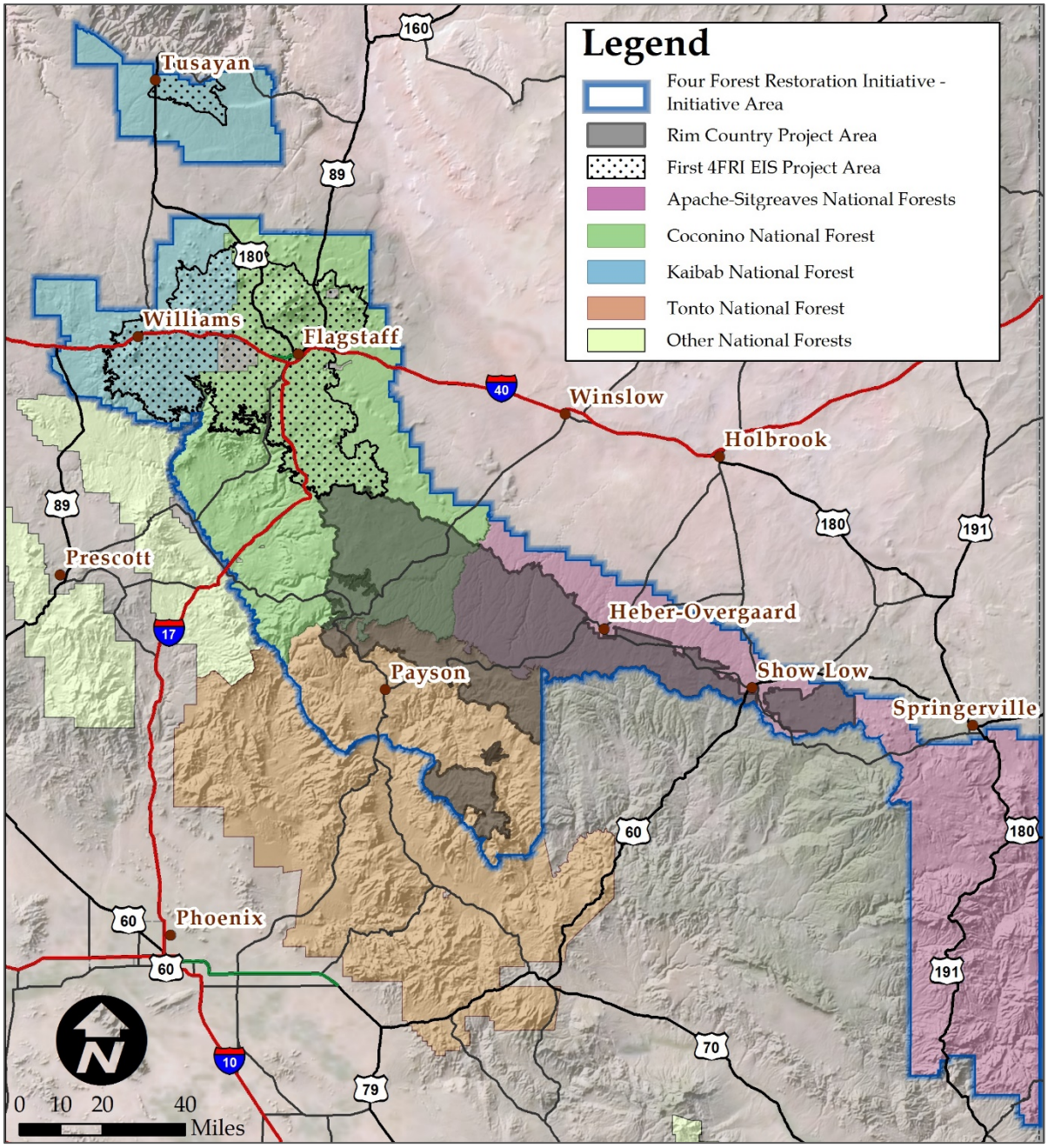

Figure S-1. Four Forest Restoration Initiative

4FRI is a result of many years of planning and collaboration among interested parties, groups and organizations, and federal, state and local government agencies. The focus has been to restore forest landscapes and reduce the potential for severe fire effects in a manner that also benefits the local economy. 4FRI was selected to receive Collaborative Forest Landscape Restoration Act (CFLRA) funding. CFLRA supports landscape restoration on National Forest System lands.

The purpose of the 4FRI Rim Country Project is to restore and maintain the structure, pattern, health, function, and vegetation composition and diversity in ponderosa pine ecosystems, thus moving the project area toward the desired conditions in the respective land and resource management plans. One outcome of restored ecosystems is increased resilience. Resilience is the ability of an ecosystem to survive natural disturbances such as fire, insects and disease, without changing its inherent function (FSH 1909.12,05; SER 2004). This project is needed to:

- Increase forest resilience and sustainability
- Reduce hazard of undesirable fire effects
- Improve terrestrial and aquatic species habitat
- Improve the condition and function of streams, springs and other aquatic and hydrological resources
- Restore riparian vegetation
- Preserve cultural resources
- Support sustainable forest products industries

To meet the purpose and need for action, the Apache-Sitgreaves, Coconino, and Tonto National Forests are proposing a suite of restoration activities on approximately 953,100 acres over a period of 20 years or when activities can be funded or completed. The area affected by the proposal includes approximately 540,020 acres on the Black Mesa and Lakeside Ranger Districts of the Apache-Sitgreaves National Forests, 398,880 acres on the Mogollon Rim and Red Rock Ranger Districts of the Coconino National Forest, and 299,710 acres on the Payson and Pleasant Valley Ranger Districts of the Tonto National Forest.

The 4FRI Rim Country Project has been published in the Apache-Sitgreaves, Coconino, and Tonto National Forests' Schedule of Proposed Actions since January of 2016. The notice of intent to prepare an environmental impact statement was published in the Federal Register on June 27, 2016 (81 FR 41517). A scoping document with the proposed action was sent to parties on the project mailing list (paper copies and electronic mail) and posted on the 4FRI website. Letters were mailed to 676 individuals, local governments, state governments, federal and state agencies, and organizations engaged with the three national forests. Public open houses were held on July 14, 2016 in Showlow, AZ and on July 21, 2016 in Payson, AZ to discuss the proposed action and accept comments. Fifty (50) scoping responses (e-mails letters and public meeting comment forms) were received from this effort.

Issues

Seven issues, including treatments in MSO PACs, treatments in goshawk habitat, large tree retention, dwarf mistletoe mitigation, smoke/air quality, economics, and roads, contributed to alternative and design feature/mitigation measure development and focused the analysis. See Table 17and chapter 1 for information on how these and other public concerns and recommendations were addressed.

Alternatives

Three alternatives were analyzed in detail and four alternatives were considered but eliminated from detailed study. The alternatives analyzed in detail include the no-action alternative (alternative 1), the modified proposed action (alternative 2), which is the preferred alternative, and one additional action alternative (alternative 3). Alternatives 2 and 3 respond to the seven significant issues for the Rim Country Project. See chapter 2 for detailed information on the alternatives considered and analyzed.

Comparison of Alternatives by Activity

Table S-1. Comparison of Alternatives by Activity

Proposed Activity	Alternative 1 No Action	Alternative 2 Modified Proposed Action (Preferred)	Alternative 3 Focused Alternative
Mechanical Treatment Intermediate thinning	No treatments would occur as a result of this alternative being selected	152,270	114,280
Stand improvement	No treatments would occur as a result of this alternative being selected	62,720	32,290
Single tree selection	No treatments would occur as a result of this alternative being selected	12,510	5,630
Uneven-aged group selection	No treatments would occur as a result of this alternative being selected	226,520	113,350
Aspen restoration	No treatments would occur as a result of this alternative being selected	1,230	1,010
Facilitative operations	No treatments would occur as a result of this alternative being selected	123,700	47,880
MSO recovery - replacement nest/roost	No treatments would occur as a result of this alternative being selected	25,290	19,590
MSO PAC - mechanical	No treatments would occur as a result of this alternative being selected	17,460	15,750
Savanna restoration	No treatments would occur as a result of this alternative being selected	18,570	2,470
Severe disturbance area treatment	No treatments would occur as a result of this alternative being selected	132,240	31,760
Wildland Urban Interface (WUI) & Infrastructure Protection	No treatments would occur as a result of this alternative being selected	63,930	46,260
Grassland restoration*	No treatments would occur as a result of this alternative being selected	36,280	36,280

Proposed Activity	Alternative 1 No Action	Alternative 2 Modified Proposed Action (Preferred)	Alternative 3 Focused Alternative
Wet meadow restoration*	No treatments would occur as a result of this alternative being selected	6,400	6,400
Riparian restoration*	No treatments would occur as a result of this alternative being selected	13,060	13,060
Total mechanical treatment (acres)	**No treatments would occur as a result of this alternative being selected**	**889,340**	**483,160**
Prescribed Fire Prescribed fire along with mechanical treatment	No treatments would occur as a result of this alternative being selected	889,340	483,160
Prescribed fire only	No treatments would occur as a result of this alternative being selected	63,790	45,900
Total prescribed fire (acres)	**No treatments would occur as a result of this alternative being selected**	**953,130**	**529,060**
Grassland Restoration Mechanical and Prescribed Fire	No treatments would occur as a result of this alternative being selected	36,280	36,280
Prescribed fire only	No treatments would occur as a result of this alternative being selected	40	40
Total grassland restoration* (acres)	**No treatments would occur as a result of this alternative being selected**	**36,320**	**36,320**
Wet Meadow Restoration Mechanical and Prescribed Fire	No treatments would occur as a result of this alternative being selected	6,410	6,410
Prescribed fire only	No treatments would occur as a result of this alternative being selected	310	310
Total wet meadow restoration* (acres)	**No treatments would occur as a result of this alternative being selected**	**6,720**	**6,720**
Riparian Restoration Mechanical and Prescribed Fire	No treatments would occur as a result of this alternative being selected	13,060	13,060
Prescribed fire only	No treatments would occur as a result of this alternative being selected	1,500	1,500
Springs restored (number)	No treatments would occur as a result of this alternative being selected	184	184

Proposed Activity	Alternative 1 No Action	Alternative 2 Modified Proposed Action (Preferred)	Alternative 3 Focused Alternative
Protective barriers around springs, aspen, native willows and bigtooth maples (miles)	No treatments would occur as a result of this alternative being selected	200	200
Stream restoration (miles)	No treatments would occur as a result of this alternative being selected	777	777
Existing road decommission (miles)	No treatments would occur as a result of this alternative being selected	490	490
Unauthorized route decommission (miles)	No treatments would occur as a result of this alternative being selected	800	800
Temporary road construction and decommission (miles)	No treatments would occur as a result of this alternative being selected	330	170
Road relocation and reconstruction (miles)	No treatments would occur as a result of this alternative being selected	As needed	As needed
Total riparian restoration* (acres)	**No treatments would occur as a result of this alternative being selected**	**14,560**	**14,560**

*Overlap exists between the riparian, grassland and wet meadow restoration categories (approximately 3,120 acres)

Design Features, Best Management Practices, and Conservation/Mitigation Measures

Project design features, best management practices and conservation/mitigation measures (hereafter referred to collectively as design features) that minimize or avoid effects from the proposed activities are included in the analysis in this DEIS (see appendix C).

Implementation Plan

A draft implementation plan (appendix D) was developed in conjunction with the design features found in appendix C. The implementation plan gives guidance that will be used by Forest Service personnel to ensure that treatments and activities are implemented to meet the purpose and need and Forest Plan standards and guidelines.

Monitoring and Adaptive Management

Appendix E includes the monitoring and adaptive management plan. This plan details the framework and process for monitoring restoration activities. The 4FRI Stakeholder Group and the Forest Service collaborated on the design of the monitoring and adaptive management plan.

Forest Plan Consistency

The Rim Country Project was reviewed for consistency with the direction in the Apache-Sitgreaves Revised Forest Plan (USDA Forest Service 2016), the Coconino Revised Forest Plan (USDA Forest Service 2018), and the current Tonto National Forest Plan, as amended (USDA Forest Service 2017).

Consistency evaluations can be found in each specialist report. The design features in appendix C and the implementation plan in appendix D also documents how treatment design meets Apache-Sitgreaves, Coconino, and Tonto National Forests Plan direction and desired conditions.

Apache-Sitgreaves National Forests: The revised Forest Plan for the Apache-Sitgreaves National Forests became effective in July of 2015, with minor changes in 2016. With design features, alternatives 2 and 3 are consistent with Forest Plan desired conditions, objectives, standards, and guidelines, although movement toward desired conditions varies by alternative. Forest Plan consistency evaluations are located in each specialist report, and design features to ensure that activities are consistent with Forest Plans are noted in appendix C.

Treatments to address high severity dwarf mistletoe infections in some stands include high intensity thinning and creation of considerable interspace in order to slow spread of mistletoe and with a purpose of improving forest health. A guideline in the Apache-Sitgreaves National Forest Plan states

> "On single species dominated sites, thinning should not be attempted where more than 80 percent of the host species – or 90 percent of the area - is infected with dwarf mistletoe. Regeneration and/or deferral may be used in these cases."

According to the 2012 Planning rule ((219.7(e)(l)(iii-iv) and 219.15(d)(2-3)), compliance with both standards and guidelines is mandatory, with standards requiring strict adherence to their terms, while guidelines allow for flexibility so long as the purpose for the guideline is achieved.

The approach to severe mistletoe infections in this document attempts modify stand characteristics (i.e. old and large tree retention, basal area, trees per acre, interspace and uneven-aged structure) to within the NRV and is considered a restoration-based treatment with the purpose of improving forest health and resilience. As a result, these treatments are consistent with the Apache-Sitgreaves Forest Plan.

Coconino National Forest: The revised Forest Plan for the Coconino National Forest became effective in June of 2018. With design features, alternatives 2 and 3 are consistent with Forest Plan desired conditions, objectives, standards, and guidelines, although movement toward desired conditions varies by alternative. Forest Plan consistency evaluations are located in each specialist report, and design features to ensure that activities are consistent with Forest Plans are noted in appendix C.

Tonto National Forest: The Tonto National Forest is presently going through the process of revising the Forest Plan. The current plan was developed under the 1982 Planning Rule and went into effect in 1985. Activities proposed in alternatives 2 and 3 are based on the best available scientific information, which includes more than 25 years of advances in forest management science and learning since the current Forest Plan was developed.

To align current Forest Plan standards and guidelines with best available scientific information, thereby making alternatives 2 and 3 consistent with the Forest Plan, three project-specific Forest Plan amendments are proposed (see appendix B). Each amendment is a one-time variance in the current Tonto National Forest Plan direction specifically for the Rim Country Project. The amended, direction would not apply to any other projects or areas outside of the Rim Country Project and it would cease to be in effect upon completion of the project. Analysis of the effects of the proposed amendments is integrated into the analysis of the alternatives presented in Chapter 3.

The purpose of amendment 1 is to bring the Forest Plan into alignment with the best available science (Reynolds et al. 2013) that provides desired conditions for restoring fire-adapted ponderosa pine in the Southwest. The purpose of amendment 2 is to bring the Forest Plan into alignment with the revised

Mexican Spotted Owl Recovery Plan (USDI Fish and Wildlife Service 2012) and defer monitoring to the Fish and Wildlife Service biological opinion that is specific to this project. The purpose of amendment 3 is to update Forest Plan language to account for advances in mechanized thinning technology and capabilities. Amendment 3 would remove language restricting the use of mechanical equipment to slopes less than 40 percent and identifying slopes above 40 percent as inoperable. Proposed language would allow the use of mechanized ground-based equipment to thin on slopes greater than 40 percent where it is not otherwise restricted and where it would not result in adverse effects on soil and water resources. This would allow for restoration treatments to be implemented on steeper slopes to meet the purpose and need of the Rim Project, and to move toward desired conditions in these areas.

With the proposed significant Forest Plan amendments (see appendix B) and the design features in appendix C, alternatives 2 and 3 are consistent with the direction in the 1985 Forest Plan.