

Errata for the Final Environmental Impact Statement for the Four-Forest Restoration Initiative, Coconino and Kaibab National Forests

Table 1. Four-Forest Restoration Initiative FEIS Errata

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
1	Chapter 3, Vegetation: Correct typographical error description of RU 6 that should be 93 acres and not 9. See replacement Table 39.	Table 39, p. 161: column 6: RU 6, row 4	9	93	Numbers are correct in specialist report. Analysis is not affected.
2	Chapter 3, Vegetation: Correct acres of MSO protected habitat by RU and total acres. See replacement Table 40.	Table 40, p. 161	36,027	35,262	Total acres of MSO protected habitat acres are reduced by 765 acres or about 2 percent. Wildlife and silviculture report use correct numbers and analyses are unaffected.
3	Chapter 3 Vegetation: Table 40 (Acres of MSO restricted habitat by RU and total acres). Correct total acres and clarify that 110,373 acres represent all MSO habitat. See replacement Table 40.	Table 40, p. 161	111,137 total acres of MSO habitat	110,373 total acres of MSO habitat	Change reduces restricted habitat acres by 764 acres or about 0.7 percent. Numbers are correct in wildlife and silviculture report. Analyses are not affected.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
4	Chapter 3, Vegetation: Correct Table 41 (goshawk habitat stratification). See replacement Table 41.	Table 41, p. 161	Nest habitat ac.: 6,961 PFA habitat ac.: 23,402 PFA/Nest ac.: 30,363 LOPFA habitat ac.: 367,452 Total Goshawk habitat ac.: 397,815	Nest habitat ac.: 6,840 PFA habitat ac. : 23,174 PFA/Nest ac.: 30,014 LOPFA habitat ac.: 367,452 Total Goshawk habitat ac: 397,466	Changes are less than 2 percent in nest habitat and about 1 percent in PFA habitat. There is no change in the percent of LOPFA habitat. Analysis conclusions are unchanged.
5	Chapter 3 Vegetation: Correct Table 43 (Alternatives A through E Comparison of Canopy Openness). See replacement Table 43.	Table 43, p. 163: column 5, row 1	45 percent	46 percent	Change equates to 1 percent. There is no change to environmental consequences or conclusions.
6	Chapter 3, Vegetation: Correct Alternative B (Canopy Openness and Maintenance of Interspace).	Page 164, line 9	74 percent moderately closed	75 percent moderately closed	Change equates to 1 percent. There is no change to environmental consequences or conclusions.
7	Chapter 3 Vegetation: Correct Table 49 (Alternatives A through VSS distribution for goshawk LOPFA habitat). See replacement Table 49.	Table 49, Page 171	No current corresponding language	Footnote added to table 49: The desired conditions for VSS percentages of 10, 10, 20, 20, 20 and 20 are for the Coconino NF only. The desired conditions for the Kaibab NF are for uneven-aged forests at the mid-scale.	Correct in both silviculture and wildlife analysis.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
8	Chapter 3, Vegetation: Correct Table 51 (Alternatives A through E Mexican spotted owl habitat forest structure and components). See replacement Table 51.	Table 51, p. 173	Replace entire table to match silviculture report which separates target and threshold MSO habitat	See replacement table 51	Correct in both silviculture and wildlife effects analysis.
9	Chapter 3 Vegetation: Correct Table 52 (Alternatives A through E bark beetle hazard rating). See replacement Table 52.	Table 52, p. 176	1 percent rounding errors	See replacement table 52	Change equates to three 1 percent rounding errors. Correct in silviculture effects analysis.
10	Chapter 3, Vegetation: Correct table 53 (Alternatives A through E dwarf mistletoe infection rating).	Table 53, p. 177	Less than 1 percent to 1 percent rounding errors in all alternatives but E.	See replacement table 53	Less than 1 percent to one percent rounding error in all alternatives but E. Two percent decrease in the none/low and moderate/high categories. Corrected in silviculture report.
11	Chapter 3, Vegetation: Correct Table 55 (Cubic feet of biomass (forest products) by alternative and national forest) and narrative section. The DEIS cubic feet of biomass by alternative and forest was not updated in the FEIS. See replacement Table 55.	Table 55, p. 179	The direct benefits to the Coconino NF from timber harvest would range from 243,299,684 cubic feet of forest products to 245,343,350 (alternative E and C). On the Kaibab NF, the output would range from 122,393,816 cubic feet (alternative E) to 122,856,697 (alternative B and D).	The direct benefits to the Coconino NF from timber harvest would range from 233,709,693 cubic feet of forest products to 243,723,353 (alternative E and C). On the Kaibab NF, the output would range from 115,595,369 cubic feet (alternative E) to 123,259,585 (alternative B and D).	The change in Alt E equates to about 7 percent (decrease). This is not significant because it is a reduction and falls within the confidence intervals of the project data.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
12	Chapter 3, Fire Ecology: Correct Table 56 (Modeled fire type for alternative A (2020 by restoration unit* in acres and (percent of treatment area)). See replacement Table 56.	Table 56, p. 197, column 5, row, 6	8,147 (1%)	8,146 (1%)	Correction equates to a 1 acre rounding error. Environmental consequences and conclusions are not affected.
13	Chapter 3, Fire Ecology: Correct Table 56 from FEIS rounding errors. See replacement Table 56.	Table 56, p. 197	Table 56	See replacement Table 56	All changes are so small that analysis conclusions are not affected: Acres change by 1 in each category and percent changes range from <1 to 1.
14	Chapter 3, Fire Ecology: Clarification statement added to fire ecology section	p. 187	Consultation with the weed coordinator for the Coconino National Forest resulted in better numbers for uncharacteristic vegetation (non-native dominated) acres for the ponderosa pine.	Consultation with the weed coordinator for the Coconino National Forest resulted in better numbers for uncharacteristic vegetation (non-native dominated) acres for the ponderosa pine, relative to the FRCC analysis.	Clarification statement that does not change environmental consequences or conclusions.
15	Chapter 3, Fire Ecology: Correct Table 61 heading to omit "classified by treatment intensity". See replacement Table 61.	Table 61, p. 203	Table 61. Alternatives B through E surface fuel loadings in ponderosa pine from 2010 to 2040 (average by stand and classified by treatment intensity)	Table 61. Alternatives B through E surface fuel loadings in ponderosa pine from 2010 to 2040 (average by stand)	No change in content or analysis conclusions.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
16	Chapter 3, Fire Ecology: Correct Table 62 FEIS rounding error. See replacement Table 62.	Table 62, p. 204	29% VCC 1, Alt C, 2020	27% VCC 1, Alt C 2020	This is a 2 percent rounding error correction. Analysis conclusions do not change.
17	Chapter 3, Fire Ecology: Correct Alternative B acres. Updates to DEIS were not incorporated into FEIS.	p. 217	Under alternatives B, the number of acres available for prescribed fire would be 586,211 acres, which would average 58,792 acres a year.	Under alternatives B, the number of acres available for prescribed fire would be 583,330 acres, which would average 58,333 acres a year.	Environmental consequences and conclusions are not affected.
18	Chapter 3, Fire Ecology: Correct Alternative D acres. DEIS updates were not incorporated into the FEIS.	p. 220	In most of the area that was thinned and not burned (388,526 acres), there would be potential for greater wildfire emissions from increased surface fuel loading.	In most of the area that was thinned and not burned (388,966 acres), there would be potential for greater wildfire emissions from increased surface fuel loading.	Change equates to 440 acres or less than 1 percent. Environmental consequences and conclusions are not affected.
19	Chapter 3, Wildlife: Correct Table 66 (other cover types in treatment area). See replacement Table 66.	Table 66, page 227	80,876 acres	80,877 acres	Correction is a 1 acre rounding error. Analysis conclusions do not change.
20	Chapter 3, Wildlife: Correct acres of MSO restricted habitat Updates from DEIS were not incorporated into the FEIS.	Chapter 3, p. 230	Approximately 76,091 acres of MSO restricted habitat exists within the treatment area, including 1,977 threshold acres and 6,736 target acres.	Approximately 75,111 acres of MSO restricted habitat exists within the treatment area, including 1,977 threshold acres and 6,715 target acres.	Change in restricted habitat acres equates to about 980 acres or about 1 percent. The change in target habitat is 21 acres or less than 1 percent. Wildlife analysis used correct numbers.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
21	Chapter 3, Wildlife: Correct MSO CHU habitat acres. Updates from DEIS were not incorporated into the FEIS.	Chapter 3, p. 231	Approximately 91,047 acres of CHU occur within the treatment area.	Approximately 88,915 acres of CHU occur within the treatment area.	Change equates to 2,132 acres or approximately 2 percent. Wildlife effects analysis used correct numbers. Environmental consequences and conclusions are not affected.
22	Chapter 3, Wildlife: Correct mechanical treatment acres (2 acres) in restricted habitat	Chapter 3, p. 238	Mechanical treatments would occur on about 71,172 acres of restricted habitat, or 95 percent of the total 75,111 restricted acres in the treatment area	Mechanical treatments would occur on about 71,173 acres of restricted habitat, or 95 percent of the total 75,111 restricted acres in the treatment area	Change equates to 1 acre. Environmental consequences and conclusions are not affected.
23	Chapter 3, Wildlife: Correct acres to be treated in restricted and target habitat with clarification added to the acres of burn-only treatments.	Chapter 3, p. 240	Prescribed fire in association with mechanical treatments would occur across about 73,828 acres of restricted habitat, including 6,713 acres of target and 1,976 acres of threshold habitats. This would include 2,354 acres of burn-only treatments in restricted habitat and about 300 acres of burn-only prescriptions in target and threshold habitat.	Prescribed fire in association with mechanical treatments would occur across about 71,173 acres of restricted habitat, including 6,495 acres of target and 1,892 acres of threshold habitats. An additional 2,354 acres of burn-only treatments would occur in restricted habitat with just over 300 acres of burn-only prescriptions in target and threshold habitat.	Change decreases the acres of fire in restricted habitat by about 3 percent. Wildlife analysis used correct numbers. The words “An additional” and “treatments would occur” and “with just over” are clarifying statements.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
24	Chapter 3, Wildlife: Correct acres of restricted habitat improved (outside of target and threshold habitat)	FEIS, Chapter 3, p. 240	More mechanical treatments and the more open nature of foraging habitat would allow fire to achieve more fuels reduction in restricted habitat outside of target and threshold habitat (65,139 acres).	More mechanical treatments and the more open nature of foraging habitat would allow fire to achieve more fuels reduction in restricted habitat outside of target and threshold habitat (62,785 acres).	Change equates to less 2,354 acres or about 3 percent. The wildlife analysis does not change because the correction addresses conclusions are accurate. The difference in numbers relative to treatment conclusions is inconsequential to the wildlife analysis.
25	Chapter 3, Wildlife: Correct Table 69 acres in MSO habitat subject to surface fire behavior (round errors). See replacement Table 69.	Chapter 3, Table 69, p. 232	17,954 acres of surface fire in protected habitat, 35, 019 acres of surface fire in restricted habitat	18,122 acres of surface fire in protected habitat, 35, 123 acres of surface fire in restricted habitat	Change equates to 104 acres out of about 35,000 acres of habitat. The change will not affect the wildlife analysis. The 4-acre change in restricted habitat is less than 1 percent.
26	Chapter 3, Wildlife: Correct acres of MSO restricted habitat. Address rounding error in acres of MSO target habitat.	Chapter 3, p. 240	Prescribed fire in association with mechanical treatments would occur across about 73,828 acres of restricted habitat, including 6,713 acres of target and 1,976 acres of threshold habitats.	Prescribed fire in association with mechanical treatments would occur across 71,173 acres of restricted habitat, including 6,495 acres of target and 1,892 acres of threshold habitats.	The wildlife analysis is correct and not affected.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
27	Chapter 3, Wildlife: Correct acres of restricted habitat. Updates to the DEIS were not incorporated into the FEIS.	Chapter 3, p. 240	More mechanical treatments and the more open nature of foraging habitat would allow fire to achieve more fuels reduction in restricted habitat outside of target and threshold habitat (65,139 acres).	More mechanical treatments and the more open nature of foraging habitat would allow fire to achieve more fuels reduction in restricted habitat outside of target and threshold habitat (62,785 acres).	Correction equates to 2,354 acres or about 4 percent change. Environmental consequences and analysis conclusions do not change.
28	Chapter 3, Wildlife: Clarification adds "about" to the number of acres of mechanical thinning with prescribed fire in alternative E.	Chapter 3, p. 243	In alternative E, treatments in Mexican spotted owl habitat include 81,500 acres of mechanical thinning with prescribed fire and 22,738 acres of only low severity prescribed fire.	In alternative E, treatments in Mexican spotted owl habitat include about 81,500 acres of mechanical thinning with prescribed fire and 23,738 acres of only low severity prescribed fire.	Clarification does not affect the wildlife analysis.
29	Chapter 3, Wildlife: Revision of wording for MSO restricted habitat acres and percent of habitat treated to improve clarity.	Chapter 3, p. 243	On average about 7,383 acres of restricted habitat would be treated per year and more than 98 percent of restricted habitat would be treated with prescribed fire.	On average about 7,383 acres of restricted habitat would be treated per year, including more than 98 percent of restricted habitat that would be treated with prescribed fire.	Editing that improves clarity does not affect the wildlife analysis.
30	Chapter 3, Wildlife: Correct alternative E acres of restricted habitat (that includes target and threshold habitat). Alternative C acres were transposed into alternative E in the FEIS.	FEIS, p. 245	Prescribed fire in association with mechanical treatments would occur across about 73,828 acres of restricted habitat, including 6,713 acres of target and 1,976 acres of threshold habitats.	Prescribed fire in association with mechanical treatments would occur across about 71,173 acres of restricted habitat, including 7,059 acres of target and 1,892 acres of threshold habitats.	Alternative C numbers were transposed into alternative E in the FEIS. Wildlife report and analysis is correct and not affected.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
31	Chapter 3, Wildlife: Correct restricted habitat acres outside of target and threshold habitat. Alternative C numbers were transposed into alternative E in the FEIS.	FEIS, p. 245	More mechanical treatments and the more open nature of foraging habitat would allow fire to achieve more fuels reduction in restricted habitat outside of target and threshold habitat (65,139 acres).	More mechanical treatments and the more open nature of foraging habitat would allow fire to achieve more fuels reduction in restricted habitat outside of target and threshold habitat (64,576 acres).	Change in acres equates to 563 acres or less than 1 percent. Wildlife report and analysis used correct numbers. Environmental consequences and analysis conclusions do not change.
32	Chapter 3, Wildlife: Correct Alternative E acres in Table 71 and see replacement Table 71.	Table 71, FEIS, p. 248	See Table 71	See Replacement Table 71	Wildlife analysis compares alternatives by MSO habitat type. The analysis (and narrative) is correct. Change is less than 1 percent for each treatment category and inconsequential to cumulative effects – are summary numbers only.
33	Chapter 3, Wildlife: Correct typographical error on buffer acres.	FEIS, p. 248	About 119,000 acres of MSO habitat are or have been proposed for treatment within the 1/5 buffer of the entire 4FRI project area.	About 119,000 acres of MSO habitat are or have been proposed for treatment within the 1/2 mile buffer of the entire 4FRI project area.	Typo in FEIS and wildlife report. No change in analysis because acres do not change in the wildlife report.
34	Chapter 3, Wildlife: Correct metrics. Updates were not incorporated from DEIS to FEIS. See replacement Table 72.	Table 72, FEIS, p. 250	See Table 72	See replacement Table 72	Corrected MSO acres are smaller than those analyzed. Wildlife analysis over-estimated cumulative impacts.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
35	Wildlife, Chapter 3: Correct typographical error: only 1 rock pit (out of 39) is within narrow-headed garter snake habitat. See replacement Table 74.	Table 74, FEIS, p. 258	Table 74 indicates 39 rock pits are within narrow-headed garter snake habitat.	Table 74 indicates 1 rock pit is within narrow headed garter snake habitat.	Thirty-nine rock pits are located outside the analysis footprint. Only one pit is within subunit 3-5 which includes narrow-headed garter snake habitat.
36	Wildlife, Chapter 3: Correct acres of northern leopard frog habitat by RU. Updates to the DEIS were not incorporated into the FEIS.	Table 75, FEIS, p. 263	RU 1 has 8,230 acres of grassland and 145,793 acres of ponderosa pine, 24 miles of riparian habitat and ephemeral streams and 32 springs.	RU 1 has 8,226 acres of grassland and 144,114 acres of ponderosa pine, 24 miles of riparian habitat and ephemeral streams and 32 springs.	The change decreases acres in non-frog habitat. The analysis is not affected and the effects determination does not change.
37	Chapter 3, Wildlife: Correct acres of ponderosa pine in bald eagle habitat. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 263	Potential habitat within the treatment area is 512,168 acres of ponderosa pine but its habitat is primarily within 2.5 miles from bodies of permanent water (i.e. Upper and Lower Lake Mary, Horseshoe Lake, Mormon Lake and Roger's Lake) and along major roadways (i.e. Interstate 17, 40, 89A and 89N and Federal Highway 3).	Potential habitat within the treatment area is 507,839 acres of ponderosa pine but its habitat is primarily within 2.5 miles from bodies of permanent water (i.e. Upper and Lower Lake Mary, Horseshoe Lake, Mormon Lake and Roger's Lake) and along major roadways (i.e. Interstate 17, 40, 89A and 89N and Federal Highway 3).	All numbers are correct in the wildlife report. The analysis is not affected and the effects determination does not change.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
38	Chapter 3, Wildlife: Correct total acres of goshawk PFAs and dispersal PFAs. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 263	All or parts of 60 PFAs occur within the 4FRI analysis area, comprising 30,011 acres. All or parts of eighteen dispersal PFAs have been identified in the 4FRI analysis area, comprising 10,023 acres.	All or parts of 60 PFAs occur within the 4FRI analysis area, comprising 30,363 acres. All or parts of eighteen dispersal PFAs have been identified in the 4FRI analysis area, comprising 10,269 acres.	In wildlife analysis the acres of PFAs and dispersal PFAs related to treatment are correct. The analysis is not affected and the effects determination does not change.
39	Chapter 3, Wildlife: Correct total acres of grassland foraging habitat for American Peregrine Falcon. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 264	Foraging habitat in the treatment area is primarily 48,774 acres of grassland, 39 miles of riparian habitat and ephemeral streams, and 74 springs and wetlands. .	Foraging habitat in the treatment area is primarily 48,703 acres of grassland, 39 miles of riparian habitat and ephemeral streams, and 74 springs and wetlands.	Wildlife report is correct. The analysis is not affected and the effects determination does not change.
40	Chapter 3, Wildlife: Correct total acres of grassland habitat for Western Burrowing Owl. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 264	There are 48,774 acres of grassland habitat within the treatment area that provides potential habitat for prairie dogs and consequently, burrowing owls.	There are 48,703 acres of grassland habitat within the treatment area that provides potential habitat for prairie dogs and consequently, burrowing owls.	Wildlife report is correct. The analysis is not affected and the effects determination does not change.
41	Chapter 3, Wildlife: Correct total acres of ponderosa pine and grasslands in the treatment area relative to the Navajo Mogollon Vole. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 264	There are 512,178 acres of ponderosa pine and 48,774 acres of grassland within the treatment area.	There are 507,839 acres of ponderosa pine and 48,703 acres of grassland within the treatment area.	The net result is a decrease in non-frog habitat. The analysis is not affected and the effects determination remains unchanged.

Errata No.	Description	FEIS Location	FEIS Language	Errata (most changes are in bold type)	Significance Evaluation (as appropriate)
42	Wildlife, Chapter 3, Correct total acres of ponderosa pine and grasslands in the treatment area relative to the Western Red Bat. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 264	Potential foraging habitat within the treatment area includes 512,178 acres of ponderosa pine and 48,774 of grassland.	Potential foraging habitat within the treatment area includes 507,839 acres of ponderosa pine and 48,703 of grassland.	Wildlife report is correct. The analysis is not affected and the effects determination does not change.
43	Wildlife, Chapter 3: Correct total acres of ponderosa pine and grasslands in the treatment area relative to the spotted bat. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 264	There are 512,178 acres of ponderosa pine and 48,774 acres of grassland within the treatment area.	There are 507,839 acres of ponderosa pine and 48,703 acres of grassland within the treatment area.	Wildlife report is correct. The analysis is not affected and the effects determination does not change.
44	Wildlife, Chapter 3: Correct total acres of ponderosa pine and grasslands in the treatment area relative to the Allen's Lappet-browed bat. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 265	Potential habitat within the treatment area is 512,178 acres of ponderosa pine and 25,658 acres of pinyon-juniper.	Potential habitat within the treatment area is 507,839 acres of ponderosa pine and 25,658 acres of pinyon-juniper.	Wildlife report is correct. The analysis is not affected and the effects determination does not change.
45	Wildlife, Chapter 3: Correct total acres of ponderosa pine and grasslands in the treatment area relative to the Pale Townsend's Big-eared bat. DEIS updates were not incorporated into the FEIS.	Table 75, FEIS, p. 265	Potential habitat within the treatment area is 512,178 acres of ponderosa pine and 25,658 acres of pinyon-juniper.	Potential habitat within the treatment area is 507,839 acres of ponderosa pine and 48,703 acres of grassland.	Wildlife report is correct. The analysis is not affected and the effects determination does not change.

Replacement Tables

Note: Corrections (acres) are in bold type

Table 39. Treatment area vegetation cover type acres by restoration unit (RU)

Cover Type	RU 1	RU 3	RU 4	RU 5	RU 6	Total
Nonvegetated						
Barren	120	134	129	1,301	48	1,732
Non-forest Communities						
Grassland	8,226	12,796	22,661	4,928	93	48,703
Forest Communities						
Pinyon-juniper Woodland	1,427	5,884	7,283	8,845	2,219	25,658
Oak Woodland	287	1,633	926	386	30	3,262
Ponderosa Pine	144,113	129,226	134,278	59,034	41,189	507,839
Aspen	420	201	497	403	0	1,522
Total Forested Acres:	146,248	136,944	142,984	68,668	43,437	538,280
Total Treatment Area (acres)	154,594	149,874	165,774	74,896	43,578	588,716

Table 40. Mexican spotted owl (MSO) habitat stratification within the treatment area (in acres) by restoration unit (RU)

MSO Habitat	RU 1	RU 3	RU 4	RU 5	RU 6	Total
Protected Habitat						
Protected Activity Center (PAC)	28,457	4,555	555	859	0	34,426
Pine Oak >40% Slope	595	238	3	0	0	836
Total MSO Protected Acres:	29,052	4,793	558	859	0	35,262
Restricted Habitat – Pine Oak						
Threshold	873	1,104	0	0	0	1,977
Target	3,920	2,795	0	0	0	6,715
Restricted Other	25,710	38,527	1,576	606	0	66,419
Total MSO Restricted Acres:	30,503	42,426	1,576	606	0	75,111
Total MSO Habitat Acres:	59,555	47,219	2,134	1,465	0	110,373

Table 41. Northern goshawk habitat stratification within the treatment area (acres by RU)

Northern Goshawk Habitat	RU 1	RU 3	RU 4	RU 5	RU 6	Total
Nest Habitat	1,126	1,247	3,489	410	616	6,840
Post-fledging Family Area (PFA)						
Uneven-aged	2,149	1,991	3,780	888	2,607	11,415
Even-aged	1,396	2,391	6,216	929	827	11,759
Total PFA	3,545	4,382	9,996	1,817	3,434	23,174
Total PFA and Nest	4,671	5,582	13,485	2,227	4,050	30,014
Landscapes Outside Post-fledging Family Areas (LOPFA)						
Uneven-aged	41,479	30,013	38,981	29,757	22,816	163,046
Even-aged	38,410	46,411	79,678	25,584	14,323	204,406
Total LOPFA:	79,889	76,424	118,659	55,341	37,139	367,452
Total Goshawk Habitat	84,559	82,006	132,144	57,568	41,189	397,466

Table 43. Alternatives A through E comparison of canopy openness

Alternative	Very Open	Open	Moderately Closed	Closed
Current Condition (Alternative A)	3	22	29	46
Alternative B	13	46	28	13
Alternative C	13	45	28	14
Alternative D	13	46	28	13
Alternative E	3	54	29	14

Table 49. Alternatives A through E in 2020 and 2050 VSS distribution for goshawk LOPFA even-aged and uneven-aged stands (percent of area)

Alternative	VSS 1 (Desired 10%)		VSS 2 (Desired 10%)		VSS 3 (Desired 20%)		VSS 4 (Desired 20%)		VSS 5 (Desired 20%)		VSS 6 (Desired 20%)	
	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050
Even-aged LOPFA												
A	7%	0%	0%	7%	35%	8%	49%	47%	7%	33%	2%	5%
B	12%(-1)	0%	0%	12%	23%	3%	37%	30%	26%	34%	3%	21%
C	Alt B	Alt B	Alt B	Alt B	Alt B	Alt B	47% (+1)	Alt B	Alt B	Alt B	7%(-1)	Alt B
D	Alt B	Alt B	Alt B	10% (+1)	32% (+9)	7% (+4)	30% (-7)	29% (-1)	22% (-4)	36% (+2)	Alt B	16% (-5)
E	14% (+1)	Alt B	Alt B	14% (+2)	Alt B	Alt B	42% (+5)	33% (+3)	22% (-4)	40% (+6)	1% (-2)	10% (-11)
Uneven-Aged LOPFA												
A	0%	0%	1%	0%	36%	8%	34%	42%	14%	25%	15%	25%
B	7%	0%	0%	6%	17%	1%	20%	19%	33%	19%	23%	55%
C	6%(-1)	Alt B	Alt B	7%(+1)	18%(+1)	Alt B	Alt B	Alt B	Alt B	Alt B	Alt B	54% (-1)
D	6%(-1)	Alt B	1% (+1)	Alt B	26% (+9)	7 (+6)	18%(-2)	Alt B	31% (-2)	18% (-1)	18% (-5)	50% (-5)
E	Alt B	Alt B	Alt B	7% (+1)	19% (+2)	Alt B	21% (+1)	20%(+1)	32%(-1)	21% (+2)	21% (-2)	51%(-4)

Table 51. Alternatives A through E Mexican spotted owl habitat forest structure and habitat components projected to the years 2020 and 2050**

Alternative	Basal Area (BA)		SDI (% of maximum)		12.0–17.9 in. (% of total SDI)		18.0–23.9 in. (Avg. % of total SDI)		24.0 in.+ (Avg. % of total SDI)		Average Trees per Acre 18 in.+		Average Gambel Oak BA % of Total BA		Tons CWD >12 in.		Snags >18 in.	
	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050
Protected																		
A	164	181	80	81	31	28	16	22	8	11	18	27.6	13	15	1.1	2.4	0.5	1.2
B	155	176	72	76	32	28	17	24	9	13	18	28	14	15	0.8	2.1	0.7	1.7
C	152	174	71	75	32	27	18	25	9	13	18.2	28.5	14	15	0.7	2.1	0.7	1.7
D	159	178	75	77	32	28	17	24	9	12	18.1	28.1	14	14	1.1	2.3	0.7	1.7

Alternative	Basal Area (BA)		SDI (% of maximum)		12.0–17.9 in. (% of total SDI)		18.0–23.9 in. (Avg. % of total SDI)		24.0 in.+ (Avg. % of total SDI)		Average Trees per Acre 18 in.+		Average Gambel Oak BA % of Total BA		Tons CWD >12 in.		Snags >18 in.	
	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050
E	159	179	74	78	32	29	17	23	9	12	18.1	28.0	14	15	0.9	2.3	0.7	1.7
Threshold																		
A	199	217	100	101	24	22	24	27	6	9	28.4	35.6	31	29	1.6	2.8	0.8	1.7
B	171	201	87	95	24	19	28	30	7	11	29	37	36	34	1.0	2.1	0.7	1.7
C	163	195	84	93	20	19	28	26	7	12	27.6	33.2	38	35	1.1	2.0	0.7	1.5
D	173	201	88	95	24	19	27	30	7	11	28.8	37.3	35	33	1.6	2.6	0.7	1.7
E	171	201	87	95	24	19	28	30	7	11	28.9	37.0	36	34	1.0	2.1	0.7	1.7
Target																		
A	162	183	82	84	28	27	14	19	8	10	16.1	23.4	22	23	1.5	2.4	0.6	1.4
B	139	171	71	79	29	24	17	21	9	12	16	25	26	26	0.9	1.9	0.5	1.4
C	129	164	67	78	24	22	17	18	10	13	15.6	21.5	28	29	1.1	1.8	0.5	1.2
D	142	172	72	80	29	24	17	21	9	11	16.5	24.7	25	26	1.5	2.3	0.5	1.4
E	139	171	72	80	28	23	17	21	9	12	16.3	24.5	26	27	0.9	1.8	0.5	1.4
Alternative	Basal Area (BA)		SDI (% of maximum)		12.0–17.9 in. (% of total SDI)		18.0–23.9 in. (Avg. % of total SDI)		24.0 in.+ (Avg. % of total SDI)		Average Trees per Acre 18 in.+		Average Gambel Oak BA % of Total BA		Tons CWD >12 in.		Snags >18 in.	
	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050	2020	2050
Restricted Other																		
A	147	169	72	76	30	28	14	20	7	10	14.1	22.8	19	21	0.6	1.5	0.5	1.1
B	78	111	37	49	25	20	21	20	13	18	11	17	25	26	0.8	1.6	0.9	0.9
C	79	112	37	49	25	21	21	20	13	18	11.5	17.1	25	26	0.8	1.6	0.9	0.9
D	91	127	46	58	23	20	19	18	11	15	11.8	17.0	26	28	1.1	1.5	0.5	0.9
E	79	112	37	49	25	21	21	20	13	18	11.4	17.1	24	26	0.8	1.6	0.9	0.9

*Restricted target/threshold is displayed as (average target/average threshold) a combined average.

**In comparison to table 7 in chapter 1, two additional evaluation categories have been included: average percent of total SDI by size class and average Gambel oak BA (percent of total BA).

Note: This table is meant to replace table 51 in its entirety.

Table 52. Alternatives A through E 2020 and 2050 bark beetle hazard rating

Hazard Rating	Alternative A % of Area	Alternative B % of Area	Alternative C % of Area	Alternative D % of Area	Alternative E % of Area
Low – 2020	4	45	44	27	41
Low – 2050	1	13	13	8	5
Moderate – 2020	13	33	34	30	36
Moderate – 2050	7	34	34	23	39
High – 2020	83	22	22	43	23
High – 2050	92	53	53	69	56

Table 53. Alternatives A through E 2020 and 2050 dwarf mistletoe infection level

Infection Level		Current Condition	Alt A	Alt B	Alt C	Alt D	Alt E
		2010	2020/2050	2020/2050	2020/2050	2020/2050	2020/2050
None/ Low	Percent of Area	66	59/56	60/57	60/57	60/56	62/59
Moderate/ High	Percent of Area	34	41/43	40/43	40/43	40/44	38/41
Extreme	Percent of Area	<1	<1/1	<1/<1	<1/<1	<1/<1	<1/<1

Table 55. Cubic feet of biomass (Forest Products) by alternative and national forest

National Forest	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Coconino NF	0	240,007,511	243,723,353	240,004,863	233,709,693
Kaibab NF	0	123,259,585	123,012,232	123,012,232	115,595,369
Total	0	363,267,096	366,735,585	363,264,449	349,305,061

Table 56. Modeled fire type for alternative A (2020) by restoration unit* in acres and (percent of treatment area)

RU	Surface	Passive	Active	No Fire
RU 1	85,639 (55%)	16,450 (11%)	51,355 (33%)	939 (1%)
RU 3	90,371 (60%)	12,941 (9%)	45,500 (30%)	903 (1%)
RU 4	111,515 (67%)	10,968 (7%)	42,643 (26%)	519 (<1%)
RU 5	51,458 (70%)	6,447 (9%)	9,558 (13%)	5,740 (8%)
RU 6	37,120 (85%)	2,768 (6%)	3,597 (8%)	45 (<1%)
Total	376,103 (64%)	49,574 (9%)	152,653 (26%)	8,146 (<2%)

Table 61. Alternatives B through E surface fuel loadings in ponderosa pine from 2010 to 2040 (averaged by stand)

Alternative	Year	>15 tons/acre (% ponderosa pine/acres)	>20 tons/acre (% ponderosa pine/acres)
Current Condition	2010	11 / 66,871	1 / 2,953
Alternative B	2020	1 / 5,418	<1 / 1,048
	2040	11 / 60,396	1 / 5,572
Alternative C	2020	<1 / 2,569	<1 / 810
	2040	10 / 60,205	<1 / 3,531
Alternative D	2020	17 / 77,294	1 / 3,298
	2040	32 / 172,131	4 / 19,269
Alternative E	2020	1 / 9,075	<1 / 1,579
	2040	11 / 65,054	1 / 8,005

Table 62. Percent change in fire regime condition class (FRCC) by alternative and year (2020 and 2050)

VCC	Existing Condition (2010)	Percent (%) Change in FRCC by Alternative and Year							
		Alt B		Alt C		Alt D		Alt E	
		2020	2050	2020	2050	2020	2050	2020	2050
VCC 1	14	26	15	27	16	16	9	22	11
VCC 2	25	69	49	69	49	49	46	73	49
VCC 3	61	5	36	4	35	35	45	5	40
FRCC	3	2	2	2	2	2	3	2	2

Table 66. Acres of treatment and nontreatment areas within the 4FRI project area

Area	Description	Acres
Project Area	Total area within 4FRI project boundary	988,764
Exclusions	Other projects	213,090
	Special management areas (wilderness, research natural areas, inventoried roadless areas, Camp Navajo, and experimental forests)	30,668
	Non-FS lands	145,156
	Miscellaneous (other cover types, no-treatment protected activity center (PAC) core areas, inaccessible areas, etc.)	11,138
	Total excluded areas within 4FRI project boundary	400,052
Treatment Area	Ponderosa pine treatment area	507,839
	Other cover types treatment area	80,877
	Area within the proposed treatment boundary (includes mechanical treatment and prescribed burning)	588,716

Table 69. Predicted fire behavior in existing (year 2010) Mexican spotted owl habitat

Mexican Spotted Owl Habitat	Habitat Acres	Surface Fire (Acres)	Passive Crown Fire (Acres)	Active Crown Fire (Acres)	Surface Fire (%)	Passive Crown Fire (%)	Active Crown Fire (%)
Protected	35,262	18,122	3,034	14,106	51	9	40
Target/Threshold	8,692	4,275	922	3,482	49	11	40
Restricted	66,419	35,123	6,540	24,756	53	10	37

*Acres by fire behavior-type do not equal total acres due to excluded areas that would not support fire such as rock, cinders, and areas with insufficient fuels

Table 71. Total acres of mechanical thinning and prescribed fire by alternative with the addition of past, current and future foreseeable projects in the project area

Action	Total Mechanical Treatment	Total Prescribed Burn	Total Cumulative and Proposed Mechanical Treatments	Total Cumulative and Proposed Prescribed Fire
Total Past, Current and Future Foreseeable Projects in the Project Area	166,520	208,268		
Alternative B	384,966	583,330	551,486	791,598
Alternative C	431,049	586,110	597,569	794,378
Alternative D	384,966	178,441	551,486	386,709
Alternative E	403,218	581,020	569,738	789,288

Table 72. Cumulative acres of treatment in the 4FRI project area and a ½ mile beyond the project area for Mexican spotted owl

Cumulative Effects in the 4FRI Project Area	Thin ponderosa pine habitat	Prescribed burn ponderosa pine habitat	Goshawk PFA/nest treatments	Thin mixed conifer habitat	Prescribed burn mixed conifer habitat	Thin MSO protected habitat	Prescribed Burn MSO protected habitat	Thin MSO Restricted habitat	Prescribed Burn MSO Restricted habitat
Current	57,508	84,514	228	752	811	1,052	1,306	17,223	20,398
Future foreseeable	39,159	38,255	2,047	2,792	2,792	6,357	931	10,935	11,347
Past	27,249	47,914	1,218	0	0	0	0	0	0
Total	123,916	170,683	3,493	3,544	3,603	7,409	2,237	28,158	31,745
Cumulative Effects ½ Mile Beyond the 4FRI Project Area	Thin ponderosa pine habitat	Prescribed burn ponderosa pine habitat	Goshawk PFA/nest treatments	Thin mixed conifer habitat	Prescribed burn mixed conifer habitat	Thin MSO protected habitat	Prescribed Burn MSO protected habitat	Thin MSO Restricted habitat	Prescribed Burn MSO Restricted habitat
Current	61,230	97,908	228	1,277	1,336	1,211	1,465	28,624	50,226
Future foreseeable	39,159	38,255	2,047	2,792	2,792	6,357	931	10,935	11,347
Past	30,197	50,862	1,218	0	0	0	0	0	0
Total	130,586	187,025	3,493	4,069	4,128	7,568	2,396	39,559	61,573

Table 74. Summary of restoration sub-unit 3-5 cumulative effects for narrow-headed garter snake

Project Type	Goshawk Habitat Treatments			MSO Habitat Treatments				Rock Pits
	PFA and Nests	LOPFA Habitat		MSO PAC		Restricted Habitat		
		Thin	Prescribed Fire	Thin	Prescribed Fire	Thin	Prescribed Fire	
Current	228	4,653	9,558	71	71	4,637	4,637	0
Future Foreseeable	0	6,940	6,528	1,703	0	6,030	6,442	1
Past	304	10,147	13,925	0	0	0	0	0
Grand Total	532	21,740	30,011	1,774	71	10,667	11,079	1