



**Forest Carbon Partners - Mescalero Apache Tribe
Improved Forest Management Project**
Reporting Period 5

August 19, 2021

Air Resources Board Compliance Offset Protocol – U.S. Forest Projects
Protocol Adopted: November 14, 2014

ARB Project ID: CAFR5283
OPR Project ID: CAR1183



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Reporting Period:

The reporting period for this Offset Project Data Report is 12 months from August 16, 2019 through August 15, 2020.

Protocol Version:

Air Resources Board Compliance Offset Protocol – U.S. Forest Projects

Adopted: November 14, 2014

Regulation Version:

Cal. Code Regs. tit. 17, § 95800-96022 (April, 2019)

DIFFERENCES BETWEEN OPDR AND LISTING DOCUMENTS

Note to Reader Regarding Differences between the OPDR and Listing Documents: There are differences between the listing documents and this OPDR. The changes between the listing documents and this version of the OPDR are enumerated in the following table.

Table 1: Listing Documents to OPDR Changes

Ln #	Item	OPDR Location	Listing Documents	Description
1	Reporting Period and commencement date	OPDR 3	Listing Form pg. 1	Commencement date was changed to October 16, 2015. The reporting period was changed to reflect the annual period from August 16 to August 15.
2	Project Area	OPDR 8	Listing Form pg. 2	Project area changed to reflect more accurate delineation; maps and other project information modified to reflect revised project area
3	Assessment Areas	RP1 OPDR 20 & 47	Listing Form pg. 2 and 3	Acreages allocated to the Assessment Area changed as a result of revisions to the project area
4	Inventory	RP1 OPDR 27-28	Listing Form pg. 3	Plot size and spacing adjusted for topography and project area
5	Summary of onsite carbon stocks	OPDR 12	Listing Form pg. 6	Onsite carbon stock estimates changed as a result of revised project area and completion of inventory data collection as well as annual growth
6	Baseline carbon stocks	OPDR 11	Listing Form pg. 7	Baseline carbon stock estimates changed as a result of FVS modeling and revised carbon calculations
7	Common practice value	RP1 OPDR 47	Listing Form pg. 7	Changed due to project area revisions
8	Legal Constraints	RP1 OPDR 22-23	Listing Form pg. 8	Updated legal constraints applicable to Mescalero tribal trust land
9	APD contact information	OPDR 3 (attestation page)	Listing Form pg. 1	Updated APD email address information
10	APD contact information	OPDR 3 (attestation page)	Listing Form pg. 1	Updated APD Physical Address
11	Reversal Risk Rating	OPDR 18	Listing Form pg. 7	Reversal Risk Rating was updated to reflect lower wildfire risk and risk related to tribal ownership
12	OPO contact information	OPDR 2	Listing Form pg. 1	Updated OPO contact mailing address, email address and phone number

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1 INTRODUCTION

The Forest Carbon Partners – Mescalero Apache Tribe Improved Forest Management Project (hereafter Mescalero Apache Tribe Forest Carbon Project) is an Improved Forest Management (IFM) project on Mescalero Apache trust forest lands developed pursuant to the California Air Resources Board Compliance Offset Protocol – U.S. Forest Projects adopted November 14, 2014.

Management of the property is designed to improve cultural and ecological values while at the same time generating income from sustainable forestry and carbon offsets, with the aim of restoring the forest to its historic state of well-spaced conifer stands with large-diameter trees and minimizing the threat of wildfire.

The Offset Project Operator is the Mescalero Apache Tribe, which has contracted with Forest Carbon Partners LP to be the Authorized Project Designee for the project. The project is located on land held in trust by the U.S. Department of the Interior Bureau of Indian Affairs (BIA) for the Mescalero Apache Tribe in New Mexico, United States. The Mescalero Apache Tribe carbon project is located on a portion of the Mescalero Apache Tribe's trust forest lands. No allotted trust lands or fee lands are included in the project.

2 OWNERSHIP

(Forest Offset Protocol §2.2, §9.1.1.1(3), Regulation §95974)

The 228,375 acre project is located on Mescalero Apache Reservation trust lands, meaning that the land is held in trust by the U.S. Department of the Interior Bureau of Indian Affairs for the Mescalero Apache Tribe. As such, the Mescalero Apache Tribe is the beneficial owner of the project area with the right to control management of the land, trees, and standing timber within the Project Area. The Mescalero Apache Tribe is also the Offset Project Operator (OPO) with the legal authority to implement the offset project. There have been no changes to land title or ownership during the reporting period.

As the OPO, the Mescalero Apache Tribe delegates responsibility to Forest Carbon Partners LP, a limited partnership managed by New Forests, as an Authorized Project Designee to perform and meet the requirements of listing, monitoring, reporting, record retention, verification, and credit issuance for the Mescalero Apache Tribe Forest Carbon Project.

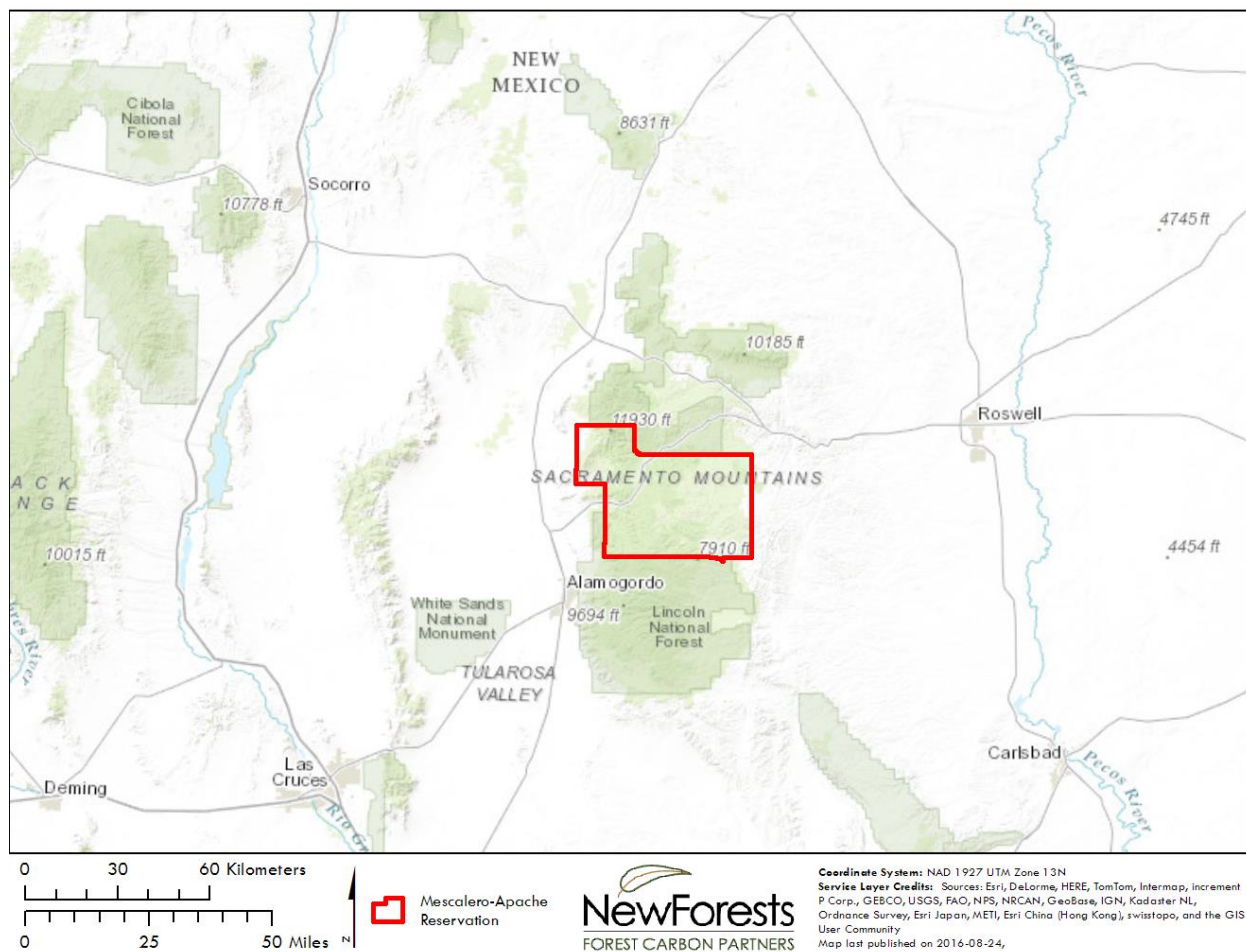
2.1 PROJECT LOCATION

2.1.1 Located in the United States

(Forest Offset Protocol §3.6)

The project takes place on land located in the United States and governed by the Mescalero Apache Tribal Council. Land surrounding the project area is governed by Otero County and Lincoln County of New Mexico, the state of New Mexico, and the United States of America (Figure 1).

Figure 1: Vicinity Map below shows the Project Area in relation to major roads, towns and jurisdictional boundaries.



3 REGULATORY COMPLIANCE

(Forest Offset Protocol §3.7, §9.2.1(4), Regulation §95973(b))

For Project activities, the Mescalero Apache Tribe complies with applicable provisions of the following federal and state laws.

- National Indian Forest Resources Management Act of 1990
- 25 CFR 163.11
- Federal Endangered Species Act
- National Environmental Policy Act
- Federal Clean Water Act
- Archaeological Resources Protection Act

The Forest Project and associated Project Lands have met and been in compliance with all local, state, or federal regulatory requirements during the reporting period. Since the last reporting period, there have been no new restrictions or easements affecting the project area, and the forest owner has not received any notices or citations for regulatory violations occurring within the project area.

4 SUSTAINABLE HARVESTING PRACTICES

(Forest Offset Protocol §3.8.1)

Since commercial harvesting is employed on the project area, it is necessary for the project to satisfy the Forest Offset Protocol §3.8.1 – Sustainable Harvesting Practices. Three options are given to satisfy this requirement:

1. The forest owner must be certified under the Forest Stewardship Council, Sustainable Forestry Initiative, or Tree Farm System certification systems.
2. The forest owner must adhere to a renewable long-term management plan that demonstrates harvest levels that can permanently be sustained over time and that is sanctioned and monitored by a state or federal agency.
3. The forest owner must employ uneven-aged silvicultural practices and canopy retention averaging at least 40% across the forest as measured on any 20 acres within the entire forestland owned by the forest owner.

Option 2 was chosen for this project. The renewable long-term management plan the Mescalero Apache Tribe will adhere to in managing the project area is the Mescalero Apache Indian Reservation Forest Management Plan 2001-2010, as approved by the BIA and renewed in 2015.

5 NATURAL FOREST MANAGEMENT

5.1 DISTURBANCE

(Forest Offset Protocol §3.8.2, Table 3.2, §9.2.1(10))

Small scale commercial timber harvesting, pre-commercial thinnings, hazardous fuels reduction treatments, and firewood and cultural products harvesting and collection occurred during the current reporting period. No wildfires over five acres were reported, but a small number of prescribed burns occurred in harvested areas. Prescribed fires were ground level and did not impact standing carbon. Harvested and treated plots were visited prior to the submission of this document to confirm remaining carbon stocks. Species composition, age class and structural elements of the natural forest management criteria have all been updated following the inventory remeasurement in 2019 and remain the unchanged for this reporting period (see Section 6 for a description of the inventory update process).

5.2 NATIVE SPECIES

(Forest Offset Protocol §3.8.2, Table 3.2, §9.1.1.1(14.a))

Both before and after commercial timber harvest, project activities will seek to improve or maintain natural ecosystem processes, enhance native tree species, and adhere to the Natural Forest Management practices required by the Forest Offset Protocol. As stated in Table 3.2 of the Forest Offset Protocol, the project must consist of at least 95% native species. No non-native species were found during the 2019 inventory. Thus, the project area meets the native species requirement found in the Forest Offset Protocol based on the sum of carbon in the standing live carbon pool and due to the strong correlation between basal area and carbon stocks (Table 2).

Table 2: Species Composition from 2019 Inventory Update

Common Name	Species	Basal Area Per Acre (ft ²)	Composition by Basal Area (%)	Native species	Percent by Native
Douglas-fir	<i>Pseudotsuga menziesii</i>	27.6	41.3%	Yes	41.3%
Ponderosa pine	<i>Pinus ponderosa</i>	14.4	21.5%	Yes	21.5%
White fir	<i>Abies concolor</i>	8.0	12.0%	Yes	12.0%
Alligator juniper	<i>Juniperus deppeana</i>	4.5	6.8%	Yes	6.8%
Gambel oak	<i>Quercus gambelii</i>	3.7	5.5%	Yes	5.5%
Southwestern white pine	<i>Pinus strobiformis</i>	3.0	4.5%	Yes	4.5%
Common or two-needle pinyon	<i>Pinus edulis</i>	2.5	3.7%	Yes	3.7%
Rocky Mountain juniper	<i>Juniperus scopulorum</i>	1.7	2.6%	Yes	2.6%
Bigtooth Maple	<i>Acer grandidentatum</i>	1.0	1.5%	Yes	1.5%
Quaking aspen	<i>Populus tremuloides</i>	0.2	0.3%	Yes	0.3%
Blue spruce	<i>Picea pungens</i>	0.1	0.1%	Yes	0.1%
Oneseed juniper	<i>Juniperus monosperma</i>	0.1	0.1%	Yes	0.1%
Corkbark fir	<i>Abies lasiocarpa</i>	0.0	0.0%	Yes	0.0%

5.3 COMPOSITION OF NATIVE SPECIES

(Forest Offset Protocol §3.8.2, Table 3.2, §9.1.1.1(14.a))

The Forest Offset Protocol requires that no single species comprise more than the percent basal area for standing live trees provided for the Species Diversity Index in the Assessment Area Data File. For the Central New Mexico Supersection and the Central New Mexico Pinyon/Juniper Woodland Assessment Area, the Species Diversity Index is 75%. The Project Area meets this requirement. As shown above, the species with the greatest proportion of basal area is Douglas-fir at 41.3%.

5.4 DISTRIBUTION OF AGE CLASSES

(Forest Offset Protocol §3.8.2, Table 3.2, §9.1.1.1(14.b))

The age class summary was created from the StandInit table in the FVS database. Stand age was based on the most current age data originating from the BIA CFI plot database.

5.5 STRUCTURAL ELEMENTS (STANDING AND LYING DEAD WOOD)

No salvage logging has occurred in the past year within the project area. Firewood collected on the property (both in and outside of the project area) was often standing deadwood. Therefore, the project must maintain or demonstrate ongoing progress toward an average of at least:

- one (1) metric ton of carbon (C) in standing dead wood per acre; or
- 1% of standing live carbon stocks, in standing dead wood, whichever is higher.

This project currently meets the dead tree requirements, as there is an average of 1 metric ton of carbon per acre (0.959 metric tons of carbon per acre, rounded to the nearest integer of 1 MT C/ac). Thus, this project continues to meet the standing dead requirements of the Protocol. Future management of this resource will look to increase the carbon stocks of standing dead trees to continue meeting the requirements of structural standing dead.

6 BASELINE CARBON STOCKS

(Forest Offset Protocol §6.2.1, §6.2.3, §9.2.1(13))

There are no optional carbon pools in this project. Standing live (IFM-1), standing dead (IFM-3), and in-use forest products carbon (IFM-7) are required pools. Forest products carbon stored in landfills (IFM-8) is also required when baseline harvesting exceeds project harvesting. In order to determine the amount of carbon stored in harvested wood products (HWP) the cut trees are further divided into Harvested Live and Harvested Merch. Harvested Live is defined as the carbon in all portions of live trees removed from the project during a harvest (including below-ground carbon). Harvested Merch is defined as the carbon in the merchantable portions (bole without bark) of the commercially harvested trees that are sent to mills to be processed into wood products. These values are used in row 9 and row 11, respectively, of the Offset Credit calculation worksheet. For the Mescalero Apache Tribe Forest Carbon Project the average annual value of the relevant baseline carbon pools are:

- Standing Live (AG+BG, IFM-1) – 5,704,001 tonnes CO₂e

- Standing Dead (IFM-3) – 1,058,832 tonnes CO2e
- Harvested Live – 146,479 tonnes CO2e
- Harvested Merch – 86,574 tonnes CO2e
- HWP in-use (IFM-7) – 26,768 tonnes CO2e
- HWP in landfills (IFM-8) – 18,952 tonnes CO2e

7 PROJECT CARBON STOCKS

(Forest Offset Protocol §6.2.4, §6.2.5, §9.2.1(6), §9.2.1(8), §9.2.1(11), §9.2.1(12))

The initial carbon inventory was collected in fall 2015, shortly after the project start date and later in the year to account for the main growing season. Because of this, the inventory data conservatively represents the project carbon stocks as of the project start date of October 16, 2015. CFI plots that were not remeasured in 2015 (previous measurement was 2012) were grown forward incrementally with DBH stand tables and height regressions. The initial inventory was grown forward on a pro-rated basis using an FVS derived growth rate to the end of the initial reporting period of August 15, 2016, thus accounting for slightly less than one full growing season. The inventory data was then grown forward from that point using stand tables and regression projections to the end of reporting period four.

To reach the carbon stocks at the end of reporting period five, data was added from additional data collection events in 2019 and 2020 which resulted in tree and plot data updates for a number of plots. The 2019 collected data was grown to the end of reporting period five and the 2020 data that was collected after the end of reporting period five were degrown to the end of reporting period five. The data from reporting period four was grown forward to the end of reporting period five using the stand table projections and height regressions created during the 2019 inventory update.

This inventory was grown on a pro-rated basis using the stand table and regression projections to the end of the reporting period. The stand table and regression projections developed in 2019 were then used to update the growth for reporting period five. Plots that were harvested or had silvicultural or fire treatments were revisited and the carbon stocks have been updated. There was a data collection event in December of 2020 and that data was degrown to the end of the reporting period.

The reporting period one OPDR stated in section 4-G "The Forest Vegetation Simulator (FVS) Central Rockies (CR) Variant (Keyser and Dixon, 2008) was used to model carbon stocks for the baseline scenario and also used to update carbon stocks from year to year for this Forest Project, as approved for use in the COP; see Appendix B: Modeling Carbon Stocks." In reporting period one the inventory was moved forward with FVS derived growth rates, stand table and regression projections. In the subsequent reporting periods the stand tables and regression projections described above were used to move both the BAF and CFI plots forward.

Commercial and non-commercial harvesting occurred during the project's fifth reporting period, so the actual on-site carbon stocks were adjusted to account for that harvesting. Harvesting is tracked and monitored in a cloud based GIS platform.

Dead trees are not tracked in the Bureau of Indian Affairs (BIA) database after their first measurement as dead. As a result height, diameter, and decay class information is not available or updated for many dead trees in the BIA dataset. To mitigate this, average diameter, height, and decay class were calculated by species from data collected for the carbon project on dead trees in plots measured for the carbon inventory effort. Averages are assigned first by the species, then with the total dead tree average if no species information is available.

A summary of the required carbon pools at the end of the current reporting period is as follows:

- Standing Live (IFM-1) – 10,661,002 tonnes CO₂e
- Standing Dead (IFM-3) – 802,378 tonnes CO₂e
- Harvested Total – 24,420 tonnes CO₂e
- Harvested Merch – 3,460 tonnes CO₂e
- HWP in-use (IFM-7) – 1,070 tonnes CO₂e
- HWP in landfills (IFM-8) – 758 tonnes CO₂e

Table 3: Actual CO2e stocks for current and previous reporting periods

Year	Standing Live	Standing Dead	Total Harvest	Merch Harvest - in Wood Products Including Landfill
2015	9,957,125	1,058,832	0	0
2016	10,186,941	1,058,832	0	0
2017	10,137,275	1,073,433	27,848	4,654
2018	10,274,569	1,083,212	32,888	5,222
2019	10,516,313	826,640	31,649	3,812
2020	10,661,002	802,378	24,420	1,827

8 CONFIDENCE DEDUCTION

(Forest Offset Protocol Appendix A.4, §9.2.1(7))

The sampling error from the 2019 inventory at the 90% level is calculated by multiplying the total combined standard error by the t value of 1.645. The pooled sampling error for all strata was determined following guidance in Appendix A.4 of the Protocol and using the following formula (Iles, 1996).

$(SE_{12} + SE_{22} + SE_{32})^{0.5} = \text{Total Combined Sampling Error}$

where: SE_n = total sampling error in volume units for Strata n

Stratified Sampling Error at 90% level = 5.7%

Confidence Deduction = 0.7%

Since the sampling error is greater than 5%, the confidence deduction is the stratified sampling error minus 5%.

9 SECONDARY EFFECTS

(Forest Offset Protocol §6.2.6, §9.2.1(14))

Secondary effects include changes in emissions due to unintended changes in regional carbon stocks that may result from the Forest Project, and are always negative. Secondary effects include activity shifting leakage that results from changes in forest management activity resulting from the Forest Project activity. The calculation itself is 20% of the difference

between actual and baseline carbon in harvested wood. For the current reporting period this is $20\% \times (0 - 117,917) = -23,583$ tonnes CO₂e as shown in row 27 of the Offset Credit calculation worksheet pasted below.

Table 4: GHG Reductions and Removals Worksheet

Reporting Period Data entered for <u>end</u> of each Period; after Period 2, each Period = 12 months		Initial Data at Start Date - October 2015	Start Date to End of Initial Reporting Period August 2016	Reporting Period 2 August 2016 - August 2017	3	4	5
Calc Row	Calculating GHG Reductions/Removals for Onsite Carbon Stocks - All Project Types						
1	Actual Onsite Carbon Stocks (tonnes CO ₂ e)	11,015,957	11,245,772.50	11,210,718	11,357,781	11,342,952	11,463,379.80
2	Confidence Deduction	0.0%	0.0%	0.0%	0.0%	0.7%	0.7%
3	Adjusted Actual Onsite Carbon Stocks (adjusted for confidence deduction) (tonnes CO ₂ e)	11,015,957	11,245,772	11,210,718	11,357,781	11,263,552	11,383,136
4	Increment in Actual Onsite Carbon Stocks (tonnes CO ₂ e)		229,815	(35,055)	147,063	(94,230)	119,585
5	Baseline Onsite Carbon Stocks (tonnes CO ₂ e)	6,762,833	6,762,833	6,762,833	6,762,833	6,762,833	6,762,833
6	Increment in Baseline Onsite Carbon Stocks (tonnes CO ₂ e)		-	-	-	-	-
7	Quantified GHG Reductions / Removals for Onsite Carbon Stocks (tonnes CO ₂ e)	4,253,124	229,815	(35,055)	147,063	(94,230)	119,585
Calc Row	Calculating Carbon Stored in Wood Products Including Market Effects and Leakage - All Project Types						
8	Actual Carbon in Trees Harvested for Wood Products in (tonnes CO ₂ e)		-	27,848	32,888	31,649	24,420
9	Baseline Carbon in Trees Harvested for Wood Products (tonnes CO ₂ e)		146,479	146,479	146,479	146,479	146,479
10	Actual Carbon in Harvested Wood Delivered to Mills (tonnes CO ₂ e)		-	8,812	9,889	7,219	3,460
11	Baseline Carbon in Harvested Wood Delivered to Mills (tonnes CO ₂ e)		86,574	86,574	86,574	86,574	86,574
12	Actual Carbon Stored Long- term in Wood Products (tonnes CO ₂ e) - Excl Landfill		-	2,725	3,057	2,232	1,070
13	Actual Carbon Stored Long- term in Wood Products (tonnes CO ₂ e) - Incl Landfill		-	4,654	5,222	3,812	1,827

14	Baseline Carbon Stored Long-term in Wood Products (tonnes CO ₂ e) - Excl Landfill		26,768	26,768	26,768	26,768	26,768
15	Baseline Carbon Stored Long-term in Wood Products (tonnes CO ₂ e) - Incl Landfill		45,719	45,719	45,719	45,719	45,719
16	Diff Between Actual and Baseline Carbon in Harvested Wood (tonnes CO ₂ e) - Excl Landfill		(26,768)	(24,043)	(23,710)	(24,536)	(25,698)
17	Difference Between Actual and Baseline Carbon in Harvested Wood (tonnes CO ₂ e) - Incl Landfill		(45,719)	(41,066)	(40,497)	(41,907)	(43,892)
18	Difference in Actual and Baseline Carbon Stored in Wood Products (tonnes CO ₂ e) - Landfill Adj		(45,719)	(41,066)	(40,497)	(41,907)	(43,892)
19	GHG Reductions / Removals for Carbon Stored in Wood Products (tonnes CO ₂ e) w/ mkt response		(36,575)	(32,853)	(32,398)	(33,525)	(35,113)
Calc Row	Calculation Other Secondary Effects - Reforestation Projects						
20	Mobile Combustion Emission Factor (average tonnes CO ₂ e per acre)						
21	Initial Site Prep Acres in Project Area (Acres)						
22	One-time combustion emissions associated with machinery use in site preparation (CO ₂ e tonnes)		-	-	-	-	-
23	Leakage Risk Percentage for Leakage from Shifting Cropland and Grazing Activities (%)			0%	0%	0%	0%
24	Secondary Effect emissions due to shifting cropland or grazing activities (tonnes CO ₂ e)		-	-	-	-	-
25	Other Secondary Effect Emissions for Reforestation Projects (tonnes CO ₂ e)		NA	NA	NA	NA	NA
Calc Row	Calculating Other Secondary Effects - Improved Forest Management Projects						
26	Difference Between Actual and Baseline Carbon in Trees Harvested for Wood Products (tonnes CO ₂ e)		(146,479)	(118,631)	(113,591)	(114,830)	(122,059)
27	Other Secondary Effects Emissions (shifting activities/materials) IFM Projects (tonnes CO ₂ e)		(29,296)	(23,726)	(22,718)	(22,966)	(24,412)

Calc Row	Determining the Uncertainty Discount Factor and Calculating Other Secondary Effects - Avoided Conversion Projects						
28	Appraised Fair Market Value of Anticipated Alternative Land Use of Project Area (000\$)						
29	Appraised Fair Market Value of the Current Forested Land use of Project Area (000\$)						
30	Avoided Conversion Discount Factor		0%	0%	#DIV/0!	0%	#DIV/0!
31	Quantified GHG Reductions / Removals for Onsite Carbon Stocks (tonnes CO ₂ e)		229,815	(35,055)	147,063	(94,230)	119,585
32	Other Secondary Effect Emissions for Avoided Conversion Projects (tonnes CO ₂ e)		NA	NA	NA	NA	NA
Calc Row	Quantified GHG Reductions and Removals						
33	Annual GHG Reductions/Removals Net of Discounts and Secondary Effects (tonnes CO ₂ e)	4,253,124	163,944	-91,634	91,947	-150,721	60,059
34	Cumulative GHG Reductions/Removals; <u>not</u> incl.neg. carryover or reversals (tonnes CO ₂ e)	4,253,124	4,417,068	4,417,068	4,509,015	4,509,015	4,569,075
35	Cumulative Negative Carryover from Prior Year (tonnes CO ₂ e)		0	0	0	0	0
36	Credits Issued - <u>Net</u> of Negative Carryover, <u>bef.</u> Buffer or adjust for Reversals (tonnes CO ₂ e)	4,253,124	163,944	0	91,947	0	60,059
Calc Row	Calculation of Buffer Pool Contribution						
37	Project Specific Reversal Risk Rating	15.8%	15.8%	10.5%	10.5%	10.5%	10.5%
38	Buffer Pool Contributions (Credits)	671,994	25,903	-	9,692	-	6,307
Calc Row	Accounting for Reversals						
39	Annual Reversals (tonnes CO ₂ e)		-	91,634	-	150,721	-
40	Total "Avoidable Reversals" to be compensated (tonnes CO ₂ e)		-				
41	"Unavoidable Reversals" compensated from the Buffer Pool (tonnes CO ₂ e)		-	91,634	-	150,721	-

Calc Row	Compensating for Avoidable Reversals						
42	"Avoidable Reversals" compensated from Forest Owners Account (tonnes CO2e)		-				
43	"Avoidable Reversals" compensated by retirement of other eligible credits or instruments (tonnes CO2e)		-				
44	Carryover "Avoidable Reversals" which need to be compensated (tonnes CO2e)		-	-	-	-	-
Calc Row	Credits Issued to Account Holder						
45	Annual Credits Issued to Account Holder	3,581,130	138,041	-	82,255	-	53,728
46	Cumulative Credits Issued to Account Holder	3,581,130	3,719,171	3,719,171	3,801,426	3,801,426	3,853,455

10 REVERSALS

(Forest Offset Protocol §7, Appendix D)

10.1 REVERSALS

(Forest Offset Protocol §7.1, §9.2.1(17))

No reversals have occurred during the current reporting period.

10.2 REVERSAL RISK RATING

(Forest Offset Protocol §7.2, §9.2.1(18), Appendix D)

Financial Risk - Contributions to the buffer pool associated with financial risk come from the potential financial failure of an organization resulting in bankruptcy, which can lead to dissolution of agreements and forest management activities to recover losses that result in reversals. Forest Projects that employ a Qualified Conservation Easement, or that occur on public lands, have lower risk. Although Tribal lands are not public lands, Tribal entities are considered public entities for purposes of financial risk rating due to their relationship with the U.S. federal government, hence the default value for public lands is used for buffer pool contribution.

Financial Risk Default Buffer Pool Contribution	1%
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Management Risk: - Management failure is the risk of management activities that directly or indirectly could lead to a reversal. Forest projects that occur on public lands or employ a Qualified Conservation Easement are exempt from this risk category. There are three categories of management risk: illegal logging, conversion to an alternative use, and over-harvesting. The Mescalero Apache Tribe Forest Carbon Project is within the United States, thus the default illegal harvesting risk of 0% is used.

The risk of conversion is assigned a default buffer pool rating of 0% since the project area is Tribal land. Per guidance from ARB, the public land default values are used for the buffer pool contribution.

The risk that the project might over-harvest as a result of high timber prices or due to fuel treatments is estimated to be the same as the default public land rate and is assigned a buffer pool contribution of 0%.

Default Illegal Harvesting (U.S) Buffer Pool Contribution	0%
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Default Conversion to Alternative Land Use Buffer Pool Cont.	0%
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Default Over Harvesting Buffer Pool Contribution	0%
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Social Risk: Social risks exist due to changing government policies, regulations, and general economic conditions. The risks of social or political actions leading to reversals are low, but could be significant.

The social risk for the project is identified as 2% since the project is within the United States.

United States Default Social Risk Buffer Pool Contribution 2%

Natural disturbances can pose a significant risk to the permanence of the GHG reductions and GHG removal enhancements. Natural disturbance risks are only partially controllable by management activities. Management activities that improve resiliency to wildfire, insects, and disease can reduce these risks. Management activities that shift harvesting practices from live sequestering trees to trees that have succumbed to natural disturbances reduce or negate the reversal depending on the size and location of the disturbance.

Natural Disturbance Risk I – Wildfire: A wildfire has the potential to cause significant reversals, especially in certain carbon pools. These risks can be reduced by certain techniques including reducing surface fuel loads, removing ladder fuels, adding fuel breaks, and reducing stand density. However, these techniques cannot reduce emission risk to zero because all landowners will not undertake fuel treatments, nor can they prevent wildfire from occurring.

Within the Project Area a high level of fuel treatment has been completed; thus the default wildfire risk of 2% is used. The resulting wildfire risk buffer pool contribution due to the high level of fuel treatment is calculated as

Wildfire Risk Buffer Pool Contribution (as described above) 2%

Natural Disturbance Risk II: A disease or insect outbreak has the potential to cause a reversal, especially in certain carbon pools. The default assigned risk rating for disease or insect outbreak is 3%.

Default Insect and Disease Outbreak Buffer Pool Contribution 3%

Natural Disturbance Risk III: A major windthrow event (hurricane, tornado, high wind event) has the potential to cause a reversal, especially in certain carbon pools. The default risk contribution from other catastrophic events is 3%.

Default Other Catastrophic Events Buffer Pool Contribution 3%

Summarizing the Risk Analysis and Calculating the Project Reversal Risk Rating

Table 5 below summarizes the assigned risk analysis by category for the project.

Table 5: Project Contribution to the Buffer Account Based on Risk

Risk Category	Contribution from Risk Descriptions Above	
	Source	Forest Project without a Qualified Conservation Easement and/or Public Ownership
Financial Failure	Default Risk	1%
Illegal Forest Biomass Removal	Default Risk	0%
Conversion	Default Risk	0%
Over-harvesting	Default Risk	0%
Social	Default Risk	2%
Wildfire	Default Risk	2%
Disease or Insect Outbreak	Default Risk	3%
Other Catastrophic Events	Default Risk	3%
Overall Contribution Based on Appendix D.5 Calculation		10.5%

Overall Contribution to Buffer Pool is 10.5% as calculated per the equation in the Forest Offset Protocol, Appendix D.5, and as shown below:

$$100\% - ((1-1\%) \times (1-0\%) \times (1-0\%) \times (1-0\%) \times (1-2\%) \times (1-2\%) \times (1-3\%) \times (1-3\%)) = 10.5\%.$$

11 FOREST BUFFER ACCOUNT CONTRIBUTION

(Forest Offset Protocol §9.2.1(19))

The project's buffer account contribution for the current reporting period is calculated by multiplying the reversal risk rating calculated above by the quantity of forest offset credits being claimed for the current reporting period:

$$10.5\% \times 60,059 \text{ credits} = 6,307 \text{ credits to be deposited into the buffer pool.}$$

12 CALCULATION OF GHG REDUCTIONS AND REMOVALS

(Forest Offset Protocol §6)

Equation 6.1 was used for estimating the fifth reporting period GHG reductions and removals. This was implemented using a modified version of the Forest Project Calculation Worksheet provided by the Climate Action Reserve, and is provided along with the project input data. This process included the changes in onsite stocks, long-term average wood product storage, and secondary effects. Changes occurring during Reporting Period five resulted in net sequestration resulting in 53,752 calculated carbon credits with a contribution to the Buffer Pool of 6,307 credits.