

Offset Project Data Report for the Initial Reporting Period Bluesource – Great Mountain Forest Improved Forest Management Project

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OPR Staff Use Only	Date Report Received	OPR Tracking Number:	Date Report Reviewed	OPR Staff Use Only

Part I. Entity Submitting Report

This form being submitted by the Authorized Project Designee (APD).

Completed By: Joshua Strauss

Mailing Address: 1935 E Vine Street, Suite 300, Murray, UT 84121

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Date Form Completed: 12/7/2018

Version Number: 3.0

Part II. Offset Project Information

Project Name: Blue Source - Great Mountain Forest Improved Forest Management Project

OPR Project ID: ACR371

ARB Project ID: CAFR5371

City: Norfolk

State: Connecticut

Zip: 06058

Registry: American Carbon Registry

Compliance Offset Protocol: U.S. Forest Projects

Version: June 25, 2015

Start Date: 3/10/2017

Reporting Period End Date: 9/09/2017

Crediting Period: 3/10/2017 to 3/09/2042

The commencement date is signified by the submittal of the project listing form to ACR. Per page 81 of the ARB 2015 Compliance Offset Protocol for U.S. Forest Projects, an IFM project's commencement date can be signified by the submittal of the project's listing information.

Part III. OPO/APD Information

Offset Project Operator

OPO Name: Great Mountain Forest Corporation

CITSS ID#: CA2525

Mailing/Physical Address: 201 Windrow Road Norfolk, CT 06058

Contact Person: Russell Russ

Phone Number: 860-542-5422

Email: russell@greatmountainforest.org

Authorized Project Designee

APD Name: Blue Source LLC

APD's CITSS ID#: CA1278

Contact Person: Joshua Strauss

Mailing Address: 1935 E Vine Street, Suite 300, Murray, UT 84121

Phone Number: 949-233-1501

Email: jstrauss@bluesource.com

Part IV. Land Ownership

1. **Whether the Offset Project Operator is the owner in fee for the project area.** Yes
 - a. **If yes, provide documentation (e.g. deed of trust, title report) showing the Offset Project Operator's ownership interest in the property and its interest in the trees and standing timber on the property.**
Please see the provided deeds. (Provided separately for verification purposes.)
 - b. **Are there other forest owners including in fee as well as third parties with existing property interests within the project area that may have an effect on the trees and standing timber located in the project area or parties with a material interest in the real property in the forest project?**
No.
2. **Forest Owners and Associated Third-Parties**
Forest Owner: Great Mountain Forest Corporation is a private forestland owner.
Mailing Address: 201 Windrow Road Norfolk, CT 06058

Associated Third-Parties
Conservation Easement Holder: State of Connecticut, Department of Environmental Protection
Mailing Address: 79 Elm Street, Hartford, CT 06106-5127
3. **Offset project type (reforestation, improved forest management, or avoided conversion).**

Improved Forest Management
4. **Indicate if the offset project occurs on public or private lands, and further specify if the offset project occurs on any of the following categories of land:**
Private Lands
 - a. **Land that is owned by, or subject to an ownership or possessory interest of a Tribe;** No
 - b. **Land that is "Indian lands" of a Tribe, as defined by 25 U.S.C. §81(a)(1);** or No
 - c. **Land that is owned by any person, entity, or Tribe, within the external borders of such Indian lands.** No

Part V. Offset Project Area

1. **Latitude/longitude coordinates**
Latitude/ Longitude: 41.55' N -73.14' W

2. **Project Area Assessment Areas**

Supersection	Assessment Area	Acres
Lower New England - Northern Appalachia	Lower New England - Northern Appalachia Mixed Hardwood	367
	Lower New England - Northern Appalachia Northern Conifer	1,966
	Lower New England - Northern Appalachia Northern Hardwood	2,994
	Lower New England - Northern Appalachia Oak-Hickory	32
	Lower New England - Northern Appalachia Shortleaf-Loblolly-Oak	539
	TOTAL	5,898

Note: sub-totals may not sum to 100% due to rounding.

3. Identify and describe the governing jurisdiction(s) applicable to the Project Area.

Governing Jurisdiction: 5th Judicial District, the State of Connecticut (USA). Litchfield County, Connecticut.

4. Describe how the Project Area was determined.

The project area was determined using GIS to include 5,897.88 forested acres owned by Great Mountain Forest Corporation (also referred to as Great Mountain Forest or GMF throughout the OPDR).

GMF owns in total 6237.2 acres. Non-forested acres were removed from the project, including right-of-ways, roads, and streams. All excluded areas were removed within a minimum mapping unit of 2.5 acres. After these areas of non-forest were excluded, the total project area included 5,897.88 acres. To ensure no neighboring properties encroached into the Project Area, ownership extent has been confirmed by property managers and will be further verified in the field.

A supporting georeferenced shapefile has been provided separately for verification purposes.

5. Existing land cover and land use

Land Cover: The Project Area's land cover is mainly mixed hardwoods and softwood-hardwood mix. All non-forested acres will be removed from the project. Some large plantation stands and other forest types may be removed from the project due to management constraints.

Land Use: Great Mountain Forest is currently a private forest.

6. Forest vegetation types

The main forest types across the property are mixed hardwoods, northern conifers, and northern hardwoods.

7. Site classes

From a soil analysis of the property 89.6% of the property is considered low site class as the annual forest productivity (cubic feet/ acre) is less than 84 cubic feet/ acre, while the remaining 10.4% are considered high site class. Site class was determined using NRCS soil data and the associated NRCS Forestland Productivity reports. The site index and site productivity analysis are provided separately for verification purposes.

8. Land pressures and climate zone/classification

The primary land pressure is conversion of natural hardwood stands to plantation-style forestry. There may also be pressure for land development.

Climactic zone: The project area falls within climactic 5b on the USDA plant hardiness zone map. Average annual extreme minimum temperatures for this zone range from -15 to -10 degrees Fahrenheit. Winters are moderately cold and the temperatures during spring and autumn are moderate and summers are warm, with more than 120 days annually with temperatures above 50°F (10°C). Average annual temperature ranges from 46 to 49°F (7.7 to 9.4°C). Annual snowfall varies widely across the region from 60" to 80" (1.5m to 2.0m) with snow generally remaining on the ground throughout winter. The average annual rainfall is about 55-60 inches (1.40-1.52m).

9. Historical land uses, current zoning, and projected land use within project area and surrounding areas

The property, along with much of the surrounding areas, is not zoned- and falls within unincorporated areas of Litchfield County. Projected land use within project area and surrounding areas is a mix of industrial and private forestland.

This property has been historically used to produce charcoal for the smelting of iron ore from the mid 1700's through the early 1920's. The forest management during this era was heavy cutting at short, 30-year rotations. Great Mountain Forest has been used for commercial forestry and as a working, teaching, and research forest for the last century. GMF has operates active management for timber revenue, sugar bush, forestry education and research, and public recreation.

10. Indicate whether the project will employ a Qualified Conservation Easement.

No.

Part VI. Offset Project Eligibility

- 1. A statement as to whether any GHG reductions or GHG removal enhancements associated with the Project Lands have ever been listed or registered with, or otherwise claimed by, another registry or program, or sold to a third party prior to listing, including;**
 - a. Have any lands within the Project Area ever been listed or registered with an offset project registry or program in the past?**
 - b. Have greenhouse gas emission reductions or removal enhancements associated with lands within the Project Area been credited or claimed for the purpose of greenhouse gas mitigation or reduction goals, whether in a voluntary or regulatory context?**
 - c. If yes, identify the registry or program (include vintages and reporting period).**

None of the Project Lands have ever been listed, registered with, or otherwise claimed by, another registry or program. No greenhouse gas emission reductions or removal enhancements associated with lands within the Project Area have ever been credited or claimed for the purpose of greenhouse gas mitigation or reduction goals, whether in a voluntary or regulatory context. No GHG reductions/ removal enhancements been sold to a third party prior to listing. The project is not transitioning to the Compliance Offset Protocol U.S. Forest Projects, after previously being listed as an early action offset project.

- 2. A statement as to whether the project is being implemented and conducted as the result of any law, statute, regulation, court order, or other legally binding mandate? If yes, explain.**

The project is not being implemented and conducted as the result of any law, statute, regulation, court order, or other legally binding mandate.

- 3. Declaration that the offset project does *not* employ broadcast fertilization.**

The offset project does not employ broadcast fertilization.

- 4. If the Forest Project is located on public land, a description and copies of the documentation demonstrating explicit approval of the offset project's management activities and baseline including any public vetting processes necessary to evaluate management and policy decisions concerning the offset project.**

This project does not occur on public lands, so therefore this section is not applicable.

- 5. If the Forest Project is located on the following categories of land, a description and copies of documentation demonstrating that the land within the Project Area is owned by a tribe or private entities:**

This project does not occur on tribal lands, so therefore this section is not applicable.

6. If commercial harvesting is either planned or ongoing within the Project Area, a description of how the Forest Owner satisfies one of the three requirements for employing and demonstrating sustainable long-term harvesting practices on all of its forest landholdings.

- ☐ Not applicable; no commercial harvesting is occurring within the Project Area.
- ☐ Third party certification under the Forest Stewardship Council, Sustainable Forestry Initiative, or Tree Farm System, whose certification standards require adherence to and verification of harvest levels which can be permanently sustained over time.
- ☐ Adherence to a renewable long-term management plan that demonstrates harvest levels which can be permanently sustained over time and that is sanctioned and monitored by a state or federal agency.
- ☒ Employ uneven-aged silvicultural practices and maintain canopy retention averaging at least 40% across the forest, as measured on any 20 acres within the entire forestland owned by the Forest Owner, including land within and outside of the Project Area (areas impacted by Significant Disturbance may be excluded from this test).

7. A description of how the offset project meets (or will meet) the definition of “Natural Forest Management”, including:

a. Composition of native species;

This project meets the natural forest management eligibility requirement of at least 95% native species based on the sum of the carbon in standing live tree carbon stocks, as 100% of the species in the inventory are native.

Species	Frequency (%)*
American basswood	0.1%
American beech	9.3%
American elm	0.0%
Balsam fir	0.2%
Black cherry	0.1%
Black spruce	4.3%
Black gum	0.7%
Chestnut oak	0.3%
Cucumber tree	0.3%
Eastern cottonwood	0.0%
Eastern hemlock	0.0%
Eastern white pine	32.0%
Gray birch	0.3%
Northern red oak	9.5%
Norway spruce	0.0%
Paper birch	0.1%
Pin cherry	16.0%
Red maple	0.2%
Red pine	0.6%

Red spruce	0.1%
Sassafras	11.6%
Shagbark hickory	0.1%
Striped maple	0.0%
Sugar maple	0.0%
Sweet birch	0.2%
White ash	0.0%
White oak	0.3%
Yellow birch	3.7%
Yellow-poplar	2.5%
Hickory spp.	1.6%
Eastern hophornbeam	1.3%
American hornbeam, musclewood	4.1%
Serviceberry spp.	0.2%
Total	100%

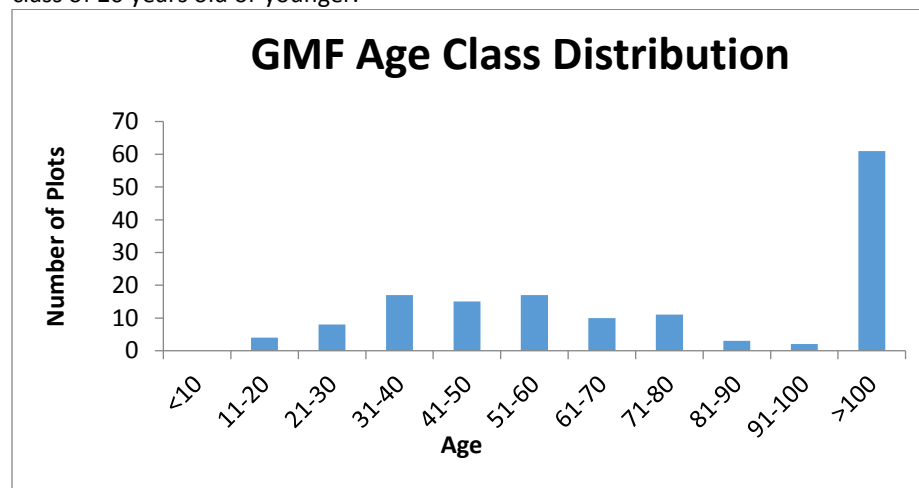
*Totals may not sum to 100% due to rounding

The project area naturally consists of a mixed species distribution where no single species' prevalence, measured as the percent of basal area of all live trees in the Project Area, exceeds the percentage value of standing live carbon shown under the heading 'Species Diversity Index' in the Assessment Area Data File.

Supersection	Assessment Area	Threshold
Lower New England - Northern Appalachia	Lower New England - Northern Appalachia Mixed Hardwood	65%
	Lower New England - Northern Appalachia Northern Conifer	60%
	Lower New England - Northern Appalachia Northern Hardwood	60%
	Lower New England - Northern Appalachia Oak-Hickory	65%
	Lower New England - Northern Appalachia Shortleaf-Loblolly-Oak	60%

b. Age class distribution;

Great Mountain Forest is less than 10,000 acres, therefore should be assessed by age class on the project level. Across the entire Project Area, less than 3% of the inventories plots were in an age class of 20 years old or younger.



c. Structural elements (standing and lying dead wood);

Live C	Dead C	% Standing Dead
49.6	1.6	3.3%

Currently, the quantity of lying dead wood is commensurate with recruitment from standing dead trees as the project maintains an average of at least one metric ton of carbon (C) per acre.

- 8. On a watershed scale up to 10,000 acres (or the Project Area, whichever is smaller), projects must maintain, or make progress toward maintaining, a maximum of 40% of the project's forest lands in ages that are less than 20 years old. (Areas impacted by Significant Disturbance are exempt from this test until 20 years after reforestation of such areas.) Does the acreage within this project meet this requirement? Yes.**
- a. Explain how the project demonstrates continuous progress toward meeting this requirement within the next 25 years. NA**
- 9. A description of the management activities that will lead to increased carbon stocks in the Project Area, compared to the baseline.**

Project Activities

The project harvest activities will employ uneven-aged silvicultural practices and maintain canopy retention averaging at least 40% across the forest, as measured on any 20 acres within the entire forestland owned by the Forest Owner, including land within and outside of the Project Area. Harvesting activity will maintain and increase carbon stocks well above the baseline.

Baseline Activities

Baseline harvesting activities would include following Best Management Practices (BMPs) for Connecticut. Additionally, "in conjunction with the GMF conservation restrictions; clear-cuts on GMF will not exceed 15 acres in area with the exception of salvage operations resulting from natural disaster, forest pests or disease; no more than 10% of the total Forest Legacy easement area will be clear-cut within a 10-year period; and at least 50% of the crown canopy shall be maintained when 34 harvesting timber within 100 feet of a stream or water body. These restrictions specifically apply to the Forest Legacy easement portion of GMF."

- 10. Does the Project Area have a canopy cover that is greater than 10 percent?**
Yes. See Attachment F for supporting documentation
- 11. All information that reference carbon stocks must be submitted with the oversight of a Professional Forester.**

Name of Forester: Russell Russ
State of Certification: Connecticut
Qualification: Certified Forest Practitioner (Cert#000556)

Part VII. Carbon Stock Inventory

- A. Provide a description of the inventory methodology used to quantify carbon stocks for each required carbon pool in the forest project's offset boundary. The inventory methodology must describe the information required in Appendix A.3 of the Compliance Offset Protocol U.S. Forest Projects, June 25, 2015.**

IFM-1 Standing Live

For further information, please see the "GMF Public Methodology and Modeling Description" document, provided separately for verification.

IFM-3 Standing Dead

For further information, please see the “GMF Public Methodology and Modeling Description” document, provided separately for verification.

IFM-6 Soil (if applicable)

Excluded.

IFM-7 Carbon in in-use forest products

Carbon in in-use forest products was calculated based on standing tree inventory data. No specific inventory processes apply.

IFM-8 Forest product carbon in landfills

Forest product carbon in landfills was calculated based on standing tree inventory data. No specific inventory processes apply.

IFM- 9 Biological emissions from site preparation

NA

IFM-14 Biological emissions/removals from change in harvesting on forestland outside the Project Area

NA

IFM-17 Biological emissions from decomposition of forest products

Biological emissions from decomposition of forest products will be calculated based on standing tree inventory data. No specific inventory processes apply. Biological emissions from decomposition of forest products will be quantified as a component of carbon stored in in-use forest products (IFM-7) and landfills (IFM-8).

Monitoring Plan

Annual monitoring will be carried out to track changes in carbon stocks. The Project Owner will submit annual Offset Project Data Reports and undertake 6-year site verification for 100 years following ARBOC issuance. Annual monitoring reports will contain inventory updates reflecting growth, harvest, and any significant disturbances.

The Project Area will be re-inventoried at least every 12 years. During re-inventory, a subset of the current 148 permanent plots, sufficient to maintain desired inventory confidence statistics, will be visited and re-measured. If it is calculated for future inventories that less than the full number of plots are needed to achieve the desired confidence statistics of <5.1%, then randomly selected plots in the applicable strata will be excluded from future calculation and retired, ensuring no continually measured plots are older than 12 years. Similarly, if it is found that more plots are needed to achieve the desired confidence statistics, plot may be added into the inventory in a random design. Otherwise, if the re-inventory results in a sampling error of $\geq 5.1\%$, then the appropriate confidence deduction will be applied in accordance to the requirements of the COP. Inventories of select portions of the Project Area will be updated periodically in response to natural disturbance or significant forest management activities. Any plots that are subject to harvesting activities or significant disturbances will be reinventoried.

If plot monumentation cannot be found during a re-inventory, the plots will be re-monumented using the same procedures as the original monumentation at the same GPS location of the given plot.

Any updates to the inventory methodology will be approved in advance by a third-party verification body and by ARB, and documented in the project change log.

In addition to inventory sampling, management staff will monitor the general health and condition of the forest forest management activities (e.g. road maintenance, timber harvesting, boundary marking, etc.), typically conducted on primary accessroads and notable bridges/culverts annually.

Each year, the forest carbon inventory and documentation will be updated via the following process:

New forest inventory data obtained from scheduled sampling during the previous year will be incorporated.

Annual harvests will be carefully tracked based on timber sale data.

Inventory data will be updated to account for any significant natural disturbance (e.g. insect infestation, fire, destructive wind storm, etc.). A significant event is any singular event that impacts one or more of the plots, or impacts collectively 39.9 acres or more of the property (each plot represents ~39.9 acres, 148 plots/5898 acres). If there is removal of $\geq 50\%$ of the standing stocks as a result of the disturbance across the affected area, then the disturbance will be considered a “significant event” and require a remeasurement or addition of plots.

In the event that 39.9 acres or more are impacted by a singular event, but no plots are impacted, a proportional number of plots will be installed so that the inventory reflects the impacts of the event (i.e. 1 plot per 39.9 acres). Plots will be placed using an approved random selection method in GIS such as the random point generator tool. If plots are impacted by a significant event, they will be remeasured and incorporated into the inventory statistics, and will thus be reflective of the event.

New inventory samples or harvest data, modeling growth, and disturbances using FVS or another approved growth will be incorporated. If new individual tree growth data is available from remeasured plots, this data will be used to calibrate the diameter increment model to the actual tree growth. If no growth data is available, or if the growth estimates seem unreasonable, all calibration parameters used in the baseline modeling will be applied to modeling the new inventory data.

Any necessary modification to spatial data based on strata boundary adjustments or other changes will be made.

Results will be incorporated in the annual OPDR.

Potential Pests and Diseases

There are no known diseases having a significant impact on forest health. Diseases will be monitored throughout as a component of the inventory. Pests present on site include the Hemlock wooly adelgid, for which active research is being conducted. According to the 2010 GMFC Stewardship Plan, “The Great Mountain Forest (GMF) staff attempts to observe and note any changes such as forest pests, invasive plants and erosion problems. Attempts are made to monitor sites on an annual or bi-annual basis before control issues can be difficult to implement. The plague of many Northeastern forests is non-native invasive plants. Like other managed forests, GMF is not without a significant invasive plant problem. Barberry, buck thorn, bittersweet, multiflora rose, phragmites and Asian honeysuckle have all established populations at different locations throughout GMF. Attempts are made to control these plants from invading native plant communities and destroying wildlife habitat. “

Rare, Threatened, or Endangered Species

There are no known RTE species on the Great Mountain Forest. Management has “conducted its own independent inventory to determine which endangered, threatened, and species of special concern may

be present on the property.” GMF will monitor for such species and if at any point RTE are discovered in the Project Area, management will develop new procedures for managing such species to incorporate into the management plan.

B. Describe the calculation methodologies used to determine metric tons per acre for each of the carbon pools included in the Offset Project Data Report.

IFM-1 Standing Live:

Gross and sound cubic foot volume was calculated using equations and coefficients developed by Scott (1981), based on guidance from “Methods and Equations for Estimating Aboveground Volume, Biomass, and Carbon for Trees in the U.S. Forest Inventory”, 2010. (Woodall, 2011).

Biomass was computed using the component ratio method and Jenkins coefficients following the procedures and equations outlined in “The Forest Inventory and Analysis Database: Database Description and Users Manual Version 4.0 for Phase 2,” and as specifically described in Appendix J, Tables 1 through 4. As stated in the COP, biomass was converted into 0.5 to calculate the mass (kg) in carbon. This product was multiplied by 0.001 tons/kg to convert the mass to metric tons of carbon. Then, the product was multiplied by 3.667 to convert the metric tons of carbon into metric tons of CO₂e.

Projected Growth

Please see the “Great Mountain Forest Modeling Plan” document, provided separately for verification.

Site Index

Please see the “Great Mountain Forest Modeling Plan” document, provided separately for verification.

Adjustments for Start Date

No adjustments were made for the start date of 3/10/2017 because the inventory was conducted in the spring of 2017.

Adjustments for Reporting Period Calculations

To determine CO₂ stocks at the end of the reporting period, the tree data was grown forward to 9/09/2017. Detail on how the data was grown can be found in the “Great Mountain Modeling Plan” document, provided separately for verification.

Belowground Live/Dead

The belowground portion of live and dead trees is calculated using the component ratio method (“CRM”) described in Appendix J of the Forest Inventory and Analysis (FIA) documentation cited in the COP.

IFM-3 Standing Dead:

Standing dead wood carbon CO₂ is calculated by estimating above and below ground biomass in the same manner it was for live trees (using appropriate volume equations and using the component ratio method and Jenkins coefficients), but then adjusting for defect and decay by applying the Domke et al. 2011¹

¹ Domke GM, Woodall CW, Smith JE. 2011. Accounting for density reduction and structural loss in standing dead trees: implications for forest biomass and carbon stock estimates in the United States. Carbon Balance Manage 6:1–11.

structural loss factors, and the Harmon et al. 2011² density decay coefficients, before finally converting to CO₂e.

The estimates of standing dead wood are calculated on a per acre basis for each stratum. A project-wide estimate of standing dead wood is calculated using a weighted average with weights assigned based on stratum size.

For the baseline, standing dead is projected to remain constant over the 100-year baseline at 5.98 tonnes CO₂ per acre.

IFM-6 Soil (if applicable): NA

IFM-7 Carbon in in-use forest products:

Carbon in in-use forest products was calculated using actual harvest volumes, following the steps in Appendix C.3 of the COP. Calculations have been provided separately for verification purposes.

A default regional value was used for mill efficiency and product mix based on weighted average of relative acreage.

IFM-8 Forest product carbon in landfills (if applicable):

Forest product carbon in landfills is calculated in accordance with the procedures described in Appendix C of the Forest Protocol.

IFM- 9 Biological emissions from site preparation: NA

IFM-14 Biological emissions/removals from change in harvesting on forestland outside the Project Area:

Calculated using a default 20% “leakage” factor applied to the difference in harvest volume relative to baseline.

IFM-17 Biological emissions from decomposition of forest products:

Biological emissions from decomposition of forest products was quantified as a component of carbon stored in in-use forest products (IFM-7) and landfills (IFM-8).

C. Provide a summary of the inventory of carbon stocks for each carbon pool (or approach used, if inventory is not applicable).

IFM-1 Standing Live:

	Average tCO ₂ e/acre	Total tCO ₂ e
Start Date	179.2	1,056,872
End of Reporting Period	181.8	1,072,226

IFM-3 Standing Dead:

	Average tCO ₂ e/acre	Total tCO ₂ e
Start Date	5.99	32,324
End of Reporting Period	5.99	32,324

² Harmon, M.E., C.W. Woodall, B. Fasth, J. Sexton, and M. Yatkov. 2011. Differences between standing and downed dead tree wood density reduction factors: A comparison across decay classes and tree species. Research Paper NRS-15. Newtown Square, PA: U.S. Department of Agriculture, Forest Service.

IFM-6 Soil (if applicable): NA

IFM-7 Carbon in in-use forest products:

N/A No trees were harvested in the first reporting period.

IFM-8 Forest product carbon in landfills (if applicable):

N/A No trees were harvested in the first reporting period.

IFM- 9 Biological emissions from site preparation: NA

IFM-14 Biological emissions/removals from change in harvesting on forestland outside the Project Area:
NA

IFM-17 Biological emissions from decomposition of forest products: NA

Actual Harvested Wood Products Summary	Total (tCO2e)	tCO2e / acre
Actual Carbon in Harvested Wood Delivered to Mill	0	0
Actual Carbon in Trees Harvested for Wood Products	0	0
Actual Carbon Stored Long-term in Wood Products - Excluding Landfill	0	0
Actual Carbon Stored Long-term in Wood Products - Landfill	0	0
Actual Carbon Stored Long-term in Wood Products - Including Landfill	0	0

No trees were harvested in the first reporting period, so there were no actual harvested wood products during this reporting period.

D. Inventory Confidence Statistics

Total	n	Stratified Standard Error	Bound	Sampling Error
1,107,550	148	32,065	52,746	4.76%

The inventory sampling error is calculated as follows:

1. $32,065 * 1.645 = 52,746$
2. $(52,746 / 1,107,550) * 100 = 4.76\%$

The estimated sampling error of 4.76% is below 5.1%, so no confidence deduction should be applied to the inventory results.

Reversal Risk Rating- Estimate

Reversal Risk Rating was calculated using the following formula:

Reversal Risk= $100\% - (1 - \text{Financial Failure}) \times (1 - \text{Illegal Forest Biomass Removal}) \times (1 - \text{Conversion}) \times (1 - \text{Over Harvesting}) \times (1 - \text{Social Risk}) \times (1 - \text{Wildfire}) \times (1 - \text{Disease/Insect Outbreak}) \times (1 - \text{Other Catastrophic Events})$

$= 1 - ((1 - 0.05) * (1 - 0.0) * (1 - 0.02) * (1 - 0.02) * (1 - 0.0) * (1 - 0.04)) * (1 - 0.03) * (1 - 0.03))$

$= 17.6\%$

Buffer Pool Contribution: $356,710 \text{ net ARBOCs} * 0.1759 = 62,738 \text{ ARBOCs}$ contributed to the Forest Buffer Account.

Part VIII. Offset Project Baseline

1. The aboveground Common Practice (CP) value is 100.56 mtCO₂e/acre. The project's aboveground ICS live carbon stocks of 148.7 mtCO₂e/acre is above the CP value.

Supersection	Assessment Area	High/Low	CP	Sum of Acres
Lower New England - Northern Appalachia	Mixed Hardwood	High	129	9
	Mixed Hardwood	Low	99	359
	Northern Conifer	High	120	299
	Northern Conifer	Low	101	1,668
	Northern Hardwood	High	114	233
	Northern Hardwood	Low	103	2,761
	Oak-Hickory	High	145	0
	Oak-Hickory	Low	128	32
	Shortleaf-Loblolly-Oak	All	69	539
	Grand Total		100.56	5,898

*Note: sub-totals may not sum to 100% due to rounding.

2. Baseline Carbon Stocks

Carbon Pool	Total tCO ₂ e	mtCO ₂ e / acre
IFM-1 Standing Live:	710,980	120.55
IFM-3 Standing Dead:	35,324	5.99
IFM-7: Long-term storage in in-use wood products	1,106	0.19
IFM-8: Long-term storage in wood products in landfills	1,280	0.22

3. If the Forest Project's initial standing live carbon stocks are below Common Practice, a determination of the "High Stocking Reference" for the Project Area.

Because the project's initial standing live carbon stocks are above common practice, this section is non-applicable.

4. Baseline Modeling

Please see document, "Great Mountain Forest Modeling Plan", provided separately for verification.

5. Harvest Planning

- a. Is harvesting planned in the Project Area? Yes
- b. Optional: Does the project use a harvest schedule model? No.

6. Minimum Baseline Level for above-ground standing live tree carbon stocks (MBL)

The LMU is the same as the Project Area, thus the WCS is equal to the ICS. Because the ICS is above the CP, we use the equation $MBL = \text{MAX}(CP, \text{MIN}(ICS, CP + ICS - WCS))$ for calculating the MBL, where, CP= aboveground common practice (mtCO₂e/acre), and ICS = initial above-ground standing live tree carbon per acre (mtCO₂e/acre). In this case, the MBL is the CP, or 100.56 mtCO₂e/acre, as determined using the below calculation.

MIN(ICS, CP+ ICS -WCS)
 MIN(148.8, 100.56 +(148.8-148.8))= 100.56 mtCO₂e/acre

MAX(103.48, 100.56) = 100.56 mtCO₂e/acre = CP = MBL

7. If the Forest Project's initial standing live carbon stocks are below Common Practice, a determination of the "High Stocking Reference" for the Project Area.

Because the project's initial standing live carbon stocks are above common practice, this section is non-applicable.

8. Provide an estimate of carbon that was stored long-term in harvested wood products in the baseline.

End of Reporting Period Long-term storage in wood products in in-use wood products (tCO ₂ e)						
Units	Lumber	Plywood	Oriented Strandboard	Non Structural Panels	Miscellaneous Products	Paper
Hardwood	242	-	0	167	4	86
Softwood	420	9	0	170	0	7

End of Reporting Period Long-term storage in wood products in landfills (tCO ₂ e)						
Units	Lumber	Plywood	Oriented Strandboard	Non Structural Panels	Miscellaneous Products	Paper
Hardwood	401	-	0	151	11	263
Softwood	270	5	0	154	1	23

Baseline Wood Products Summary	Total (tCO ₂ e)	tCO ₂ e / acre
Baseline Carbon in Harvested Wood Delivered to Mill	7,273	1.23
Baseline Carbon in Trees Harvested for Wood Products	13,138	2.23
Baseline Carbon Stored Long-term in Wood Products - Excluding Landfill	1,106	0.19
Baseline Carbon Stored Long-term storage in wood products in landfills	1,280	0.22
Baseline Carbon Stored Long-term in Wood Products - Including Landfill	2,385	0.40

9. Secondary Effects Estimate

The equation below outlines the process by which secondary effects are calculated for IFM projects:

$$\text{If } \sum_{n=1}^y (AC_{hv,n} - BC_{hv,n}) < 0, \text{ then } SE_y = (AC_{hv,y} - BC_{hv,y}) \times 20\%$$

Where

SE_y= Estimated annual Secondary Effect (used in Equation 6.1).

AC_{hv,n}=Actual amount of onsite carbon harvested in reporting period n (prior to delivery to a mill), expressed in CO₂-equivalent tons.

$BC_{hv,n}$ = Estimated average baseline amount of onsite carbon harvested in reporting period n (prior to delivery to a mill), expressed in CO₂-equivalent tons, as determined in Step 1 of Section 6.2.3.

Y = The current year or reporting period.

In the case of the GMF IFM project, this equation is calculated as follows:

$$= (0 - 13,138) * 0.2$$

$$= -2,628$$

Secondary Effects Inputs	Tonnes CO2e
Actual Carbon in Trees Harvested for Wood Products	0
Baseline Carbon in Trees Harvested for Wood Products	13,138
Difference Between Actual and Baseline Carbon in Trees Harvested for Wood Products	-13,138
Secondary Effects Emissions	-2,628

Total Net GHG reductions and GHG removal enhancements (QRy) For the Reporting Period

This estimate for the project reporting period is carried out in the *GMF ARBOC Calculation Worksheet* (provided separately for verification purposes) and summarized below.

Summary	Tonnes CO2e
ARBOCs Issued	356,710
Buffer Pool Contributions	62,738
Annual ARBOCs Issued to Account Holder	293,972

10. Provide a projection of baseline and actual harvesting volumes from the Project Area over 100 years.

Please see Attachment L.

11. Baseline Modeling

Please see provided proprietary document, "Great Mountain Forest Modeling Plan".

12. Provide a description of any and all legal constraints affecting forest management activities in the Project Area. Include documentation of legal constraints and a description of each constraint (referring to Section 6.2.1.2); for each constraint provide a narrative that constraint has on forest management.

Please see Attachment I: Legal Constraints below.

13. Provide a description of the modeling techniques used to simulate the effect of any constraints on carbon stocks.

Please see provided document, "Great Mountain Forest Modeling Plan."

14. The OPO will demonstrate financial feasibility of the growth and harvesting regime assumed for the baseline by conducting a financial analysis of the anticipated growth and harvesting regime that captures all relevant costs and returns, taking into consideration all legal, physical, and biological

constraints, using regional norms or documented costs and returns for the Project Area or other properties in the Forest Project's Assessment Area.

Please see attachment J: Financial Feasibility.

Part IX. Attestations and OPO Signature

I certify under penalty of perjury under the laws of the State of California the GHG reductions and/or GHG removal enhancements for Blue Source - Great Mountain Forest Improved Forest Management Project from 3/10/2017 to 3/09/2042 will be measured in accordance with the Compliance Offset Protocol U.S. Forest Projects, June 25, 2015,, and all information required to be submitted to ARB is true, accurate, and complete.

Initial: *RW*

I understand I am voluntarily participating in the California Greenhouse Gas Cap-and-Trade Program under title 17, article 5, and by doing so, I am now subject to all regulatory requirements and enforcement mechanisms of this program and subject myself to the jurisdiction of California as the exclusive venue to resolve any and all disputes arising from the enforcement provisions in this article.

Initial: *RW*

I understand that the offset project activity and implementation of the offset project must be in accordance with all applicable local, regional, and national environmental and health and safety laws and regulation that apply to the offset project location. I understand that offset projects are not eligible to receive ARB or registry offset credits for GHG reductions and GHG removal enhancements that are not in compliance with the requirements of the cap-and-trade program.

Initial: *RW*

In signing this form, I certify under penalty of perjury of the laws of California that the information contained in this form is true, accurate, and complete. I further certify that I am an Account Representative of the Offset Project Operator (OPO).

Signature: *Roger Williams III*

Printed Name: Roger Williams

Title: President, Blue Source LLC

Date: 12/7/2018

Part X. Attachments

Attachment A: Forest Owner

Please see corresponding folder containing all deed, provided separately for verification purposes.

Attachment B: Public Projects

N/A

Attachment C: Qualified Conservation Easement

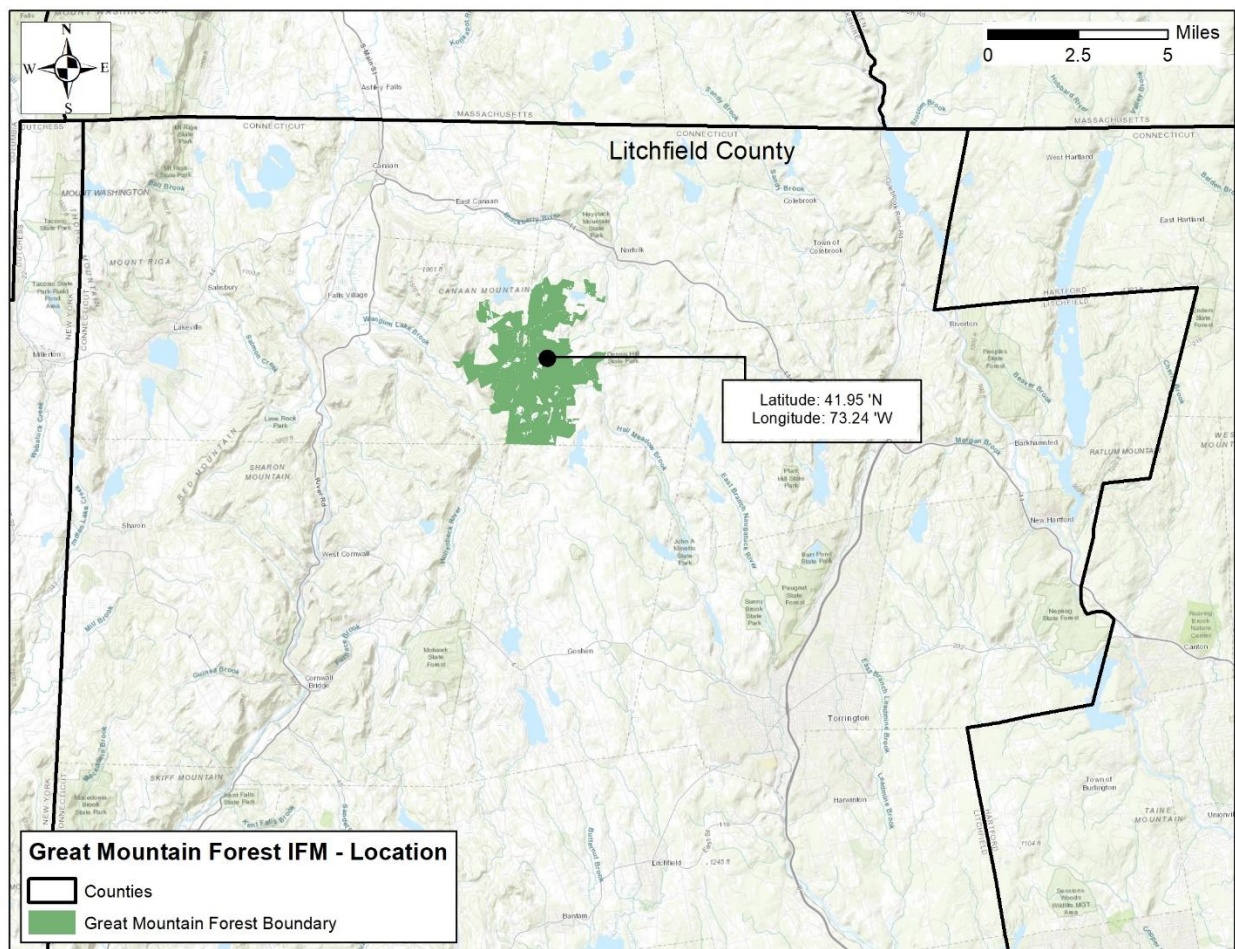
N/A

Attachment D: Tribal Projects

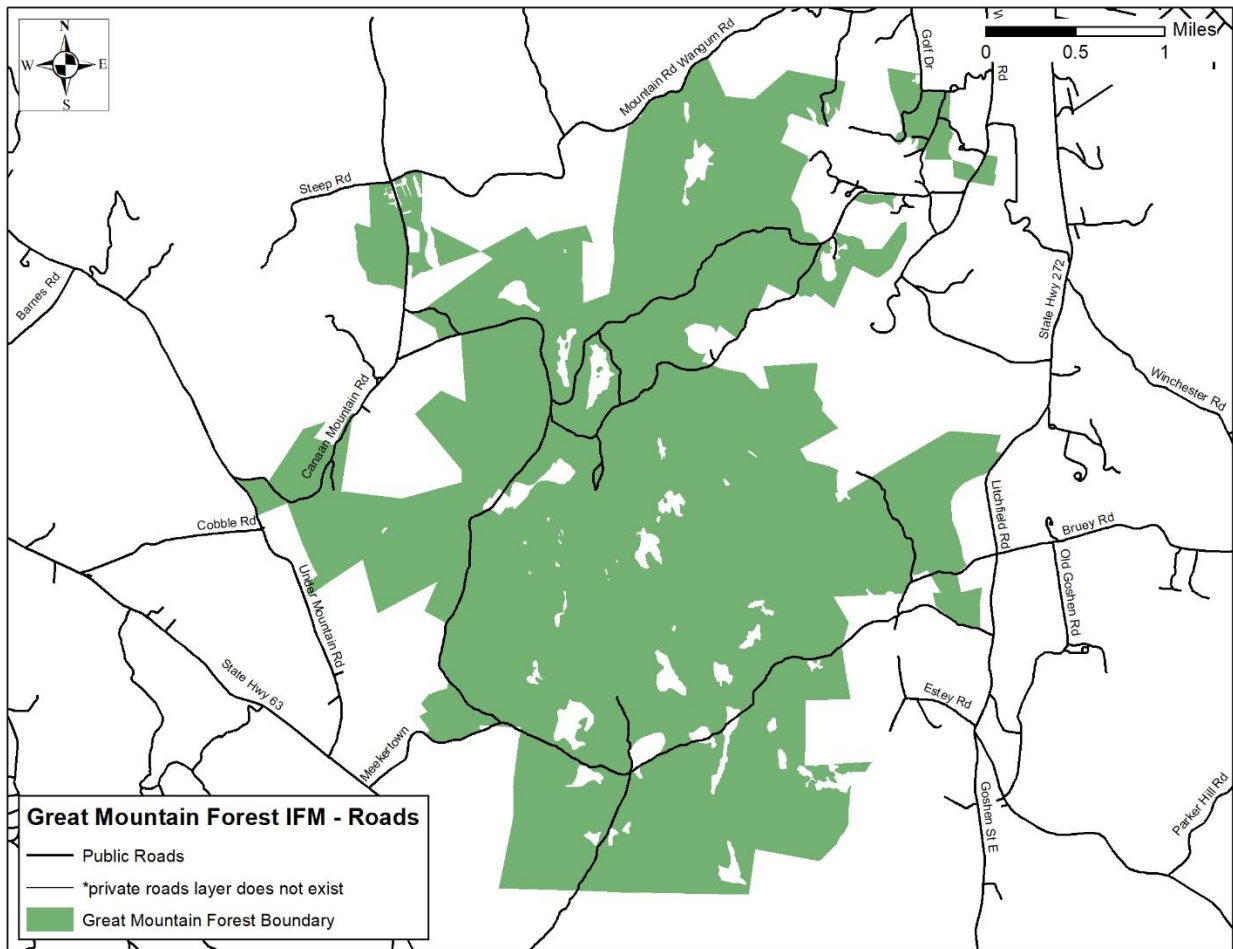
N/A

Attachment E: Project Maps

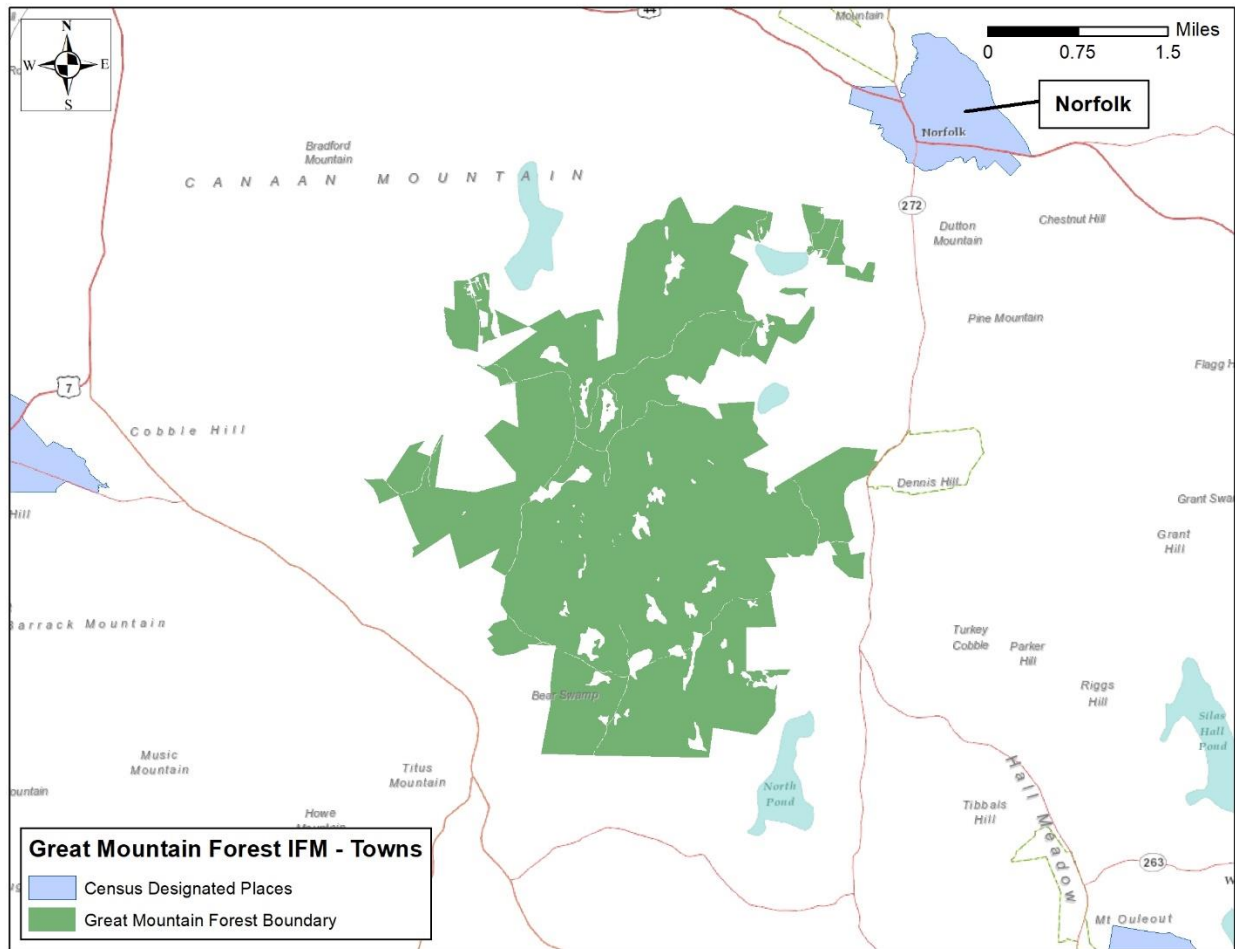
1. Governing jurisdictions, and latitude/longitude coordinates



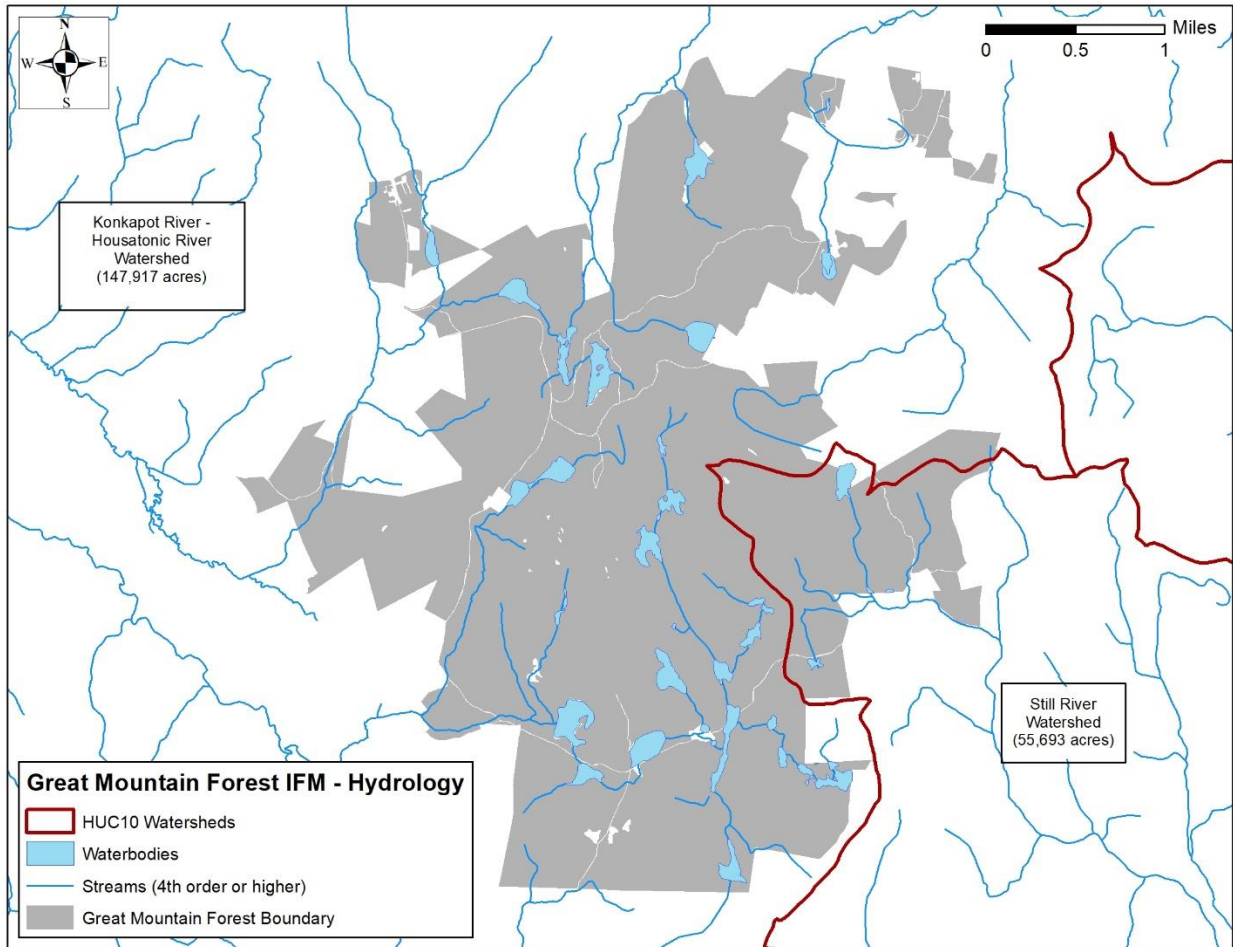
2. Public and private roads (map)



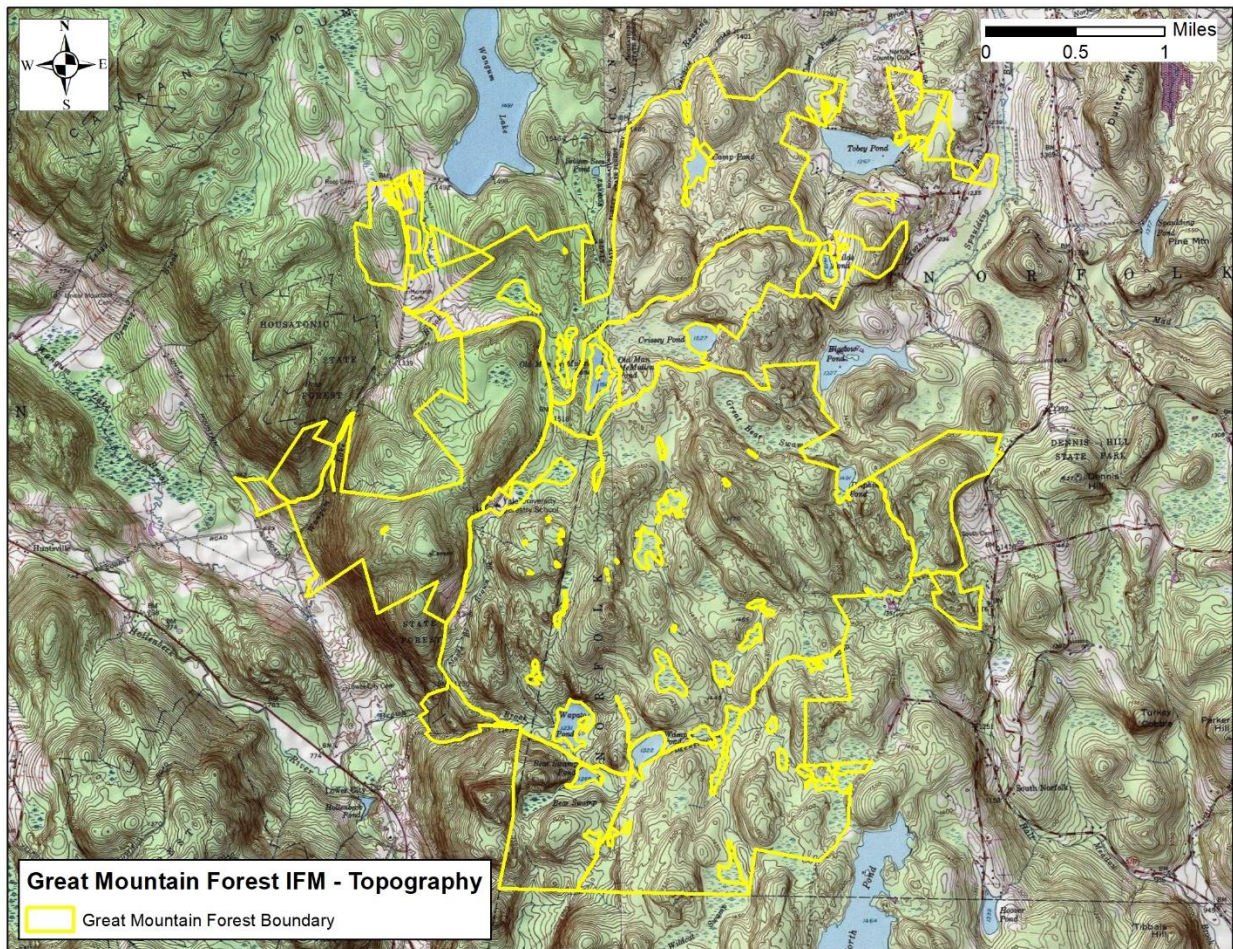
3. Towns (map)



4. Major watercourses (4th order or greater), water bodies, and watershed description (map)



5. Topography (map)



6. Townships, ranges, and sections (map)

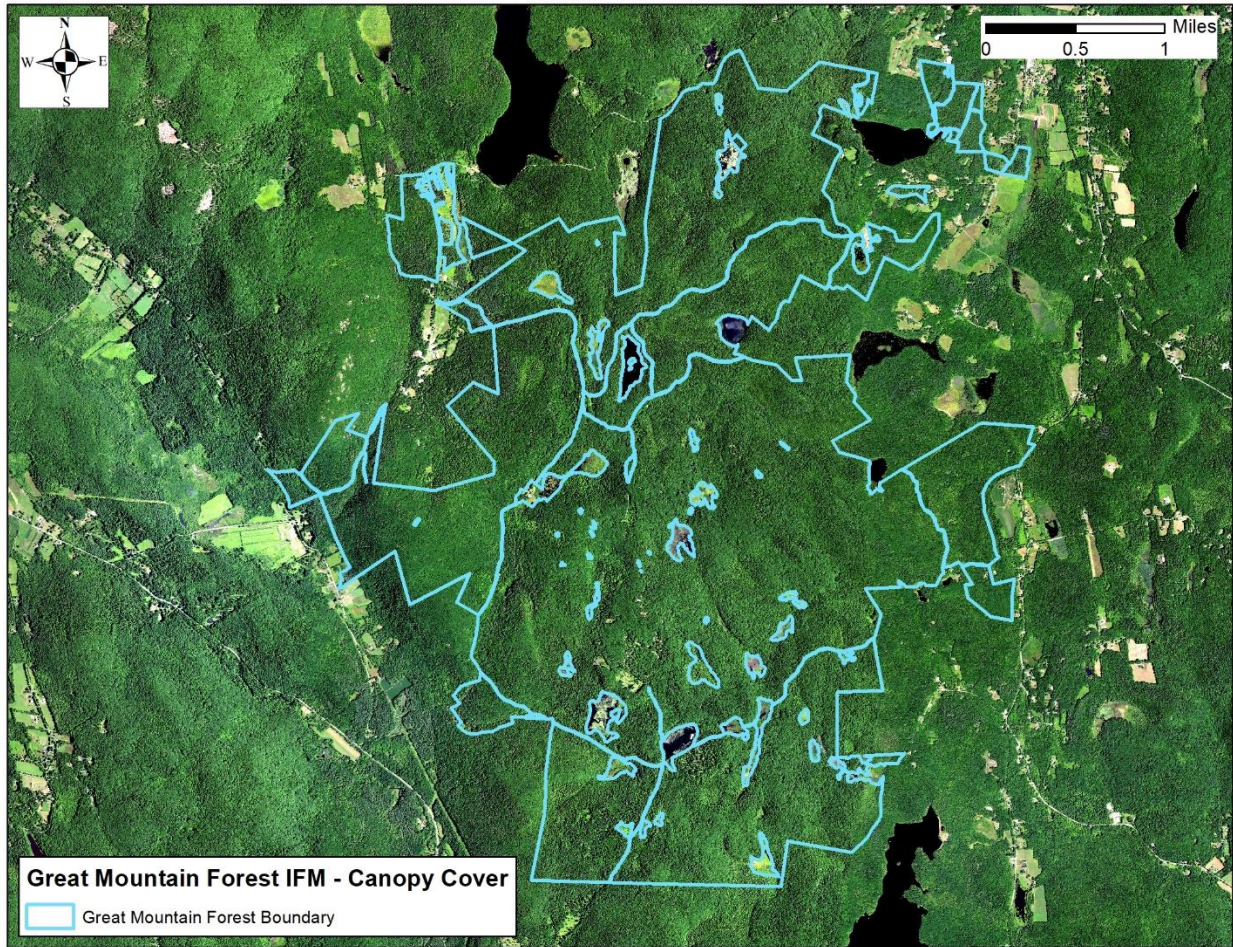
The State of Connecticut is not part of the USGS Public Land Survey System. Location information is provided in map 1.

7. Georeferenced shape file

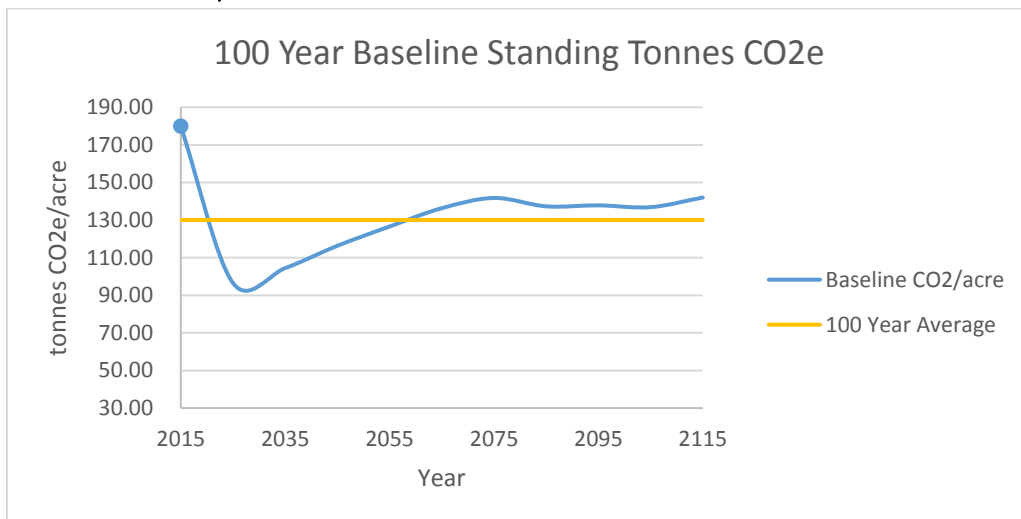
Please see provided georeferenced shapefile.

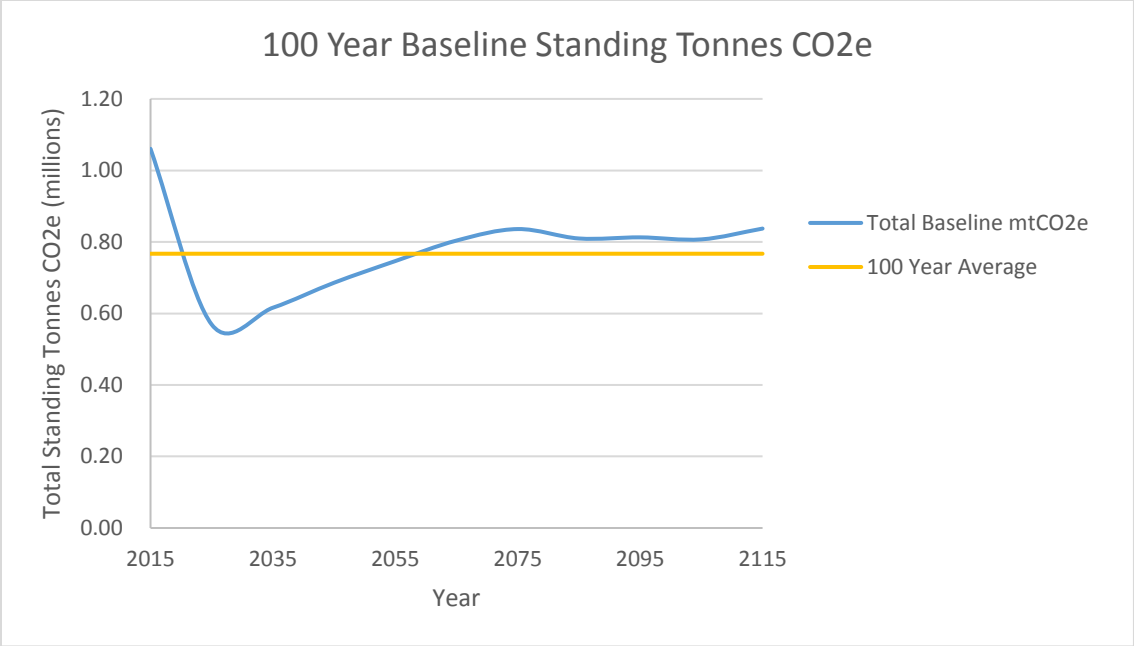
Attachment F: Canopy Cover

As evidence by recent aerial imagery, the Project Area contains greater than 10% canopy cover.

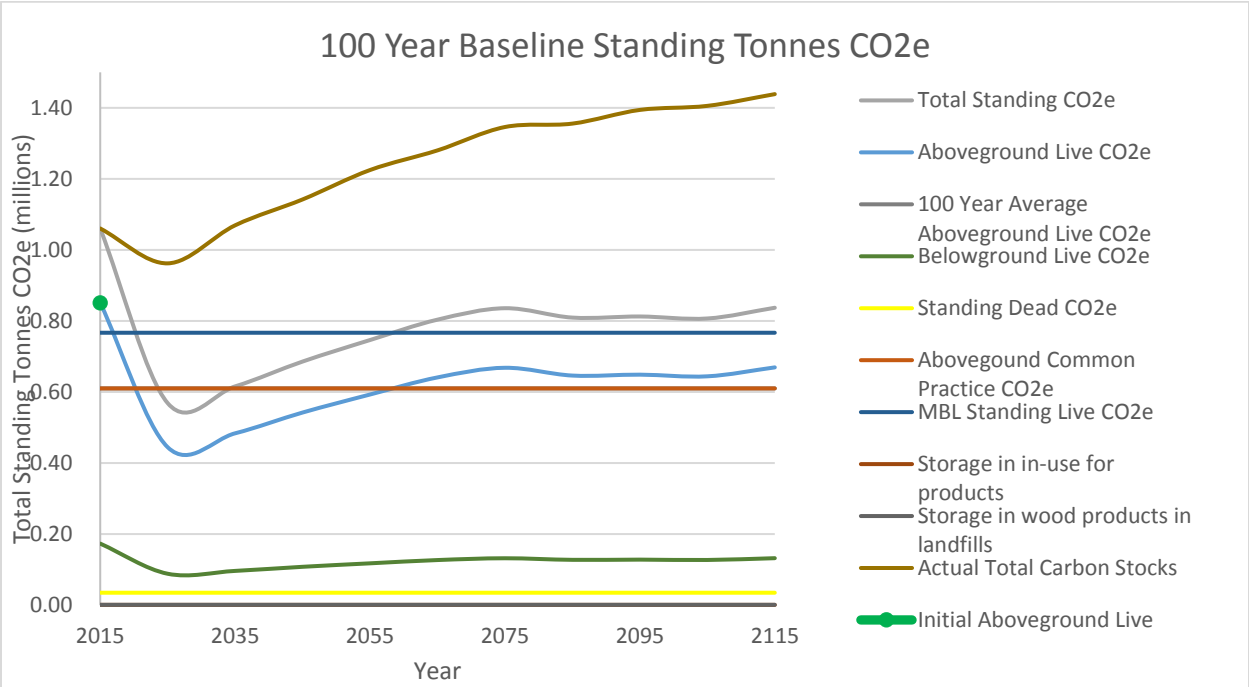


Attachment G: 100-year Baseline





Attachment H: Baseline Onsite Carbon Stocks



Within 5-10 years after the project commencement, a large majority of the carbon stocks on the property will be harvested using even-aged silvicultural techniques. Over the next fifty years, these stocks will re-establish to current levels. At this time, another small even-aged harvest is anticipated. Following this second harvest, the remaining growing stock will continue to grow until the end of the 100-year timeframe.

Please see the document “GMF Public Methodology and Modeling Description” for a graph and description of 100 year project and baseline volume.

Attachment I: Legal Constraints

In Connecticut, Forestry Best Management Practices (BMPs) for timber operations as set forth by "Best Management Practices for Water Quality While Harvesting Forest Products" (CT DEEP 2007) are required through the Forest Practices Act (CGS Title 23, Chapter 451a 23-65f through 23-65q) for any property where "wood products harvested from a tract of forest land [are] in excess of fifty cords or one hundred fifty tons or twenty-five thousand board feet, whichever measure is appropriate, in any twelve-month period." If these conditions are met, the landowner must utilize certified forest practitioners who are required to follow state forest practice regulations; however, these regulations do not restrict silvicultural treatments or impose harvest limits.

Additionally, because the conservation easement on the project area was recorded more than one year prior to the commencement date (recorded 12/9/2003), all constraints as listed in the conservation easement on the property will be modeled into the baseline, which states that the property cannot clear cut above 15 acres in size and within a 10-year period no more than 10% of easement area may be clear cut.

The project will model easement restrictions by constraining harvested acres in FVS.

Attachment J: Financial Feasibility

A financial analysis (Forest Protocol section 5.2.1) of the baseline growth and harvest regime reveals that the activities represented in baseline scenario are clearly feasible. Refer to the provided report "GMF_FinancialAnalysis" for details on financial analysis.

Attachment K: Change Log

The Change Log has been provided separately showing all changes to the project documentation from the original listing submittal to the final OPDR.