

CAR1205 Listing Addendum A

9.1.1.1

14. A description of how the offset project meets (or will meet) the definition of “Natural Forest Management” (refer to Section 3.8.2), including:

- a. Composition of native species;
- b. Distribution of age classes / sustainable management;
- c. Structural elements (standing and lying dead wood);

Due to rounding, numbers presented throughout this and other documents may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

Part VI.B.1 – the project will consist of at least 95% native species based on the estimated sum of carbon in the standing live carbon pool. The assessment shall be conducted using estimates of stems per acre for Reforestation Projects and basal area per acre for Improved Forest Management and Avoided Conversion Projects.

Example:

Species ID	Common Name	Scientific Name	Basal Area	Percent
126	Pitch Pine	<i>Pinus rigida</i> Mill.	3.68	4.27%
132	Virginia Pine	<i>Pinus virginiana</i> Mill.	1.84	2.14%
261	Eastern Hemlock	<i>Tsuga canadensis</i> (L.) Carrière	0.65	0.76%
316	Red Maple	<i>Acer rubrum</i> L.	7.45	8.65%
318	Sugar Maple	<i>Acer saccharum</i> Marsh.	0.39	0.45%
332	Yellow Buckeye	<i>Aesculus flava</i> Aiton	0.13	0.15%
371	Yellow Birch	<i>Betula alleghaniensis</i> Britton	0.26	0.30%
372	Sweet Birch	<i>Betula lenta</i> L.	1.04	1.21%
400	Hickory Spp.	<i>Carya</i> Nutt.	9.38	10.90%
531	American Beech	<i>Fagus grandifolia</i> Ehrh.	1.69	1.96%
541	White Ash	<i>Fraxinus americana</i> L.	1.30	1.51%
602	Black Walnut	<i>Juglans nigra</i> L.	0.52	0.60%
621	Yellow-Poplar	<i>Liriodendron tulipifera</i> L.	9.88	11.48%
651	Cucumbertree	<i>Magnolia acuminata</i> (L.) L.	4.03	4.68%
693	Blackgum	<i>Nyssa sylvatica</i> Marsh.	0.92	1.07%
802	White Oak	<i>Quercus alba</i> L.	11.75	13.65%
806	Scarlet Oak	<i>Quercus coccinea</i> Münchh.	9.72	11.29%
832	Chestnut Oak	<i>Quercus prinus</i> L.	11.27	13.09%
833	Northern Red Oak	<i>Quercus rubra</i> L.	1.56	1.81%
835	Post Oak	<i>Quercus stellata</i> Wangenh.	1.56	1.81%
837	Black Oak	<i>Quercus velutina</i> Lam.	6.03	7.00%
931	Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees	0.26	0.30%
951	American Basswood	<i>Tilia americana</i> L.	0.78	0.91%
Total Native			86.09	100.00%
Total			86.09	

Part VI.B.2 - the Project Area will naturally consist 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.

Example:

Assessment Area: Alleghany & North Cumberland Mountains Mixed Pine Hardwood (SDI: 60 percent)

Species ID	Common Name	Scientific Name	BA (sqft/ac)	Percent
126	Pitch Pine	<i>Pinus rigida</i> Mill.	20.00	33%
132	Virginia Pine	<i>Pinus virginiana</i> Mill.	10.00	17%
261	Eastern Hemlock	<i>Tsuga canadensis</i> (L.) Carrière	-	0%
316	Red Maple	<i>Acer rubrum</i> L.	-	0%
318	Sugar Maple	<i>Acer saccharum</i> Marsh.	-	0%
332	Yellow Buckeye	<i>Aesculus flava</i> Aiton	-	0%
371	Yellow Birch	<i>Betula alleghaniensis</i> Britton	-	0%
372	Sweet Birch	<i>Betula lenta</i> L.	-	0%
400	Hickory Spp.	<i>Carya</i> Nutt.	-	0%
531	American Beech	<i>Fagus grandifolia</i> Ehrh.	-	0%
541	White Ash	<i>Fraxinus americana</i> L.	-	0%
602	Black Walnut	<i>Juglans nigra</i> L.	-	0%
621	Yellow-Poplar	<i>Liriodendron tulipifera</i> L.	-	0%
651	Cucumbertree	<i>Magnolia acuminata</i> (L.) L.	-	0%
693	Blackgum	<i>Nyssa sylvatica</i> Marsh.	-	0%
802	White Oak	<i>Quercus alba</i> L.	-	0%
806	Scarlet Oak	<i>Quercus coccinea</i> Münchh.	20.00	33%
832	Chestnut Oak	<i>Quercus prinus</i> L.	10.00	17%
833	Northern Red Oak	<i>Quercus rubra</i> L.	-	0%
835	Post Oak	<i>Quercus stellata</i> Wangenh.	-	0%
837	Black Oak	<i>Quercus velutina</i> Lam.	-	0%
931	Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees	-	0%
951	American Basswood	<i>Tilia americana</i> L.	-	0%
Acres:		4,711	60.00	100%

Assessment Area: Alleghany & North Cumberland Mountains Oak-Hickory (SDI: 65 percent)

Species ID	Common Name	Scientific Name	BA (sqft/ac)	Percent
126	Pitch Pine	<i>Pinus rigida</i> Mill.	-	0%
132	Virginia Pine	<i>Pinus virginiana</i> Mill.	-	0%
261	Eastern Hemlock	<i>Tsuga canadensis</i> (L.) Carrière	0.87	1%
316	Red Maple	<i>Acer rubrum</i> L.	11.88	13%
318	Sugar Maple	<i>Acer saccharum</i> Marsh.	0.29	0%
332	Yellow Buckeye	<i>Aesculus flava</i> Aiton	0.29	0%
371	Yellow Birch	<i>Betula alleghaniensis</i> Britton	-	0%
372	Sweet Birch	<i>Betula lenta</i> L.	1.16	1%
400	Hickory Spp.	<i>Carya</i> Nutt.	6.96	8%
531	American Beech	<i>Fagus grandifolia</i> Ehrh.	1.45	2%
541	White Ash	<i>Fraxinus americana</i> L.	-	0%
602	Black Walnut	<i>Juglans nigra</i> L.	-	0%
621	Yellow-Poplar	<i>Liriodendron tulipifera</i> L.	3.48	4%
651	Cucumbertree	<i>Magnolia acuminata</i> (L.) L.	1.45	2%
693	Blackgum	<i>Nyssa sylvatica</i> Marsh.	1.45	2%
802	White Oak	<i>Quercus alba</i> L.	15.65	17%
806	Scarlet Oak	<i>Quercus coccinea</i> Münchh.	13.33	15%
832	Chestnut Oak	<i>Quercus prinus</i> L.	18.55	20%
833	Northern Red Oak	<i>Quercus rubra</i> L.	1.16	1%
835	Post Oak	<i>Quercus stellata</i> Wangenh.	1.16	1%
837	Black Oak	<i>Quercus velutina</i> Lam.	11.59	13%
931	Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees	-	0%
951	American Basswood	<i>Tilia americana</i> L.	0.58	1%
Acres:		11,571.00	91.31	100%

Assessment Area: Alleghany & North Cumberland Mountains Northern Hardwoods (SDI: 70 percent)

Species ID	Common Name	Scientific Name	BA (sqft/ac)	Percent
126	Pitch Pine	<i>Pinus rigida</i> Mill.	-	0%
132	Virginia Pine	<i>Pinus virginiana</i> Mill.	-	0%
261	Eastern Hemlock	<i>Tsuga canadensis</i> (L.) Carrière	0.71	1%
316	Red Maple	<i>Acer rubrum</i> L.	5.71	6%
318	Sugar Maple	<i>Acer saccharum</i> Marsh.	0.71	1%
332	Yellow Buckeye	<i>Aesculus flava</i> Aiton	-	0%
371	Yellow Birch	<i>Betula alleghaniensis</i> Britton	0.71	1%
372	Sweet Birch	<i>Betula lenta</i> L.	1.43	2%
400	Hickory Spp.	<i>Carya</i> Nutt.	17.14	18%
531	American Beech	<i>Fagus grandifolia</i> Ehrh.	2.86	3%
541	White Ash	<i>Fraxinus americana</i> L.	3.57	4%
602	Black Walnut	<i>Juglans nigra</i> L.	1.43	2%
621	Yellow-Poplar	<i>Liriodendron tulipifera</i> L.	22.86	25%
651	Cucumbertree	<i>Magnolia acuminata</i> (L.) L.	9.29	10%
693	Blackgum	<i>Nyssa sylvatica</i> Marsh.	0.71	1%
802	White Oak	<i>Quercus alba</i> L.	12.86	14%
806	Scarlet Oak	<i>Quercus coccinea</i> Münchh.	-	0%
832	Chestnut Oak	<i>Quercus prinus</i> L.	2.86	3%
833	Northern Red Oak	<i>Quercus rubra</i> L.	2.86	3%
835	Post Oak	<i>Quercus stellata</i> Wangenh.	2.86	3%
837	Black Oak	<i>Quercus velutina</i> Lam.	2.14	2%
931	Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees	0.71	1%
951	American Basswood	<i>Tilia americana</i> L.	1.43	2%
Acres:		9,288	92.86	100%

Part VI.B.3b - Please see Part V.I – 92.6% of the Project Area is older than 20 years old.

Part VI.B.4 – if the project does not meet the maximum of 1% of standing live stocks or 1 ton of carbon (C), then the project will ensure that structural elements are retained in sufficient quantities throughout the project life by continuing to implement project activities that do not include the active harvest or removal of standing or lying dead wood. Structural elements are also incorporated into management planning and through enrollment in the Sustainable Forestry Initiative certification.

Example of analysis:

Year	Metric tonnes CO ₂ e		Metric tonnes C		Percent
	TSL	TSD	TSL	TSD	
2015	112.82	1.82	30.79	0.50	1.61%