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Forest Ecosystem Restoration

Verification

Assessment

Report for:

Berea College

in

Berea, Kentucky, USA

Report Finalized: November 9, 2021

Audit Dates: May 12-13, 2021

Audit Team: Richard Z. Donovan,
Auditor

Technical Support: Mateo
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Verification
issue/expiry: November 8 2022

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INTRODUCTION

This report presents the findings of an independent verification audit conducted by a forest auditor representing Preferred by Nature. The auditor had technical support from Preferred by Nature staff in Spain and the US (Vermont).

The purpose of the audit was to evaluate the ecological, economic and social performance of Berea College’s restoration initiative as defined by the established Forest Ecosystem Restoration Standard Version 1.0 by Preferred by Nature.

The Berea College restoration efforts are part of a larger forest management context covering 9,122 acres managed by Clint Patterson, the designated Restoration Manager (RM) for this restoration effort. Clint’s role began as “college forester” in 2010, preceded by a series of nine other college foresters going back to 1897¹. The original forest was purchased through a combination of investment by Professor Silas C. Mason and Ms. Sarah Fay with an endowment for 5,400 acres. It was expanded to its current acreage over the years through additional purchases by Berea College. The latest, updated management plan was produced in 2019 by the RM and endorsed by Derrick Singleton, Vice President for Operations and Sustainability at Berea College.

The entire forest area is already certified under the Forest Stewardship Council (FSC) system (since 2014), as part of a “group” forest management (FM) certificate managed by the Center for Forest and Wood Certification at the University of Kentucky, and already subject to regular FM auditing by Preferred by Nature. Previously the forest was covered under a Fountain Forestry Group FM certification for a couple of years. The forest includes areas that have been certified through the California Action Reserve (CAR) for carbon offsets, and as such is subject to periodic auditing for that component of management as well. The CAR certification has provided significant financial resources for continued management of the forest. Given the relatively large size of the forest, the forest receives annual field audits through the UK FSC FM group certification.

Dispute resolution: If Preferred by Nature clients encounter organisations or individuals having concerns or comments about Preferred by Nature and our services, these parties are strongly encouraged to contact relevant Preferred by Nature regional office. Formal complaints and concerns should be sent in writing.

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1 AUDIT CONCLUSIONS

1.1 Audit Recommendation and verification decision

Based on Organisation’s conformance with verification requirements, the following recommendation is made:

- Verification approved:
Upon acceptance of NCR(s) issued below
-

- Verification not approved:
-

¹ “A Century of Forestry at Berea College” by Clint Patterson is a publicly available, 20-page, professionally formatted pamphlet describing the history of the forest at Berea College and its management. It was originally produced in 2010 and revised in 2018.

1.2 Non-conformity Reports (NCRs)

Check if no NCR(s) have been issued

NCR: 01/2021	NC Classification: minor
Standard & Requirement:	Forest Ecosystem Restoration Standard, vs. 1.0, 1.3
Report Section:	Annex 1
Description of Non-conformance and Related Evidence:	
The RM provided all geographic information readily when asked. However, specific shapefiles for the restoration sites (within the already existing shapefile for the overall forest) were not available.	
Corrective action request:	Organisation shall implement corrective actions to demonstrate conformance with the requirement(s) referenced above. Note: Effective corrective actions focus on addressing the specific occurrence described in evidence above, as well as the root cause to eliminate and prevent recurrence of the non-conformance.
Timeline for Conformance:	By the next annual surveillance audit, but not later than 12 months from report finalization (08/November/2022)
Evidence Provided by Organisation:	PENDING
Findings for Evaluation of Evidence:	PENDING
NCR Status:	OPEN
Comments (optional):	

1.3 Observations

Note: Observations are issued for the early stages of a problem which does not of itself constitute a non-conformance, but which the auditor considers may lead to a future non-conformance if not addressed by the organization; observations may lead to direct non-conformances if not addressed.

No observations

OBS: 01/2021	Standard & Requirement:	Forest Ecosystem Restoration Standard 1.0, Indicator 4.1
	Report Section	Indicator 4.1, Monitoring
Description of findings leading to observation:	Though there is comprehensive coverage on restoration in the 2019 Management Plan, specific monitoring reports on restoration are work in progress and were not presented to the auditor. Having such reports would put the college in a better position in terms of reporting on its restoration activities.	
Observation:	For future audits it will be important to see specific written monitoring reports on restoration activities, with reference to performance on a site-by-site basis and perhaps site-specific shapefile reports that can be used for on-site and remote monitoring.	

1.4 Stakeholder consultation

Given the fact that Berea College is already FSC-certified (NC-FM/COC-007601, valid from January 31, 2017), this verification focused on the technical implementation of restoration on the forest, using Version 1.0 of the Preferred by Nature Forest Ecosystem Restoration Standard Version 1.0. Stakeholder outreach consisted of field trips and discussions with Berea College staff and a few visiting volunteers and experts. Given that the forest is continually under FSC certification and there have been no outstanding stakeholder issues to date, the auditor did no public stakeholder outreach. No public meetings were held. The table below summarizes the issues identified by the assessment team with a brief discussion of each based upon specific interview and/or public meeting comments.

Principle/Subject Area	Stakeholder comment	Preferred by Nature response
1: Planning	N/A	N/A
2: Tenure & Security	N/A	N/A
3: Implementation	N/A	N/A
4: Monitoring and Reporting	N/A	N/A

1.5 Actions taken by Organisation Prior to Report Finalization

N/A

2 AUDIT PROCESS

2.2 Certification Standard Used

Standards Used (including version):	Version 1.0 of the Preferred by Nature Forest Ecosystem Restoration (FER) Standard.
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2.3 Audit Team and accompanying persons

Name	Role and qualifications
Richard Zell Donovan	Field forest auditor for this audit with over approximately 30 years of experience in forest management certification in tropical, temperate, and boreal countries. Prior to doing FM certification audits, for four years the auditor led a field project in Costa Rica conducting tree planting and assisted natural regeneration in tropical forest. The auditor is also a co-writer of the Preferred by Nature FER standard. The auditor has an MSc in natural resources management and administration with a focus on community forestry and hydrology and is a former professional tree feller in tropical and temperate forests. The auditor is based in Jericho, Vermont, USA. Field experience in over 50 countries in tropical, temperate and boreal forest.
Mateo Cariño Fraisse	Technical reviewer of this draft report and Landscape specialist and forester at Preferred by Nature. Co-author of the FER standard and project manager for restoration standard field tests in multiple locations around the globe in temperate and tropical forests (so far, tests in boreal forest may happen in the future). Experienced forest auditor in temperate and tropical forests for both plantations and natural forests.

2.4 Audit Overview

Site(s)	Date(s)	Main activities	Auditor
Berea College	May 12	Opening meeting, examination of documents, office visit, & discussions with Berea College staff	Richard Zell Donovan
Berea College Forest	May 12-13	Field visits and interviews	Richard Zell Donovan
Berea College	May 13	Closing meeting	Richard Zell Donovan
Total number of person days used: 4 days by one auditor, including 1 day spent in preparation, 2 days on site and 1 day for post site visit follow-up.			

Description of Overall Audit Process

The audit was organized with forester Clint Patterson and consisted of office discussions, review of available documentation and field visits to virtually all the restoration sites. As the Berea College Forest has been FSC-certified since 2012, with virtually no major issues, the audit did not engage in communications with stakeholders. In addition to restoration site visits, the auditor was also able to see watersheds which are a part of the forest and an important source of water supply for nearby communities and interact with Berea College staff who work out of the forestry extension center at the forest.

The sites visited included areas where plantings of short needle pine are occurring, planting of native grassland vegetation, chemical application sites, prescribed burn sites, and areas under strict protection (including on nature trails and near the visitor center). All restoration sites were visited.

The forest is located a few miles from Berea College outside the city of Berea, Kentucky.

2.4.1 List of FMUs selected for evaluation

FMU Name	Rationale for Selection
Berea College Forest	The college accepted being the site of a field test for the Preferred by Nature draft 1.0 Forest Ecosystem Restoration standard. The college is implementing restoration on parts of its forest, primarily to restore mixed oak/pine woodlands and native grasslands.

2.4.2 List of management aspects reviewed by assessment team

Type of site	Sites visited	Type of site	Sites visited
Road construction	4	Illegal settlement	
Soil drainage	3	Bridges/stream crossing	5
Workshop	1	Chemical storage	1
Tree nursery		Wetland	2
Planned Harvest site		Steep slope/erosion	
Ongoing Harvest site		Riparian zone	3
Completed logging	3	Planting	2
Soil scarification	1	Direct seeding	
Planting site	3	Weed control	1

Felling by harvester		Natural regeneration	6
Felling by forest worker		Endangered species	
Skidding/Forwarding		Wildlife management	
Clearfelling/Clearcut		Nature Reserve	
Shelterwood management	1	Key Biotope	
Selective felling	4	Special management area	3
Sanitation cutting		Historical site	1
Pre-commercial thinning		Recreational site	2
Commercial thinning		Buffer zone	numerous
Prescribed burns	2	Local community	
Logging camp		Municipal watershed	2

3 Organization DETAILS

3.2 Organization specific background information

<p>Ownership and land tenure description (legal and customary)</p> <p>Berea College is the fee-simple owner (land title) of the 9,122 acres (3,693 hectares) of the Berea College Forest. Nearby communities do access potable water supply from “man-made” lakes within the forest, under long term agreements.</p>
<p>Legislative and government regulatory context</p> <p>Forest management in Kentucky is under the purview of the Kentucky Division of Forestry, which is under the Kentucky Energy and Environment Cabinet. The Division of Forestry also supervises fire management, and Berea College coordinates with them on the use of prescribed fire, and all other forest management activities (timber and non-timber forest products harvesting, biological protection, etc.).</p>
<p>Environmental Context</p> <p>The Berea College Forest is located at the western edge of the Cumberland Plateau. The forest and surrounding ecosystems have unique resources, as identified through the HCV assessment that has been completed and considered during FSC forest certification activities. The college used the University of Kentucky “HCV worksheet” to cover the topic of HCVs and Categories 2 and 4 were deemed of relevance. The HCVF 2 designation is represented by the presence of rock cliffs throughout the forest between 1,300 to 1,400 feet in elevation. Sometimes, these cliffs are dissected and sometimes they are contiguous for distances of a quarter mile for more. In some places, these cliffs feature “rock house” overhanging structures with cultural heritage value. The HCVF 4 designation includes municipal watersheds contained within the forest for multiple nearby municipalities.</p> <p>Berea College is formally engaged as a “carbon offset” site through the California Action Reserve (CAR). This includes sites where the college has “set asides” where no timber harvesting or other commercial activities are allowed “carbon exclusion areas” – these areas are mapped and audited through the CAR program by an independent auditor. As part of the original CAR registration process the forest boundaries and tenure confirmed (CAR requires a 100-year agreement on the part of the registrant – in this case Berea College – to maintain the forest as forest with specific approved activities per the CAR registration).</p>
<p>Socioeconomic Context</p> <p>There are well-documented multiple land uses in the region, including timber harvesting, mining, historic indigenous presence and relics, and indigenous and non-indigenous historic settlements. Though there have been land conflicts in the past, these issues have been resolved, though there is an underlying sense amongst some community members that this is “their forest”, and thus they sometimes engage in activities (on a small-scale) that</p>

undermine sustainable resource management. In some parts of the forest there are issues around trash-dumping, marijuana cultivation, vandalism (of signs, gates, and other infrastructure) and a very small amount of timber theft. There have also been a few cases on or near the forest where illegal “meth labs” were set up (and shut down by Kentucky legal authorities). Marijuana cultivation and meth labs have affected less than 100 acres (40 hectares).

Berea College’s visitor’s center in the forest serves as a resource for historical documentation and education around all these land uses. As such the college constantly interacts with the local communities, both because of its direct important for managing community watersheds, but also because the College does want its forest to serve a place for outreach and demonstration for forestry, recreation, management of invasive species, prescribed burns, and biological research. There is significant hiking on the forest, and at the fringe of the forest there is a bike trail that receives substantial walking and biking traffic. Hunting is allowed in general, though there are signs posted prohibiting hunting in some locations (e.g., recreation sites near the visitor center). Historically there was significant timber harvesting and mining in the region, but mining does not currently happen on the forest and all timber harvesting is FSC-certified (and audited regularly).

3.3 General overview of the organization and scope

As previously described, the Berea College Forest is owned directly by the college. The forest is private titled land. It is 9,122 acres (3,693 hectares). The forest is a member of the University of Kentucky Group FM certificate that is managed by Eric Gracey (email: gracey@uky.edu), a forester who previously worked for the Kentucky Division of Forestry. It has been part of that certificate for 6 years. Since the Berea College Forest currently represents approximately 40% of the Kentucky Group FM, it receives annual audit attention. The forest also receives audit attention due to its formal registration with the Climate Action Reserve (CAR) of the state of California for climate-related commitments and actions in the forest.

The forest is considered a single forest management unit (FMU), though there are multiple parts of the forest, all relatively close to each other. In general, the Berea restoration efforts focus on both restoration of mixed short-needle pine and oak (various species) woodlands and restoration of natural grasslands in a few small areas within the forest complex. Berea uses a combination of tree plantations using native species (in small blocks typically not more than 3-4 acres), prescribed burning, enrichment planting with oak and pine species, and associated thinning or release activities to foster growth of the desired species.

Berea College also places a high importance on using the forest as an education resource for students at the college and others in the local community about forest dynamics, wildlife and biodiversity, land use and forest history, sustainable use of forest products, and forest practices in general. It maintains an active visitor’s center (with full-time staffing) in the same location as the forestry office, where there are also workshop/storage facility, walking trails, with forest management demonstration sites nearby.

Activities on the forest include recreation (hiking, animal watching, mountain biking, education, timber, and non-timber forest products harvesting and scientific research – biological inventories and monitoring, forest management technique testing, etc).

