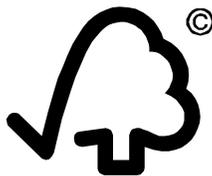




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**Rainforest  
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*SmartWood Program*

Forest Management  
**2012 Annual audit**  
Report for:

Commonwealth of  
Pennsylvania, DCNR  
Bureau of Forestry  
In  
Harrisburg, PA USA

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### Standard Conversions

1 mbf = 5.1 m<sup>3</sup>  
 1 cord = 2.55 m<sup>3</sup>  
 1 gallon (US) = 3.78541 liters  
  
 1 inch = 2.54 cm  
 1 foot = 0.3048 m  
 1 yard = 0.9144 m  
 1 mile = 1.60934 km  
 1 acre = 0.404687 hectares  
  
 1 pound = 0.4536 kg  
 1 US ton = 907.185 kg  
 1 UK ton = 1016.047 kg

# 1. INTRODUCTION

The purpose of this report is to document annual audit conformance of Commonwealth of Pennsylvania, DCNR Bureau of Forestry (BOF), hereafter referred to as Forest Management Enterprise (FME). The report presents the findings of SmartWood auditors who have evaluated company systems and performance against FSC forest management standards and policies. Section 2 of this report provides the audit conclusions and any necessary follow-up actions by the company through corrective action requests.

SmartWood audit reports include information which will become public information. Sections 1-3 will be posted on SmartWood’s website according to FSC requirements. All appendices will remain confidential.

Dispute resolution: If SmartWood clients encounter organizations or individuals having concerns or comments about Rainforest Alliance / SmartWood and our services, these parties are strongly encouraged to contact SmartWood regional or Headquarters offices directly (see contact information on report cover). Formal complaints or concerns should be sent in writing.

## 2. AUDIT FINDINGS AND RESULTS

### 2.1. Audit conclusion

<b>Based on Company’s conformance with FSC and SmartWood requirements, the audit team makes the following recommendation:</b>	
<input checked="" type="checkbox"/>	<b>Certification requirements <u>met</u>, certificate maintenance recommended</b> No NCR(s) issued
<input type="checkbox"/>	<b>Certification requirements <u>not met</u>:</b>
Additional comments:	None
Issues identified as controversial or hard to evaluate.	The audit focused on the gap analysis between the previous used Appalachia Standard and the new FSC-US Standard, in addition to addressing the previous year's CARs. Built into this audit process was a revisiting of the Marcellus gas activity, concentrating on the FME's control over associated gas and oil operations relative to their forest management. Another focus area was on recreational aspects on the state forests and looking at some activities that could potentially, negatively affect the forest. Last, a recently purchased land parcel has been incorporated into the Lackawanna State Forest; however, timber cutting rights have been granted to a non FSC-certified company for 15 years. The focus again was on examining this to see if the FME has control over the forest management and operations of this land to assure the certifying body that this land should not be excised from the FSC-certified landbase.

### 2.2. Changes in FMEs’ forest management and associated effects on conformance to standard requirements:

Changes in the FME’s organizational structure since the last audit include the inception of the Geospatial Applications Section which assists the FME with geographical information system

(GIS) mapping and utilization. The Section includes a Section Chief and two other staff (one a contract employee) with one more to be added in the near future.

Additionally, a compliment of 15 staff members was added to develop and implement the FME's oil and gas monitoring program which is comprised of three foresters, three forest technicians, one assistant manager, one GIS specialist, one biometrician, two plant specialists, one water quality specialist, one wildlife biologist, one social/policy specialist, and one infrastructure specialist. Other increases in staff were primarily for management of gas activities and included three geologists and an ecologist.

Minor changes were made to management systems as needed to address the open CARs (see Section 2.4).

During the audit process the auditors identified several tracks where the BOF does not own the timber rights. Consequently, these tracts, totaling 24,907 acres were removed from the certificate. The new certified area is approximately 2,136,432 acres.

**2.3. Stakeholder issues** *(complaints/disputes raised by stakeholders to FME or SmartWood since previous evaluation):*

Since the previous audit there were some stakeholder comments directed at certain recreational activities (e.g., perceived damage from the Rattlesnake Enduro events). These are discussed below. In addition, there were comments from stakeholders on the Marcellus gas leasing program. The comments on gas leasing received by SmartWood were similar to, but fewer in number than those received in 2010. A thorough review of stakeholder comments regarding oil and gas leasing and SmartWood's responses is included in the 2011 audit report. No new gas leasing issues were identified over the past year.

**Rattlesnake Enduro**

A stakeholder group notified SmartWood of damage caused by motorcycles during a race in the Sproul State Forest that had not been repaired as of August 19, 2011. The race took place July 31, 2011. As many as 500 motorcycles may have used the trails, which included state forest roads and off-road trails. The stakeholder who contacted SmartWood commented "It is my understanding that there are no plans to reclaim the damage, and DCNR, at least at the local level, has condoned the damage."

SmartWood was not able to visit the site because the audit was scheduled for other forest regions, but the stakeholder supplied photographs of the trail disturbance and a trail map. SmartWood requested pertinent information from the BOF regarding requirements to address forest damage.

BOF has a Special Activities Agreement with the trail ride sponsor to repair all damage within 30 days. The route must be approved in advance by the Department. BOF charges a fee for the event that includes 8 hours of ranger patrol during the event and 16 hours for course inspection after the event to identify needs for remediation. BOF obtained a security deposit of \$1,000 to be held until 8-30-2011 or until any damages are repaired.

BOF reports that as of September 23, 2011 the trail has been inspected and instructions have been given to the Enduro sponsor as to what is expected. All trails that are not on existing roads (approximately 18 miles) are being raked smooth and any crossing with an existing road is being blocked with brush. All inclines have water barriers i.e. logs or rocks, laid across every 30 feet to

catch erosion. BOF has allowed the race sponsor until October 31, 2011 to accomplish this, but is aware the sponsor is currently working to complete the remediation activities before that date.

As an example of past enforcement, after the 2008 Enduro at this site the BOF retained the security deposit because the Enduro sponsor had not completed remediation as requested, and prohibited future events until the remediation was completed.

Based on the evidence provided, the audit team has concluded that BOF is compliance with FSC requirements for recreation trails (see FSC-US Indicator 6.5.g) and that procedures are in place to ensure that the required remediation occurs on a timely basis.

## 2.4. Conformance with applicable non conformity reports

The section below describes the activities of the certificate holder to address each applicable non conformity report (NCR) issued during previous evaluations. For each NCR a finding is presented along with a description of its current status using the following categories. Failure to meet NCRs will result in nonconformances being upgraded from minor to major status with conformance required within 3 months with risk of suspension or termination of the SmartWood certificate if Major NCRs are not met. The following classification is used to indicate the status of the NCR:

Status Categories	Explanation
Closed	Operation has successfully met the NCR.
Open	Operation has either <u>not met</u> or has <u>partially met</u> the NCR.

Check if N/A (there are no open NCRs to review)

<b>CAR 01/11</b>		<b>Reference to Standard: Appalachia 1.1.a. (FSC US Forest Management Standard 1.1.a.)</b>
<b>Non-conformance</b>		Pennsylvania's Erosion and Sediment Control regulations (Chapter 102 of the Clean Stream Law) require that Erosion and Sediment (E&S) Plans be available for review and inspection by the DEP or the County Conservation District at the project site during all stages of the earth disturbance activity, yet E&S Plans were not observed to be on site for all active logging jobs.
<b>Major</b> <input type="checkbox"/>	<b>Minor</b> <input checked="" type="checkbox"/>	
<b>Corrective Action Request:</b> BOF shall ensure that forest management plans and operations comply with federal, state, county, municipal, and tribal laws, case law, and regulations.		
<b>Timeline for conformance:</b>		Prior to next annual audit
<b>Evidence to close CAR:</b>		Check boxes were added to the forester's Timber Sale Inspection and Completion Report forms to ensure that the issue of posting Erosion and Sediment (E&S) Plans is addressed weekly. A memo was sent to Districts to inform them of the policy and to be sure that E&S plans are posted at the log landing in a weatherproof container. This memo was provided to the auditors. The FME stated that post memo District inspections by the FME have showed conformance with the measure. During the on-site visit, the auditors went to several field sites and observed that E&S Plans were appropriately posted in plain view. In light of this, and the fact that no other violations of any federal, state, county,

	municipal, and tribal laws, case law, and regulations were detected it was the opinion of the auditors that the BOF was in compliance with this Indicator.
<b>CAR Status:</b>	CLOSED
<b>Follow-up Actions (if app.):</b>	None

<b>CAR 02/11</b>	<b>Reference to Standard: Appalachia 4.2.a. (FSC US Forest Management Standard 4.2.a.)</b>	
<b>Non-conformance</b>		<p>A logging subcontractor was observed to not wear proper PPE (hard hat) when topping felled trees on an active harvest site. In some cases on BOF State Forestland, workers are exempt from wearing certain PPE if doing so violates religious beliefs and rules. BOF has worked with OSHA and State lawyers to develop policy and procedure with regard to religious exemptions for contractors and subcontractors working as timber harvesters on State Forests. The key element of worker with PPE religious exemption is that each worker must have written support from their religious leader as to the need for not using PPE. The subcontractor who was not wearing a hardhat did not have such a letter on file with the BOF.</p> <p>BOF hard hat policy was unknown to most BOF staff interviewed during the audit, and it was observed that hard hat use is inconsistent and irregular within and across Districts, particularly with staff from different BOF Divisions and Sections working in the forest.</p>
<b>Major</b> <input type="checkbox"/>	<b>Minor</b> <input checked="" type="checkbox"/>	
<b>Corrective Action Request:</b> BOF shall ensure the use of safety equipment appropriate to each task.		
<b>Timeline for conformance:</b>	Prior to next annual audit	
<b>Evidence to close CAR:</b>	<p>Check boxes were added to the forester's Timber Sale Inspection and Completion Report form to ensure that the contractor use of PPE is monitored weekly. A memo was sent to Districts to inform them of the policy. This memo was provided to the auditors. The FME stated that post memo District inspections by the FME have showed conformance with the measure. During the on-site visit, the auditors went to a field site and observed that PPE was being used by the logger and a completed form was reviewed by the auditors as evidence that the forms are in use. Specific to the religious exemption issue, this would be addressed on a case by case basis initiated by observations in the Timber Sale Inspection and Completion Report form. In light of this, and assurances from FME staff that other loggers were complying, it was the opinion of the auditors that the BOF was in compliance with this Indicator.</p>	
<b>CAR Status:</b>	CLOSED	
<b>Follow-up Actions (if app.):</b>	None	

<b>CAR 03/11</b>	<b>Reference to Standard: Appalachia 6.1.c. (FSC US Forest Management Standard 6.1.b.)</b>
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<b>Non-conformance</b>		<p>Upon review of the State Forest Environmental Reviews (SFER) for 2008, 2009 and 2010, the audit team has found the assessment for impacts to plant and wildlife habitat impacts to non-listed species and groundwater to be lacking. Impact assessments of current leases are included in the environmental review documents for individual leases (e.g., see “FY 2009-10 Oil and Gas lease Sale Environmental Review,).</p> <p>For non-listed species these documents include a short paragraph describing measures that will be used to protect and manage non-listed species (e.g., see “FY 2009-10 Oil and Gas lease Sale Environmental Review,” Section 18, Habitat Diversity and Interspersion). However, the Environmental Review does not include a short-term or cumulative impact assessment of the lease on non-listed species. In particular the impact of forest loss and fragmentation (approximately 24,000 acres and 3,000 miles of forest edge (<a href="http://www.dcnr.state.pa.us/forestry/marcellus/pdfs/ProjectedForestConversion_OilGas.pdf">http://www.dcnr.state.pa.us/forestry/marcellus/pdfs/ProjectedForestConversion_OilGas.pdf</a>); on species that depend on large, unfragmented blocks of forest is not addressed by the Environmental Review for current leases.</p> <p>Likewise the groundwater section of the Environmental Review also focuses on preventive measures and does not address short-term and cumulative impacts.</p>
<b>Major</b> <input type="checkbox"/>	<b>Minor</b> <input checked="" type="checkbox"/>	
<b>Corrective Action Request:</b> BOF shall evaluate potential short-term environmental impacts and their cumulative effects prior to commencement of management activities.		
<b>Timeline for conformance:</b>		Prior to next annual audit
<b>Evidence to close CAR:</b>		<p>Draft changes have been incorporated into the BOF Environmental Review Policy to incorporate short-term and cumulative impacts to surface water, groundwater and “Common Animals and Plants”. Two supporting documents have been drafted, as described in the following paragraphs.</p> <p>Potential short and long-term impacts to surface waters and ground water from activities associated with oil and gas activities and other site disturbing have been addressed in the BOF document <i>Impacts of Disturbance Events on Groundwater and Surface Water Quality and Quantity</i> (Impacts_2_SW_GW.docx).</p> <p>Short-term and long-term impacts to common plants and animals are evaluated in the draft document <i>Impacts_2_Common_Plants_Animals.docx</i>, including impacts from silviculture, roads, recreation trails, rights-of way, and Marcellus activity. Impacts to forest birds are further broken down into forest interior birds, mid-successional birds, and early successional birds.</p> <p>These two documents address the nonconformance identified above.</p>
<b>CAR Status:</b>		CLOSED

<b>Follow-up Actions (if app.):</b>	None
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<b>CAR 04/11</b>	<b>Reference to Standard: Appalachia 6.1.e. (FSC US Forest Management Standard 6.3.h.)</b>	
<b>Non-conformance</b>		DCNR's 2008 and later Marcellus gas leasing provides the option for invasive plant species be monitored prior to approval for site development in order to collect baseline data. If invasive plants are identified after site development they must be controlled prior to site disturbance. Leases from 2008 to the present require that the lease holder monitor invasive species for five years following construction, or until invasive species are not observed on site, whichever is longer and new occurrences of invasive plants must be controlled (for example, see FY 2009-10 Gas Lease Sale Environmental Review, Section 20). However, BOF does not have similar invasive plants monitoring for pre-2008 leases and has even less control over lands with severed subsurface rights that do not have a recent negotiated land use agreement. While BOF is planning an expanded monitoring program for gas activities, the details have not been specified and the funding has not been secured.
<b>Major</b> <input type="checkbox"/>	<b>Minor</b> <input checked="" type="checkbox"/>	
<b>Corrective Action Request:</b> BOF shall monitor invasive species establishment throughout the forest with special emphasis on disturbed areas and areas where invasive species are known to exist.		
<b>Timeline for conformance:</b>		Prior to next annual audit
<b>Evidence to close CAR:</b>		<p>The 2010 audit (2009 calendar year) found that BOF has an active program for monitoring and controlling invasive plants in forest management areas. The gap identified above was specific to monitoring of invasive plants in areas disturbed by oil and gas leases issued prior to 2008, and on areas disturbed by subsurface extraction in areas with severed subsurface rights</p> <p>BOF has developed and expanded monitoring program that will monitor all sites subject to oil, gas, and mineral extraction. The program has been funded and staffed; BOF will have 7 field monitoring staff and will have a total of 15 field and office. BOF has also developed a framework to visit sites on a 5-year basis. Where subsurface rights holders leaseholders are not required to monitor invasive plants (pre-2008 leases and severed rights areas without a Surface Use Agreement), BOF will monitor and treat any invasive plants found.</p> <p>BOF has begun the first year of monitoring of invasive species and exotic seed mixed use by gas companies, and the first report is being drafted and intends to publish this annually.</p>
<b>CAR Status:</b>		CLOSED
<b>Follow-up Actions (if app.):</b>		

<b>CAR 05/11</b>	<b>Reference to Standard: Appalachia 6.3.a.8.</b>
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		<b>(FSC US Forest Management Standard 6.3.g.1., 6.3.g.2.)</b>
<b>Non-conformance</b>		<p>The BOF <i>Silviculture Manual</i> specifies a minimum 10-20 square feet per acre of retention in clearcuts and overstory removal (OSR) harvests, and 20-40 square feet where 2-aged management is practiced (primarily buffer zones). The retention may be in clumps or scattered trees within the harvest block. One district visited relied primarily on clump retention, which all canopy layers and ground vegetation intact in roughly 1/10 to 1/4-acre patches. Sites at other two districts audited were characterized by scattered retention, often uniformly spaced, with no midstory or understory structure retained. The <i>Silviculture Manual</i> makes no reference to retention of live trees and native vegetation and opening sizes in a manner that is consistent with the characteristic natural disturbance regime in each community type (as required by indicator 6.3.a.8). Opening sizes and retention appeared to be characteristic of catastrophic disturbances, not characteristic disturbances. Interviews with field foresters indicated that the guideline in the manual and other guidance on production forestry (e.g. Silvah model outputs), not natural community disturbance patterns, guided their decisions on retention and opening sizes.</p>
<b>Major</b> <input type="checkbox"/>	<b>Minor</b> <input checked="" type="checkbox"/>	
<p><b>Corrective Action Request:</b> BOF shall ensure that when even-aged or two-aged management (e.g., seed tree, regular or irregular shelterwood), or deferment cutting is employed, live trees and native vegetation are retained and opening sizes are created within the harvest unit in a proportion and configuration that is consistent with the characteristic natural disturbance regime in each community type (see Glossary), unless retention at a lower level is necessary for restoration or rehabilitation purposes. Harvest openings with no retention are limited to 10 acres.</p>		
<b>Timeline for conformance:</b>		Prior to next annual audit
<b>Evidence to close CAR:</b>		<p>PA DCNR has evaluated natural disturbance regimes for the various forest types, pre-European anthropogenic disturbances, and changes to disturbance regimes and species composition resulting from human activities since European settlement (see Natural_Disturbance_Regimes_Draft.docx).</p> <p>The “Sale Layout and Design” chapter of the BOF <i>Silviculture Manual</i> will be revised to include the natural disturbance regime assessment and will include guidance for foresters on incorporating this guidance into retention for even-aged regeneration harvests. Training for BOF foresters on using the new guidance will occur at the BOF winter meeting and during a special forester training session in September.</p> <p>Because the new guidance has not been implemented and training has not occurred, the audit team was not able to fully evaluate conformance at timber harvest sites. However, interview with field foresters indicated that both dispersed and grouped retention is being used to provide a range of ecological values. For example, foresters in District 19 are incorporating new research on the benefits of dispersed</p>

	retention to benefit golden winged warblers, a species of concern in the region. Therefore, the auditors have determined that BOF has met the requirements of the Indicator. Future audits will verify implementation of the new guidance.
<b>CAR Status:</b>	CLOSED
<b>Follow-up Actions (if app.):</b>	None

<b>CAR 06/11</b>	<b>Reference to Standard: Appalachia 8.5.a. (FSC US Forest Management Standard 8.5.a.)</b>	
<b>Non-conformance</b>		Monitoring data from oil and gas development impacts to the surrounding forest has been collected by the BOF for decades, with increased monitoring efforts over the last few years associated with the expansion of gas leasing. Some monitoring information is available on the website; however, the BOF has not fully reported nor summarized for the public all of these oil and gas data.
<b>Major</b> <input type="checkbox"/>	<b>Minor</b> <input checked="" type="checkbox"/>	
<b>Corrective Action Request:</b> BOF shall develop and maintain either full monitoring results or an up-to-date summary of the most recent monitoring information on oil and gas development, covering the Indicators listed in Criterion 8.2 that will be available to the public, free or at a nominal price, upon request.		
<b>Timeline for conformance:</b>		Prior to next annual audit
<b>Evidence to close CAR:</b>		Oil and gas monitoring staff were hired in the past year. Because the first season of data is still being collected, a monitoring summary could not be completed prior to the time of the annual audit. A framework for a full monitoring report has been established that will incorporate results of oil and gas development monitoring and will be posted on the BOF's website for public review. The auditors were provided with a file titled "Monitoring Report Framework.docx." In addition, a preliminary summary of activities as of the third quarter of 2011 was provided to the auditors and included acres of forest cleared for gas development, flora/fauna Related issues, recreational impacts, and water quality issues. The audit team determined that monitoring process and reporting protocol is sufficient evidence to close this CAR.
<b>CAR Status:</b>		CLOSED
<b>Follow-up Actions (if app.):</b>		Criterion 8.5 should be evaluated at the next annual audit with a specific focus on completion of an oil and gas monitoring summary.

<b>CAR 07/11</b>	<b>Reference to Standard: Appalachia 9.1.a. (FSC US Forest Management Standard 9.1.a., 9.1.b., 9.1.c.)</b>	
<b>Non-conformance</b>		As reported in the 2010 audit report, during 2008-2009, BOF conducted the required analysis for all State Forest Lands and documented the findings. Documentation reviewed by the audit team, at that time, included:  <ul style="list-style-type: none"> <li>• "High Conservation Value Identification, Management, and</li> </ul>
<b>Major</b> <input checked="" type="checkbox"/>	<b>Minor</b> <input type="checkbox"/>	

		<p>Monitoring Processes within the State Forest System: A Corrective Action Request Response” (HCVF EMS1.doc), which is the primary response to CAR 08/08.</p> <ul style="list-style-type: none"> <li>• HCV Maps.pdf</li> <li>• Screen shot of HCV4 assessment tool</li> </ul> <p>The 2010 audit determined that: “The HCVF EMS1.doc analysis addresses each of the six High Conservation Values (HCV) potentially present and found that all are present on the forest. The assessment process included appropriate data sources and range of stakeholders.” At that point, BOF designated the entire forest as HCVF. The auditors determined that BOF had taken an aggressive approach to designating HCVF and placed more acres in HCVF than was appropriate given the requirements in the standard and under new guidance (the FSC-US HCVF Assessment Framework). At the time of this designation, the HCVF Assessment Framework was in draft form and clear guidance on interpreting and implementing the HCVF concept was just emerging. The 2010 audit also identified a new potential nonconformance with Criterion 6.10 and HCVF. Under Criterion 6.10, conversion of HCVF is not allowed. Since, BOF had, in error, designated the entire forest as HCVF. CAR 04/10 was issued; however, since some lands were incorrectly designated as HCVF, conversion of actual HCVF was not occurring. CAR 04/10 has been closed in this report; for details see above for findings to close CAR 04/10.</p> <p>Prior to this audit, BOF provided the audit team with a corrected High Conservation Value Forest (HCVF) assessment. The corrected assessment includes 220,803 acres designed as HCVF (reduced from 2.14 million acres indicated in the 2010 report). The new HCVF designation includes all Wild Areas and Natural Areas (WNAs). The BOF has determined that the designation of WNAs correlates closely with the HCVF definitions and is consistent with their 2009 HCVF assessment. Due to their conservation value, WNAs have been designated as HCV1 (Significant concentrations of biodiversity) HCV2 (Significant large landscape level forests), and HCV3 (Rare, threatened or endangered ecosystems). While currently, all WNAs are designated as HCVF, there are small portions where sub-surface rights had previously been severed or leased to others. There is no conversion allowed on HCVF. Since the potential for conversion is largely outside of the control of BOF, if the sub-surface right holder decides to exercise their rights which would result in a conversion of acreage in a WNA to non-forest use, BOF would have to excise the area before it is converted (as per the FSC excision policy (20-003)) in order to remain in conformance with the FSC standard. (Note: Only the specific areas that are directly converted need to be excised.)</p> <p>The corrected HCVF assessment has not been formally vetted with stakeholder or otherwise formalized to reflect the recent changes. Therefore, a new CAR has been issued for BOF to formally revise their HCVF assessment. BOF must correct the HCVF assessment and ensure the HCVF designation is consistent with FSC standards and</p>
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	<p>polices.</p> <p>Since there was a previous nonconformance with the Indicator, FSC procedures require that this be issued as a major CAR. Due to the complexity of the issue, the size of the FMU and that PA DCNR BOF manages public land, in order for BOF to complete a thorough revision to their HCVF assessment (utilizing their full, detailed planning process), BOF has six (6) months to address this CAR. Additionally, because BOF has already completed an HCVF assessment and HCVF areas are currently designated and protected, this extended time frame is appropriate.</p>
<p><b>Corrective Action Request:</b> BOF shall revise their HCVF assessment in conformance with Indicator 9.1.a.</p>	
<p><b>Timeline for conformance:</b></p>	<p>Six (6) months from finalization of this report (by September 30, 2011)</p>
<p><b>Evidence to close CAR:</b></p>	<p>Because the 2012 annual audit had to occur prior to September 30<sup>th</sup> in order for BOF to be evaluated against the new FSC-US Forest Management standard, this CAR could be evaluated along with the other open CARs during the annual audit rather than during a separate CAR Verification Audit.</p> <p>BOF has completed the assessment process required for this CAR as described below.</p> <p>Subsequent to the issuing of this CAR, BOF developed a timeline to address the CAR that considered the requirements of the BOF planning process. Progress on revising the HCVF designations to date is as follows:</p> <p>Initial data applicable to HCVF delineation were identified during four day-long central office staff meetings (May-June 2011). The FSC-US HCVF Assessment Framework was used as guidance to identify areas that might qualify as HCV and applicable data sources were consulted for each of the HCVs.</p> <p>Following the initial meeting, GIS data layers were developed for each of the HCVs and preliminary identification of HCVs were reviewed with central office staff and district managers (via WebX) for review and comment (July 2011). After these comments were incorporated into the assessment, data sources identified and identified HCVs were reviewed with the Ecosystem Management Advisory Committee (EMAC; see findings for CAR 08/11 below) for formal comments and further suggestions (August 2011). Comments were incorporated into the assessment and revisions were reviewed internally by BOF. Based on this process, a HCVF document outlining the analysis and draft designation of HCVF areas was developed. See findings for CAR 08/11</p>

	<p>below for the consultation that was conducted using the draft designation. After consultation was conducted and reviewed, the HCVF designation was finalized.</p> <p>The auditors have determined that BOF has completed a robust assessment of HCV attributes and included them in their designation and mapping. Therefore, BOF is in conformance with this Indicator and this CAR can be closed.</p> <p>While the auditors have determined that BOF's HCVF assessment and consultation is in conformance with the standard, BOF had challenges accessing all the information they wanted to use to fully evaluate all HCV categories. There was a delay in BOF getting access to data layers from DEP on drinking water supply areas. They were able to get this information prior to the completion of the report but after the public stakeholder consultation period. In addition, BOF had data only on coastal floodplains, which have been designated as HCVF. Information on functional floodplains was not available but BOF is working with TNC to develop this dataset, which will be considered for addition to HCVF designation as it becomes available. Finally, BOF attempted to gather data from American Indian tribes but received no response to letters and calls. BOF did, however, consult with several relevant resources including the National Congress of American Indians; National Conference of State Legislatures; US Forest Service; Historic and Museum Commission (PHMC); state Historic Society and each individual county historic society; and, Penn State University Anthropology Dept. BOF was able to identify some areas that were designated as HCVF from those sources and will continue attempts to get input directly from tribes. HCVF designation will be updated as needed as new information is acquired.</p>
<b>CAR Status:</b>	CLOSED
<b>Follow-up Actions (if app.):</b>	None

<b>CAR 08/11</b>	<b>Reference to Standard: Appalachia 9.2.a. (FSC US Forest Management Standard 9.2.a, 9.2.b.)</b>				
<table border="1"> <tr> <td data-bbox="178 1493 324 1902"><b>Non-conformance</b></td> <td data-bbox="324 1493 470 1902"></td> </tr> <tr> <td data-bbox="178 1535 324 1902"><b>Major</b> <input type="checkbox"/></td> <td data-bbox="324 1535 470 1902"><b>Minor</b> <input checked="" type="checkbox"/></td> </tr> </table>	<b>Non-conformance</b>		<b>Major</b> <input type="checkbox"/>	<b>Minor</b> <input checked="" type="checkbox"/>	<p>The 2008 assessment found that BOF had conducted adequate stakeholder consultations for the areas included as HCVF at that time. Additionally, the 2010 audit found that the assessment process and consultation addressed all six HCV elements, designated and mapped areas with the identified HCVs, and met the requirements of Criteria 9.1 and 9.2.</p> <p>The areas that are currently included as HCVF (Wild Areas and Natural Areas) have been subject to extensive stakeholder consultation and review. However, BOF has recently corrected the HCVF assessment. BOF did not consult with stakeholders and scientist to confirm that the revised areas with HCVF attributes and resulting HCVF were properly</p>
<b>Non-conformance</b>					
<b>Major</b> <input type="checkbox"/>	<b>Minor</b> <input checked="" type="checkbox"/>				

	identified, nor was there a public review process to review the changes in the HCVF assessment.
<b>Corrective Action Request:</b> BOF shall	
a) consult with outside stakeholders and scientists to confirm that HCVF locations and their attributes have been accurately identified; b) conduct a transparent and accessible public review of proposed HCVF attributes and HCVF areas; and c) integrate information from stakeholder consultations and other public review into HCVF descriptions and delineations.	
<b>Timeline for conformance:</b>	Prior to next annual audit
<b>Evidence to close CAR:</b>	<p>The HCVF revision process described above has included a review of identified HCVs by the Ecosystem Management Advisory Committee (EMAC) for formal comments and further suggestions (August 2011). The EMAC includes Penn State School Forestry, The Nature Conservancy, Western Pennsylvania Conservancy, Sierra Club, forest products groups, Pennsylvania Game Commission, USDA Forest Service, land trusts, and other experts. Input from this review cycle has been incorporated into the current revision of the HCVF assessment. The revised HCVF assessment with information on areas with identified HCVs was subject to public review and comment. The draft HCVF designation was sent to stakeholders and posted on the website on November 15, 2011. Comments were due back to BOF by December 7<sup>th</sup>. On December 14<sup>th</sup>, the EMAC committee reviewed the findings and finalized the HCVF designation and delineation.</p> <p>While the auditors have determined that BOF's HCVF assessment and consultation is in conformance with the standard, BOF is continuing to seek additional information and input on some of the HCV attributes. As additional information is gathered, the HCVF designation will be updated. There is a State Forest Resource Management plan update scheduled for 2012. HCVF designation and management will be incorporated into that process which includes a rigorous public stakeholder comment and review process.</p>
<b>CAR Status:</b>	CLOSED
<b>Follow-up Actions (if app.):</b>	None

## 2.5. New corrective actions issued as a result of this audit

There were no new corrective action requests.

## 2.6. Audit observations

**Observations** are very minor problems or 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 client. An observation may be a warning signal on a

particular issue that, if not addressed, could turn into a NCR in the future (or a pre-condition or condition during a 5 year re-assessment).

<b>OBS 01/12</b>	<b>Reference Standard &amp; Requirement:</b> FSC US Forest Management Standard (V 1.0) Indicators 6.6.b
Indicator 6.6. requires in part that the written strategy for chemical use “ <i>includes an analysis of options for, and the effects of, various chemical and non-chemical pest control strategies, with the goal of reducing or eliminating chemical use.</i> ” Policies and practices limit chemical use to only those cases where chemicals are necessary and alternative methods are used where feasible. While the amounts used are minimized, the goal of reducing or eliminating use is not clearly described in the SFRMP or other documents.	
<b>Observation:</b> BOF should ensure that written strategies include the goal of reducing or eliminating chemical use.	

### 3. AUDIT PROCESS

#### 3.1. Auditors and qualifications:

Auditor Name	Robert R. Bryan, M.S.	Auditor role	Lead auditor, ecologist
Qualifications:	M.S. Forestry, University of Vermont (1984); B.S. Botany and Environmental Studies, University of Vermont (1976). Currently president of Forest Synthesis LLC. Previously employed as Forest and Wetlands Habitat Ecologist/Forester, Maine Audubon (1995 - 2008) Licensed Maine Forester #907. Member SAF and Forest Guild. Certification Experience: FSC auditor since 2003. Lead auditor (SmartWood), including over 55 FSC Forest Management certification audits and assessments in the Northeast, Lake States, and Appalachia, and Southeast US including family forests, investment and industrial forests, managed conservation forests, and public lands. Member of FSC Northeast Standards Committee 1997-2003 and FSC-US national standards advisory committee (2007-2008), peer review of SFI industrial forest certification in Northern Maine, member of state-level forest certification policy committees.		
Auditor Name	Stephen C. Grado, Ph.D.	Auditor role	Social assessor, forester
Qualifications:	Dr. Grado is a Society of American Foresters (SAF) Certified Forester/Forest Certification Auditor #1155 and Fellow, a Professor of Forestry, and the George L. Switzer Professor in the Department of Forestry at Mississippi State University. He received a Ph.D. in Forest Resources in 1992, a M.S. in Forest Resources and Operations Research in 1984, and a B.S. in Forest Science in 1979 at The Pennsylvania State University, State College, Pennsylvania. He also has a B.A. in Political Science from Villanova University near Philadelphia, Pennsylvania. Dr. Grado has served as a socio-economic assessor/auditor on 54 primarily SmartWood pre-assessments (1, lead; 3, team), assessments (7 lead, 20 team), USDA Forest Service Test Evaluations (2, SW team; 1, SGS team), and numerous annual field audits (13 lead, 5 team; 1 SFI team). In addition, he has served as an assessor/auditor for innumerable SmartWood chain-of-custody assessments/audits, and also served as a peer reviewer of FSC certification FM/COC assessment reports. Dr. Grado is also certified to the ISO 9001:2008 standard for Quality Management Systems for Lead Auditors.		

### 3.2. Audit schedule

Date	Location /Main sites	Principal Activities
9-19-2011	DCNR Office, Harrisburg	Opening meeting. Review of progress on applicable CARs and documentation pertinent to FSC indicators to be reviewed during the annual audit.
9-19-2011	District 17	Review of rare species and natural community management at the Goat Hill Wild Plant Sanctuary.
9-20-2011	Districts 11 and 19	Review of field conformance with FSC standard.
9-21-2011	District 20	Review of field conformance with FSC standard.
9-21-2011	DCNR District 20 office, Hillsgrove	Closing meeting
Total number of person days used for the audit: <b>10</b> = number of auditors participating <b>2 X</b> number of days spent in preparation, on site and post site visit follow-up including stakeholder consultation <b>5</b>		

### 3.3. Sampling methodology:

SmartWood has a goal of sampling at least three SFL districts each year. For the current audit, four Districts were sampled in eastern Pennsylvania. None had been visited during an annual audit in the current 5-year audit cycle. The Districts included a range of sites including High Conservation Value Forests (Districts 17 and 11), recreation trails, lease cabin sites, other recreation sites (Districts 11, 17, 19, and 20), timber harvest sites and other silvicultural activities (Districts 17, 19, and 20), activities associated with Marcellus gas extraction (District 20), and responses to damage from Hurricane Irene and Tropical Storm Lee (District 20). Twenty-one sites were visited during the audit.

Within each District the sampling process included a range of forest types and harvest methods. Proximity to sensitive sites (e.g., streams, vernal pools, wetlands) was also a priority in selecting sites. Active harvests were selected to evaluate current impacts to soils, water, and existing vegetation, while closed harvests were sampled to observe longer-term impacts on resources and the amount of forest regeneration.

Activities of Marcellus gas leaseholders were reviewed at five sites, including road upgrades, a compressor and water storage site, test well site, planned gas line corridors, and an active drilling pad. BOF procedures were reviewed, including steps to ensure that gas extraction activities minimize the footprint of development sites, planning procedures to reduce forest fragmentation and eliminate impacts to sensitive sites, and monitoring by BOF staff.

### 3.4. Stakeholder consultation process

Prior to the actual audit process, SmartWood developed a public consultation stakeholder announcement. The FME provided the lists of stakeholders. On August 16, 2011 SmartWood sent out a notification via e-mail alerting stakeholders to the audit.

In addition, stakeholders were contacted and interviewed by the auditors to solicit their opinions and to detect any issues of importance. In some cases stakeholders contacted the auditors and the auditors proceeded to contact them in return. Interviews were conducted with FME personnel prior to the on-site visit, in their offices, in the field, and after the on-site visit.

Stakeholder type	Stakeholders notified (#)	Stakeholders consulted or providing input (#)
Advisory Group Member	146	1
ENGO	1	1
Timber buyers	113	1
FME Employees	45	45
Contractors	14	0
Forest Industry	1	1

### 3.5. Changes to Certification Standards

Forest stewardship standard used in audit:	FSC-US Forest Management Standard (v1.0); FM-35 SmartWood Chain-of-Custody Standard for Forest Management Enterprises (FMEs)
Revisions to the standard since the last audit:	<input type="checkbox"/> No changes to standard. <input checked="" type="checkbox"/> Standard was changed (detail changes below)
Changes in standard:	Changes related to the FSC-US Forest Management Standard are documented in an FSC-US Crosswalk document, which is available upon request. All changes were evaluated and reported in Appendix IV.
Implications for FME:	Conformance to new requirements verified

### 3.6. Review of FME Documentation and required records

#### a) All certificate types

Required Records	Reviewed
Complaints received by FME from stakeholders, actions taken, follow up communication	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
Comments: The FME did not provide complaint documentation since the last audit and thus this was not reviewed beyond individual complaints communicated to the auditors.	
Accident records	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Comments: FME provided a detailed safety accident records report to the auditors which included the injury date, injury day, injury status, long-term status of the injury, body part affected, cause of the accident or affliction, nature of the accident or affiliation with a detailed description, location of the incident, and total cost incurred and paid by insurance. There were 81 compensation claims. Also, provided were recreation-related accidents on the forest (e.g., year-to-date ATV 2011 Accident Statistics, Snowmobile 2010-11 Accident Statistics).	
Training records	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Comments: Training records from July 30, 2010 through June 2011 were provided to the auditors. This included the name of the training session or workshop, instructor or training sources, and number of attendees per event. There were 362 events described in the training log with the total number of participants at 14,631. In addition, the log for Incident Command System training for emergency situations was provided to the auditors. This is a FEMA training event. Described were the	

course title, source of the training, sessions by category, attendees by session, and fees paid by the FME for the event. This included 213 sessions with the total number of participants at 3,212.

Since the last audit 33 rangers have undergone specialized training. This included Firearms Qualifications, PR-24 (side handle baton), and Act 180 legal updates. Every-other-year trainings include but are not limited to CPR/First Aid (First Responders level of Cert.), straight baton, OC (i.e., pepper spray), and various other general topics such as tree identification, wildlife issues, and verbal judo.

Recreation training summary records were also provided. This included the Youth Snowmobile Instructor training records. As of March 2011, there were 89 certified snowmobile instructors. For 2010, they conducted 26 Snowmobile Safety classes with 331 youngsters ranging from 10 to 15 years old. Since last year's audit, DCNR trained 22 new Youth ATV Safety Instructors. For 2010, all instructors conducted 137 ATV Safety classes with 459 youngsters ranging from 8 to 15 years old.

Operational plan(s) for next twelve months	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
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Comments: The FME's operational plans can be found at <http://www.dcnr.state.pa.us/forestry/sfrmp/documents.aspx>. In addition, a file was provided to the auditors titled "Timbersales\_Approved\_2011-12.pdf" which gave further details on pending activities.

Inventory records	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
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Comments: Inventories are carried out on the FMU in a number of different ways and for a number of different reasons. The FME conducts a Continuous Forest Inventory (CFI), which provides basic biological data on plants, shrubs, trees, tree growth and mortality, forest stand structure, volume, and changes on state forest lands. The CFI is a continuous process to provide data for developing periodic updates to resource management plans, as well as for long range planning and monitoring.

Landscape Exams are a process designed to identify faunal habitat needs, set priorities for habitat projects, assist in planning annual activities, record accomplishments, and provide continuity in forest resource management. The FME also inventories through its regular timber sale process conducting plot inventories and analyzing stand level data. In addition, the FME inventories recreational activities as well as other attributes of the forest.

Reports for the FME's inventories would be too voluminous. However a few examples have been provided to the auditors to give a sense of assurance that these inventories are being accomplished. The FME let it be known that detailed reports can be generated for any auditing purposes by request.

Harvesting records	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
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Comments: Harvesting records were provided to the auditors in the file titled "2010\_Annual\_Timber\_Report.docx."

## APPENDIX I: FSC Annual Audit Reporting Form:

<b>Forest management enterprise information:</b>			
<b>FME legal name:</b>	Commonwealth of Pennsylvania, DCNR, Bureau of Forestry		
<b>FME Certificate Code:</b>	SW-FM/COC – 003821		
<b>Reporting period</b>	Previous 12 month period	<b>Dates</b>	9/1/2010-9/1/2011

<b>1. Scope Of Certificate</b>			
Type of certificate: single FMU	SLIMF Certificate: not applicable		
<b>New FMUs added since previous evaluation</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Group Certificate:</b> Updated of FMU and group member list provided in <b>Appendix VII-a:</b>			
<b>Multi-FMU Certificate:</b> List of new FMUs added to the certificate scope:			
FMU Name/Description	Area	Forest Type	Location Latitude/Longitude
	ha		
	ha		
	ha		

<b>2. FME Information</b>	
<input type="checkbox"/> No changes since previous report (if no changes since previous report leave section blank)	
Forest zone	Temperate
Certified Area under Forest Type	
- Natural	865,255 hectares
- Plantation	0 hectares
Stream sides and water bodies	8543 Linear Kilometers

<b>3. Workers</b>		
Number of workers including employees, part-time and seasonal workers:		
Total number of workers	678 workers	
- Of total workers listed above	592 Male	86 Female
Number of serious accidents	81 (compensation claims - includes ticks and bee stings)	
Number of fatalities	0	

<b>4. Forest Area Classification</b>		
<input type="checkbox"/> No changes since previous report (if no changes since previous report leave section blank)		
Total certified area	865255 hectares	
Total forest area in scope of certificate	865255 hectares	
Ownership Tenure	<b>State/Public ownership</b>	
Management tenure:	<b>state/public management</b>	
Forest area that is:		
Privately managed	hectares	
State/Public managed	865255 hectares	
Community managed	hectares	
Area of production forests (areas where timber may be harvested)	765424 hectares	
Area without <u>any</u> harvesting or management activities: strict forest reserves	99831 hectares	

## 5. High Conservation Values identified via formal HCV assessment by the FME and respective areas

No changes since previous report (if no changes since previous report leave section blank)

Note: Some areas are designated as more than one HCV so the area per HCV or category in each HCV do not necessarily add up to overall total.

Code	HCV TYPES <sup>1</sup>	Description:	Area
HCV1	Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).	DCNR Plant Sanctuaries; Focus Areas	15,591 ha
HCV2	Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.	Wild Areas; Quehanna Wild Area ROS; Natural Areas > 2000	55,224 ha
HCV3	Forest areas that are in or contain rare, threatened or endangered ecosystems.	Natural Areas Designated for Old Growth; ROS Primitive Roadless Areas; Natural Communities S1-S2 Ranked	16,804 ha
HCV4	Forest areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	Public Drinking Water Sources; Coastal Floodplains, Functional Floodplains	2,427 ha
HCV5	Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).	None identified	0 ha
HCV6	Forest areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).	PHMC PA Forest PASS data (Archeological)	108 ha
<b>TOTAL HCVF AREA</b>			<b>74,063 ha</b>
Number of sites significant to indigenous people and communities			125

## 6. Pesticide Use

FME does not use pesticides. (delete rows below)

FME has a valid FSC derogation for use of a highly hazardous pesticide  YES  NO

FSC highly hazardous pesticides used in last calendar year

Name	Quantity	# of Hectares Treated
None	0	0 ha

Non FSC highly hazardous pesticides used in last calendar year

Name	Quantity (liters of mixture)	# of Hectares Treated
glyphosate	16367	6926
triclopyr	590	1002

<sup>1</sup> The HCV classification and numbering follows the ProForest HCVF toolkit. The toolkit also provides additional explanation regarding the categories. Toolkit is available at <http://hcvnetwork.org/library/global-hcv-toolkits>.

metsulfuron methyl	15	1
sulfomenturon methyl	11528	266
imazapyr	1004	2426
sethoxydim	526	834
prodiamine	587	6
2,4-Dichlorophenoxyacetic acid, dimethylamine salt	214	4

## APPENDIX II: List of visited sites (confidential)

FMU or other Location	Compartment/ Area	Site description / Audit Focus and Rationale for selection
District 17	Goat Hill Wild Plant Sanctuary	This site was formerly a State Natural Area, where any active vegetation management is not allowed. The site was protected to due to the presence of rare plants (including three globally rare species) and natural communities associated with serpentine barrens present at the site. Due to encroachment of competing vegetation in the absence of natural and pre-European disturbance (fire) the designation was changed to a “Wild Plant Sanctuary” to allow active management of the site to promote the rare species and habitats.
District 19 (Delaware State Forest)	“The Edge” timber sale	Initial shelterwood entry 2008 with deer exclosure. Two-aged management along road buffer, planned overstory removal with retention in rear, and retention of older planted Norway spruce to provide upland conifer cover. Thinning in Norway spruce will allow the stand to develop into a mix of spruce and native hardwoods. No evidence of FSC “plantation.”
District 19	Little Mud Pond Lease Lot Colony	“Colony” of cabins on leased lots (roughly 700+ lease lots in the District). Discussion of BOF enforcement of lease provisions and ability to force removal of un-permitted docks at the time of lease transfer.
District 19	Little Mud Pond Gypsy moth control	Discussion of 2009 Bt control of gypsy moth and the relationship between District staff and BOF Forest Health staff.
District 19	Burnt Mill ATV Trail	All-weather ATV trail. Discussion of trail layout, construction, funding, and enforcement.
District 19	Saw Creek Sale	Herbicide treatment of shelterwood understory with very dense black birch competition. Discussion on thresholds of competition that determine need for treatment, alternative methods, identification of sensitive areas and establishment of buffers, and contractor qualifications.
District 19	60 Mile Run Salvage	Salvage of oak killed by gypsy moth. Active job but contractor not on site. Issues of retention of live trees and contractor safety discussed.
District 11 (Lackawanna State Forest).	Pond Creek unauthorized picnic area	Streamside area used as an unauthorized party site closed with boulders and to eliminate vehicle traffic. Native vegetation is returning. Closure of the site also addressed concerns of neighbors.
District 11	Motorized camping access site	First motorized-access campsite on the District, established 2011. ADA compliant. No facilities except fire ring and picnic table; use by permit only.
District 11	Bobcat Sale	120 acres. Improvement cut ca 1986 that had very dense regeneration of diseased beech. A 2004 herbicide treatment followed by deer fencing and overstory removal (2008). Desirable tree regeneration and a diverse community of shrubs and native herbaceous species occupy the treated site. Discussion of wildlife plots (outside fence) and retention of tree in overstory removal (OSR) harvests.

District 11	Cowgate Wild Plant Sanctuary	Area established to protect a population of an uncommon fern (Hartford Fern) that was formerly listed as threatened in PA. Discussion of monitoring by district foresters and relationship to Ecological Services staff.
District 11	Gravel Road BMPs	Inspection of a site that was upgraded to meet Penn Dirt and Gravel Roads maintenance guidelines. Guidelines exceed standard BMPs and are designed to maximize protection of water quality at the local scale (there is a High Value trout stream nearby), and at the watershed scale (Lehigh/Delaware River Watershed).
District 11	Choke Creek Cabin II timber sale	Planned OSR in oak-mixed hardwoods inside deer fence and planned fern control on a portion of the site. Discussion of planned road improvements to meet BMPs.
District 20 (Loyalstock State Forest)	Haggarman Run Road	Road reconstruction by gas company to handle increased traffic loads. Built a concrete sub-base and topped with a gravel running surface because a typical crushed stone base would have been too wide and would have impacted the stream that runs near the road. Stream is monitored by the Lycoming Creek Association.
District 20	Haggerman Compressor Site	Gas water reservoir and planned gas pipeline compressor site. DCNR was able to get the gas company to eliminate one of three proposed compressor sites and configure the site to reduce noise impacts to a nearby hunting camp. DNCR also has been able to get the gas company to reduce the number of reservoirs and total volume of water storage.
District 20	Round Top Sale	A 40-acre initial shelterwood entry in mixed oak (2008), fenced 2009, ready for overstory removal harvest after compressor site is built. Approximately 12 acres of this stand will be lost to the compressor site. Monitoring indicated sufficient free-to-grow seedlings of desirable trees so that herbicide control would not be needed.
District 20	Monitoring well site and proposed pipeline	Two-acre Marcellus gas monitoring well that will be used by the lessee to test effectiveness of the fracking process. District was able to get the gas company to use this site, which had been a shale pit, and avoided a new opening in the forest and new road section. At BOF request the site will also be used as a gathering place for 5 pipelines, further reducing forest fragmentation. Pipelines will be routed along road corridors in most cases to avoid additional forest fragmentation.
District 20	Wild Weasel Block 6	A 35-acre overstory removal in mixed oak. Retention trees meet FSC guidelines. Logger interview.
District 20	Seneca Resources Pad C	Active Marcellus drilling site. Discussion of DCNR process of approving pad locations after review of Pennsylvania Natural Heritage Program (PNHP) data, Pennsylvania Game Commission (PGC) and Fish and Boat Commission (F&BC) data, and wetlands information. Discussion with DNCR "gas forester" regarding on-site monitoring of activities and planned remediation of seed-mat failure.
District 20	Rock Run recreation area	Popular area with swimming holes along Rock Run. When camping was allowed this area had become a heavily used "party site" with severe site impacts and negative effects on other users. DCNR banned camping and alcohol use in 2008 and currently there are only

		occasional minor enforcement issues. DCNR reports that public comments have been overwhelmingly in favor of the changes.
District 20	Big Hollow Road washout	Recent bridge washout due to September 2011 Hurricane Irene and Tropical Storm Lee related flooding. Discussion of the BOF assessment of damages, short-term repairs, and long-term strategy to repair washouts on the forest road system.

## APPENDIX III: List of stakeholders consulted (confidential)

### List of FME Staff Consulted

Name	Title	Contact	Type of Participation
Bahr, Tim	PA DCNR-BOF, District #20, Energy Forester, Loyalsock Forest	tbahr@pa.gov	Field interview, closing meeting
Balch, Tim	PA DCNR-BOF, District #19, Assistant District Forester, Delaware Forest	Route 611 HC 1 Box 95A Swiftwater, PA 18370-9723  tbalch@pa.gov	Field interview
Borawski, Teddy	PA DCNR-BOF, Geologic Supervisor, Minerals Program	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  torawski @pa.gov	Opening meeting
Carr, Tim	PA DCNR-BOF, District #19, Forester, Delaware Forest	Route 611 HC 1 Box 95A Swiftwater, PA 18370-9723  tcarr@pa.gov	Field interview
Cassell, Seth	PA DCNR-BOF, Chief, Communications	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  717-783-0392 scassell@pa.gov	Opening meeting
Devlin, Dan	PA DCNR-BOF, State Forester	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  717-787-2105 ddevlin@state.pa.us	Closing meeting
Dotzel, Joe	PA DCNR-BOF, District #20, Assistant District Forester, Loyalsock Forest	jdotzel@pa.gov	Field interview, closing meeting
Erb, Glenn	PA DCNR-BOF, District #20, Forester, Loyalsock Forest	gerb@pa.gov	Field interview, closing meeting
Fayocavitz, Walter	PA DCNR-BOF, District #11, Forester, Lackawanna Forest	wfayocavitz@pa.gov	Field interview
Ferretti, Ellen	PA DCNR, Deputy Secretary	717-772-9100	Closing meeting
Firestone, Chris	PA DCNR-BOF, Botanist, Ecological Services	570-724-8149 cfirestone@pa.gov	Field interview, closing meeting
Frassetta, Joseph	PA DCNR-BOF, District #17, District Forester, William Penn Forest	845 Park Road Elverson, PA 19520-9523  610-582-9660 jfrassetta@pa.gov	Field interview, e-mail contact

Gilbert, Carrie	PA DCNR-BOF, Botanist-Ecosystem Services	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  cagilbert@pa.gov	Field interview
Glinski, Richard A.	PA DCNR-BOF, District #20, District Forester, Loyalsock Forest	274 Arbutus Park Road Bloomsburg, PA 17815-9528  570-387-4255 rglinski@pa.gov	E-mail contact, field interview, closing meeting
Hall, Jason M.	PA DCNR-BOF, Forest Program Specialist	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  717-783-7941 jahall@pa.gov	Field interview
Hardy, Ben	PA DCNR-BOF, District #11, Forester, Lackawanna Forest	bhardy@pa.gov	Field interview
Hartlieb, Rick	PA DCNR-BOF, District #17, Service Forester, William Penn Forest	rhartlieb@pa.gov	Field contact
Hazen, Matt	PA DCNR-BOF, District #19, Forester, Delaware Forest	Route 611 HC 1 Box 95A Swiftwater, PA 18370-9723  570-895-4000	Field interview
Hecker, John	PA DCNR-BOF, Chief, Silviculture Section	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  717-783-7932 jhecker@pa.gov	Opening meeting, field interview, closing meeting
Hratkovich, Adam	PA DCNR-BOF, Environmental Review Specialist	c-ahratkovich@pa.gov	Opening meeting
Hudson, Jason M.	PA DCNR-BOF, Forest Program Specialist, Recreation	717-783-7941 jahall@pa.gov	On-site interview, e-mail contact
Hyland, Jim	PA DCNR-BOF, Forest Program Specialist, Recreation	jhyland@pa.gov	Field interview, closing meeting
Just, Emily	PA DCNR-BOF, Wildlife Ecologist-Ecosystem Services	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  emjust@pa.gov	Field interview
Keefer, Matt	PA DCNR-BOF, Chief, Resource Planning and Inventory	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  717-214-3814 makeefer@pa.gov	Opening meeting, field interview, closing meeting

Kuntz, Eric	PA DCNR-BOF, District #19, Forester, Delaware Forest	Route 611 HC 1 Box 95A Swiftwater, PA 18370-9723  ekuntz@pa.gov	Field interview
Ladner, Timothy S.	PA DCNR-BOF, District #19, Assistant District Forester, Delaware Forest	Route 611 HC 1 Box 95A Swiftwater, PA 18370-9723  570-895-4006 tladner@pa.gov	Field interview
Latz, Tim	PA DCNR-BOF, District #17, Service Forester, William Penn Forest	tlatz@pa.gov	Field contact
Layaou, Chris	PA DCNR-BOF, District #19, Forest Technician, Delaware Forest	Route 611 HC 1 Box 95A Swiftwater, PA 18370-9723  clayaou@pa.gov	Field interview
Lester, Mike	PA DCNR-BOF, Assistant State Forester-Forestry Services	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  717-783-7938 milester@pa.gov	Opening meeting
Lylo, Nicholas P.	PA DCNR-BOF, District #11, District Forester, Delaware and Lackawanna Forests	Route 611 HC 1 Box 95A Swiftwater, PA 18370-9723  570-945-7133 nlylo@pa.gov	Field interview
Maza, John J.	PA DCNR-BOF, District #11, Service Forester, Lackawanna Forest	jmaza@pa.gov	Field interview
McNeal, Zack	PA DCNR-BOF, District #17, Fire Forester, William Penn Forest	zmcneal@pa.gov	Field contact
Miller, Scott	PA DCNR-BOF, Silvicultural Program Specialist	scomiller@pa.gov	Field interview, closing meeting
Pipech, Rich	PA DCNR-BOF, District #20, Forester, Loyalsock Forest	570-946-4049	Field interview, closing meeting
Podniesinki, Greg	PA DCNR, Director, Natural Heritage Program	gpodniesinki@pa.gov	Field interview
Prewant, Kathryn	PA DCNR, Administrative, Business Manager, Director's Office	717-705-5194 kprewant@pa.gov	E-mail contacts
Proctor, Arianne	PA DCNR-BOF, Chief, Geologic Supervisor	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  arproctor@pa.gov	Opening meeting
Roth, Paul	PA DCNR-BOF, Chief, Inventory and Monitoring	paroth@pa.gov	Opening meeting
Salvato, Brian	PA DCNR-BOF, Silviculture Section, Silviculturalist	bsalvato@pa.gov	Field interview, closing meeting

Shultzburger, Ellen	PA DCNR-BOF, Chief, Ecological Services	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  eshultzaba@pa.gov	Opening meeting, field interview
Sitch, Kelly	PA DCNR-BOF, Environmental Program Specialist	ksitch@pa.gov	Opening meeting
Ulozas, Joseph	PA DCNR-BOF, District #11, Assistant District Forester, Lackawanna Forest	julozas@pa.gov	Field interview
Vorhees, Chad	PA DCNR-BOF, Forest Resource Planner-Planning Section	Rachel Carson State Office P.O. Box 8552 Harrisburg, PA 17105-8552  717-425-5368 chvorhees@pa.gov	Opening meeting, field interview, e- mail contacts, closing meeting
Weaver, Dale	PA DCNR-BOF, District #20, Forest Technician, Loyalsock Forest	dalweaver@pa.gov	Field interview, closing meeting
Weaver, Jon	PA DCNR-BOF, District #20, Forester, Loyalsock Forest	joweaver@pa.gov	Field interview, closing meeting

#### List of other Stakeholders Consulted

Name	Organization	Contact	Type of Participation
Huck, Rich	Logger, Dwight Lewis Lumber Company	570-724-5091	Field interview
Leitholf, Kurt	PA DCNR; CNRAC, Executive Director	Rachel Carson State Office Building P.O. Box 8767 400 Market St. Harrisburg, PA 17105-8767  717-705-0031 kleitholf@state.pa.us	Telephone interview
Puller, Blaine	Collins Company, Retired	315 Sacket Hollow Smithport, PA  814-887-2635 814-558-4116	E-mail contact, telephone interview
Wasserman, John	PA Forest Coalition	Tamarack, PA john@johnwasserman.com	E-mail contact

## APPENDIX IV: Forest management standard conformance (confidential)

This Appendix outlines the identified gaps, or new requirements of the FSC-US National Standard V1.0 as compared to the FSC Appalachia Regional (v4.2). This appendix is to be used with the Appalachia Std. Crosswalk 2010, which provides a crosswalk between the current FSC-US Forest Management (FM) Standard (V1.0, July 8, 2010). Findings of conformance or non conformance at the indicator level for the identified gaps will be documented in the following table with a reference to an applicable CAR or OBS. The nonconformance and CAR is also summarized in a CAR table in Section 2.4. All non-conformances identified are described on the indicator level for the identified gaps.

### Gap Analysis: FSC Appalachia Regional (v4.2)

FSC-US FM Std. Indicators	Conformance Yes/No	Findings for Identified Gaps	CAR OBS #
<b>Principle 1</b>			
1.1.a	Yes	Check boxes were added to the forester's Timber Sale Inspection and Completion Report form to ensure that the issue of posting Erosion and Sediment (E&S) Plans is addressed weekly. A memo was sent to Districts to inform them of the policy and to be sure that E&S plans are posted at the log landing in a weatherproof container. The FME stated that post memo District inspections by the FME have showed conformance with the measure. During the on-site visit, the auditors went to several field sites and observed that E&S Plans were appropriately posted in plain view. In light of this, and the fact that no other violations of any federal, state, county, municipal, and tribal laws, case law, and regulations were detected it was the opinion of the auditors that the BOF was in compliance with this Indicator.	
1.2.a	Yes	Written documentation and information was provided to the auditor's confirming that annual fixed payments are made to local municipalities, local school districts, and counties on properties managed by the Commonwealth as State Forest lands. As stated in the official documentation, this obligation has been fulfilled for fiscal year 2011/12.	
1.6.b	Yes	BOF has identified several tracts that are not included in the certificate (lands with timber rights held by others for a defined time period). BOF has disclosed the location of these tracts, the natural resources, management activities, and rationale for excluding these areas from certification.	
<b>Principle 2</b>			
<b>Principle 3</b>			
3.2.b	Yes	As stated in the FME's FMP (Chapter I, Section Q. Archaeological Sites, Architectural and Cultural Resources) the DCNR and the FME are committed to protecting Pennsylvania's historical, cultural, and natural resources.  Legally, the role of the FME as defined by the Pennsylvania History Code (37 Pa. C.S.A., Section 101 et. seq. and Article 1, Section 27) of the Pennsylvania Constitution is to identify and protect the architectural and archaeological resources of Pennsylvania. Thus the role of the FME is to strongly protect any listed resources, protect non-listed resources whenever possible, and co-operate and seek the	

		<p>advice of the PA Historical and Museum Commission's (PHMC) Bureau for Historic Preservation (BHP) on matters of new listings and signage development.</p> <p>As a result, the FME's chief partner in this effort is the BHP which also protects the state resources that include tribal resources. The BHP maintains an online database (CRGIS) which is used to identify and protect prehistoric and historic cultural resources. While the list of archaeological sites traditionally maintained by the FME's Districts and central office may be out of date, the BHP's CRGIS system is the only legitimate way to determine if a soil disturbing project will impact cultural resources. Unlisted resources should, and are, also protected whenever possible and considered for submission to the BHP for review and possible inclusion in the CRGIS.</p> <p>If a previously unknown archaeological site location (e.g., a native American village site) is discovered on land administered by the FME, the discovery must be relayed to District management and the Planning Section without delay for evaluation and possible listing with the BHP. Care is to be taken to minimize disturbance of any new discovery.</p> <p>The FME also has a Planning and Feedback Process document given to the auditors which outlines environmental reviews for new projects. On initiation of any project on state forest lands that may or will disrupt, alter, or otherwise change the environment, a review and consideration of environmental review items is required. On initiation of any project in a number of categories, a formal written project review, addressing the environmental review items must be completed by the District Forester and approved by the State Forester. Projects include but are not limited to wetlands encroachment; in-stream alterations; disturbance activities in a natural area including insect and disease control; timber management in a wild area; ROW expansions or new construction (e.g., pipelines or major powerlines); surface mining; oil and gas leases (excluding gas storage); large-scale stone removals; subsurface disturbance to caves; addition of public-use roads to the state forest road system; land acquisitions/exchanges, new trail construction; and large blocks of artificial regeneration, (i.e., monocultures &gt;10 acres). Some projects, such as timber sales, have developed checklists to facilitate environmental reviews. Included all checklists for project reviews are a number of specific items. This includes "Archaeological and Historic Sites", along with several other categories, that would be of importance to tribal representatives.</p> <p>During the audit, interviews with staff assured the auditors that the above steps are being followed. No evidence to the contrary was discovered in the field.</p>	
<b>Principle 4</b>			
4.2.a	Yes	<p>Check boxes were added to forester's Timber Sale Inspection and Completion Report form to ensure that the issue of having contractors wear PPE is addressed weekly. A memo was sent to Districts to inform them of the policy. The FME stated that post memo District inspections by the FME have showed conformance with the measure. During the on-site visit, the auditors went to a field site and observed that PPE was being used by the logger and a completed form was reviewed by the auditors to as evidence that the forms are in use. In light of this, and assurances from FME staff that other loggers were</p>	

		complying, it was the opinion of the auditors that the BOF was in compliance with this Indicator.	
4.4.a	Yes	<p>The goal of the FME's social impact analysis is to better understand the social impacts of their forest management activities and ensure they are addressed in the State Forest Resource Management Plan (SFRMP) and in the implementation of their forest operations. This social impact analysis is continually reviewed during updates to its FMP to determine if new social impacts are occurring that may need to be added into the forest management and planning process. In addition to this process, there are numerous advisory committees whereby citizens and special interest groups can provide inputs into forest planning and management activities. These groups meet periodically. Meetings can be initiated by the FME, often by the District Foresters, or they can be requested by advisory committee members. The Citizens Natural Resource Advisory Committee (CNRAC), Recreation Advisory Committee (RAC), and Ecosystem Management Committee (EMAC) all have representation from across the Commonwealth, and include people with varied backgrounds. Committee meeting frequency ranges from committee to committee, and some committee meetings with external groups (e.g., CNRAC) are open to the public. There are also is an FME wide Communications Committee. These committees help the FME incorporate and respond to public input. As a result of the above processes, the FME is continuing to address all issues related to the social impacts of its forest management activities and incorporating them into forest management planning and operations.</p> <p>For historical and archaeological sites, if a previously unknown archaeological site location (e.g., a native American village site) is discovered on land administered by the FME, the discovery must be relayed to District management and the Planning Section without delay for evaluation and possible listing with the BHP. Care is to be taken to minimize disturbance of any new discovery. While the FME documents all sites, they are not revealed in a public summary, since this information would jeopardize the resource.</p> <p>The FME also has a Planning and Feedback Process document which was given to the auditors which outlines environmental reviews for new projects. On initiation of any project on state forest lands that may or will disrupt, alter, or otherwise change the environment, a review and consideration of environmental review items is required. On initiation of any project in a number of categories, a formal written project review, addressing the environmental review items must be completed by the District Forester and approved by the State Forester. Projects include but are not limited to wetlands encroachment; in-stream alterations; disturbance activities in a natural area including insect and disease control; timber management in a wild area; ROW expansions or new construction (e.g., pipelines or major powerlines); surface mining; oil and gas leases (excluding gas storage); large-scale stone removals; subsurface disturbance to caves; addition of public-use roads to the state forest road system; land acquisitions/exchanges, new trail construction; and large blocks of artificial regeneration (i.e., monocultures &gt;10 acres). Some projects, such as timber sales, have developed checklists to facilitate environmental reviews. Included in all checklists for project reviews are a number of specific items. This includes "Archaeological and Historic Sites," along with several other categories that would be of importance to tribal representatives. Again, while the FME documents</p>	

		<p>this process, specific sites and activities surrounding them are not revealed in a public summary, since this information would jeopardize the resource.</p> <p>The FME provided the auditors with a summary document titled "State Forest Resource Management Plan 2007 Update Process, Summary of Public Comments" dated June 10, 2008 (previously completed in 2003). It can also be located on the FME's web site at <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/Public_Comment_Summary_2007.pdf">http://www.dcnr.state.pa.us/forestry/sfrmp/Public_Comment_Summary_2007.pdf</a>. This document describes how public inputs were collected, analyzed, and incorporated into forest management planning and operations for a number of other key areas of concern. Major topics of concern in the public summary were Recreation (e.g., motorized and non-motorized); Deer; Energy (e.g., oil and gas); Forest Health (e.g., invasives, pests); Silviculture and Forest Management; Specially Designated Areas; Land Acquisitions; Conservation Landscapes; Community Involvement; Education, and Outreach; and the Planning and Public Input Process.</p> <p>For each of these topics above, public inputs are used to change planning and implementation, if it is deemed necessary by the FME staff. For example, if recreational activities are perceived to cause extensive damage to the forest (e.g., the Rattlesnake Enduro), the FME will address this issue with both the recreationists, the public, and on-the-ground steps for remediation. For the Rattlesnake Enduro, the FME has a Special Activities Agreement with the trail ride sponsor to repair all damage within 30 days. The route must be approved in advance by the FME. The FME charges a fee for the event that includes 8 hours of ranger patrol during the event and 16 hours for course inspection after the event to identify needs for remediation. For this 2011, the FME obtained a security deposit of \$1,000 to be held until August 30, 2011 or until any damages are repaired.</p>	
4.4.d Public forest only	Yes	<p>The FME's Web site has been updated since the last audit (<a href="http://www.dcnr.state.pa.us/forestry/index.aspx">http://www.dcnr.state.pa.us/forestry/index.aspx</a>) and this site provides a conduit for commenting on FME activities. The FME's Bureau of Forest Directories can be found on the web site (<a href="http://www.dcnr.state.pa.us/forestry/directory/index.htm">http://www.dcnr.state.pa.us/forestry/directory/index.htm</a>) and this also includes the Central Office Directory and the Forest District Directory. Thus all FME members can be contacted and comments communicated at a low cost. In addition, the FME's public consultation for FMP revisions includes advertized and clear methods for the public to comment on the FMP which is posted on the FME's web site (<a href="http://www.dcnr.state.pa.us/forestry/sfrmp/">http://www.dcnr.state.pa.us/forestry/sfrmp/</a>) as a draft and then as a final revision. Many public meetings were held throughout the state for the public to attend and provide comments. A summary of this consultation can be found on the web site (<a href="http://www.dcnr.state.pa.us/forestry/sfrmp/Public_Comment_Summary_2007.pdf">http://www.dcnr.state.pa.us/forestry/sfrmp/Public_Comment_Summary_2007.pdf</a>), and it includes details on important public issues and inputs and how they are used for forest planning, management, and in operations.</p> <p>The DCNR has also developed an e-mail database to more efficiently reach out to stakeholders who request information or updates. Individual entries are categorized by their expressed specific interest areas, so e-mail contacts will only go out to those listed for those categories. As a result, the interested public can return comments on current activities ongoing in the forest.</p>	

		<p>Consultations are also facilitated for short-term projects. For example, the FME has procedures in its Silviculture Manual, Chapter 5 addressing adjacent landowner notification of their forest management activities. When a timber sale boundary is also a FME forest boundary, the FME will make a “good faith” effort to notify adjacent landowners of pending timber sales. The FME describes good faith efforts as: 1) face-to-face communication, 2) a letter describing the sale and providing contact information, and 3) for unknown landowners, signage along property boundaries defining the timber sale and providing contact information. The FME’s harvest planning process typically begins six months in advance of an actual harvest operation and at least a 30-day notification will be provided.</p> <p>Notifications of forest activities on state forest lands also are provided to adjoining landowners, municipal watershed authorities, state parks, camp lessees, trail clubs, pipelines, and electrical line concerns. Other individuals and concerns are also notified of forest activity. As stated in the FMP’s Silvicultural/Timber Management section, if federal or state listed fauna or flora species, or habitat critical to their survival, either presently known or subsequently identified, occur within or adjacent to a proposed timber management project area, the FME’s wildlife biologists or botanists are notified prior to commencement of additional work. Wildlife biologists or botanists determine what, if any, changes to the project are necessary to protect any floral or faunal species or habitat. Also stated in the FMP, if archeological sites, either known or subsequently identified, occur within a proposed timber management project area, the FME’s Resource Planning and Information Section will be notified prior to commencement of any additional project work. The Section will coordinate assessment of the site and needed protection measures with the PHMC.</p> <p>Through an examination of the FMP, the process and public comments in regard to the FMP, field visits during the audit, and through stakeholder outreach it was determined that the FME is doing a credible job addressing significant concerns related to forest management actions, evaluating site disturbing activities, and further incorporating these concerns into its forest management planning and operations.</p>	
<b>Principle 5</b>			
5.2.c Public forest only	Yes	By Pennsylvania state law, all timber sales must be handled on a bid process with the sale going to the highest bidder. The sale contract cannot be altered to favor any bidder or type of bidder. However, according to the FME’s personnel, most sales go to local processors and many sales on the forest are of a size and value that permits small local mills and contractors to successfully bid on timber. Field observations of harvested sites revealed that there are a diversity of contract jobs, both small, medium, and large and requiring various types of equipment, thus providing opportunities for all mills, wood buyers, or contractors who might bid on a timber sale. A stakeholder list of mills and contractors shows that most of potential bidders are local and they vary in size.	
5.5.a	Yes	As a state entity, and in accordance with state law (Article I, section 27 of the Pennsylvania Constitution, Sec. 27. Natural Resources and the Public Estate), the FME has identified a wide variety of ecosystem services that will be provided to the public which it serves. These services include protecting watersheds through appropriate forest practices, engaging in fisheries projects to enhance habitat,	

		<p>growing more wood than they are harvesting and thus promoting carbon storage, and providing a wide array of recreation activities on the state forests.</p> <p>In the FMP, plans for prioritizing carbon sequestration are described (p.10). Carbon sequestration is now added to a new “Energy” section of the FMP. A Carbon Management Advisory Group (CMAG) has developed preliminary recommendations for terrestrial and geologic sequestration opportunities on state forest land. Also, a collaborative planning process timeline (six-phased approach) for carbon management on state forest land is outlined in the FMP.</p> <p>Recreation activities involve their cabin lease program, hunting, fishing, wildlife watching and sightseeing, boating, ATV trial use, snowmobiling, camping, maintaining of wild and scenic areas (e.g., Goat Hill Wild Plant Sanctuary visited by the auditors), to name a few.</p> <p>A key to providing protections, quality opportunities, and enhancements when providing ecosystem services are the many partnerships the FME engages in. For example, the Goat Hill Wild Plant Sanctuary is managed in cooperation with the Western Pennsylvania Conservancy, the adjacent landowner, and private citizens in the area. Other activities (e.g., hiking, hunting) and resources (i.e., watercourses, wildlife corridors) are enhanced by the presence of local state parks and a multitude of state game lands thus proving an expansive landbase situated within close proximity to highly populated communities.</p> <p>To take appropriate measures to maintain and enhance natural resources under their management, assessments must be made on impacts from various activities on the forest. As a result, the FME has undertaken various assessments looking at these impacts. For example the auditors were given documents on trail establishment and use, and the impacts they may have on fauna and flora in proximity to these trails. The FME assessed the short- and long-term effects (both negative and positive) on species groups, which included amphibian and reptiles, birds, and small, medium, large size mammals, from hiking, ATV and snowmobile use, mountain biking, and horseback riding. Other evaluations were made on rights-of-way, and oil and gas activity. Another assessment document was titled “Impacts of Disturbance Events on Groundwater and Surface Water Quality and Quantity.”</p> <p>In summary, through field visits, a review of documentation, and through staff interviews, it was the opinion of the auditors that this Indicator is being met.</p>	
5.5.b	Yes	<p>From field observations it was evident that FME staff is taking appropriate measures, based on their professional expertise and their internal assessments as noted in Indicator 5.5.a, to implement appropriate measures for maintaining and/or enhancing ecosystems services and resources. There are numerous examples to support this contention. In the Goat Hill Wild Plant Sanctuary measures were taken to eliminate ATV use and prohibit trespassing. Leased cabins are carefully monitored to ensure they are living up to their cabin maintenance agreements. A cabin lessee was seen on site, having just made repairs to his cabin to enable its sale to buyer. Harvested areas are protected from deer browse to permit regeneration. Gas and oil sites are monitored to ensure that the surrounding forest is</p>	

		protected.	
5.6.a	Yes	<p>DCNR calculates sustainable harvest levels as described in the Silviculture/Timber Chapter of the SFRMP: <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/silviculture.htm#timberharvest">http://www.dcnr.state.pa.us/forestry/sfrmp/silviculture.htm#timberharvest</a>, which is considered to be part of the management plan. The BOF utilizes a linear programming harvest allocation model based on growth and yield models developed from the continuous forest inventory, land classification system, and a suite of model parameters. The primary constraints used in the model are desired rotation ages, even flow of timber harvests, and even flow of acres harvested (both allowed to fluctuate modestly within desired sustainable limits). The sustained yield harvest is calculated for each BOF district. The basis for the harvest calculation includes:</p> <ul style="list-style-type: none"> <li>• Data for growth analysis and predictions are from measurements of 1500 CFI plots scattered across all forest types and sites. One-fifth of the plots are measured each year for a five year cycle, and the data taken include measurements of regeneration.</li> <li>• Individual species growth data are collected on the CFI plots. The data are incorporated into the growth calculations (yield tables) that have been developed for seven forest types within four major forest regions across the state.</li> <li>• The model incorporates age class rotation ages up to 140 years based on forest type, site, and management objectives.</li> <li>• The CFI analysis results in a new growth figure that incorporates accretion, ingrowth, and mortality.</li> <li>• Areas reserved from harvest are not included in the calculation. Out of the 2.4 million acres, approximately 974,000 acres have been included in the area included in the sustainable harvest calculation. This area was reduced by 10% to account for steep slopes, small wetlands, and other inoperable areas too small to be classified as forest stand.</li> <li>• Harvest level assumptions are reduced within stream management zones and other for "buffer areas" identified in the model.</li> <li>• All silvicultural systems and intermediate treatments used are integrated into the harvest model. The harvest allocation model is a non-spatial model and schedules areas for harvest by analysis areas, rather than individual forest stands. Analysis areas are aggregates of similar forest stands. Harvests can therefore be conducted in one forest stand or across multiple forest stands- whatever combination is necessary to meet the regeneration goal for each forest type, site class and stocking level, and age class.</li> <li>• Management objectives are incorporated into the model by setting rotation lengths, desired age class distributions, desired economic outputs and other factors. The model output has been run for 140 years and includes multiple treatments across that time.</li> </ul> <p>The current model calculations were last updated in 2001-2003, and full implementation began in 2004 with the adoption of the current forest plan. The harvest allocation will be reviewed during the current planning process and updated as necessary based on new cover type and inventory data and harvest records to date.</p>	
5.6.c	Yes	BOF's silvicultural practices emphasize maintaining full stocking and improving stand quality through appropriate and timely silvicultural activities. All harvest proposals are reviewed by the central office for consistency with the BOF's silviculture guidelines. Field evidence	

		observed by the audit team confirmed consistency with the requirements of this indicator.	
<b>Principle 6</b>			
6.1.a	Yes	<p>The following data and assessments are used for both timber management planning and other activities such as planning oil and gas leases. Numbers below correspond with the listed items in the indicator.</p> <ol style="list-style-type: none"> <li>1) Data on forest type, stocking and age class are maintained in the cover type information is updated during the landscape exam process, which occurs approximately every 15 years on each landscape. A detailed analysis of natural disturbance regimes for each major forest type has been prepared and will be incorporated into the silviculture manual (see evidence to close CAR 05/11 in this report).</li> <li>2) DCNR is a partner in the Pennsylvania Natural Heritage Program (PNHP; formerly the Pennsylvania Natural Diversity Inventory or PNDI) and maintains current data on rare, threatened and endangered species and natural communities. This information is reviewed before any site disturbing activities, including forest management, recreation site development (e.g., trails) and approving well locations on oil and gas leases. The review process and associated documents were reviewed with BOF during the current audit. <p>The PGC and F&amp;BC do ongoing surveys to update RT&amp;E information. Natural Heritage surveys counties on an ongoing basis on an approximate 10-year cycle. DCNR is alerted if there is an update to the data, and districts are also notified so they are able to incorporate the most recent information into management plans and actions. District data are updated monthly.</p> </li> <li>3) Other habitats and species of management concern are identified in the Fauna section of the SFRMP. DCNR is currently developing guidance for including Species of Greatest Conservation Need into its management plans. Habitat for these species is generally identified through information from other agencies (e.g., PGS, F&amp;BC) and habitat analyses. Other sources (e.g., Audubon's Important Bird Areas, such as the area including Goat Hill Wild Plant Sanctuary) are included as appropriate.</li> <li>4) Water resources are identified on GIS data layers and unmapped data are identified during the on-site harvest planning process. BOF marks all streams and sensitive aquatic boundaries (e.g., vernal ponds, wetlands) prior to any timber sale.</li> <li>5) Soil data are included in the GIS.</li> <li>6) Historic and pre-settlement conditions and disturbances are identified in the analysis of natural disturbances, which is being incorporated into the Silviculture Manual (see evidence used to close CAR 05/11 in this report)</li> </ol> <p>Specific, detailed assessment processes for oil and gas activities have been developed. These are described in detail in the 2011 annual FSC audit report (Appendix III, Criterion 6.1).</p>	
6.1.d	Yes	The assessments described in Indicator 6.1.a and management	

Public forests only		<p>approaches (6.1.c) are incorporated into the State Forest Resource Management Plan (SFRMP). New assessments and processes developed since the last full SFRMP revision will be incorporated into the public review process for the upcoming plan revision (scheduled to begin on 2012). Detailed assessments are shared with applicable stakeholders and experts (e.g., the Ecosystem Management Advisory Committee), while more generalized information is typically prepared for public review and comment. Final assessments in the form of the SFRMP are available at the BOF website, and additional detail is available from the BOF upon request. Assessments and management approaches specific to oil and gas extraction are also available on the BOF website.</p>	
6.2.c Public forests only	Yes	<p>BOF has partnered with other agencies and stakeholders to develop landscape-level plans and guidelines for specific areas and species including Allegheny woodrat, timber rattlesnake, elk, and brook trout and bats. Species recovery policies are described in the Fauna section of the SFRMP.</p> <p>BOF has hired additional Ecological Services employees and in the process of developing plans for other species. There will now be a plan for each plant sanctuary and each species within each management district. BOF has also begun an Eastern hemlock conservation plan. These plans will address both listed species and non-listed species identified in the State Wildlife Action Plan. Funding from gas leases has enabled DCNR to hire more ecologists to develop these plans.</p> <p>BOF's Wild Plant Sanctuaries are managed specifically for the maintenance and restoration of rare plants. Where appropriate, active management occurs to promote the species of concern. For example, during the audit active restoration of serpentine barrens was observed at the Goat Hill Wild Plant Sanctuary. Many species of rare plants (included three globally rare species) and rare Lepidoptera are benefitting from active management of this rare community type. The auditors visited this sanctuary and observed first hand actions that have been taken.</p>	
6.3.a.3	Yes	<p>Type 1 Old Growth areas are protected in State Forest Natural Areas. A list of these areas was provided to the audit team. Type 2 Old Growth areas are protected in the following management zones as described in the Ecological Considerations Section of the SFRMP: natural areas, selected portions of wild areas, special resource management zones, and limited resource management zones. See <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/eco.htm#oldgrowth">http://www.dcnr.state.pa.us/forestry/sfrmp/eco.htm#oldgrowth</a>. Harvesting is not permitted in these zones unless approved by the State Forester through a State Forest Environmental Review where justification is provided.</p> <p>While BOF believes that they have identified and protected most of old growth areas, old growth is included in the list of resources that foresters are searching for the landscape exam process.</p>	
6.3.b	Yes	<p>The importance of habitat diversity and species associated with different forest successional stages are described in the SFRMP Fauna section. The key to DCNR habitat management is the maintenance of a wide range of successional stages across the forest. Approximately 1.2 million acres has been set aside in natural areas and current or future old growth areas. These areas currently or in the future will provide well distributed late successional and old growth habitats in blocks of up to 40,000 acres. Summary data from</p>	

		<p>the SFRMP sustainable harvest projection indicates that a diversity of 10-year age classes in stands up to 140 years old. The harvest model indicates that both young-forest and old-forest habitats will be well represented in the future. Because these habitat types consist of native plant communities established through natural regeneration, habitat for native forest vertebrate species will be well represented across the forest.</p> <p>Special habitats (e.g., Audubon's Important Bird Areas) are identified and conserved where applicable.</p> <p>Relative to forest loss and fragmentation due to Marcellus gas extraction, the BOF assessment noted the highest potential impacts for forest interior species. BOF believes that these are localized impacts at around gas development sites, but the landscape planning process for BOF-issued leases has retained large blocks of forest interior habitat on lease tracts. On areas with severed rights where BOF has less control, BOF shares information on sensitive habitats early in the development process and seeks to find leverage to develop a surface rights agreement with the subsurface rights holder when possible. BOF is also building a monitoring program to assess long-term and landscape impact.</p>	
6.4.a	Yes	<p>The Representative Sample Areas (RSA) assessment is included in the analysis of major and minor natural community types in the "Guidelines for Bioserve Identification." Section 3 of the revised guidelines (2005) describes the process for identifying and protecting representative examples of natural community types within Bioserve areas. The process specifically addressed major and minor community types and typical patch sizes of each type, and identified the need for protection based on the number of existing protected examples within the region. The assessment used BOF and PNHP data and other available sources. This delineation was tested against an alternative proposal by the Ecosystem Management Advisory Committee in 2007. Results indicated that the BOF's zoning-based system adequately captures the range of community types on BOF lands and identifies where protected examples occur on the landscape.</p>	
6.4.b	Yes	<p>When assessment described in 6.4.a identified ecosystems that were not sufficiently protected in Wild Areas and Natural Areas, additional examples were used to delineate Bioserve areas. Bioserve guidelines address patch sizes necessary to ensure that protected examples are ecologically viable. The number of protected replicates is based on the relative rarity of the community type: three is considered adequate for common community types and two for rare types. These protected communities serve to address all three RSA purposes identified in the intent statement for Criterion 6.4</p>	
6.4.d	Yes	<p>The FSC Standard requires that the RSA assessment be updated at a minimum of every 10 years. The first RSA assessment was completed in 2003 and reviewed in 2007.</p>	
6.6.b	Yes	<p>Herbicides are used to control competing understory vegetation at the time of regeneration. Methods and rationale are described in Chapter 10 of the <i>Silviculture Manual</i>. The decision on whether or not to use herbicides for regeneration treatments is based on the SILVAH manual procedures, but foresters have the latitude to not prescribe herbicides if site conditions indicate that regeneration will be successful. The SILVAH manual provides many non-chemical alternatives (e.g., fire, mowing). Chemicals are used only when more than 60% of regeneration plots have competing vegetation that will</p>	<b>OBS 01/12</b>

	<p>prevent forest regeneration and non-chemical methods are not feasible or effective. For example, mowing may be used but frequently results in sprouting of all species and insufficient suppression of regeneration. Alternatives to chemical uses are also considered for invasive species controls that are not associated with silvicultural treatments. The chemical use forms list alternatives considered.</p> <p>DCNR is beginning to use fire in some cases. Historically the BOF was hesitant to use fire due to safety concerns and ambiguity in state laws on liability of individual employees. State law was modified to clarify the liability issue, with support from The Nature Conservancy and the Western Pennsylvania Conservancy. Use of prescribed fire has increased from approximately 100 acres per year to about 500 acres per year. An example of a burn plan to control competitive vegetation and avoid herbicide use on District 20 (Shrivers Ridge 3) was reviewed by the audit team. The BOF is evaluating the cost in terms of money and staff time, as well as effectiveness. Suitable weather windows also limit potential use of fire. Clear Creek State Forest in the Allegheny region has been most active and BOF reports they have had very good results with oak regeneration. The BOF is looking to see how fire can be best used in other areas. The update to the SFRMP includes a section on silvicultural use of fire.</p> <p>No chemicals listed as highly hazardous by the FSC are used. The lowest toxicity chemicals possible are used, with three chemicals that are generally considered to be very low toxicity (i.e., glyphosate, imazapyr, and tryclopypyr) accounting for most of the area treated. Other chemicals are used only where it has been determined that these chemical will be ineffective.</p> <p>Application methods are designed to minimize risks. Currently there are no aerial applications of chemicals (Bt, a biological control, is applied aerially to suppress gypsy moth). Understory mist spraying is most common, but individual-stem treatments are used when possible. This method reduces the volume needed and impacts to non-target species.</p> <p>Insecticides are only used to control hemlock wooly adelgid in selected natural areas with exemplary hemlock stands.</p> <p>Written strategies include the Silviculture Manual, Silvah Manual, the IPM section of the SFRMP, and various supporting documents by BOF and its partners that addresses specific species controls (e.g., Gypsy moth, hemlock wooly adelgid, and emerald ash borer). All documents describe alternatives to chemical use. Eventual phase out is not explicitly included in these documents, as the need for chemical use cannot be predicted and feasible alternatives are not currently available that will enable the BOF to meet its other management objectives. However, policies and practices limit use to only those cases where chemicals are necessary and alternative methods are used where feasible. The SFRMP Forest Health and Pest Management section states that <i>"The bureau will scrutinize the use of pesticides and herbicides on state forest land. All employees who are responsible for the application of these substances will continue to be properly trained in their handling and use. Chemical pesticide application on state forest land will be considered only when other alternatives have been exhausted."</i> The use of Integrated Pest</p>	
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		Management (IPM) is referenced in several places in the 2007 SFRMP update. While these policies are followed and amounts used are minimized, the goal of reducing or eliminating use is not clearly described in the SFRMP (see <b>OBS 01/12</b> ).	
6.6.d	Yes	<p>Most chemical use is applied by commercial contractors in association with silvicultural regeneration operations. In addition, BOF employees use herbicides to control invasive plants. BOF conforms with the requirements of Indicator 6.6.d as follows:</p> <ul style="list-style-type: none"> <li>• Prior to chemical use, sites are screened for environmental and human health risks. Documented environmental reviews for each chemical use project include PNHP information on RT&amp;E species and habitats, including PGC (wildlife except fish and herptiles), F&amp;BC (fish and herptiles), DCNR (rare plants and natural communities), and USFWS data sources. Mapped water resources are identified on GIS, and unmapped wetlands and small streams are identified during site reconnaissance.</li> <li>• All sensitive sites are identified on maps in the “Statement of Work” document that becomes part of the herbicide application contract. Specific precautions to minimize risks in the Statement of Work include equipment specifications (e.g., nozzle type), accuracy, weather conditions, equipment speed and spray widths, GPS and marking of spray zones and buffer areas, direction of spray at block boundary, spill cleanup requirements, acceptable chemicals and formulations, spray rates and mixing procedures, metering, record keeping, and other precautions. Use must follow manufacturers label requirements, which also address environmental and human health and safety. Similar information is included in prescriptions and the SFL Chemical Use database records that are implemented by BOF employees for invasive plant control.</li> <li>• Pesticide applicators: BOF personnel and contractors must be certified by the Commonwealth; commercial applicators must also have a pesticide application business license. These certifications and licenses ensure that workers are trained in environmental and human health and safety procedures, are aware of all risks, and wear proper safety equipment, and trained to minimize non-target impacts.</li> <li>• All proposals for herbicide use are reviewed by the Silviculture Section (for regeneration treatments) or Operations (for invasive species control); contracts are prepared at the Section level. All commercial operations are monitored by BOF staff to ensure compliance with contract requirements.</li> </ul>	
6.8.b	Yes	<p>Biological controls include Bt spraying for Gypsy moth control, release of a Mile-a-Minute Weevil to control the invasive plant Mile a Minute weed, and research experiments coordinated with the PSU to control Tree of Heaven with a naturally occurring fungus <i>Ailanthus verticillium</i> wilt. All organisms used by BOF are reviewed and approved by USDA APHIS for safety and BOF follows all required protocols. Gypsy moth suppression is done by licensed applicators that are required to have proper training and safety equipment. BOF applicators are also trained in application methods and equipment. Contracts include health and safety requirements.</p>	
6.8.c	Yes	<p>Applications described in 6.6.b are monitored by BOF in accordance with legal requirements and USDA protocols. Commercial Bt contractors have detailed monitoring requirements in contracts and BOF also monitors commercial operations. Written plans describe procedures, risk avoidance, and monitoring. For example, the document “Air Operations Plan, Gypsy Moth Suppression Program</p>	

		2009" was reviewed by the audit team. The plan includes a justification for use, describes responsible persons, potential risks, detailed procedures to avoid adverse impacts, training, and monitoring procedures.	
6.10.d	Yes	No areas have been converted to plantations as defined by the FSC.	
6.10.e	Yes	<p>Justification for conversion resulting from oil, gas, and mineral development is included in the Geology/Minerals Section of the SFRMP.</p> <p>Leasing guidelines and best management practices for oils gas leases have been developed by DCNR and updated as a result of the recent surge in Marcellus gas leasing. Marcellus gas development was the subject of a detailed review by SmartWood during the 2011 (2010 calendar year) audit. This analysis found that the leasing was consistent with applicable indicators of Criterion 6.3 of the Appalachian standard. The auditors have concluded that DCNR's landscape approach to leasing and site-specific plans address the pertinent requirements of Criterion 6.3 of the current FSC Standard (FSC-US v.1.0).</p>	
6.10.f	Yes	<p>DCNR has prepared a map showing areas with subsurface rights owned by others. A GIS for mapping and tracking areas converted to non-forest use from development of subsurface rights is being developed and is nearly functional. DCNR has consulted with SmartWood regarding excision of converted areas from the certificate. BOF has developed draft excision procedures that meet the intent if this indicator and describes cases when lands subject to severed subsurface rights will be excised. This policy will be implemented over the coming year.</p> <p>There have been no cases where BOF held these rights and then sold them. During the 2011 audit SmartWood evaluated the conversion to non-forest use and found that it was consistent with the requirements of 6.10.a-c, and there has been no conversion to plantations (6.10.d).</p>	
<b>Principle 7</b>			
7.1.d	Yes	<p><b>Landscape description:</b></p> <p>The forest is divided into small landscapes several hundred to several hundred acres in size. These are periodically assessed by local foresters and described in landscape narratives. Chapter 1 of the <i>Silviculture Manual</i> describes the landscape assessment process.</p> <p><b>Landscape Indicators of Criterion 6.3:</b></p> <p><b>6.3.a.1.</b> Late successional and old growth management are described in the Ecological Considerations section of the SFRMP. The importance of management for early successional habitats is described in the Fauna section of the SFRMP.</p> <p><b>6.3.a.2.</b> Conservation of rare ecological communities is described in the Ecological Considerations section (Biodiversity and Bioreserves subsections) of the SFRMP.</p> <p><b>6.3.a.3</b> Identification and protection of old growth is described in the Ecological Considerations section of the SFRMP  <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/eco.htm#oldgrowth">http://www.dcnr.state.pa.us/forestry/sfrmp/eco.htm#oldgrowth</a> .</p> <p><b>6.3.b</b> Habitat for vertebrate and other animal species and populations</p>	

		<p>is described in the “Fauna” section of the SFRMP.  <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/fauna.htm">http://www.dcnr.state.pa.us/forestry/sfrmp/fauna.htm</a>.</p> <p><b>6.3.c</b> Aquatic and Riparian Habitat management is described in the Fauna section of the FRMP.  <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/fauna.htm#habitat">http://www.dcnr.state.pa.us/forestry/sfrmp/fauna.htm#habitat</a>.</p>	
7.1.f	Yes	<p>The Invasive Plants and Forest Health Sections of the SFRMP 2007 Update (at web site <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/sfrmp_update_2007_complete.pdf">http://www.dcnr.state.pa.us/forestry/sfrmp/sfrmp_update_2007_complete.pdf</a>) describe invasive species present, applicable management objectives, and how they will be controlled. Invasive species are identified and mapped in the landscape management database. Also developed are plans for the Public Wild Plant Sanctuaries. An example of this was found in a site plan provided to the auditors for the Goat Hill Wild Plant Sanctuary. All of the above elements were found in this plan and a visit to this site further illustrated positive results on the ground.</p>	
7.1.j	Yes	<p>The SFRMP (at <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/sfrmp_update_2007_complete.pdf">http://www.dcnr.state.pa.us/forestry/sfrmp/sfrmp_update_2007_complete.pdf</a>) and associated documents (e.g., State Forest Resource Management Plan 2007 Update Process, Summary of Public Comments; the Inventory Manual of Procedure for the Fourth State Forest Management Plan) address all aspects of this Indicator and report on, and take management action on, evaluations of social impacts in those cases where assessments are possible. For example, attempts to develop a dialogue with native Americans have largely gone unanswered.</p> <p>Specifically, there are no known traditional and customary rights of use on the forest or ceremonial or archeological sites. However, the SFRMP provides information on protections cultural and historical sites and special natural areas. A section of the plan titled “CONSERVING SPECIAL PLACES, DCNR'S PLAN FOR GUIDING FUTURE INVESTMENTS IN LAND ACQUISITION” addresses some of these concerns and the social implications for losing these areas. Also mentioned is its relationship with the PHMC.</p> <p>Mention of management for aesthetic values are distributed throughout the SFRMP. For example, when discussing deer fencing the plan states “When fencing in road buffer areas, aesthetics should always be considered. The public may only accept a certain amount fencing along the road. This level of acceptance will vary from district to district depending on the forest users and their interests.”</p> <p>All documents address types of activities permitted and not permitted on various areas within the state forests. For example in the Introduction the plan states that “Approximately 121 miles of haul roads will be constructed or improved as a result of timber sale activities. Approximately 274 acres of roads and landings will be seeded for erosion control and wildlife habitat upon retirement from motorized use. These seeded and retired roads provide important access to the forest for forest fire protection and recreation.” For natural areas of special significance the plan states that “Impacts to the resource will be monitored and the District Forester will regulate use and access through closures if necessary.”</p> <p>The FME is aware the creation and/or maintenance of local jobs, and is aware of its employment, public mandate, and how this affects the local economy around each state forest and for the state. As stated in the SFRMP “the forest products industry is a vital part of the</p>	

		<p>Pennsylvania economy and many local communities. The industry includes more than 2,600 establishments, and employs over 82,000 Pennsylvanians accounting for one of every nine manufacturing jobs in the state. (PA Department of Labor, 2004). The forest products industry in Pennsylvania manufactures products in excess of \$15 Billion annually.” The FME track timber sale volumes, which provides an indication of related jobs. Also, local purchases of goods and services contribute as well to further employment and spending.</p> <p>The FME also contributes to the development of jobs through its support of local economic development. For example, oil and gas facilitation has led to a boom in employment and spending in those areas where this activity has been permitted. See also Indicator 4.4.a.</p>	
7.1.k	Yes	The SFRMP and associated documents (e.g., the Inventory Manual of Procedure for the Fourth State Forest Management Plan; Infrastructure Section at <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/infra.htm#road">http://www.dcnr.state.pa.us/forestry/sfrmp/infra.htm#road</a> ; Guidelines for Administering Oil and Gas Activity on State Forest Lands, VERSION 2011-1, April 26, 2011) describe the purpose and needs of the road transportation system.	
7.1.r	Yes	The SFRMP can be found at the web site <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/update.aspx">http://www.dcnr.state.pa.us/forestry/sfrmp/update.aspx</a> and it describes the need and value in seeking input and advice from a host of sources including advisory committees and councils and through various public forums including public meetings. The stakeholder process is described in this plan and it contains a summary of the latest SFRMP review which can be found at the web site <a href="http://www.dcnr.state.pa.us/forestry/sfrmp/Public_Comment_Summary_2007.pdf">http://www.dcnr.state.pa.us/forestry/sfrmp/Public_Comment_Summary_2007.pdf</a> . This document contains the complete summary of public comments that were gathered from nine regional public meetings, from solicited written comments, and from web-based comments submitted through the DCNR web site. The public comment period closed October 31, 2007.	
7.4.b Public forest only	Yes	As established with the 2003 SFRMP, the FME will continually engage in a five-year planning and public input cycle to provide more frequent updates and revision processes. The 2007 plan published in 2008 is a direct reflection of this action.	
<b>Principle 8</b>			
8.2.c	Yes	<p>BOF meets the requirements of this indicator as follows:</p> <ol style="list-style-type: none"> <li>1) <b>Rare, threatened and endangered species and/or their habitats</b> are monitored by periodic PNDI updates, which incorporate monitoring by the agencies responsible for those species (Natural Heritage, PGC, F&amp;BC).</li> <li>2) <b>Common plant communities and/or habitats</b> are monitored by updating cover type maps every 15 years during the landscape examination process. Rare plant communities are monitored through the natural heritage review process described for RTE species above.</li> <li>3) <b>Location, presence and abundance of invasive species</b> are monitored during stand examinations, regeneration inventories, landscape examinations, and in association with oil and gas leasing.</li> <li>4) <b>Condition of protected areas, set-asides and buffer zones;</b> and</li> <li>5) <b>High Conservation Value Forests.</b> Examples of protected areas and HCVF monitoring are included in the Ecological Natural Areas Inventory report and Wild Areas inventory report. The BOF reviewed all of its monitoring procedures and identified those associated with each of the six HCVs. The</li> </ol>	

		<p>procedures have been summarized in the document "PA BOF HCVF Monitoring Matrix.doc" (10-1-09).</p> <p>Specific monitoring is being developed for monitoring associated with Oil and Gas development. To date monitoring has included site location and management, including on-site buffers for sensitive resources identified by BOF and the gas company's environmental consultants, and monitoring of erosion and sediment controls, spills, and safety. A long-term, comprehensive monitoring program is being developed that includes threatened or endangered species, plant species near habitat, wetlands, and impacts on forest-interior species. DCNR will also incorporate research being conducted by Penn State University and others in its comprehensive monitoring program. Data such as monitoring of seed mixes and effectiveness of buffers for wetlands and RT&amp;E species will be used for adaptive management.</p>	
<b>Principle 9</b>			
<b>Principle 10</b>			
General	Not Applicable	BOF does not manage any plantations. Older stands of exotic species such as Norway spruce or Scots pine (typically pre-1960's) are found on some forests. These are generally being managed to allow native forest species to become established, although planted trees and small stands are being retained to provide softwood cover for wildlife and aesthetic buffers along forest roads. BOF does not intend to retain or manage any of these stands as plantations as defined by the FSC. Over time all of these stands will eventually be dominated by native species.	
10.5.g Public forest only	N/A	BOF does not manage any plantations	
10.6.d	N/A	BOF does not manage any plantations	

## APPENDIX V: Chain-of-Custody Conformance (confidential)

**Note:** This CoC Appendix is used for FMEs only selling standing timber, stumpage, logs and/or chips produced within a FMU covered by the scope of the certificate. FME certificate scopes that include primary or secondary processing facilities shall include an evaluation against the full FSC CoC standard: FSC-STD-40-004 V2. Refer to that separate report Appendix.

### Definition of Forest Gate: (check all that apply)

<input checked="" type="checkbox"/>	<b>Standing Tree/Stump:</b> FME sells standing timber via stumpage sales.
<input checked="" type="checkbox"/>	<b>The Log Landing:</b> FME sells wood from the landing/yarding area.
<input type="checkbox"/>	<b>On-site Concentration Yard:</b> Transfer of ownership occurs at a concentration yard under the control of the FME.
<input type="checkbox"/>	<b>Off-site Mill/Log Yard:</b> Transfer of ownership occurs when offloaded at purchaser's facility.
<input type="checkbox"/>	<b>Other:</b> <i>explanation</i>
Comments: The vast majority of timber is sold as stumpage during bid sales. BOF may also sell small quantities of dead commercially inoperable timber under firewood permits – in these cases the forest gate is the stump. Occasionally BOF cuts a small amount of timber during maintenance projects – in these cases the landing is the forest gate.	

### Scope Definition of CoC Certificate:

Does the FME further process material before transfer at forest gate? (If yes then processing must be evaluated to full CoC checklist for CoC standard FSC-STD-40-004 v2.) <b>Note: This does not apply to on-site production of chips/biomass from wood harvested from the evaluated forest area.</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Comments:	
Is the FME a large scale operation (>10,000 hectares) or a Group Certificate? (If yes then CoC procedures for all relevant CoC criteria shall be documented.)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comments: See CoC 1.3	
Does non-FSC certified material enter the scope of this certificate prior to the forest gate, resulting in a risk of contamination with wood from the evaluated forest area (e.g. FME owns/manages both FSC certified and non-FSC certified FMUs)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comments: See CoC 2.1	
Does FME outsource handling or processing of FSC certified material to subcontractors (i.e. milling or concentration yards) prior to transfer of ownership at the forest gate? (If yes a finding is required for criterion CoC 7 below.)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Comments:	
Does FME purchase certified wood from other FSC certificate holders and plan to sell that material as FSC certified? (If yes then a separate CoC certificate is required that includes a full evaluation of the operation against FSC-STD-40-004 v2.).	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Comments:	
Does FME use FSC and/or Rainforest Alliance trademarks for promotion or product labeling? (If FME does not nor has no plans to use FSC/RA trademarks delete trademark criteria checklist below.)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comments: See CoC 5	

### Annual Sales Information

Total Sales/ Turnover	27,265,000 US\$
Volume of certified product sold as FSC certified (i.e. FSC claim on sales documentation) (previous calendar year)	346,049 m3
Value of certified product sold as FSC certified (i.e. FSC claim on sales documentation) (previous calendar year)	23,326,000 US\$

### Chain-of-Custody Criteria [FM-35 SmartWood Chain-of-Custody Standard for Forest Management

Enterprises (FMEs)]

<b>1. Quality Management</b>	
COC 1.1: FME shall define the personnel/position(s) responsible for implementing the CoC control system.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Findings:</b> The primary person responsible for the COC system (Chief of Silviculture) has been identified in the written procedures.	
COC 1.2: All relevant staff shall demonstrate awareness of the FME's procedures and competence in implementing the FME's CoC control system.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Findings:</b> Staff interviewed indicated awareness of the COC system and their responsibilities. Because all contracts with COC information are issued from the central office and COC ends at the stump or landing, field foresters are not routinely involved in COC responsibility.	
CoC 1.3: FME procedures/work instructions shall provide effective control of FSC certified forest products from standing timber until ownership is transferred at the forest gate. <i>Note: For large scale operations (&gt;10,000ha) and Group Managers, CoC procedures covering all relevant CoC criteria shall be documented.</i> Including:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a) Procedures for physical segregation and identification of FSC certified from non-FSC certified material. <b>(If applicable)</b>	
b) Procedures to ensure that non-FSC certified material is not represented as FSC certified on sales and shipping documentation. <b>(If applicable)</b>	
c) Procedures to include FME FSC certificate registration code and FSC claim (FSC Pure) on all sales and shipping documentation for sales of FSC certified products.	
d) Recordkeeping procedures to ensure that all applicable records related to the production and sales of FSC certified products (e.g. harvest summaries, sales summaries, invoices, bills of lading) are maintained for a minimum of 5 years.	
e) Procedures to ensure compliance with all applicable FSC/Rainforest Alliance/SmartWood trademark use requirements.	
<b>Findings:</b> All procedures listed above are applicable and are found in the document "Chain-of-Custody Guidelines.doc" (9-16-09).	
<b>2. Certified Material Handling and Segregation</b>	
COC 2.1: FME shall have a CoC control system in place to prevent the mixing of non-FSC certified materials with FSC certified forest products from the evaluated forest area, including:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
a) Physical segregation and identification of FSC certified from non-FSC certified material.	
b) A system to ensure that non-FSC certified material is not represented as FSC certified on sales and shipping documentation.	
<b>Note: If no outside wood is handled by FME within scope of certificate, mark as N/A.</b>	
<b>Findings:</b>	
a) There is little to no risk of mixing at the landing; however, procedures specify that certified and non-certified wood must be separated.	
b) BOF occasionally arranges harvests for other state agencies that are not certified (e.g., Bureau of State Parks). Procedures require that contracts specify "Not FSC-certified" for such sales.	
CoC 2.2: FME shall identify the sales system(s) or "Forest Gate", for each FSC certified product covered by the Chain of Custody system: i.e. standing stock; sale from log yard in the forest; sale at the buyer's gate; sale from a log concentration yard, etc.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Findings:</b> The "Chain of Custody Guidelines" identifies the Forest Gates used by the BOF, as described above.	
CoC 2.3: FME shall have a system that ensures that FME products are reliably identified as FSC certified (e.g. through documentation or marking system) at the forest gate.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Findings:</b> Sales contracts are used to identify FSC-certified wood. Timber sale contracts include the certificate number; and the words "FSC Pure" have been added to any new contracts issued after September, 2009. An example was reviewed during the annual audit. Examples of contracts with required CoC information were provided to the audit team.	
CoC 2.4: FME shall ensure that certified material is not mixed with non-FSC certified material at any stage, up to and including the sale of the material.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
<b>Note: If no outside wood is handled by FME within scope of certificate, mark as N/A.</b>	

**Findings:** See findings for CoC 2.1

### 3. Certified Sales and Recordkeeping

COc 3.1: For material sold with FSC claim the FME shall include the following information on sales and shipping documentation:

- a) FME FSC certificate registration code, and
- b) FSC certified claim: FSC Pure

Yes  No

**Findings:** See findings for CoC 2.3.

CoC 3.2: FME shall maintain certification production and sales related documents (e.g. harvest summaries, invoices, bills of lading) for a minimum of 5 years. Documents shall be kept in a central location and/or are easily available for inspection during audits.

Yes  No

**Findings:** BOF procedures require that records be kept for 7 years.

CoC 3.3: FME shall compile an annual report on FSC certified sales for SmartWood containing monthly sales in terms of volume of each FSC certified product sold to each customer.

Yes  No

**Findings:** Records of sales are maintained in digital form on BOF computers. Records of sales can be summarized and printed for any period or product desired. A summary of recent sales was provided to the audit team.

### 4. Outsourcing

CoC 4.1: FME control system shall ensure that CoC procedures are followed at subcontracted facilities for outsourcing and FME shall collect signed outsourcing agreements covering all applicable FSC outsourcing requirements per FSC--40-004 v-2.0 *FSC Standard for Chain of Custody* November 2007.

**Note 1: If FME outsources processing or handling of FSC certified material the outsourcing report appendix is required.**

**Note 2: Check N/A If FME does not outsource processing or handling of FSC material.**

Yes  No   
N/A

**Findings:** There is no outsourcing.

### 5. FSC/Rainforest Alliance Trademark (TMK) Use Criteria

#### Standard Requirement:

The following section summarizes the FME's compliance with FSC and Rainforest Alliance trademark requirements. Trademarks include the Forest Stewardship Council and Rainforest Alliance/SmartWood names, acronyms (FSC), logos, labels, and seals. This checklist is directly based on the FSC labeling standard (FSC-STD-40-201 *FSC on-product labeling requirements* (version 2.0) and FSC-TMK-50-201 V1-0 *FSC Requirements for the Promotional Use of the FSC Trademarks by FSC Certificate Holders*. References to the specific FSC document and requirement numbers are included in parenthesis at the end of each requirement. (Rainforest Alliance Certified Seal = RAC seal).

#### General

COc 5.1: FME shall have procedures in place that ensure all on-product and off product FSC/Rainforest Alliance trademark use follows the applicable policies:

Yes  No

**Findings:** COc 5.1 is addressed by the document "FSC Logo Usage and Certification Referencing Guidelines for the Pennsylvania Bureau of Forestry."

COc 5.2: FME shall have procedures in place and demonstrate submission of all FSC/Rainforest Alliance/SmartWood claims to SmartWood for review and approval prior to use, including"

- a) On-product use of the FSC label/RAC seal;
- b) Promotional (off-product) claims that include the FSC trademarks ("Forest Stewardship Council", "FSC", checkmark tree logo) and/or the Rainforest Alliance/SmartWood trademarks (names and seal)(50-201,2.3).

Yes  No

#### Findings:

- a) BOF does not use on-product labeling.
- b) All applicable procedures for promotional use are included in the document "FSC Logo Usage and Certification Referencing Guidelines for the Pennsylvania Bureau of Forestry." All procedures were

approved prior to the closure of CAR 6/10 in April 2010. The most recent trademark use was approved by SmartWood 9/15/2011 (Case: 00055268). This use is found at the BOF forest certification web page: <a href="http://www.dcnr.state.pa.us/forestry/stateforestmanagement/Certification/index.htm">www.dcnr.state.pa.us/forestry/stateforestmanagement/Certification/index.htm</a> .	
COC 5.3: FME shall have procedures in place and demonstrates that all trademark review and approval correspondence with SmartWood is kept on file for a minimum of 5 years (40-201, 1.10; 50-201, 2.4):	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Findings:</b> BOF COC procedures specify that approval correspondence with SmartWood is kept on file for a minimum of 5 years.	

<b>Off-product / Promotional</b>	
<input type="checkbox"/> Check if section not applicable (FME does not, and does not plan to use the FSC trademarks off-product or in promotional pieces)	
Note: promotional use items include advertisements, brochures, web pages, catalogues, press releases, tradeshow booths, stationary templates, corporate promotional items (e.g., t-shirts, cups, hats, gifts).	
When applicable to the FME's promotional/off-product use of the trademarks, the criteria below shall be met:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Findings:</b> SmartWood has reviewed all uses of trademarks for consistency with the following indicators, including the most recent use reference above.	
COC 5.4: If the FSC trademarks are used for promotion of FMUs, FME shall limit promotion to FMUs covered by the scope of the certificate.	
COC 5.5: In cases that the Rainforest Alliance trademarks are used (50-201, 13.1, 13.2):	
a) The FSC trademarks shall not be at a disadvantage (e.g., smaller size);	
b) The FSC checkmark tree logo shall be included when the RAC seal is in place.	
COC 5.6: In cases that the FSC trademarks are used with the trademarks (logos, names, identifying marks) of other forestry verification schemes (SFI, PEFC, etc.), SmartWood approval shall be in place (50-201, 3.0).	
COC 5.7: Use of the FSC trademarks in promotion of the FME's FSC certification shall not imply certain aspects are included which are outside the scope of the certificate (50-201, 1.6).	
COC 5.8: Use of the FSC trademarks on stationery templates (including letterhead, business cards, envelopes, invoices, paper pads) shall be approved by SmartWood to ensure correct usage (50-201, 12.0).	
COC 5.9: In cases that the FSC trademarks are used as part of a product name, domain name, and/or FME name, SmartWood approval shall be in place (50-201, 9.0, 10.0).	

<b>On-product</b>	
<input checked="" type="checkbox"/> Check if section not applicable (FME does not, and does not plan to apply FSC labels on product)	

## APPENDIX VI: SmartWood Database Update Form

**Instructions:** For each FSC certificate, SmartWood is required to upload important summary information about each certificate to the FSC database (FSC-Info). During each annual audit SW auditors should work with the certificate holder to verify that the information posted on FSC-Info is up to date as follows:

1. Print out current Fact Sheet prior to audit from FSC-Info website or direct link to fact sheets (<http://www.fsc-info.org>)
2. Review information with the FME to verify all fields are accurate.
3. If changes are required (corrections, additions or deletions), **note only the changes** to the database information in the section below.
4. The changes identified to this form will be used by the SW office to update the FSC database.

Is the FSC database accurate and up-to-date? YES  NO   
(if yes, leave section below blank)

### Client Information (contact info for FSC website listings)

<b>Organization name</b>	PA DCNR Bureau of Forestry		
<b>Primary Contact</b>	Chad R. Voorhees	<b>Title</b>	Forest Resource Planner
<b>Primary Address</b>	PA DCNR Bureau of Forestry Resource Planning Section 400 Market Street PO Box 8552 Harrisburg PA 17105-8552	<b>Telephone</b>	717-425-5368
<b>Address</b>	Same as above.	<b>Fax</b>	717-783-5109
<b>E-mail</b>	chvoorhees@pa.gov	<b>Webpage</b>	<a href="http://www.dcnr.state.pa.us/forestry/index.aspx">http://www.dcnr.state.pa.us/forestry/index.aspx</a>

### Forests

<b>Change to Group Certificate</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Change in # of parcels in group</b>	<b>total members</b>
<b>Total certified area</b>		865,255 Hectares (or)	<b>Acres</b>

### Species (note if item to be added or deleted)

Scientific name	Common name	Add/Delete

### Products

Product type	Description	Add/Delete