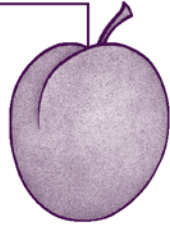


The
PLUM LINE
SPECIALIZING IN SUSTAINABLE
FOREST MANAGEMENT SYSTEMS



Special Audit Report

to the

Maine Department of Conservation

on the

Small Woodland Owners
Association of Maine

Tree Farm Group Certification

December 31, 2003

The Plum Line
Sustainable Forest Management Systems
Tree Farm Group Certification
S.W.O.A.M. *Special* Audit Report
to the
Maine Department of Conservation
12/31/03

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Introduction

The Small Woodland Owners Association of Maine (SWOAM) organized a group of forest landowners (“SWOAM Stewardship Family” or “Group”) for the purpose of seeking third-party certification under the American Tree Farm System (ATFS) group certification process. SWOAM requested a group audit to certify that its Group member management conforms to the *American Forest Foundation Standards of Sustainability for Forest Certification on Private Land* December 2002 edition (the Standard – see **Appendix A**). An audit team assembled by *The Plum Line* (TPL) completed an audit in September and October, 2003 in order to make a determination on the conformance of the Group’s process and performance to the Standard according to the American Tree Farm System’s *Group Certification Process – Auditing Procedures for Group Certification and Qualifications Criteria for Group Certification Bodies*.

The American Forest Foundation (AFF) is the parent organization responsible for developing and maintaining the American Tree Farm System (ATFS). The mission of the ATFS is “to promote the growing of renewable forest resources on private lands while protecting environmental benefits and increasing public understanding of all benefits of productive forestry”. To accomplish this mission, ATFS has educated, assisted, and certified almost 65,000 landowners and their Tree Farms covering 85 million acres of forestland (and including 26 million acres of private, non-industrial forestland acres) with the help of some 7000 volunteer foresters. Although this is the oldest and largest forest certification program in the world, with the expectation of an increasing demand for wood from certified forests, there is potential for ATFS to grow significantly. With millions of non-industrial private forestland owners in the US holding nearly 300 million acres of land, however, the potential for expanding the Tree Farm program is unlikely to be met through continued reliance solely on the services of volunteers.

Fortunately, there are numerous other organizations in the US that also provide forest management assistance or supervision to non-industrial forest owners, including private consultants, forest industry “landowner assistance programs” (LAPs), state agency “Forest Stewardship” and property-tax reduction programs, landowner associations and even a small (but growing) number of forest landowner cooperatives. By using the infrastructure and systems of these organizations to provide information about their participants and some degree of consistency in the management of participants’ lands, the certification of their participants to ATFS standards could be achieved more economically and more rapidly than through the provision of Tree Farm services on the traditional landowner-by-landowner

basis by volunteer inspecting foresters. To this end, the ATFS has developed guidelines for group memberships, and audit procedures and qualification for “third-party” group certifiers.

To test and help develop the potential for such “group certifications” and the documents supporting them, the ATFS has sponsored a series of pilot group certification audits of five such organizations. The Maine SWOAM audit was one such pilot certification audit.

To accomplish this goal, The Plum Line (TPL - an accomplished sustainable forest management assistance and certification auditing partnership) is providing the necessary group certification auditing services. New Hampshire and Maine-based Innovative Natural Resource Solutions LLC and Strategic Resource Systems from Michigan are the partner companies of TPL.

SWOAM has organized a group of forest landowners that includes 37 individual landowners owning over 18,000 acres of forest land in Maine (at the time of the audit). A standardized application process for inclusion into the group (and criteria for membership) have been developed by SWOAM. As with the SWOAM group, the ATFS group process anticipates growth within the groups organized.

In addition to the normal audit process used by TPL for the SWOAM audit, at the request of the Maine Department of Conservation, additional audit criteria were added as an adjunct to the SWOAM Tree Farm audit criteria found in the Standard.

It should be noted that a separate full audit report, outlining all procedures and findings of the Tree Farm Group Certification audit, has been issued to SWOAM and the American Tree Farm System. This report to the Maine Department of Conservation is not a substitute for this report nor does it outline the findings of the full audit report.

1. Audit Scope & Criteria

1.1 Scope

This certification audit applied to the SWOAM Group activities as they relate to its Stewardship Family members (the Group Members). The objective of the overall audit was a third-party certification of the Group to the Standard as a pilot audit of the new ATFS Group Certification Process. The American Tree Farm System is responsible for issuing the certification should TPL find the SWOAM Group in conformance with the Tree Farm Standard.

As part of the pilot phase of the ATFS Group Certification Process, TPL has also reviewed and describes its findings to ATFS in the full audit report relative to the Group's organization according to the ATFS *Guidelines for Group Members and Group Organizations*. TPL has not determined conformance to this set of guidelines and, thus, this portion of the audit objective is separate from and does not affect the results of the SWOAM audit objective of determining conformance to the Tree Farm Standard.

In addition, and separate from the full audit objective and report, TPL was also requested to include in the audit a series of additional indicators (beyond the Tree Farm Standard – see **Appendix A** for the Tree Farm Standard) requested by the State of Maine Department of Conservation. The findings relative to those criteria are the exclusive subject of this report.

1.2 Criteria

In an October 5, 2003 letter from R. Alec Giffen, Director of the Maine Forest Service to Robert Simpson, Director of the American Tree Farm System, that included an attachment entitled “Attachment Regarding Maine’s Goals for Sustainable Forestry as They Apply to Small Landowners”, Mr. Giffen outlined a series of potential indicators that could be audited during the SWOAM audit. An analysis of these potential indicators by the auditors resulted in a list of “auditable” additional indicators (some indicators in the letter attachment were deemed not auditable by the auditors). This list of auditable indicators included the following:

1.2.1 Indicators that are explicitly part of the Tree Farm Standard

- a. minimizing soil disturbance
- b. soil erosion
- c. effectively utilizing best management practices for protection of water quality
- d. preventing sedimentation or other disturbance of water bodies
- e. protecting regeneration of desirable species
- f. other visual impacts of timber harvesting
- g. protecting rare plant and animal habitats including S1 and S2 plants, rare or exemplary natural communities and the habitats of threatened and endangered animals

- h. implementing the recommendations of a forest management plan
- i. conducted under the direct supervision of a Licensed Forester
- j. conducted by loggers who have received training and certification from the Certified Logging Professional program (CLP) or an equivalent training system

1.2.2 Indicators that are not explicitly in the Tree Farm Standard

- a. excessive removal of organic matter
- b. exposure of mineral soil
- c. minimizing damage to residual stands
- d. protecting and enhancing the growth of selected crop trees
- e. roadside accumulations of harvest residues
- f. bent or broken trees
- g. deep rutting
- h. unnatural, geometric harvest edges where they are visible
- i. retaining large diameter trees, snags and downed logs
- j. protecting special habitat features, such as vernal pools, obvious nest trees for raptors, and deer wintering areas
- k. percentage of properties and percentage of acres with management plans developed through Maine's Forest Stewardship Program

2. Audit Team

The lead auditor was Charles A. Levesque of *The Plum Line* partner firm, Innovative Natural Resource Solutions, LLC, based in Antrim, NH. The other member of the audit team was Dr. David Capen, wildlife biologist, of Grand Isle, Vermont and a faculty member at the University of Vermont, Burlington. Dr. H. William Rockwell, Jr., of *The Plum Line* partner firm Strategic Resource Systems, served the role of document reviewer/audit manager and was not on-site. Dr. Rockwell also served as the appeal body for the audit. The biographical information for these individuals can be found in **Appendix B**.

3. SWOAM Stewardship Family

Since SWOAM Group Administrator Mandy Farrar was hired in May, 2003 to both develop the SWOAM Stewardship Family processes as well as implement them, the Group has been organized to include 37 individual members owning over 18,000 acres (at the time of the audit). This group contains a wide-ranging group of owners from nearly all regions of the state (12 of Maine's 16 counties are represented). During the audit, the audit team was told that many other landowners have showed interest in becoming part of the SWOAM Group. SWOAM has plans to grow the Group.

The following list provides some information about the group of landowners who comprised the group at the time of the audit:

	Acres	County	Existing Tree Farmer
Landowner 1	123	Hancock	N
		Oxford, Cumberland,	
Landowner 2	928	Franklin, Kennebec	Y
Landowner 3	211	Washington	N
Landowner 4	1600	York	Y
Landowner 5	64	Penobscot	N
Landowner 6	150	Penobscot	Y
Landowner 7	1037	York	Y
Landowner 8	175	Cumberland	Y
Landowner 9	230	Sagadahoc	N
Landowner 10	176	Kennebec	Y
Landowner 11	40	Kennebec	N
Landowner 12	1400	Cumberland	Y
Landowner 13	235	Cumberland	N
Landowner 14	200	Somerset	N
Landowner 15	380	Franklin	N
Landowner 16	350	Oxford	N
Landowner 17	200	Cumberland	Y
Landowner 18	890	Pisataquis	Y
Landowner 19	84	Waldo	Y
Landowner 20	94	Somerset, Cumberland	N
Landowner 21	85	Penobscot	N
Landowner 22	530	Somerset, Cumberland	N
Landowner 23	110	Cumberland	N
Landowner 24	171	York	Y
Landowner 25	138	Piscataquis	Y
Landowner 26	400	Cumberland	N
Landowner 27	55	York	N
Landowner 28	451	York, Cumberland	Y
Landowner 29	700	Washington	Y
Landowner 30	160	Hancock	Y
Landowner 31	127	Penobscot	Y
Landowner 32	548	Penobscot	Y
Landowner 33	997	Penobscot	Y
Landowner 34	97	Pisataquis	N
Landowner 35	1690	Penobscot	Y
Landowner 36	55	Penobscot	Y
Landowner 37	3503	Throughout state	Y
TOTAL Acreage	18384		

The SWOAM Group process includes an adopted set of Policies and Procedures, an application process and a formal internal monitoring or auditing process among other policies and procedures.

4. Audit Procedures

4.1 Preliminary meeting

A preliminary meeting (pre-certification meeting) between the Group and the lead auditor, was held at the Group headquarters in Augusta, Maine, on September 25, 2003. The procedures of the Group were reviewed at that time, and the general substance of the audit plan was discussed and agreed to. In addition, evidence of conformance provided to TPL in advance of the meeting by the Group was discussed relative to Standard conformance. A sample field audit was conducted for one member of the SWOAM Group. The adding of additional indicators requested by the Department of Conservation was also discussed.

As a result of that meeting, review, and agreement, it was determined that the Group was ready to undergo a full certification audit as outlined in the audit plan, subject to items outlined in a determination of readiness letter. .

4.2 Other meetings

In addition to the formal preliminary meeting, an opening meeting was held at the beginning of the field audit at 5:30 AM on October 29 to review the plans for the audit, the field sample and outstanding documentation issues. Short informal end-of-the-day meetings were held at the end of the field audit days on October 29 and 30 to review the findings from the day's audit and plan for the next day's activities. A formal closing meeting was held at 10:15 AM on October 31 to review the findings from the audit and to discuss a timeline for addressing non-conformances and report drafting.

4.3 Field sample

Group certification is based on the principle that it is not necessary to visit every Group member to determine that efficacy of the Group's procedure, and that a sampling process can suffice. The selection of the field sites, however, is key to the outcome of the audit.

TPL believes that efficient sampling uses prior knowledge of management systems and risk factors in forestry to pick observations that can reveal the reliability of forest management. Experience has shown that:

1. Observing many practices at one site is efficient and reveals management system interrelations.
2. Some environments are inherently more risky than others – e.g., near water.
3. Sampled sites should provide a reasonable sampling of the population of practices.
4. The variation of staff performance is proportional to the independence of staff and their distance from a home office (in the case of the SWOAM Group, independent managers of distinct ownerships).
5. Travel costs between potential observation sites are usually high.
6. Auditees are more familiar with travel times than are auditors.
7. Auditees are naturally motivated to reveal conformance but not non-conformance.

8. Given enough time between sample selection and actual observation, auditees can improve the condition of sites, records, and staff knowledge.

TPL, therefore uses the following sampling strategy principles to accomplish this result:

1. A preference for sites with multiple treatments.
2. A preference for sites with known risk factors – e.g., water.
3. Gathering data about sites, practices, organization, and staff before site selection.
4. Stratification of observations by administrative unit and individual staff member.
5. Selection of sites along efficient travel routes.
6. Reliance on the auditee to help determine the efficiency of audit routes.
7. Maintaining auditor authority to select sites and to alter the selection of sites.
8. Announcing site selections only shortly before observations are made.

Based on the principles and criteria above, from the population of 37 SWOAM Group members (some with multiple forest tract ownerships), *TPL* selected 16 potential forest tract sample sites representing 15 individual SWOAM Group members. During the audit, one additional site was added to the original list of 16 and 2 sites with redundant qualities were dropped to save time.

The initial group of 16 sites was provided to SWOAM one-week in advance of the audit in order to properly notify landowners, obtain their permission to access their properties and to notify the managing forester involved in order to include both the landowner and the forester on site during the audit. While this forester/landowner combination occurred on the majority of the field sites, several audit site visits included only the landowner or the forester, and in one case, neither. SWOAM Group Administrator Mandy Farrar, who has knowledge of all Group member properties, was present at each site visit.

4.4 Field audit

The field audit took place from dawn until dusk on October 29 and 30, 2003. Each field day began with a brief opening meeting to confirm the day's schedule, responsibilities, and arrangements; to procure any additional needed documents; and to answer preliminary questions. Each day concluded with a brief closing meeting to review the day's findings, to confirm plans for the evening, and to confirm plans for the next day.

On the first day of the audit, Wednesday, October 29, once the opening meeting was concluded, the team visited 7 Group members with multiple field sites (in northern/central Maine). On the second field day, Thursday, October 30, the team visited 6 Group members with multiple field sites (in southern Maine).

4.5 Audit Report:

A draft audit report was circulated to the audit team for comment on November 20, 2003. The draft was then be submitted to Mandy Farrar for review of matters of fact by SWOAM.

5. Audit Findings – Maine Dept. of Conservation Criteria

5.1 Indicators that are explicitly part of the Tree Farm Standard

5.1.1 minimizing soil disturbance – Recent harvests or road-building occurred on approximately one-third of the field sites visited. On these sites the audit team observed short skid distances, small landings and streamside buffers that routinely exceeded that required by state and local ordinance. Excessive soil disturbance was not observed.

5.1.2 soil erosion – For all the sites audited, very little soil erosion was observed. On one site where a minor non-conformance was observed, recent rains had resulted in some soil movement from an access road into a wetlands which drained into a pond. Given the small size of most properties, roads were kept to a minimum of distances and skids were also short. Most of the properties observed had very little relief which would normally encourage erosion. In one instance, where there was substantial relief, some exemplary road construction was observed.

5.1.3 effectively utilizing best management practices for protection of water quality – three instances where implementation of Best Management Practices for water quality protection were lacking resulted in minor non-conformances.

5.1.4 preventing sedimentation or other disturbance of water bodies – One of the three instances described above where a lack of BMPs was observed resulted in a small amount of sedimentation entering a water body (wetlands draining into a pond).

5.1.5 protecting regeneration of desirable species – Regeneration was adequate (according to the Tree Farm Standard, Maine’s Forest Practices Act and owners’ objectives) on all sites observed during the audit.

5.1.6 other visual impacts of timber harvesting – On only one site visited during the audit was an issue of potential visual quality discussed and observed. A visible landing area immediately on a state highway was made more visible by recent highway right-of-way clearing, further exposing the area. Also, small wetland pockets and a prescribed heavy thinning further made this one site a visual challenge. Given the circumstances, the audit team determined that all action that could be taken to protect visual quality had been taken on the site. No other visual quality issues were observed during the audit; in fact, the properties visited were uncharacteristically tidy when compared to most forest harvesting operations previously observed by audit team members.

5.1.7 protecting rare plant and animal habitats including S1 and S2 plants, rare or exemplary natural communities and the habitats of threatened and

endangered animals – A major non-conformance was issued to SWOAM regarding the issue of special sites (historical, biological, archaeological, cultural, and geological as described in the Tree Farm Standard). Regarding rare plants and animals, rare or exemplary natural communities and threatened and endangered animals, a majority of the individual group members in the audit sample lacked knowledge of these plants, animals and communities and, consequently, management prescriptions to properly manage for these resources was lacking. Outside of a few instances where this information was clearly in the possession of the landowner forester, it is not known whether the land of the members of the SWOAM group in the audit sample, in fact, contain those resources.

5.1.8 implementing the recommendations of a forest management plan & 5.1.9 conducted under the direct supervision of a Licensed Forester – Of the 15 group members included in the audit, only one landowner did not use the services of a licensed forester although the management plan for this landowner was written by a licensed forester. All members in the sample had written management plans developed by a licensed forester.

5.1.10 conducted by loggers who have received training and certification from the Certified Logging Professional program (CLP) or an equivalent training system – Of the SWOAM Group members in the audit sample, one logger (who was also the landowner) had not been trained through CLP. A second logger had been through the training but had chosen not to be certified.

5.2 Indicators that are not explicitly in the Tree Farm Standard

5.2.1 excessive removal of organic matter - As with observations described above in 5.1.1, and 5.1.2. soil erosion and movement was minimal in the sites observed during the audit. On the recent logging operations in the audit sample, organic and mineral soil was not observed to have moved nor was “excessive removal” of organic matter observed.

5.2.2 exposure of mineral soil – Mineral soil was exposed on several SWOAM group member ownerships where new road building had occurred. In a few cases where recent logging operations had occurred, small areas where organic matter was thin and bedrock shallow, observations of mineral soil occurred where skid trails traveled.

5.2.3 minimizing damage to residual stands – Outside of trees used intentionally as bumper trees during skidding operations (observed on all sites where logging operations had recently taken place and a few where operations had occurred some years ago), very little residual stand damage was observed during the audit. Operators and foresters appeared to take residual stand damage seriously and used skid-trail layout to minimize damage.

5.2.4 protecting and enhancing the growth of selected crop trees – In concert with the observations described in 5.2.3 above, skid trail layout and harvest area layout was observed to protect remaining trees in the stands viewed. Thinning operations clearly intended to provide crown expansion space for those trees chosen to be future crop trees.

5.2.5 roadside accumulations of harvest residues – Only one harvest site observed during the audit included a roadside landing area. This site, on a recent harvest operation that had been closed out, contained no debris or residues except for small woody material approximately 0-4 inches in diameter laying flat on the landing soil. No piles of woody material were observed on any landing seen.

5.2.6 bent or broken trees – Of the sites visited during the audit, only one, a heavy thinning (mostly from below in the canopy) in a predominantly white pine stand that was overstocked prior to harvesting, showed any bent or broken trees resulting from tree felling. Considering the amount of volume removed, the damage was minor.

5.2.7 deep rutting - Deep rutting (defined for the purposes of this indicator as over 6 inches deep for skidder rutting) was not observed on any of the audit sites.

5.2.8 unnatural, geometric harvest edges where they are visible – Only one recent harvest (in the past 3 years) was observed where the harvest was heavy enough for harvest edges to be readily observable. No geometric (straight) edges were observed.

5.2.9 retaining large diameter trees, snags and downed logs – Snags and downed logs were observed in nearly every stand visited during the audit. Large diameter trees (i.e. tree over 24" in diameter) were observed on several properties during the audit.

5.2.10 protecting special habitat features, such as vernal pools, obvious nest trees for raptors, and deer wintering areas – Mixed conformance was observed relative to this additional indicator. Some landowners had special habitat features such as vernal pools identified, mapped and managed accordingly while others had not identified such features. Deer wintering areas were often noted by managers and landowners in the field but few of these were mapped in management plans. Raptor nest zones were noted by two landowners/forest managers. Other landowners added additional voluntary buffers when harvesting near trout streams.

5.2.11 percentage of properties and percentage of acres with management plans developed through Maine's Forest Stewardship Program - 30 of the 37 management plans in the SWOAM Group population are Maine-approved Forest Stewardship plans. This represents 14,258 of the 18,384 acres in the SWOAM Group population.

Special note on Maine Stewardship Plans: The Maine Forest Stewardship Plan does not meet all the requirements of the Tree Farm Forest Management Plan as required in the Tree Farm Standard.

6. Conclusion - As part of a third-party audit of the SWOAM Stewardship Family under the Tree Farm Group Certification process, additional indicators were added to the audit process at the request of the Maine Department of Conservation. Of those indicators audited, substantial conformance was found for most. Non-conformance was found on others. These non-conformances are outlined in general in this report and some are more fully described (those pertaining to the Tree Farm Standard) in the full audit report to SWOAM. A substantial finding was that the Maine Stewardship Forest Management plan was found to not be sufficient to address the requirements of the Tree Farm Standard relative to management plans.

Appendix A

Standards of Sustainability For Forest Certification

Including Performance Measures and Field Indicators

Adopted December, 2002
(To Be Implemented 2004)

Standards of Sustainability for Forest Certification On Private Lands

Standard 1: Ensuring Sustainable Forests

The American Forest Foundation's (AFF) Standards of Sustainability promote the growing of renewable forest resources on private lands while protecting environmental benefits and increasing public understanding of all benefits of productive forestry.

Performance Measure 1.1

Qualified forest owners must comply with AFF's Standards of Sustainability. American Tree Farm System (ATFS)'s volunteer network of accredited, qualified natural resource managers will conduct field verification of landowner conformance.

Indicators 1.1.1

An accredited Tree Farm Inspector must inspect qualified properties to assure conformance with AFF's standards of sustainability.

Indicator 1.1.2

Tree Farm inspectors will audit certified properties every five years. Properties that fail to meet AFF's standards and guidelines will be decertified. [Landowners may seek review of decertification decisions through ATFS's formal dispute resolution process.]

Standard 2: Compliance With Laws

Forest management complies with all relevant federal, state and local regulations and ordinances.

Performance Measure 2.1

Forest owners must comply with all relevant federal, state, county, and municipal laws and regulations.

Indicator 2.1.1

Landowner affirms that he/she complies with all relevant laws and regulations, and that he/she will correct conditions that led to adverse regulatory actions, if any.

Indicator 2.1.2

Landowner obtains advice from forestry consultants, public agency natural resource managers, or contractors who are trained in, and familiar with, applicable laws, regulations and published Best Management Practices for forestry.

Standard 3: Commitment to Practicing Sustainable Forestry

Forest owners demonstrate their commitment to sustainability by developing and implementing a long-term forest management plan.

Performance Measure 3.1

Forest owners must have a written forest management plan consistent with the scale of forestry operations of the property.

Indicator 3.1.1

Management plans include: title page; type of ownership (e.g., fee simple, limited partnership, etc.); owners goals appropriate to the management objectives; tract map noting stands and conditions, important features including special sites, and management recommendations that address wood and fiber production, wildlife habitat, owner-designated fish, wildlife and plant species if desired, environmental quality, and, if present and desired by the landowner, recreational opportunities.

Indicator 3.1.2

Management plan is active, adaptive, and embodies the owners' current objectives, remains appropriate for the land certified, and reflects the current state of knowledge about forestry and natural resource management.

Performance Measure 3.2

Forest owners assure management activities are conducted in accordance with the management plan.

Indicator 3.2.1

On-site visit, interviews, and records confirm management activities are being conducted in accordance with the plan.

Standard 4: Reforestation

Forest owners provide timely restocking of desirable species of trees, compatible with regional ecosystems on harvested areas and idle areas where tree-growing is the land use objective.

Performance Measure 4.1

Land must be reforested with natural seeding, sprouting, direct seeding, or reforestation with tree seedlings.

Indicator 4.1.1

Harvested forest land must achieve satisfactory stocking levels reflecting the forest owner's management objectives, within five years after harvest, or within a time interval as specified by applicable regulation, whichever is shorter.

Standard 5: Air, Water and Soil Protection

Forestry practices maintain or enhance the environment, including air, water, soil, and site quality.

Performance Measure 5.1

Forest owners must adhere to State Forestry Best Management Practices (BMPs) and comply with all relevant forest practices act(s) and ordinances.

Indicator 5.1.1:

Landowner affirms that he/she complies with all relevant laws and regulations, and that he/she will remedy or has remedied any conditions that led to adverse regulatory actions, if any.

Indicator 5.1.2:

Landowner must minimize disturbances within riparian zones.

Indicator 5.1.3

On-site visit confirms that landowner is conducting management activities in accordance with BMPs and all relevant forest practices act[s] and ordinances.

Performance Measure 5.2

Application of forest chemicals must not exceed the levels necessary to achieve specific management objectives.

Indicator 5.2.1

Chemicals are applied only when necessary to meet specific management objectives.

Indicator 5.2.2

Management plans consider integrated pest management as a preferred means of controlling insect pests, pathogens, and vegetative competition.

Indicator 5.2.3

Chemicals are applied in accordance with EPA-approved labels and meet or exceed all human health and environmental safety requirements on the label, and in local, state, and federal law.

Performance Measure 5.3

Where prescribed fire is used, the forest owner must plan appropriately for its application.

Indicator 5.3.1

Landowner affirms that if and when prescribed fire is used, it is conducted in accordance with the owner's management plan and with state and local laws and regulations.

Indicator 5.3.2

On-site visit confirms prescribed fires, if used, were conducted in accordance with the management plan and applicable laws and regulations.

Standard 6: Fish, Wildlife and Biodiversity

Forest management activities contribute to the conservation of biodiversity and maintain or enhance habitat for native fish, wildlife, and plant species, with emphasis on natural plant and animal communities and rare plants and animals.

Performance Measure 6.1

Landowners are encouraged to confer with their local natural resource agencies, state natural resource heritage programs, or other knowledgeable sources about rare species or species of concern that occur on their property.

Indicator 6.1.1

Where practical, management plans consider and address opportunities to protect rare species and special habitat features.

Performance Measure 6.2

Forest management activities must maintain or enhance habitat for owner's designated fish, wildlife, and plant species as identified in the management plan

Indicator 6.2.1

Forest management activities must maintain or improve habitat for owner's target game and non-game fish and wildlife species.

Standard 7: Forest Aesthetics

Forest management practices minimize negative visual impacts of forest activities.

Performance Measure 7.1

Landowners must manage their forest with concern for visual impacts, in a manner consistent with size and scale of their forestry operations.

Indicator 7.1.1

On tracts of significant visual exposure, management plans and forest operations may include: roadside buffers, access entry "dog-legs," limited harvests in certain areas, and adaptation of other visual management techniques.

Standard 8: Protect Special Sites

Special sites are managed in a way that recognizes their unique characteristics.

Performance Measure 8.1

Forest management practices must recognize historical, biological, archaeological, cultural, and geological sites of special interest.

Indicator 8.1.1

Management plan and forest operations identify and manage for special sites in a manner consistent with forest owner's objectives, the unique features of the site, and the size and scale of the property.

Standard 9: Wood Fiber Harvest and Other Operations

Wood fiber harvests and other forest operations are conducted in accordance with the management plan and with sensitivity to other forest values (e.g., water quality, regeneration, wildlife habitat, biodiversity, special sites, etc.).

Performance Measure 9.1

Landowners must comply with the management plan described in Standard Three (3).

Performance Measure 9.2

Landowners must adhere to all national, state, and local laws and regulations applicable to forest management when conducting forest operations.

Indicator 9.2.1

In selecting contractors, landowners seek loggers, foresters, and other forest management contractors who have completed recommended training and education programs offered in their respective states.

Indicator 9.2.2

Loggers and contractors conducting wood fiber harvests and other forest management operations carry required Workers Compensation and general liability insurance.

Appendix B

Charles A. Levesque

Education:

Leadership New Hampshire Associate
N.H. Town Moderator training
Institute for Participatory Management & Planning training
B.S.F. 1979 University of N.H., Forest Resources, Magna Cum Laude

Profile:

Mr. Levesque is the founder and President of Innovative Natural Resource Solutions LLC, a northeastern U.S. based natural resource policy consulting firm, and a principal in The Plum Line partnership.

Mr. Levesque has 20 years of forest and forestry-based consulting, non-profit, business and governmental experience in field forestry, association management, lobbying, public policy, planning and land protection. He has worked in the field for (then) Brown Company in Maine, New Hampshire and Vermont; for the USDA Forest Service in Montana; as Executive Director of the NH Timberland Owners Association, Trust for New Hampshire Lands and Northern Forest Lands Council.

Mr. Levesque founded Innovative Natural Resource Solutions in 1994 with the philosophy that human use and protection of natural resources are compatible and that strong economic growth need not be sacrificed for the sake of environmental quality. He has served numerous clients with INRS from the private, non-profit and government sectors. A small sampling includes the Maine Forest Service, Mead Corp., Statewide Program of Action to Conserve our Environment, The Trust for Public Land, Maine Forest Biodiversity Project, Northeastern Forest Alliance (state foresters from New York, Vermont, New Hampshire and Maine), Champion International, Hancock Timber Resource Group and many others. In 1998 his firm conducted a Verification of Champion International's Maine operations' conformance to the SFI Program Standard. He is intimately familiar with the SFI Standard, having worked for SFI Program state implementation committees in New York, Vermont, New Hampshire and Maine. He has also been the audit manager for six sustainable forest management system audits since 1999.

Mr. Levesque is a Fellow of the Society of American Foresters and a former member of its national governing Council. He serves on numerous natural resource and civic related boards and committees. He has received numerous awards and was elected Town Moderator in Deering, New Hampshire for 5 years.

H. William Rockwell, Jr.

Education:

BS, Natural Resources, The University of Michigan
Master of Forestry, The University of Michigan
Master of Business Administration, The University of Michigan
MA, Economics, Michigan State University
PhD, Agricultural Economics, Michigan State University

Profile:

Dr. Rockwell is a sustainable forest management system consultant, President of Strategic Resource Systems, and a principal in The Plum Line Partnership.

Dr. Rockwell has more than 20 years of broad-based consulting, governmental, academic, and association experience in forest resource administration, economics, management, planning, and policy. He has been trained as an ISO 14000 lead auditor, in the Canadian Standard Association's Sustainable Forest Management System standards (Z808 and 809), in the AF&PA standards, and in general audit protocols and procedures. He is a Certified Forester and a RAB-certified Provisional Environmental Auditor. He has been the Audit Team leader for six sustainable forest management system audits since 1999.

Previously, Dr. Rockwell led the Michigan DNR Forest Management Division efforts to develop an environmental management system for a million-acre state forest through the combined consideration of the requirements of ISO 14001, the Canadian Standard Association's Sustainable Forest Management System standards, the American Pulp & Paper Association's Sustainable Forestry Initiative, SmartWood's Forest Stewardship Council certification program, and The Nature Conservancy's Eco-Regional, Statewide, and Landscape Conservation Planning efforts. He has also been active in the Great Lakes Forest Alliance's project to develop a comprehensive set of sustainable forest management criteria and indicators in the Lake States region. Before joining The Plum Line, he had served American Can*, Boise Cascade, the USDI Bureau of Indian Affairs*, the Legislative Commission on Minnesota Resources*, the Michigan Department of Natural Resources, the Pacific Northwest Regional Commission*, and the Society of American Foresters, among others (* = as an employee or subcontractor of George Banzhaf & Company, Milwaukee, Wisconsin).

Dr. Rockwell is a Fellow of the Society of American Foresters and a former member of its national governing Council. He has served as its Director of Resource Policy, and edited its task force report on Biological Diversity in Forested Systems. He has served in many other volunteer roles in SAF, and was named Michigan Forester of the Year in 1996. He belongs to the Association of Consulting Foresters and National Association of Environmental Professionals, among other forestry, environmental, and economics organizations. He has served as Chair of the Upper Great Lakes Biodiversity Coordinating Committee, as President of the Northeastern Forest Resource Planners Association, on the Michigan's Relative Risk Assessment Project agency committee, and on the Keystone National Dialogue on Biological Diversity on Federal Lands.

David E. Capen

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EDUCATION

University of Tennessee, B.S.F., 1969 (Forestry)
University of Maine, M.S., 1972 (Wildlife Management)
Utah State University, Ph.D., 1977 (Wildlife Science)

PROFESSIONAL EMPLOYMENT

2002-Present: Research Professor, School of Natural Resources, University of Vermont
1999-2002: Professor, School of Natural Resources, University of Vermont
1999-2000: Visiting Scientist, National Parks and Wildlife Service, New South Wales, Australia
1982-1998: Associate Professor, School of Natural Resources, University of Vermont
1993: Visiting Faculty Member, Department of Fisheries and Wildlife, Utah State University (sabbatical leave)
1976-1981: Assistant Professor, School of Natural Resources, University of Vermont

EDITORIAL APPOINTMENTS

1987-1989: Editor, Wildlife Society Bulletin
1986-1987: Associate Editor, Wildlife Society Bulletin
1994-1999: Editorial Panel, Wildlife Society Bulletin

PROFESSIONAL SOCIETIES

The Wildlife Society	Wilson Ornithological Society
Society of American Foresters	Cooper Ornithological Society
Ecological Society of America	Colonial Waterbird Group
American Ornithologists Union	Society of Field Ornithology
Society of Conservation Biology	American Society for
Photogrammetry	and Remote Sensing

PROFESSIONAL EXPERTISE

Wildlife Habitat Analysis Avian Ecology Landscape Ecology Biodiversity Analysis
GIS and Remote Sensing Multivariate Statistics Conservation Planning and Reserve Design

PROFESSIONAL CERTIFICATIONS

Certified Wildlife Biologist (The Wildlife Society)
Certified Forester (Society of American Foresters)

FOREST CERTIFICATION CONSULTING

SFI Forest Certification, Audit Team, Finch-Pryne Co., NY, for The Plum Line
SFI Forest Certification, Audit Team, Seven Islands Land Co., Maine, for The Plum Line

FSC Forest Certification, Peer reviewer, Maine Bureau of Public Lands, for
Scientific Certification Systems (SCS)
FSC Forest Certification, Peer reviewer, Yale-Meyers Forest, Conn., for SCS
FSC Forest Certification, Audit Team, Massachusetts EOE, for SCS
SFI Forest Certification, Audit Team, Harden Furniture, NY, for NSF