

2021 Report to the 130th Legislature's
Joint Standing Committee on Agriculture,
Conservation and Forestry
on
Outcome Based Forestry
Submitted pursuant to 12 M.R.S. §8869(§3-B)

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Introduction

In 2001, the 120th Legislature adopted the Outcome Based Forestry (OBF) statute in response to the forest policy debates of the 1990s and aspects of the 1989 Forest Practices Act (FPA). While the FPA was intended to curtail the creation of large, rolling clear-cuts and assure regeneration, OBF addressed these issues utilizing a science-based, voluntary process to achieve agreed-upon economic, environmental, and social outcomes. The OBF statute had a sunset provision until 2012, when it was removed by the 126th Legislature. Until the sunset clause's removal, no OBF agreements had been implemented due to landowner uncertainty over the law's future. Thereafter, two landowners signed OBF agreements with the State (through the signature of the Director of the Bureau of Forestry, aka Maine Forest Service (MFS)). See Appendix B for a statutory summary.

The Governor has appointed a technical review panel (panel) as required by law to oversee OBF (Appendix C). The panel works with the MFS Director to implement, monitor, and assess OBF agreements. To participate in an OBF project, the landowner, Director, and panel must develop agreed-upon desired outcomes, establish a method for determining if the outcomes have been attained, and implement a system for reporting results to the public. The panel assesses whether the practices applied in areas subject to an OBF agreement provide at least the equivalent forest and environmental protection as provided by rules and regulations otherwise applicable to that area. The panel met virtually three times in 2021.

Unfortunately, the COVID pandemic curtailed the panel's ability to meet with landowners since early 2020. Nearly all recent meetings between the panel and participating landowners have been entirely virtual or hybrid. At times, individual panel members have met with participating landowners, usually as observers during certification audits. Virtual and hybrid meetings are likely the norm until the situation improves.

The statute clearly states that a participating landowner must manage their holdings in a way that provides a defined suite of public benefits in return for departing from specific requirements of the FPA.

This report documents the progress to date on OBF regarding agreements with the Bureau of Parks and Lands, Irving Woodlands, Katahdin Forest Management, and Seven Islands Land Company.

OBF Agreement Status:

Four agreements have been signed: the Bureau of Parks and Lands (BPL), Irving Woodlands (Irving), Katahdin Forest Management (KFM), and Seven Islands Land Company (SILC). All four agreements are of a landscape proportion covering the landowners' entire Maine ownerships of 600,000 acres (BPL), 1.25 million acres (Irving), 300,000 acres (Katahdin), and 768,000 acres (Seven Islands) for a total of just over 2.9 million acres.

The objectives agreed upon between the forest landowners, panel, and Bureau Director are part of the agreements and are found as an appendix to each agreement.¹

The panel has conducted several site visits on participating lands and reviewed landowner operations plans prior to their implementation. Harvest sites on Irving land were visited multiple times. Visits of a similar intensity took place during discussions with KFM and SILC. The panel plans two visits annually to each participating landowner, once in early winter to review the previous year's operations and planned operations for the coming year and once in late summer to review year-to-date progress.

Since 2013, panel field inspections have been augmented with systematic, regular reviews of harvest operations (pre-harvest, during harvest, and post-harvest) by Foresters of MFS's Forest Policy and Management Division. Field monitoring by MFS Foresters has continued throughout the pandemic, as it does not require close contact between individuals. Each landowner is monitored at least twelve times per year. A sample inspection sheet used by the District Foresters can be found in the appendix.

The Legislature's Joint Standing Committee on Agriculture, Conservation, and Forestry provides public oversight of the OBF program. Committee members have visited Irving Woodlands' operations on two occasions in the past. MFS and the panel look forward to arranging future visits by the committee to active OBF projects, should there be interest.

Examples of public benefits of OBF

- Ensures that the goals and outcomes of soil and water quality protection and biodiversity are met.
- Pre-harvest planning to address the aesthetic impacts of timber harvesting.
- Investment of \$37 million in the construction of an 80 million board feet per year spruce/fir sawmill in Nashville Plantation (Irving) that employs 60 people and provides a market for small-diameter balsam fir and spruces in northern Maine.²
- Increased negotiated payment rates to contractors and woods operators.
- Assurance of long-term planning for the sustainability of forest resources.
- Knowledge of harvest levels by species/products.
- Tracking of all types of harvests, including clear-cuts, for trends.
- Better implementation of science-based silvicultural practices, than what is allowed for within the Forest Practices Act, e.g., beech bark disease management and managing density of white pine stands for quality growth. Another example is in the FPA a prescriptive separation zone is required around clearcuts. OBF members

¹ Agreements and a great deal of supporting and background material are posted to the MFS website, https://www.maine.gov/dacf/mfs/policy_management/outcome_based_forestry.html.

² Such markets are important for managing balsam fir-dominated stands in anticipation of the impending spruce budworm outbreak. Irving has since expanded production and employment at the mill.

have the ability to manage based on site conditions, as opposed to leaving poor quality, or disease infested stems based on a law.

- Reduction of inspections by Forest Rangers, freeing up their time for other forest protection duties.

Examples of forest landowner benefits from OBF

- Application of optimal silvicultural practices to the land base.
- Reduced administrative time devoted to adhering to FPA numerical limits (e.g., 450 trees/acre of regeneration and 250-foot separation zones).
- Stability of the regulatory environment that encourages business development.
- Construction of an 80 million board foot spruce/fir sawmill in Nashville Plantation (Irving) that has improved utilization of smaller diameter balsam fir from Irving's and many adjacent landowners' properties.
- Reduced trucking, road building, and maintenance costs by applying scientific management to harvest areas.
- Increased investment in tree planting and thinning of young spruce/fir stands.

Panel evaluation of participant performance

The technical review panel reviews each participant's annual operating plans, both *a priori* and retrospectively and harvest operations (in progress and retrospectively); observes and analyzes the participants' independent, third-party certification audits; and considers the field monitoring reports by MFS Foresters.

Based on field observations and consideration of the various data and information obtained from multiple sources, the panel finds that the four participating landowners, Irving Woodlands, Katahdin Forest Management, Seven Islands Land Company, and the Bureau of Parks and Lands, have all attained compliance with the State's forest sustainability goals (Appendix A). The panel also notes that participants responded quickly to public inquiries, questions, or concerns.

All participating landowners have:

- Maintained their certification to one or more independent, third-party standards (Forest Stewardship Council (FSC) and/or Sustainable Forestry Initiative® (SFI) Standard). If a certification audit has revealed any observations or non-conformances, they have been minor and quickly corrected by the landowner. Panel members have had the opportunity to observe the landowners' certification audits and review certification audit reports.

Utilize Maine licensed foresters to prepare management plans. Foresters oversee all timber harvesting and other forest management operations.

- Policies and procedures that exceed State regulatory requirements regarding timber harvesting operations in riparian areas. All participating landowners effectively implement State Best Management Practices for protecting water quality.
- Policies and procedures are in place to address other forest resources and values, such as wildlife habitat and aesthetics.

Panel members can participate in any landowner advisory committee meetings. Panel members believe they have had ample opportunity to review certification audit reports and records, discuss practices and policies, and observe field operations. Their expectations and needs for explanations and answers to questions were satisfied. Field operations provided effective illustrative support for the panel's findings.

MFS monitoring evaluation of participant performance

MFS has assigned District Foresters from the Forest Policy and Management Division to periodically monitor participants' harvest operations to document conformance to the terms of the participants' agreements. (See Appendices D and E for examples of field monitoring forms.) On average, the foresters monitor one to two sites per landowner per month, with 62 sites visited in 2021. Some sites are visited before the harvest begins, others while the harvest is in progress or post-harvest. Some harvests are visited at various stages for purposes of continuity in monitoring. The Foresters report that the participants nearly always operate in conformance with policies that exceed the minimum regulatory requirements, particularly with respect to the protection of water quality.

The Foresters generally have found no significant issues during their visits; however, they have discovered a few departures from expected norms (described in part in the next section) and taken immediate steps to secure better performance.

Issues identified during 2019 and 2020

Water quality

During 2019, MFS responded to several complaints statewide of sediment flows from forest management roads into water bodies. Two of these complaints originated from harvests by two different OBF landowners. The investigation of those complaints resulted in enforcement action on one landowner). The other complaint was the responsibility of another landowner conducting road maintenance operations on a participant's land. This issue was resolved through intervention and corrective action. MFS field monitoring revealed some minor issues, which were promptly resolved on-site.

The water quality complaints beyond the norm across all ownerships (not just OBF landowners) appear to be the result of a combination of factors: a new generation of grader operators (several of the reported were due to improper grading); frequent heavy rainstorms overwhelming the capacity of ditches and other water management

structures; re-opening of old roads; legacy roads³; and higher awareness of outside parties reporting water quality issues.

MFS and Maine's forest industry have collaborated to increase awareness of the general nature of the issues and methods to reduce and respond to such situations. The number of complaints has decreased sharply since late summer 2019. The SFI Standards Implementation Committee initiated a series of grader workshops and continues to work with MFS, the University of Maine, and others to develop an enhanced series of workshops targeted at Best Management Practices (BMPs) to protect water quality, several of which were held in 2020 and 2021.

The impacts of climate change, include but are not limited to high-intensity, short-duration rainstorms, shorter periods of frozen and/or dry ground, and attendant impacts on water quality. These impacts are real and affect all forest landowners, even those who do not actively manage their holdings. OBF participants are focused on continuous improvement, policy revisions, increasing the size of stream crossings, supporting research, and other efforts to adapt their management strategies to changing conditions.

Silvicultural plans

MFS field monitoring revealed shortcomings in one OBF landowner's harvest planning template and implementation of harvest plans. The plans lacked important details, such as pre-harvest conditions and explicit silvicultural goals. Field monitoring found instances of inadequate layout (e.g., riparian buffers were not flagged). While the landowner promptly updated their harvest plan template, MFS staff continued to identify harvest plan quality issues. They attempted to resolve these issues with the landowner's foresters as quickly as possible. The panel is aware of these issues and intends to address them.

Shoreland harvesting

During 2020 and 2021, MFS field staff identified several possible violations of shoreland harvesting rules on three participating ownerships. With one exception, these matters are either under investigation or are pending settlement.

One violation already resolved was self-reported by the landowner's forester, a minor exceedance of cleared opening restrictions near a pond. This violation was closed with a Letter of Warning.

The other violations involved more extensive harvesting in shoreland areas and required enforcement action because of their extent. These violations occurred for one or more of the following reasons: (1) misinterpretation of shoreland harvesting rules; (2) reliance on maps for harvest layout instead of verifying ground conditions; (3) harvester error; and/or (4) inadequate forester supervision.

The landowners involved have taken steps to understand how and why these violations occurred, made the necessary policy changes to minimize the risk of reoccurrence, and committed to additional staff training.

³ Legacy roads are roads constructed prior to the modern regulatory era.

Pesticide use

The public has frequently expressed concern regarding the use of pesticides for both agricultural and forestry activities. In the first session of the 129th Legislature, the introduction of a bill that proposed to ban the aerial application of herbicides was transformed into a study of aerial herbicide use in northern Maine. That study, conducted by an independent, third-party auditor, found that "The State of Maine regulatory framework, within which aerial application of herbicides in forest operations takes place, is functioning as designed. Further, within the context of forest landowners' silvicultural decisions and the decision to aerially apply herbicides to control (for a targeted period of time) but not eliminate vegetation that competes with forest stand establishment and early stand development, we observed a consistent and genuine effort on the part of forest managers and pesticide applicators/suppliers to minimize reliance on and use of herbicides, principally through thorough planning and integrated pest management."⁴

The first session of the 130th Legislature saw further legislative attention to this issue. A bill to ban aerial application of herbicides for forestry purposes was passed by the Legislature but vetoed by Governor Mills, and the Legislature sustained the veto. The Governor then issued an Executive Order (EO 41 FY 20/21) directing further agency review of the issue and the establishment of a water quality monitoring program. At the time of this report's publication, the final report responding to the Executive Order was completed, submitted to the Governor, and shared with the Legislature.

Over the years, the panel has focused some of its field time on reviewing the use of pesticides by participating landowners, particularly the use of herbicides to prepare sites for planting and control competition with desired tree regeneration. Two panel members have significant academic training and experience in pesticide use; three are licensed pesticide applicators. During field visits, the panel frequently asks participating landowners to explain the rationale and timing for applying herbicides. Discussions have been frank and constructive. The panel has not found any situation that deviates from the auditor's opinion quoted in the first paragraph.

MFS identified the need to ensure that certification auditors were made aware of situations that might not be reviewed during an audit. MFS anticipates amending existing agreements to require participants to notify certification auditors of the imperative to contact MFS as a stakeholder for information regarding field monitoring and regulatory issues.

The panel has reviewed the situations described above and reviewed them with the participants in some cases. The panel concurs with MFS's responses to these situations and will continue to pay close attention to the issues raised by them.

The landowners have all demonstrated a commitment to continuous improvement in their management. MFS and the panel support the landowners' responses to these situations.

⁴ Letter from Nancy McBrady, Director, Bureau of Agriculture, Food and Rural Resources to the Joint Standing Committee on Agriculture, Conservation and Forestry, 29 January 2020.

Concluding remarks

To accommodate the possibility of increased interest in OBF from the public and the legislature and to recognize the significant commitment that panel members make, the MFS Director has recommended additional panel members to provide the best possible balance of forestry knowledge. The regular, systematic reviews of harvest operations by Foresters of MFS's Forest Policy and Management Division have facilitated the panel's work. The ability of MFS and the panel to observe certification audits and review the auditors' detailed reports also improves our understanding of participating landowners' achievement of the full suite of sustainability goals.

Other states have shown interest in Maine's OBF policy, as it offers a path to follow where scientific forestry is preferred over restrictive and costly legislation. In Canada, British Columbia has had a "results-based forestry" regime in place on its Crown Forests for over a decade. New Brunswick recently adopted a "results-based forestry" strategy for its Crown Forests. Maine remains the only state in the U.S. to offer outcome-based forestry as an option for regulatory compliance.

MFS and the panel conclude that OBF is working well as a policy tool across the four participating landowners' holdings. The issues discovered over the past two years are being addressed appropriately. Participating landowners are fulfilling their responsibilities and demonstrating the value of practicing sound silviculture and protecting important public values, all under the regular oversight of MFS staff and the panel.

Appendix A. State Forest Sustainability Goals

1. Criterion 1: Soil productivity
 - a. Goal: Maintain site productivity.
 - b. Outcomes: Site productivity will be maintained or improved, and the area in roads and yards will be minimized.
2. Criterion 2: Water quality, wetlands, and riparian zones
 - a. Goal: Maintain or improve the chemical, physical, and biological integrity of aquatic systems in forested areas and riparian forests.
 - b. Outcomes: Forest management in shoreland areas protects water quality and aquatic and riparian forest biodiversity.
3. Criterion 3: Timber supply and quality
 - a. Goal: Improve the quantity and quality of future timber supply when appropriate.
 - b. Outcome: The management strategy and harvest levels for the lands will increase the quality and quantity of the forest resource as appropriate in the medium and long term (20 - 50 years).
4. Criterion 4: Aesthetic impacts of timber harvesting
 - a. Goal: Minimize adverse visual impacts of timber harvesting.
 - b. Outcomes:
 1. The landowner will minimize visual impacts of harvests, roads, landings, and other management activities.
 2. The landowner's planning staff are trained in and apply principles of visual quality management.
 3. The landowner identifies areas with high and moderate visual sensitivity and takes appropriate measures to avoid significant visual impacts whenever necessary.
5. Criterion 5: Biological diversity
 - a. Goal: Maintain biological diversity with healthy populations of native flora and fauna, forest communities, and ecosystems.
 - b. Outcomes:
 1. Management addresses the habitat needs of the full range of species present.
 2. Maintain or manage for acreage in the late successional (LS) condition through management and protection.
 3. Maintain a reasonable component of standing dead trees, live cull trees, and down logs across the landscape (not necessarily on every acre).
 4. High Conservation Value Forests are properly identified, and values are protected on the ownership.
 5. Rare, threatened, and endangered species habitats are properly identified, and the land is managed to protect the habitats and occurrences of rare, threatened, and endangered species.
 6. Important plant communities are properly identified, and the land is managed to protect important plant communities.

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7. Deer wintering areas are properly identified and managed to maintain or improve their value as winter cover for deer.
6. Criterion 6: Public accountability
 - a. Goal: Demonstrate sustainable forestry and build public confidence that forest management is protecting public values for the long-term.
 - b. Outcomes:
 1. The landowner will maintain independent 3rd party certification with a nationally recognized sustainable forest management certification system without major, unresolved non-conformances on managed lands.
 2. A Licensed Forester within the company will review and approve the landowner's Forest Management Plan.
 3. The landowner will employ Licensed Foresters who are actively involved in the management, planning, and supervision of operations on the land.
 4. All timber harvesting contractors will employ at least one person possessing Certified Logging Professional or Qualified Logging Professional certifications or the equivalent.
7. Criterion 7: Economic considerations
 - a. Goal: Optimize benefits to the local and regional economy while also achieving the goals specified for the other criteria to the extent allowed by market conditions.
 - b. Outcomes: The landowner's management activities support as vibrant and diverse a forest products industry as is practicable, including loggers, truckers, and production facilities.
8. Criterion 8: Social considerations
 - a. Goal: The landowner supports the communities surrounding their lands and operations, and except where special circumstances dictate otherwise, the landowner continues to provide historic and traditional recreational opportunities that do not conflict with the landowner's objectives or values.
 - b. Outcomes: The landowner provides opportunities for appropriate historic and traditional recreational uses that do not conflict with the landowner's values or objectives.
9. Criterion 9: Forest Health
 - a. Goal: The forest is healthy and vigorous, with no serious insect infestations or disease outbreaks.
 - b. Outcomes: The landowner does what is prudent and practicable to monitor for and prevent and control insects, disease, and fire, consistent with good practice in the industry, and assists MFS in forest health monitoring programs on the ownership.

Appendix B. Key statutory provisions of Outcome Based Forestry

12 M.R.S., §8003 (3)(Q)

Q. The director, in cooperation with public and private landowners, shall actively pursue creating areas on public and private land where the principles and applicability of outcome-based forest policy, as defined in section 8868, subsection 2-B, can be applied and tested. No more than 6 such areas may be designated. The director shall seek to designate areas of various sizes owned by different landowners. The designated areas must represent differing forest types and conditions and different geographic regions of the State. Prior to entering into an outcome-based forestry agreement, the director and the panel of technical experts under section 8869, subsection 3-A shall conduct a comprehensive review of the proposed outcome-based forestry agreement. The term of initial agreements may not exceed 5 years. The director may renew an agreement if requirements under this section and section 8869, subsection 3-A are met. The term of a subsequent agreement may not exceed 5 years.

12 M.R.S., §8868 (2-B)

2-B. Outcome-based forest policy. "Outcome-based forest policy" means a science-based, voluntary process to achieve agreed-upon economic, environmental and social outcomes in the State's forests, as an alternative to prescriptive regulation, demonstrating measurable progress towards achieving statewide sustainability goals and allowing landowners to use creativity and flexibility to achieve objectives, while providing for the conservation of public trust resources and the public values of forests.

12 M.R.S. §8869 (3-A)

3-A. Plans for outcome-based forestry areas. Practices applied on an area created pursuant to section 8003, subsection 3, paragraph Q must provide at least the equivalent forest and environmental protection as provided by existing rules and any applicable local regulations. At a minimum, tests of outcome-based forestry principles must address:

- A. Soil productivity;
- B. Water quality, wetlands and riparian zones;
- C. Timber supply and quality;
- D. Aesthetic impacts of timber harvesting;
- E. Biological diversity;
- F. Public accountability;
- G. Economic considerations;
- H. Social considerations; and
- I. Forest health.

The Governor shall appoint a panel of at least 6 technical experts to work with the director to implement, monitor and assess tests of outcome-based forestry principles. The panel of technical experts must have expertise in all of the principles listed in paragraphs A to I. In order to participate in an outcome-based forestry project, the landowner, director and technical panel must develop agreed-upon desired outcomes for the outcome-based forestry area and develop a method for determining if the outcomes have been attained and a system for reporting results to the public. The technical panel shall assess whether the practices applied on the outcome-

based forestry area provide at least the equivalent forest and environmental protection as provided by rules and regulations otherwise applicable to that outcome-based forestry area. The technical panel may not delegate this assessment to any other person, except that the technical panel may consider information provided by the bureau, the landowner or a 3rd-party forest certification program auditor.

12 M.R.S. §8869 (3-B)

3-B. Reporting and notification; outcome-based forestry projects. The director, in consultation with the technical panel under subsection 3-A, shall report to the joint standing committee of the Legislature having jurisdiction over forestry matters as follows.

A. Beginning March 1, 2015 and annually thereafter, the director shall submit a report detailing the progress on each outcome-based forestry agreement under section 8003, subsection 3, paragraph Q. The report must include an assessment of the landowner's progress toward attaining the outcomes under subsection 3-A. The report must be presented to the joint standing committee of the Legislature having jurisdiction over forestry matters at a public meeting no sooner than 30 days after submission of the report to the committee.

B. When an initial outcome-based forestry agreement is approved by the director as provided by section 8003, subsection 3, paragraph Q, the director shall notify the joint standing committee of the Legislature having jurisdiction over forestry matters within 15 days. In the notification, the director shall address how the proposed agreement will provide at least the equivalent forest and environmental protection as provided by rules and regulations that otherwise would apply to that outcome-based forestry area.

C. When an outcome-based forestry agreement under this section is renewed as provided by section 8003, subsection 3, paragraph Q, the director shall notify the joint standing committee of the Legislature having jurisdiction over forestry matters no later than 15 days after the agreement is renewed.

A report, notification or any information concerning outcome-based forestry projects under this subsection must be placed on the Department of Agriculture, Conservation and Forestry's publicly accessible website.

12 M.R.S. §8869 (7-A)

7-A. Exemption for outcome-based forestry areas. An outcome-based forestry area designated under section 8003, subsection 3, paragraph Q is exempt from the requirements of this section if specifically exempted in the agreement establishing the outcome-based forestry area.

12 M.R.S. §8869 (13)

13. Confidential information. Information provided to the bureau voluntarily or to fulfill reporting requirements for the purposes of establishing and monitoring outcome-based forestry areas, as created pursuant to section 8003, subsection 3, paragraph Q, is public unless the person to whom the information belongs or pertains requests that it be designated as confidential and the bureau has determined it contains proprietary information. For the purposes of this subsection, "proprietary information" means information that is a trade secret or production, commercial or financial information the disclosure of which would impair the competitive position of the person submitting the information and would make available information not otherwise publicly

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available. The bureau, working with the landowner and the panel of technical experts appointed under subsection 3-A, may publish reports as long as those reports do not reveal confidential information.

12 M.R.S. §8879 (1)

1. Content. The report must describe the condition of the State's forests based on historical information and information collected and analyzed by the bureau for the 5-year period. The report must provide an assessment at the state level of progress in achieving the standards developed pursuant to section 8876-A, including an assessment of designated outcome-based forestry projects authorized under section 8003, subsection 3, paragraph Q, including a recommendation to continue, change or discontinue the outcome-based forestry projects. The director shall also provide observations on differences in achieving standards by landowner class. The report must summarize importing and exporting of forest products for foreign and interstate activities. The director shall obtain public input during the preparation of the report through appropriate methods.

Appendix C. Biographies of OBF panel members

Kyle Burdick is the Vice President of the Baskahegan Company. He received his B.S. in Forest Management from the University of Maine and is a licensed forester and Certified Forester®. For the last ten years, he has managed lands in eastern Maine for industrial, conservation, and family woodland owners. Prior to that, he worked on industrial forest land in the Adirondacks. Kyle serves on the board of directors of Project SHARE, is the Chair of SAF, is a member of Maine Woodland Owners and the Forest Stewards Guild. He lives in Brookton.

Barry Burgason received a B.S. in wildlife management from Cornell University and a M.S. in wildlife management from the University of Maine. He is a Certified Wildlife Biologist and a member of The Wildlife Society. Barry has been involved with forestry/wildlife interactions since beginning his thesis on wildlife use of clear-cuts in the Moosehead region. He then worked as the assistant regional wildlife biologist for the Department of Inland Fisheries and Wildlife for 17 years. From 1995 to 2017, he was the wildlife biologist for Huber Resources Corporation. As part of Huber's management team, he participated in SFI and FSC certification audits. Barry has chaired the Maine Forest Products Council's wildlife committee and participated in a variety of forestry/wildlife panels and publications.

Mike Dann is a retired forester from Dixmont. He earned a B.S. in Forest Management from the University of Maine and is a licensed forester. He has 40 years of experience in natural resource management, 36 years with Seven Islands Land Company, and four years with Small Woodland Owners Association of Maine (SWOAM). He is a member of SWOAM, Maine Forest Products Council, Forest Resources Association, and the Society of American Foresters. He also is a Tree Farmer.

Keith Kanoti has over 20 years of experience working in various aspects of forestry, including forest management, policy, and education. He is currently the University Forest Manager at the University of Maine. He is responsible for managing all forestland of the University of Maine System and the University of Maine Foundation. He previously worked for the Maine Forest Service, overseeing the statewide forestry water quality program. Keith has a B.S. in Forestry from the University of New Hampshire and a M.S. in Forestry from the University of Maine. He is a licensed forester.

Maxwell McCormack Jr., Research Professor Emeritus of Forest Resources, University of Maine; B.S. (forestry) University of Maine; MF and DF (silvics) Duke University. Dr. McCormack is a Golden Member and Fellow Society of American Foresters; Distinguished Member, Northeastern Weed Science Society; and Honorary Life Member of the Maine and NH-VT Christmas Tree Associations. He is a recipient of the Humboldt Prize from the Alexander Von Humboldt Foundation, Germany. His 65-year forestry career has taken him to 28 U.S. States, 7 Canadian provinces, 8 European nations, New Zealand, and Australia. He is a licensed forester currently consulting from his residence in Orono.

Dave Struble retired as the Director of the Maine Forest Service's Forest Health and Monitoring Division and State Entomologist. His 45-year career with the MFS focused on monitoring and evaluating forest health and sustainability and developing pest management options for Maine's forest and shade tree owners. He served on several regional and national task forces and US Forest Service program oversight/management committees. Mr. Struble is a graduate of the University of Maine with a B.S. in Forestry and a M.S. in Entomology. He is a licensed forester.

Peter Triandafillou is from Orono and is the retired Vice President of Woodlands for Huber Resources Corp. He is a member of the Maine Forest Products Council board of directors and the Society of American Foresters. He is a licensed forester and has participated on numerous public boards, including Outcome Based Forestry, LURC reform, sustainable forestry, wood supply, and statewide water quality rules.

Appendix E. OBF Riparian Monitoring Form

Riparian Assessment

Sediment (number of locations)	
Sediment Volume (cu ft)	
Ruts (number >50% through buffer)	
Natural Woody Debris >4" (number)	
Woody Debris >4" from Harvest (number)	
Gouges in Bank from Harvest (number)	
Slash Volume in Channel (cu ft)	

Plot Data

	1	2	3	4
BA sq ft				
Crown Closure %				
Largest DBH				