

2023 Report to the 131st 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

The practice of forestry is a science. Laws that regulate forestry activities do not necessarily promote science-based forest management. The 120th Legislature enacted the Outcome Based Forestry (OBF) law to address aspects of the 1989 Forest Practices Act (FPA) that limited the wise use of scientific forestry in the best interests of the people of Maine and the private and public landowners (see appendices). While the FPA was intended to curtail the creation of large, rolling clear-cuts and assure regeneration, OBF addresses these issues and many others of public concern. The only law directly impacted by OBF is the FPA.

The 120th Legislature adopted the OBF statute in 2001 in response to the forest policy debates of the 1990s. The OBF statute had a sunset provision until 2012, when the 126th Legislature removed this provision. Until the sunset clause was removed, no OBF agreements were implemented due to landowner uncertainty over the law's future. In 2012, shortly after the sunset clause was removed, 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 Outcome Based Forestry program has a technical review panel (panel) as required by law to oversee it (Appendix C). The panel works with the MFS Director to implement, monitor, and assess OBF agreements. The statute requires a participating landowner to manage their holdings in a way that provides a defined suite of public benefits in return for departing from specific requirements of the FPA. 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 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 once virtually and four times in person in 2023. Panel members also attended in-person annual member certification meetings for two of the OBF landowner members. Scheduling conflicts prevented attendance at the other two members' meetings.

This report documents the progress on the four OBF agreements signed to date with the following participating landowners: the Bureau of Parks and Lands (BPL), Irving Woodlands (Irving), Katahdin Forest Management (KFM), and Seven Islands Land Company (SILC). The four agreements cover 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 Irving and BPL five-year agreement renewals were completed in 2023. The new agreements can be found on the Maine Forest Service website. 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

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.

The panel has conducted several site visits on participating lands and reviewed landowner operations plans before implementation. Maine Forest Service District Foresters also perform fifty-seven harvest inspections of members' harvest operations throughout the year, and at multiple locations. The panel plans two annual visits to each participating landowner, once in early winter to review the previous year's operations and the planned operations for the coming year and once in late summer to review year-to-date progress.

Meetings between the panel and participating landowners are still virtual, hybrid, or in-person, to allow for scheduling flexibility. During certification audits, individual panel members have often met with participating landowners, usually as observers only.

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. Each landowner is monitored at least twelve times per year, with the exception of BPL this year, which was visited ten times.

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 twice in the past. OBF landowner members have sent invitations to the ACF committee annually. 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

- Assurances 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
- 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 revolves around the FPA requirement of separation zones around clearcuts. OBF members can manage these areas based on site conditions, instead of leaving poor quality or disease/insect-infested stems based on a prescribed distance in a law.

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.

Examples of forest landowner benefits from OBF

- 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.
- Application of optimal silvicultural practices to the land base.

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 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.
- Management plans prepared by Maine licensed foresters. Foresters oversee all timber harvesting and other forest management operations.
- Policies and procedures in place 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 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 Appendixes D and E for examples of field monitoring forms. On average, the foresters monitor one to two sites per landowner per month, with 57 sites visited in 2023. Additional riparian zone inspections also occur. Some harvests are visited before the harvest begins, others while the harvest is in progress, and others post-harvest. Some harvests are visited at various stages for the purpose 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 have taken immediate steps to secure better performance. 2023 was certainly a challenging year for harvest operations, with an increase in the number of higher-volume rain events and higher-than-average temperatures.

Issues identified during 2023

Water quality

During the 2023 OBF harvest inspections, a few issues were found around stream crossings. Through their investigations, foresters found that a consistent issue revolved around the wet conditions and the need for additional BMP training for operators and members' field staff. The water quality issues were remediated and resolved through intervention. As a result of the identified need, the number of BMP training was increased by Maine Forest Service staff, members' staff, and other stakeholders.

Similar to the 2022 report, annual water quality complaints reported to the Maine Forest Service are not just specific to OBF landowners and can be applied across all types of land ownership. Further, they appear to be the result of a combination of continuing factors: workforce transitions, i.e., new operators, frequent and heavy rainstorms overwhelming the capacity of ditches and other water management structures; re-opening of old roads, higher than average winter temperatures and a 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 water quality issues and methods to reduce and respond to such situations. The number of complaints has decreased sharply since late summer 2019. The Sustainable Forestry Initiative(SFI), SFI Implementation Committee (SIC) initiated a series of grader workshops and continue to work with MFS, the University of Maine, and others to expand and enhance a series of workshops targeted at Best Management Practices to protect water quality, several of which were held 2023.

The impacts of climate change, including but not limited to high-intensity, short-duration rainstorms, shorter periods of frozen and/or dry ground, and attendant impacts on water quality, 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.

Concluding remarks

MFS and the panel conclude that OBF works well as a policy tool across the four participating landowners' holdings. Any issues discovered are being addressed appropriately. Participating landowners fulfill their responsibilities, demonstrate the value of practicing sound silviculture, and protect important public values, all under the regular oversight of MFS staff and the panel.

The MFS Director recognizes the benefit of having additional technical review panel members in the future. This is in recognition of the significant time commitment that the existing members devote to this work and to enhance the diversity of experience and expertise amongst panel members. The Director will continue to make recommendations for additional panel members as qualified candidates arise.

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

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 BS 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, and is a member of Maine Woodland Owners and the Forest Stewards Guild. He lives in Brookton.

Barry Burgason received a BS 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 BS 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 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. Before this, he 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) U Maine; MF and DF (silvics) Duke University. Dr. McCormack is a Golden Member and Fellow of the Society of American Foresters, a Distinguished Member of the Northeastern Weed Science Society, and an 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 in 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 BS 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				