

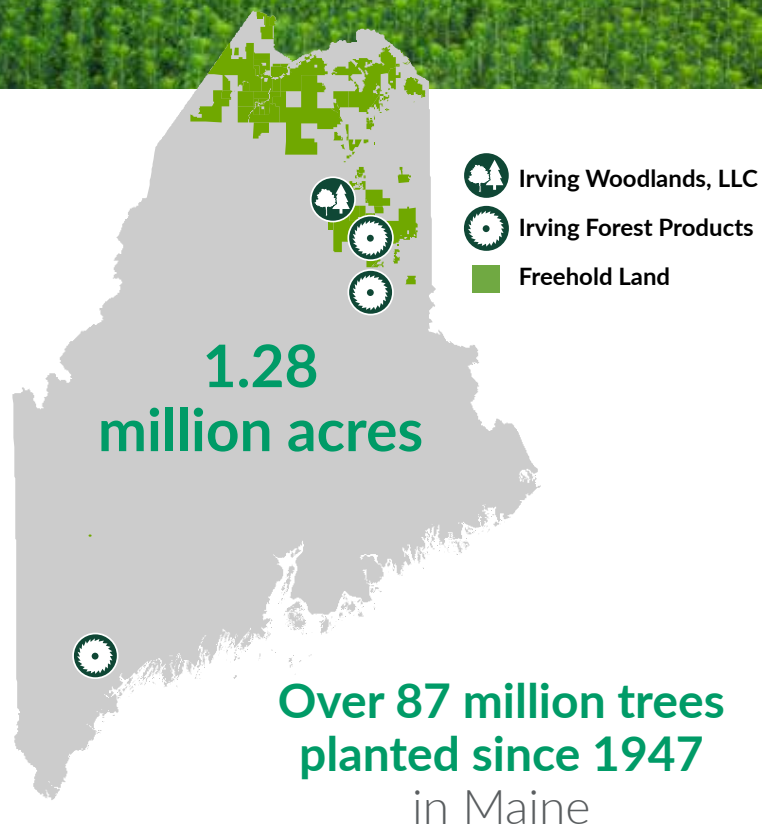
OUTCOME BASED FORESTRY IN MAINE

2024 Working Forest Report



IRVING WOODLANDS, LLC

IRVING WOODLANDS IN MAINE



THE WORKING FOREST IN MAINE AT A GLANCE: ECONOMIC IMPACT

*2023



Over 2,600 Jobs
(direct, indirect,
induced, and forestry
contractors)



\$62 Million
in total wages
(direct, indirect and induced
- including payments to
forestry contractors)



Providing a dependable
and sustainable
Wood Supply
to numerous customers
throughout the State of
Maine



\$76 Million
in Capital Investment
(2019-2024)



\$100 Million
in local Maine purchases





A WORKING FOREST WORKS FOR CONSERVATION

A healthy and productive forest works for us all

We know that a healthy and diverse forested land base is foundational to its productivity and long-term success. That's why we're committed to being good land stewards with our Conservation Program. Our team of foresters train annually to identify and conserve for a number of values, such as old forests, nesting sites, rare plants, deer wintering areas and important archeological areas.

RESEARCH PARTNERS

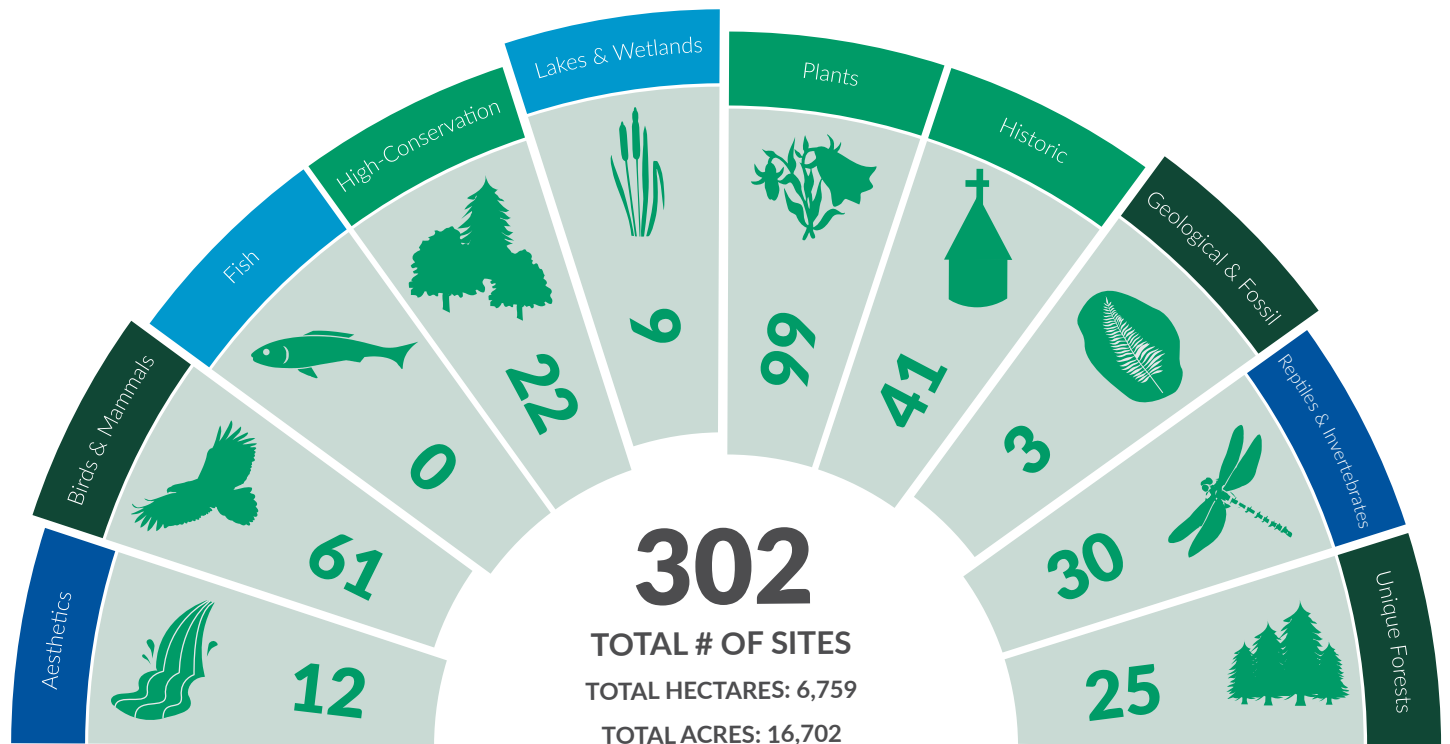
Our (voluntary) Forest Research Advisory Committee includes University of Maine scientist Dr. A. Weiskittel.

Dr. A. Weiskittel is the Irving Chair in Forest Ecosystem Management at University of Maine.

Dr. Neil Thompson is the Irving Chair in Applied Forest Management at University of Maine - Fort Kent.

Irving Woodlands, LLC has been a long-term and active member of the Cooperative Forestry Research Unit.





MAINE - 2024

Learn more about our conservation program at: www.jdirvingconservation.com

THE ROLE OF MAINE'S WORKING FORESTS ON REGIONAL AND NATIONAL BIRD CONSERVATION

A 30-year bird study in Maine, led by Dr. John Hagan and supported in part through the Corporate Forestry Research Unit at the University of Maine, describes bird abundance in the working forests of Maine.

STUDY STATISTICS:

- 1990s – Researchers investigated bird richness and abundance in a ~600,000-acre working forest in the Moosehead Lake Area.
- 2020s – Researchers repeated the study and compared the results.

RESULTS:

- 70 per cent of the species found saw increased abundance from 30 years ago, while 30 per cent saw no change or declined.
- These results are in stark contrast to previous studies, which reported substantial continental and/or regional declines.

PROJECT PARTNERS



Researchers concluded that the broad mixture of forest communities in Maine, including the working forest and conservation forest, serve as an important sanctuary for birds.



Black-throated Green Warbler, Maine



Purple Finch, Maine

RESEARCHERS:

John Hagan
Sage Levy
Kelsi Anderson
Peter McKinley
Michael Reed
John Gunn
Ben Shamgochian

SONGBIRD DIVERSITY IN THE WORKING FOREST

Dr. Lisa Venier and FRAC have concluded their five-year research project to model habitat for two species of conservation concern: the Olive-sided flycatcher and the Canada warbler.

STUDY STATISTICS:

- The Canada warbler and Olive-sided flycatcher are listed as species of Special Concern under the Committee on the Status of Endangered Wildlife in Canada.
- Acoustic recording units were placed in 17 different forest communities in Black Brook to record songbirds.
- Presence or absence of each species was used to determine their habitat use.

RESULTS:

- **The managed forest landscape of Black Brook provides important habitat for these two species.**
- **The two species had significant occupancy on intensively managed forest landscapes.**
- **No landscape-level environmental variables influenced species presence.**

A well-managed working forest allows for songbird species abundance and diversity.



Songbird Acoustic Monitoring Device, Black Brook Woodlands, New Brunswick

Our mapping system and acoustic monitoring devices in Black Brook give researchers the ongoing ability to understand the forest landscape and learn how birds use different forest communities.



Canada Warbler, Northern New Brunswick

PROJECT PARTNERS



WHITE-TAILED DEER STUDY

Philip Wiebe has been a biologist with Canadian Forest Services for over 15 years and studies the effects of forestry on forest-dwelling animals in Canada. He is currently a PhD student focusing on white-tailed deer at the University of New Brunswick. Philip seeks to understand the relationship between habitat quality and population growth through GPS technology.

STUDY STATISTICS:

- 100+ deer GPS collared in five years to assess population changes. Each collar creates up to 10,000 location points.
- The longest tracked migration was 110 kilometres between summer and winter habitat.

PREDICTIONS SO FAR:

- Summer food availability differs between treated and untreated areas, but deer do not prefer one type of area over another due to high overall food availability.
- Populations follow a growth curve which accelerates quickly and reduces when limited by food supply.
- The ideal deer habitat is 10 per cent winter habitat and 90 per cent summer habitat.

PROJECT PARTNERS



We maintain 126,310 HA
/ 312,119 AC of
mature softwood deer
wintering areas.



RESEARCHERS:

Dr. Graham Forbes

Joe Kennedy

Dr. Amber Roth

Nathan Bieber

John Gilbert

Elias Ayrey

Dr. Dave MacLean

Joe Nocera

Ian Thompson

Philip Wiebe



OUTCOME BASED FORESTRY OVERVIEW

WE ARE IN THE PROCESS OF CONDUCTING A REFRESH OF OUR MANAGEMENT PLAN UTILIZING THE LATEST STATE-OF-THE-ART PRECISION FORESTRY TECHNOLOGY.

This forest management plan aligns with the criteria and objectives outlined within the Maine Forest Service's (MFS) Outcome Based Forestry (OBF) law. We are confident that our new plan can be implemented to meet the desired outcomes of the OBF agreement that we entered into with the MFS. This agreement requires that our operations be implemented in a manner that is ecologically sustainable, economically viable and socially responsible.

Our OBF agreement obligates us to maintain independent third party certifications for our woodlands and relieves us from certain provisions of the Maine Forest Practices Act (FPA). Today, our woodlands are certified to meet the standards of the Forest Stewardship Council® (FSC® C041515) and the Sustainable Forestry Initiative® (SFI®) forest certification systems.

Final OBF assessment is determined by a governor-appointed panel of technical experts who report to the director of the MFS. The accompanying table provides a quick reference comparison between OBF and the Maine FPA and the benefits that have been achieved thus far. A summary of our forest management plan and our SFI® and FSC® certification reports are both publicly posted on our website.



OBF	COMPARISON BETWEEN OBF AGREEMENT AND FPA	FPA
Yes	State of Maine, Based Technical Experts Review	No
Yes	Independent 3rd Party Certification Required	No
Yes	Provisions to Improve Timber Supply and Quality	No
Yes	Provisions to Protect Forest Health	No
Yes	Provisions to Conserve Biological Diversity	No
Yes	Provisions to Consider Economic and Social Obligations	No
Yes	Reduced Administrative Work for Landowner and MFS Staff	No
Yes	Increased Reporting Transparency	No
Required for all harvests	Science Based Harvest Prescriptions	Only required for clearcuts
Required	Regeneration of Clearcuts	Required
250 acres	Maximum Clearcut Size Allowable	250 acres
Landowner can manage with scientifically based silviculture prescriptions	Clearcut Separation Zone Requirements	May only be harvested according to prescriptive standards in rule
Buffering between clearcuts can utilize natural landscape features		Minimum 250 foot separation zones with short term 1:1 acreage requirement
Yes	*Required Compliance to All Local, State & Federal Regulations to Protect Water and Wildlife and Protected Resources (i.e. DEP, LUPC, MFS, AWW, Local Ordinances, etc.)	Yes

*The State of Maine has established laws that protect the wildlife, waters and unique natural resources in our State that are above and beyond the FPA. All of the laws protecting our natural resources remain intact and are still subject to compliance under OBF.



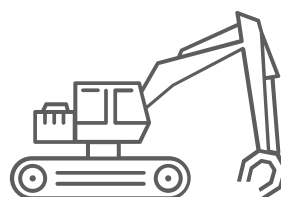
A WORKING FOREST WORKS FOR:



Competitive wood
supplies for Maine mills



Improved forest health
and resistance to forest
loss due to disease and
wind damage



Science-based harvesting
prescriptions which inform
better forest management
practices



Fewer roads built



Reduced watercourse
crossing associated with
reduced road construction



More efficient operations

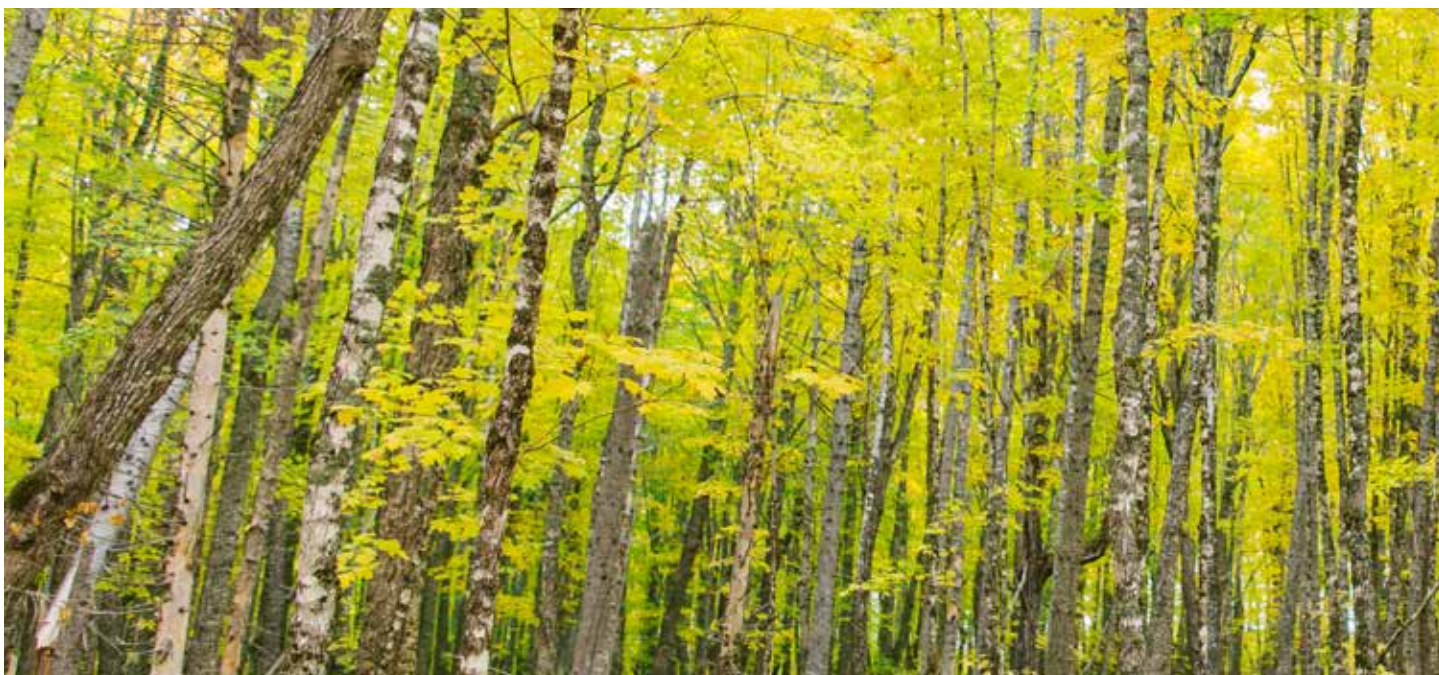


A WORKING FOREST
LANDSCAPE PROMOTES
HEALTHY FORESTS,
CONSERVATION AREAS,
COMMUNITIES AND THE
MAINE ECONOMY.



Science-based harvest prescriptions





IRVING WOODLANDS DETAILED SCORECARD

From the Auditor's Report

"Numerous examples of effectively protected riparian areas and waterbodies were observed during the field audit."

"A number of vernal pools were observed during the field audit to be well protected under the Company's Vernal Pool Policy."

"JDI planners do an effective job of tailoring the silviculture system(s) being prescribed to the stand characteristics (species composition, structure, condition, age(s), etc.), site characteristics (fertility, trafficability) and broad management objectives pertaining to a particular stand. In addition to clearcut systems, a variety of partial cutting silviculture systems are prescribed and implemented by the Company."



The mark of
responsible forestry



**ZERO
NON-CONFORMANCES
IN 2024**



MAINE WOODLANDS DETAILED SCORECARD

RESPONSIBLE FORESTRY	2024 MAINE DATA
Resource holdings (freehold - Maine)	1,280,000 acres
Land base harvested	2%
Trees planted – # of seedlings	4.0 million
Early Intervention Strategy (EIS) - Spruce budworm treatment area	6,700 acres
Forest lost from disease	0 acres
Forest lost from windthrow	0 acres
Forest lost from fire	0 acres
Forest lost from all causes	0 acres
Mapped watercourse buffers (total)	94,000 acres
Forestry road building (new roads)	36 miles
Pre-commercial thinning & planted stand cleaning completed	6,228 acres
Tree planting completed	6,887 acres
Sustainable Forestry Initiative Certification (SFI)	100% of Maine holdings
ISO® 14001 Environmental Management System Registration	100% of Maine holdings
Forest Stewardship Certification® (FSC®)	100% of Maine holdings
Certification Non-Conformances (FSC®, SFI & ISO 14001)	0
Volunteer Conservation areas on JDI land # of unique areas set aside	16,620 acres + 289 sites



A WORKING FOREST WORKS FOR SUSTAINABILITY

Transparency in the Working Forest

We are committed to sustainably managed forests and land stewardship. When your business is based on a sustainable natural resource, it is the socially and environmentally responsible way forward. This unwavering core value helps us find a better way, every day.

On the lands we own and manage, we are committed to transparency and accountability when it comes to our management practices. As early adopters of third-party certification, we have held a Sustainable Forestry Initiative® certificate since 2003. We take our responsible management seriously. We achieve environmental certification by ensuring 100 per cent of our operations are annually and independently audited according to ISO® 14001 environmental standards and certified under the Sustainable Forestry Initiative® (SFI) forest certification.

In Maine, 100 per cent of our woodlands are also certified under the Forest Stewardship Council® (FSC® C041515) program. You can learn more about these certifications through the links below.

Our Supply Chain works with international leaders in third-party certification and assurance. Third-party audits are carried out by the Maine Forest Service, KPMG and SCS Global Services. These audits are key to our continued improvement and our efforts toward being accountable forest land managers. We prioritize regulatory requirements and go above and beyond to ensure that we have an effective sustainable forest management strategy.

Learn more about our efforts in our Healthy Forest Report Card:
irvingwoodlands.com/jdi-woodlands-healthy-forest-report-cards-fsc.aspx



2024 FOREST CERTIFICATION FIELD SAMPLES

- ✓ Harvest Areas
- ✓ Road Construction & Maintenance
(including watercourse crossings)
- ✓ Silviculture Site
(Tree Planting & Thinnings)
- ✓ Late Successional Forest
- ✓ Visual Areas
- ✓ Unique Areas
- ✓ Riparian Zones
- ✓ Purchase Stumpage Sites
- ✓ Herbicide Blocks
- ✓ Deer Wintering Areas

OVER 20 YEARS
OF THIRD-PARTY
CERTIFICATION

100%
of land
certified



**SUSTAINABLE
FORESTRY
INITIATIVE**

SFI-00032

forests.org

100% of Irving
lands certified
in Maine



fsc.org

Environmental management
systems certified for **100%** of
our land management activities





OPERATIONS REPORT

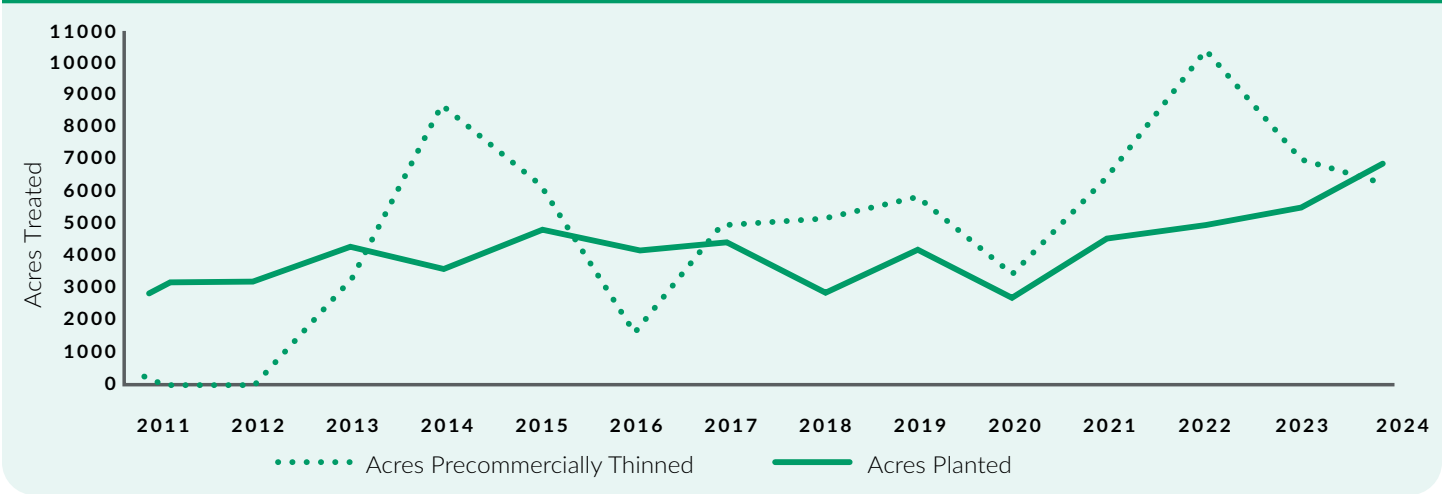
Our sustainability approach balances business needs with a long-term vision to sustain healthy, fast-growing and resilient forests for future generations. 2024 saw our foresters work diligently to deliver and execute an operating plan that met our sustainable forest management strategy under Outcome Based Forestry. This commitment includes implementing rigorous best practices in forest management, because a working forest is in a continuous cycle of harvest and renewal.

We continue to focus on securing the wood supply in Maine for generations to come. That’s why we grow more wood than we harvest every year and produce high-quality products to enable reinvestment in our managed lands. This ensures the care of forests not only for today but for future generations.

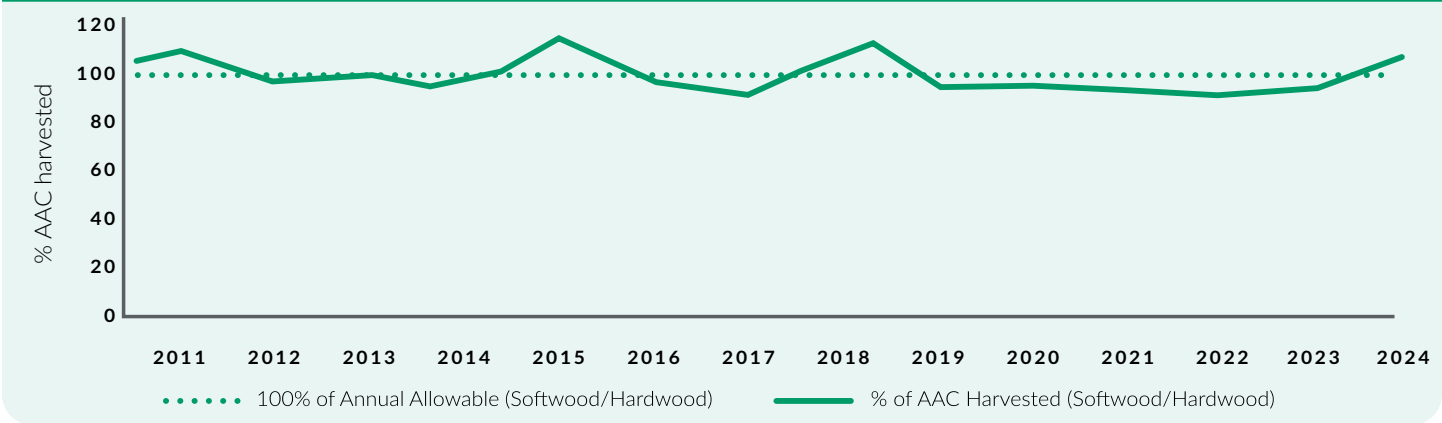


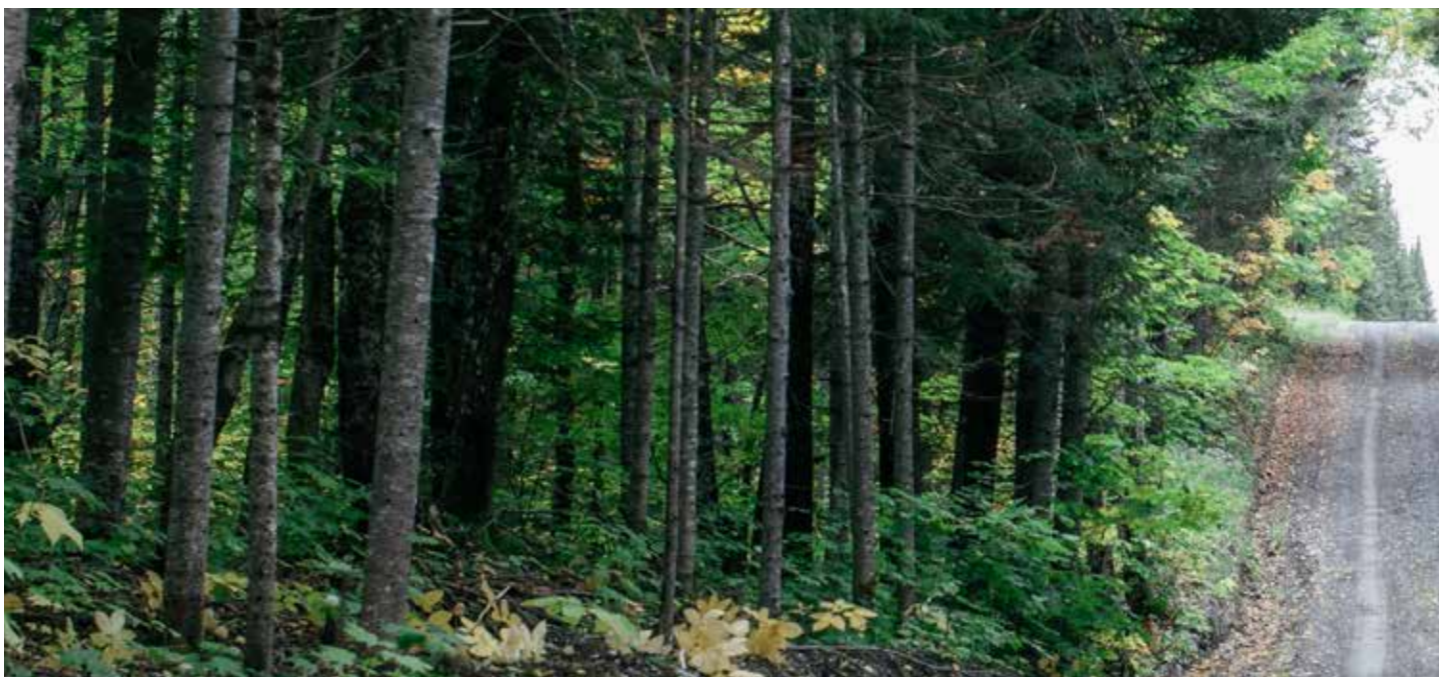


SILVICULTURE – GROWING A HEALTHY FOREST



SUSTAINABLE HARVESTING OF FOREST PRODUCTS





FOREST MONITORING RESULTS

We're committed to the health, growth, and long-term productivity of our lands. In collaboration with the MFS, we monitor forest well-being, development, and yield through staff training, stakeholder consultation, aerial surveys, and ground sampling for long-term planning.

Beyond forest monitoring, we assess our environmental and social impacts. Our initiatives focus on improving operations, protecting water resources, and safely handling hazardous materials like fuel. These efforts span all stages—from planning to reforestation—and include sustainable wood supply, public education, soil and biodiversity conservation, and adherence to forest cover and habitat guidelines.

Our water protection programs manage hazardous materials near water, plan riparian areas, control siltation, maintain watercourse crossings, and regulate activities in municipal water supply zones. All programs follow government regulations and are part of daily routines for staff and contractors.

Spruce Budworm (SBW) is the most immediate threat to forest health and the largest insect-related forest pest in North America. Over 30 million acres have been defoliated in Quebec, which has become a source of moth flights into Maine. These moths lay eggs that develop into larvae, feeding on local trees the following year.

Over the past five years, our monitoring has identified hotspots of overwintering larvae (L2s) and targeted treatments have successfully protected affected stands. In 2024, widespread moth flights from Quebec reached northern Maine, prompting landowners to form the Maine Spruce Budworm Coalition (MBRC). Together with state and federal agencies, they adopted New Brunswick's Early Intervention Strategy (EIS), which focuses on early monitoring, detection, and treatment.

Stay tuned for 2025 EIS results as we continue to respond to this growing threat.



We monitor the environmental and social impact of our operations through an Environmental Management System (EMS) that enables us to document, monitor, and address incidents as they occur. Our EMS operates on a “top to bottom” communication structure, with corporate leadership cascading down to our regional team and operations. Regular staff meetings facilitate discussions on operational issues, including incidents and non-conformities, with staff and contractors every week. All incidents and non-conformities are logged into a database, and corrective actions are recorded, prioritized, and tracked to identify trends, deviations from the plan, and areas for improvement.

No non-conformances were identified in 2024. Additionally, we received eight public complaints in 2024, and action plans to address these concerns were successfully implemented.

FOREST SURVEYS		
1st Year Planted Stand Survival Plots	> 90%	Survival issues are mostly related to weather.
2nd Year Planted Stand Survival Plots	> 90%	Survival issues are related to competition and weather.
5th Year Planted Stand Survey	2,896 acres	Were surveyed and were found to be free from significant competition.
10th Year Planted Stand Survey	4,791 acres	Were surveyed and found to have significant natural competition that now requires intermediate thinning treatments.
High Conservation Value Forest (HCVF) Survey	6 areas	No observed risks to HCVF attributes.
Invasive Species Monitoring	All	Glossy buckthorn, garlic mustard and dog strangling vine are invasive species of particular concern; at this time monitoring has not detected evidence of establishment in the woodlands.
Insect Monitoring	L2s	Early L2 monitoring indicates approximately 300,000 acres in northern Maine have reached levels that require immediate treatment under EIS. 250,000 of those acres fall under the operating umbrella of the Maine Spruce Budworm Response Coalition and will be treated in early 2025.



STAKEHOLDER ENGAGEMENT

We are committed to developing and maintaining strong relationships with many different stakeholder groups. We make time to listen to their questions and concerns and work collaboratively to find solutions and communicate transparently about our operations.

Our approach is a combination of both formal and informal interactions, and we are increasing our traditional engagement efforts with additional presentations, tours, community events, donations and volunteering while expanding our range of stakeholders. We are also using social media to extend our reach. We communicate with our followers through a variety of social platforms, including Facebook, LinkedIn and Instagram.

Every year, we donate to local community initiatives in Maine to ensure the communities where we work and live can thrive.

VISIT OUR PAGES AT:

-  facebook.com/irvingwoodlands
-  instagram.com/irvingwoodlands
-  linkedin.com/company/irvingwoodlands



ORGANIZATION	NATURE OF BUSINESS
Maine Natural Areas Program	Gathering spatial information on any recent finds of Maine's rare and invasive plants as well as providing the state with details on staff finds. This is done annually.
Maine Inland Fisheries & Wildlife	Gathering spatial information on recent finds of Maine endangered/threatened fauna species and provide details to the State on any JDI staff finds. This is done annually. Spent time with MIFW staff in the field to confirm the use of a number of great blue heron colonies. Regular discussions on issues such as deer and moose management, heron colonies, etc.
Maine Heritage Preservation Commission	Gathering spatial information on any recent archaeological finds.
University of Maine (Presque Isle)	Discuss operational constraints on our harvesting equipment that will be in the vicinity of an historic native site.
New England Wildflower Society (NEWFS)	NEWFS provides Irving Woodlands, LLC with detailed information on the status of particular rare plant sites on our land in northern Maine.
Manomet Center for Conservation Sciences	Advice on rare/uncommon forest communities and late successional forests.
Penobscot Environmental Consulting	Advice on retaining and recording legacy trees.
SFI Fisheries Improvement Network (FIN)	Maine Forest Products Council / SFI led group consisting of landowners, state and ENGO groups dedicated to improving fish habitat state-wide.
Maine Stream Connectivity Network	Regulator, landowner ENGO group formed to improve fish and aquatic connectivity on Maine watercourses.
MFPC Wildlife Technical Committee	Landowner group who discuss fish & wildlife issues, usually with state regulators and user groups like SAM.
Cooperative Forest Research Unit (CFRU)	UMaine researcher-landowner sponsored body which develops and researches a variety of forestry and wildlife interaction issues.
Maine Department of Environmental Protection	Issues concerning invasive forest plant species.

IN 2024, WE ALSO MET OR CORRESPONDED WITH THE FOLLOWING:

- Numerous Individuals
- Local Town Boards
- Aboriginal Groups
- Sportsmen Organizations
- Technical Schools
- Other Landowners
- Numerous Forestry Organizations
- Sportsmen Forest Landowner Alliance
- Maine Snowmobile Association Clubs
- ATV Clubs
- North Maine Woods
- Allagash Wilderness Waterway
- Maine Forest Service
- Fish River Lakes Association
- Friends of Cross Lake



DISCOVER THE GIFT OF NATURE

Recreational use for unlimited adventure

We know the importance of experiencing the great outdoors and have dedicated public access to private land for historic and traditional recreational opportunities for public use both inside and outside of the North Maine Woods framework of Aroostook County.

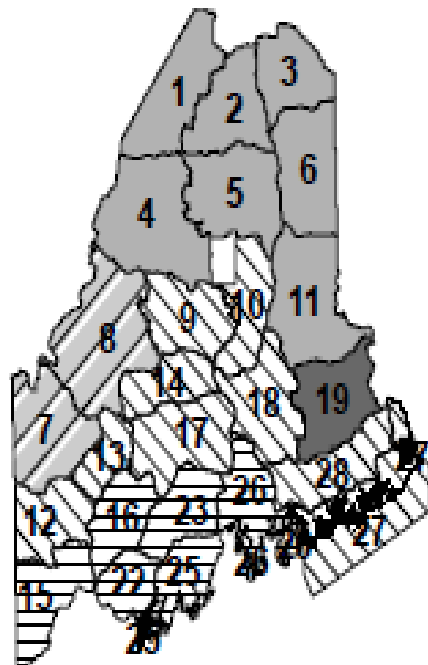
Our working relationships with individuals and groups have been beneficial to all and we continue to support traditional uses of the land such as hunting, fishing, trapping and hiking.





Hunting Zones

- Week 1,2
- Week 1,2,3
- Week 2
- Week 2,3
- November



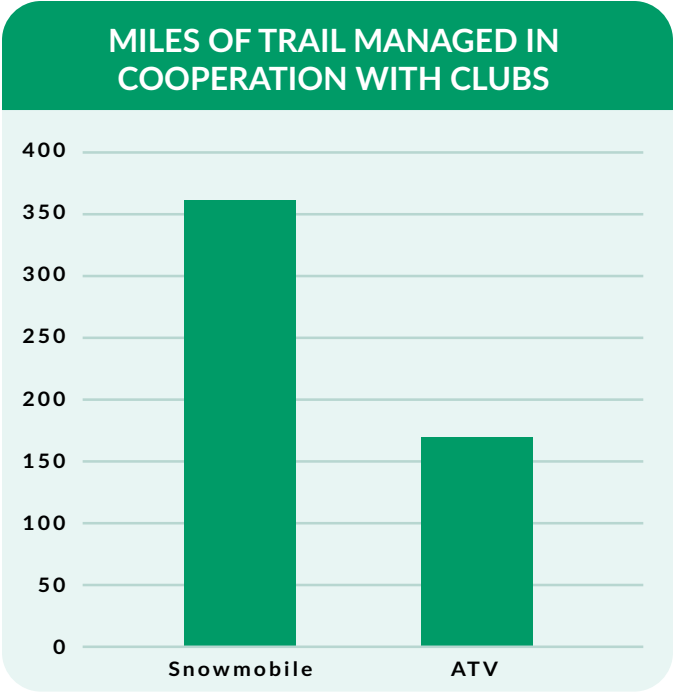
Week 1: September 23 - September 28

Week 2: October 14 - October 19

Week 3 November 4 - November 9

November Season: November 4 - November 30

November 2 (Maine Residents Only)



North Maine Woods, Inc.

P.O. Box 425, 92 Main Street, Ashland, Maine 04772

"Experience the Tradition"



A WORKING FOREST WORKS FOR COMMUNITIES

Committed to continuously improving every aspect of our management and operations..

We strive to be partners and good neighbors, and continue to actively work to support our state, communities, staff, contractors, suppliers and most importantly, our customers.

- In 2024, we worked with 30 commercial outfitters offering outdoor experiences in our woodlands
- Cooperative working relations with over 650 camp leases
- Recruiting, developing and training people internally, from our university system and our communities





SPRUCE BUDWORM (SBW) EARLY INTERVENTION (EIS) STRATEGY

Due to moth migration from the neighboring 30+ million acre SBW outbreak in Quebec, early larval counts (L2s) taken in the fall of 2024 indicate that up to 300,000 acres of Spruce and Fir forest in northern Maine are at risk of defoliation in 2025. Irving Woodlands, LLC is actively working with the Maine Forest Service and other landowners to develop a cooperative framework and treatment strategy for 2025. EIS has worked in New Brunswick, Canada, and we see this as the only responsible alternative for preserving the health of our forests here in Maine.

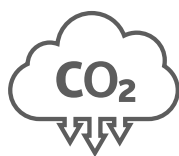
ADDITIONAL PROJECTS UNDERWAY

- Recruitment of contractors and specialized equipment for working in the forest
- Updating our planning process, platforms and operational interface for staff and contractors in the field
- Development and use of precision forestry tools
- Watersheds in a changing climate study



JOBS & ECONOMY

Our wood supply is growing, facilitating investment and growth in our forest products industries



CARBON SEQUESTRATION

Planting superior trees sequesters four times more CO₂ than a naturally regenerated forest



CONSERVATION

Planting improved trees helps to achieve conservation objectives

COMMUNITIES GROW WITH TREES

Outcome based forestry means a competitive wood supply to many non-Irving mills in the state, including:

- Columbia Forest Products
- H.C. Haynes
- JM Huber
- Katahdin Forest Products
- Louisiana Pacific
- Maine Woods Company
- Portage Wood Products
- Premium Log Yards
- Woodlands Pulp
- Woodland Pulp LLC
- J and J Cedar Mill
- Aroostook Woodsmiths
- Sappi
- Michigan Veneer
- Pleasant River Lumber
- ReEnergy



480 New Hires
Between 2020 -2024!
(staff, hourly and student)

Over 600 New Hires
Planned Over the Next
Three Years!

Proudly working with over 100 Contractors in Maine.



SCAN TO
WATCH
OUR STORY!

Outcome Based Forestry – 2024

www.irvingwoodlands.com

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