

INTRODUCTION

Vermont is the “Green Mountain State” and is defined by its forests. We have much to be thankful for when it comes to Vermont’s forest - they provide a multitude of benefits. Decisions we make today will influence our forests for years to come. This forested ecosystem forms the basis for biological diversity, natural communities, wildlife habitats, scenic landscapes, and recreational opportunities. As a natural resource, forests provide an economic base for employment, tourism, and recreation and support a diverse forest products industry. Livable communities and our quality of life depend on healthy, sustainable forests. Sustainable forests begin with healthy forests, which have the capacity for self-renewal of their ecological productivity, diversity, complexity, and resiliency. A healthy forest can meet the needs of present generations without compromising the needs of future generations.

In 2010, the Vermont Division of Forests completed a comprehensive forest resource plan in response to requirements from the Secretary of the US Department of Agriculture as authorized in the 2008 Cooperative Forestry Assistance Act. “The 2010 Vermont Forest Resources Plan-State Assessment and Resource Strategies” (2010 Plan) responded to the call for a reexamination and assessment of the nation’s forests, identification of priority areas for federal assistance, and a description of the resources necessary to address statewide and regional strategies. The 2010 Plan addressed the three national priorities identified in the 2008 Cooperative Forestry Assistance Act:

- CONSERVE and manage working forest landscapes for multiple uses and value,
- PROTECT forests from threats, and
- ENHANCE the public benefits from trees and forests—all in support of the sustainability of our nation’s forests.

The State Forest Action Plans are required to be updated at least every ten years. Recognizing that change is constant, and in response to new information and topics including climate change, flood resiliency, landscape-level habitat connectivity, updated management guidelines, new initiatives, and the application of new spatial assessment tools, the Division decided in 2015 to update its 2010 Plan. The new report is now called the 2017 Vermont Forest Action Plan (2017 Plan).

Because forest fragmentation¹ continues to be a major natural resource concern, the update incorporates an emphasis on landscape-scale strategies and habitat conservation. By maintaining and enhancing healthy, connected

¹ Forest fragmentation is defined as the breaking up of large forest blocks into smaller units by housing, roads, or land use change.

landscapes we maintain forest and habitat integrity, improve climate change resiliency, and reduce the potential impacts of diseases and non-native invasive species.

PLAN COMPONENTS

The 2010 Plan remains the foundation of our efforts to sustainably manage for healthy forests, and the 2017 Plan builds upon this base. Much of the focus, organization, and direction of the 2010 Plan did not need to change. The 2017 Plan reflects new assessment information obtained since 2010 and provides an opportunity to re-engage our staff and partners in identifying new issues and opportunities. The 2017 Plan primarily makes changes to three sections of the previous plan: assessment, issues, and priority areas. These are included sequentially under each Desired Future Condition.

DESIRED FUTURE CONDITIONS are the heart of the 2017 Plan, derived in part from the Montreal Process Criterion and Indicators², developed through global consensus in 1995. Desired Future Conditions describe the conditions required if the long-term vision of Vermont's forest is to be realized. These five statements are the basis for long-term goals and detail the strategies and specific actions needed to achieve those goals. The Desired Future Conditions should be viewed as a whole; they are not mutually exclusive, nor are they intended to apply to every landowner or acre of land in the state.

The five Desired Future Conditions remain:

- **DESIRED FUTURE CONDITION. BIOLOGICAL DIVERSITY:** Conserve biological diversity across all landscapes.
- **DESIRED FUTURE CONDITION. FOREST HEALTH AND ECOLOGICAL PRODUCTIVITY:** Maintain and enhance forest ecosystem health and ecological productivity.
- **DESIRED FUTURE CONDITION. FOREST PRODUCTS AND ECOSYSTEM SERVICES:** Maintain and enhance forest contribution to ecosystem services.
- **DESIRED FUTURE CONDITION. LAND ETHIC:** Maintain and enhance an ethic of respect for the land, sustainable use, and exemplary management.
- **DESIRED FUTURE CONDITION. LEGAL, INSTITUTIONAL, AND ECONOMIC FRAMEWORK:** Vermont has a legal, institutional, and economic framework in place for forest conservation and sustainability.

² The Montréal Process Criteria and Indicators are a tool for data collection and reporting for the Conservation and Sustainable Management of Temperate and Boreal Forests.

THE ASSESSMENT section contains current information and data. Organized to align with the Desired Future Conditions, the primary objective of the Assessment is to evaluate current forest conditions and identify priority forest areas and forest-related issues on which to focus state and federal resources. Assessments are one of the most dynamic parts of any long-range plan; much of the spatial and other data that we relied on in the 2010 Plan has been updated, or new sources have become available. We are presenting data in two different formats: this Plan and a new visual web-based Story Map presentation and interactive maps, found at vtforest.com.

PRIORITY LANDSCAPES AND FOCUS AREAS replaces the Priority Areas section of the 2010 Plan and are presented both in this 2017 Plan and in the new Story Maps presentation; these are also organized by Desired Future Condition.

STRATEGIES detail how we propose to implement the vision of Vermont's forests. In the 2017 Plan, we have reexamined and rewritten the strategies from the 2010 Plan, discontinuing some and adding others. Strategies continue to focus around the five Desired Future Conditions. In Appendix A, we have compiled a list of Strategies in a matrix to provide a quick overview of how the strategies relate to and support priority landscapes and focus areas as well as the national priorities.

MULTISTATE PRIORITY LANDSCAPES AND ISSUES are where we can share resources to address regional threats and opportunities.

THE FOREST LEGACY PROGRAM continues to support federal and state partnerships in land conservation and has been a cornerstone of our efforts to conserve biological diversity and protect forests from fragmentation and is an important part of our 2017 Plan as we move forward.

THE NATIONAL PRIORITIES SECTION, found in Appendix B, contains a new approach that highlights how we move from strategy to action. Forest action plans (FAP) collectively represent a strategic plan for the nation's forests that can direct limited resources where they are most needed. Through FAPs, state forestry agencies can demonstrate how federal investments can leverage other resources and produce measurable outcomes that address national priorities, as outlined in the Cooperative Forestry Assistance Act. The National Priorities section tells how Vermont is using federal funds to carry out the three national priorities in the Cooperative Forestry Assistance Act. We have selected several programs and projects in each national priority category that demonstrate how federal investments have resulted in successful, measurable outcomes.

STORY MAPS use geography as a means of organizing and presenting information. Through a geographic context, they tell the story of the assessment of current conditions, identify priority landscapes and focus areas, and show successes and challenges in carrying out our strategies. Story Maps also combine maps with other rich content—text, photos, and graphs—so that user experiences are visual, interactive, and intuitive. We have collaborated with

Northeastern Area State and Private Forestry and the Vermont Agency of Natural Resource's (ANR) Division of Information Technology to present the updated assessment in this new format. We have relied on numerous sources and partners to gather and provide spatial information.

VISION AND MISSION FOR VERMONT'S FORESTS

The keystone to all we do is the intersection of our Vision and Mission Statements for Vermont's forests.

VISION FOR VERMONT'S FORESTS

The forests of Vermont consist of healthy, sustainable ecosystems and provide significant environmental, social, and economic benefits. There is broad participation in the stewardship of trees and forests by landowners, businesses, government, and Vermont citizens.

MISSION FOR THE VERMONT DIVISION OF FORESTS

We manage for and protect healthy forests; we work with Vermont citizens to promote forest health, supporting best management practices, sustainable use, and respect for the land.

DEFINITIONS

A mission statement for any organization is only valuable when it is clearly defined. The following definitions are important to understand in relation to the 2017 Plan and essential to the interpretation of the Division's mission statement.

- **BEST MANAGEMENT PRACTICES:** Best management practices (BMPs) are proactive practices used during forest management to achieve a healthy, sustainable ecosystem with a focus on water quality, forest soils, silviculture, forest products, wildlife, biodiversity, aesthetics, and recreation.
- **EXEMPLARY MANAGEMENT:** Forestry practices that serve as a model and are deserving of replication because they reflect a sustainable land ethic with thoughtful strategies used for planning, implementation, and evaluation.
- **HEALTHY FOREST:** A healthy forest has the capacity for self-renewal of its ecological productivity, diversity, complexity, and resiliency.
- **RESPECT FOR THE LAND:** Appreciation of the value of the land and understanding and accepting responsibility for our impacts on a finite, non-renewable resource.

- SUSTAINABLE FORESTRY: The management of forests that maintain their health, productivity, diversity, and overall integrity in the long-run, in the context of human activity and use.
- SUSTAINABLE USE: The use of forests to meet the needs of present generations without compromising the needs of future generations.

It is important to note that the use of the term “forest” is meant to reflect a forest continuum, from urban street trees and remnant forests in our cities and towns to woodlots and rural forest blocks in our remote landscapes. Vermont’s forests are a mosaic—all have value and provide important ecological services.

VERMONT FORESTS TODAY: FOREST FACTS

FOREST FACTS	2010	2017	COMMENTS
Forest Area	4,580,000 acres	4,508,000 acres	Agricultural land is no longer being abandoned and forest land development is occurring at a slow but steady pace.
Forest Land Area	75%	74%	
Ownership	80.4% Private 19.6% Public	79.5% Private 20.5% Public	
Conserved Land	1.3 million acres	1.4 million acres	Includes 84,000 acres on which the State has public access that may not have been included in the 2010 Plan figures.
Enrollment in Use Value Appraisal program	1,521,566 acres	1,846,743 acres	
Live trees	3,523,000,000	3,403,000,000	Trees of 1-inch diameter and larger
Hardwood / Softwood	72% Hardwood 28% Softwood	73% Hardwood 27% Softwood	
Sugar Maple	19%	18.5 %	Trees of 5-inch diameter and larger
Dieback of sugar maples	7.5%	7.1%	
Healthy Sugar maples	95.2%	95.9%	
Annual net growth of live trees	193,866 thousand ft ³ /yr	175,550 thousand ft ³ /yr.	Vermont's forests are still growing, but the rate of growth has decreased
Growth-to-harvest removal for all species across the State	2.1/1	2.1/1	Both growth and harvests have declined since 2009, but this ratio has remained steady
Forestry Division Budget	\$5.4 million: 67% general funds 21% federal funds 9% special fund 3% inter-departmental transfers	\$6.4 million: 60% general funds 20% federal funds 18% special funds 2% inter-departmental transfers	Accounting for inflation and recovery from the 2009 recession, the Divisions' budget has essentially been flat. 93% of the Division's budget is personnel costs.
Carbon storage in above ground forests	397 short tons	402 short tons	
Emissions from gallons of gasoline offset by growth in forests	n/a	619 million gallons annually	
<p><small>Data sources: USDA Forest Service, Forest Inventory, and Analysis; Department of Forests, Park and Recreation; University of Vermont Transportation Research Center; and US Energy Information Administration. More forest facts can be found at fpr.vermont.gov/forest/forest_business/forest_statistics</small></p>			

Chart 1: Vermont Forests Today: Forest Facts

ALIGNING WITH OTHER PLANNING EFFORTS

In June of 2013, the USDA Forest Service-Northeastern Area State and Private Forestry (NA SP&F) released their Strategic Plan for Fiscal years 2013-2018. The 2017 Plan intends to support states in carrying out their Forest Action Plans. Common themes across the states were incorporated into NA SP&F's plan. These themes can be found in the 2017 Plan and include:

- Keeping forests as forests;
- Forest ecosystem health and productivity;
- Urban and community forest health and sustainability;
- Water, biodiversity, recreation, and other ecosystem services;
- Forest products industry and markets;
- Sustainable forest management across all ownerships;
- Climate change;
- Wildfire threats to forests, public safety, and property;
- State and private capacity for forestry; and
- Awareness of and support for forests.

The Vermont Fish & Wildlife Department (VFW) revised the Vermont Wildlife Action Plan in 2015 as required by Congress. VFW is one of our closely allied state departments in the ANR and is the other major state landowner of forests in Vermont. The Division and VFW jointly manage forest land and resources across the state. The 2017 Plan is closely tied to the 2015 Vermont Wildlife Action Plan and staff from both departments provided input into both plans. Many of the strategies and assessments in this plan are linked to, or are built on, similar sections in the 2015 Vermont Wildlife Action Plan.

The Vermont State Comprehensive Outdoor Recreation Plan (SCORP) is rewritten every five years in order to maintain eligibility to receive funding for municipal and state recreation and conservation projects from the Federal Land and Water Conservation Fund. Highlights of the most recent 2014-2018 SCORP, including outdoor recreation supply, access and use changes, land acquisition for public recreation, and investment in flood resilient recreation facilities are incorporated into the 2017 Plan.

The USFS Green Mountain and Finger Lakes National Forest's (GMNF) Land and Resource Management Plan (Forest Plan), written in 2006, has been updated with several amendments and administrative changes. The GMNF planning staff and the Forest Supervisor's Office provided input to align our mutual goals during the drafting of this 2017 Plan.

Our 2017 Plan also contains many strategies that will address the Lake Champlain phosphorus Total Maximum Daily Loads (TMDL). As required by the Federal Clean Water Act and the United States Environmental Protection Agency (EPA), The Vermont Department of Environmental Conservation (DEC) wrote a plan to address the TMDL. On June 17, 2016, EPA established new phosphorus TMDLs for the twelve Vermont segments of Lake Champlain.

As in 2010, our Strategies are based on five statements of Desired Future Conditions for Vermont's forests, derived in part from the Montreal Process Criterion. The Montreal Process is an internationally recognized set of 7 criteria and 54 indicators that are used to monitor forest sustainability at the national level. The NA S&PF has adopted these seven criteria. Meeting these criteria enables us to address the three national priorities identified in the 2014 Cooperative Forestry Assistance Act (Chart 2).

SUMMARY OF REQUIRED STAKEHOLDER REVIEW

- **FOREST LEGACY PROGRAM:** The Forest Legacy Program (FLP) requires states to complete an Assessment of Need (AON) and reassess it every 5 years with guidance from the State Forest Stewardship Coordinating Committee. The AON identifies priority landscapes and Legacy areas to focus federal investment, particularly where valuable forest lands face the greatest threats. Vermont's current AON was completed in 2010. Vermont's AON was evaluated in 2014 during a 5-year USFS program review. It was concluded that no amendments or adjustments to the AON were needed.
- **STATE FOREST STEWARDSHIP COORDINATING COMMITTEE:** The Committee was informed of progress in the planning process and met in April of 2017 to review and provide final approval of the 2017 Plan. The State Urban and Community Forestry Council also participated during the development and review.
- **VERMONT DEPARTMENT OF FISH AND WILDLIFE:** The 2017 Plan is closely tied to the 2015 Vermont Wildlife Action Plan. Staff from both departments provided input to both documents. The Fish and Wildlife department reviewed a finished draft and provided final approval of the Plan in May of 2017.
- **NRCS STATE TECHNICAL COMMITTEE:** Members of the Committee met in April of 2017 to review a finished draft and provided final approval of the Plan.
- **GREEN MOUNTAIN AND FINGER LAKES NATIONAL FOREST:** During the development of the 2017 Plan, we worked with The GMNF planning staff and the Forest Roundtable. The GMNF reviewed a finished draft and provided final approval of the Plan in April of 2017.
- **US DEPARTMENT OF INTERIOR - FISH AND WILDLIFE SERVICE:** Input into the 2017 Plan through the 2015 Vermont Wildlife Action Plan, the Staying Connected Initiative, and the Forest

Roundtable all provided opportunities for coordination with, and direct ties to, the USFWS plans for the Missisquoi Refuge plan and Silvio O. Conte refuge draft 2016 Comprehensive Conservation Plan (CCP). In addition, FPR has worked as a partner with USFWS on the Refuge and has been an active participant in the development of the CCP.

- **US DEPARTMENT OF DEFENSE:** Land managers at Vermont Guard Camp Johnson and Ethan Allen Firing Range were provided a draft for comment.
- **US DEPARTMENT OF INTERIOR - NATIONAL PARK SERVICE:** Forest management plans prepared for the Mount Tom Forest at the Marsh-Billings-Rockefeller National Historic Park and the Appalachian National Scenic Trail Statewide Comprehensive Outdoor Recreation Plan helped guide our efforts with the Plan.

MONTREAL PROCESS CRITERIA – ALSO ADOPTED BY NAASF & NORTHEASTERN AREA SP&F	VT DESIRED FUTURE CONDITIONS	NATIONAL PRIORITIES
Conservation and biological diversity	BIOLOGICAL DIVERSITY Conserve biological diversity across all landscapes	Conserve working forest landscapes
Maintenance of productive capacity of forest ecosystems	FOREST HEALTH AND ECOLOGICAL PRODUCTIVITY Maintain and enhance forest ecosystem health and ecological productivity	Protect forests from harm
Maintenance of forest ecosystems health and vitality		
Conservation and maintenance of soil and water resources	FOREST PRODUCTS AND ECOSYSTEM SERVICES Maintain and enhance forest contribution to ecosystem services	Enhance public benefits of trees and forests
Maintenance of forest contribution to global climate cycles		
Maintenance and enhancement of long-term multiple social, economic benefits to meet the needs of society	LAND ETHIC Maintain and enhance an ethic of respect for the land, sustainable use, and exemplary management	All three
Legal, institutional, and economic framework in place for forest conservation and sustainable management	LEGAL, INSTITUTIONAL, AND ECONOMIC FRAMEWORK Vermont has a legal, institutional, and economic framework in place for forest conservation and sustainability	All three

Chart 2: Relationship between Montréal Process Criteria (adopted by NAASF and Northeastern Area S&PF), Vermont desired future conditions, and national priorities in the Cooperative Forestry Assistance Act (CFAA).