

Revisiting Forest Health and Integrity: An Update on Work Accomplished and Recommendations for the Future

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Overview

On May 6, 2014, [Act 118](#) - an act relating to forest integrity - was signed into law acknowledging Vermont's forestlands' many values and the importance of forests to Vermont's environment, economy, and quality of life. The findings of Act 118 recognize that large blocks of contiguous forests are essential for effective wildlife habitat, sustainable ecosystem functions, and preservation of both Vermont's forest-related business, scenic rural character, tourism, and outdoor recreation. The Act called for a report assessing the current and projected effects of fragmentation on Vermont's forestland and recommendations on protecting forest integrity within the state. The Commissioner of Forests, Parks, and Recreation (FPR) presented the Vermont Forest Fragmentation Report in April of 2015. The document outlined the enormous value and benefit provided by healthy forest blocks and summarized the causes and drivers of forest fragmentation in Vermont, identifying categories of policy options to facilitate the wise use of Vermont's forests.

In Act 61 of 2015, the Vermont General Assembly directed the Commissioner of FPR to consult with interested stakeholders and provide recommendations for implementing the policy options in the Forest Fragmentation Report, including statutory changes needed to promote forest integrity. Accordingly, the Commissioner and stakeholders identified a series of options that, if implemented, would help secure forest conservation and continuation of forest benefits. These strategies, along with a series of steps that state agencies can carry out, would also raise awareness about the values and benefits forests provide Vermonters and the gradual and cumulative negative effects of forest fragmentation. These included:

1. Outreach and Education on Forest Values and Benefits
2. Increase Landowner Incentives to Keep Forests Forest
3. Invest in Strategic Forestland Conservation
4. Support for Sustainable Forestry and the Vermont Forest Economy

Strategic efforts to conserve, protect, and enhance Vermont's forests are more important now than ever. Forest conservation is key to reducing the impacts of climate change. Forests and harvested wood products provide the simplest and least expensive ways to sequester and store atmospheric CO₂ and they also provide many other critical climate benefits and resilience, including moderating air temperature, protecting water supply, mitigating floods, controlling erosion, intercepting pollution, and protecting human health and built infrastructure. Once forests are converted to other land uses, it can take decades to centuries to return to similar pre-development conditions and functions.

Since 2016, much progress has been made to realize the recommendations outlined in the [Recommendations in support of Forest Health and Integrity In response to Act 61 of 2015](#). Even with these steps forward, Vermont continues to lose forestland at a rate of approximately 11,000 acres per year¹, and forests continue to be fragmented and subdivided. In response to the Senate Natural Resources and Energy (SNRE) Committee's request to identify policy and investment recommendations to support the reversal of forest loss in Vermont, FPR reviewed the recommendations set out in the 2016 policy recommendation report to assess progress, consider new understanding and circumstances, and provide recommendations for the future. This review uncovered a broad suite of accomplishments and that many of the recommendations are still relevant today and deserve reenergized efforts – most importantly, the need to advance efforts to support **Vermont's Forest Economy** and its complicated and dynamic web of participants and interactions owing to the outsized role it plays in keeping forests forested and maintaining their functions, values, and benefits.

¹ USDA Forest Service. 2020. Forests of Vermont, 2019. Resource Update FS-243. Madison, WI: U.S. Department of Agriculture Forest Service, Northern Research Station. 2 p. <https://doi.org/10.2737/FS-RU-243>

Status of the 2016 Forest Integrity Policy Recommendations

The strategies listed below were identified in the [Recommendations in support of Forest Health and Integrity In response to Act 61 of 2015](#). For each strategy, a status update is provided and, in many cases, recommended actions for the future.

1. Support Outreach and Education on Forest Values and Benefits

1A. SUPPORT LANDOWNER ASSISTANCE AND EDUCATION

1A1. Implement FPR recommendations in the Report on County Forester Staffing and UVA Delivery pursuant to Section 58 of Act 57 (H.489).

- **UPDATE:** FPR is in the process of implementing significant improvements to improve administration of current use, including clarifying and streamlining forest management plan requirements, shifting from hard copy to digital forest management plan submissions, developing electronic data systems, digitizing critical hard copy files, and incorporating the use of mobile technology in program administration and outreach efforts. **Recommended future investments are focused on enhancing administrative capacity to free up field staff's capacity for landowner engagement and outreach.**

1A2. Examine capacity in the Department of Fish and Wildlife habitat technical assistance program to facilitate coordination with county foresters in order to incorporate wildlife related recommendations into UVA plans and provide fish and wildlife related assistance particular to connectivity and forest fragmentation to private landowners.

- **UPDATE:** Capacity among FPR field staff to conduct outreach and collaboration to realize potential benefits is limited – see 1A1 on the needed administrative capacity to allow for more forester field time with landowners and collaboration with partners. The Department of Fish and Wildlife has expanded their outreach and technical assistance program to private landowners. The two Departments collaborate regularly and effectively on this delivery.

1A3. Support the development of a centralized system that enables departments across ANR and partnering organizations to track landowner outreach, education, and technical assistance efforts and to monitor metrics reflective of on-the-ground results and impacts.

- **UPDATE:** Tracking systems have improved but still lack a centralized system that enables coordination of landowner engagement across the ANR.

1A4. Support forestland succession/estate planning efforts that encourage the maintenance of private forestland ownerships as they pass from one generation to the next.

- **UPDATE:** Investments have been made within Vermont Housing and Conservation Board's Farm and Forest Viability Program to provide outreach and technical assistance through partnerships with Vermont Woodlands Association and Coverts. ANR has partnered with Vermont Natural Resources Council and UVM Extension to educate realtors about estate planning as they are on the front line during real estate transactions. **Recommended continued support and investment.**

1A5. Support landowner assistance programs such as Coverts, Vermont Woodland Owners Association, and the University of Vermont Extension.

- **UPDATE:** Efforts, include partnering on grants, participation on boards, and coordination on public events and educational opportunities, are ongoing to support expanding the organizations' impact and services.

1A6. Pass current legislation in support of forests and forestry to:

- Codify Vermont forestland owners' right to conduct forestry operations.
 - Protect lawful forestry operations from nuisance lawsuits.
 - Limit municipal regulation of forestry operations.
 - Strengthen laws and penalties against timber trespass and theft.
- **UPDATE:** Significant progress made.
 - & b. Vermont Right to Conduct Forestry Operations - [12 V.S.A. § 5757](#)
 - Limitations on Municipal Bylaws - [24 V.S.A. § 4413](#)
 - Crimes and Criminal Behavior, Trees and Plants - [13 V.S.A. § 3601 – 3609](#)

1A7. Evaluate proposed legislation for unintended impacts on forestland ownership.

- **UPDATE:** Efforts ongoing by ANR leadership.

1B. PROVIDE TECHNICAL ASSISTANCE TO TOWNS, REGIONAL COMMISSIONS, AND WATERSHED GROUPS.

1B1. Consider expanding the town planning cycle so that town plans must be rewritten every eight years instead of every five years to allow towns time to implement their plans before restarting the planning process.

- **UPDATE:** Planning cycle was extended to eight years.

1B2. Strengthen Chapter 117 of Title 24 to:

- Clarify and affirm that the long-standing exemption of accepted silvicultural practices from municipal regulation includes limited primary processing of on-site derived forest products, consistent with existing protections for accepted agricultural practices.
 - Encourage conservation commission and planning commission members to take the Agency of Natural Resources NR1 and NR2 orientation courses while serving.
 - Augment the statutory relationships that currently exists between ANR and Regional Planning Commissions (RPCs) to develop capacity for RPC staffing that supports proper planning for all natural resource concerns – water, fish and wildlife, and forestland management and conservation.
 - Recommend that towns and regional planning commissions use state-of-the-art tools, including ANR's Conservation Design map and Biofinder, to develop town plans, develop policy, and help prioritize conservation activities.
- **UPDATE:**
[Act 171](#) of 2016 amended Vermont Planning Statutes to encourage and allow municipalities to address the protection of forest blocks and habitat connectors while supporting the local forest

products industry. As of January 1, 2018, municipalities seeking to have their plans approved by their Regional Planning Commission must include additional information on the future land use map and language that identifies state, regional, or locally significant forest blocks and habitat connectors. The plan may also include specific policies on how the community will reduce forest fragmentation, enhance forest health, and support essential ecological functions. [Act 171 Guidance](#) was developed by ANR in partnership with Vermont Natural Resources Council. The Guidance provides information about the new forest block and habitat connectors requirements, a 5-step approach to successful implementation, and sample policy language.

- a. Municipal and Regional Planning and Development, Limitations on Municipal Bylaws - [24 V.S.A. § 4413](#)
- b. The ANR offers two natural resources municipal planning courses: Natural Resources 1 and 2. These courses, offered at least twice a year, are designed for Vermonters serving on municipal boards or who work as conservation volunteers and want to learn more about the science and concepts involved in Vermont land use planning and land management.
- c. & d. The ANR provides ongoing outreach and technical support to regional planning commissions and municipalities, including assessment, mapping, and policy language.

Recommend continuing to support outreach and technical assistance to municipalities and regional planning commissions.

1C. PROMOTE LIVABLE DOWNTOWNS

1C1. Incentivize towns/municipalities to require density-based zoning, instead of lot-sized zoning, to encourage clustering.

- **UPDATE:** Significant Agency of Commerce and Community Development (ACCD) programming. **Recommend continued support.**

1C2. Consider options to provide greater protection to large forest blocks outside of downtown centers.

- **UPDATE:** Recent Act 250 discussions. **Recommendations:**
 - a. Establish working lands enterprise zones, where municipal zoning bylaws have jurisdiction over forest processing up to a to-be-determined size.
 - b. Establish permit condition flexibility to allow for delivery of raw materials to forest based enterprises outside "normal" business hours.
 - c. Determine a mechanism to provide credit for their land conservation effect rather than charging forest-based businesses for primary agricultural soil mitigation.
 - d. Allow for permit amendments where Rule 34E does not apply.

1C3. Encourage development in designated areas and ensure policies and regulation do not make it more costly to develop in these areas.

- **UPDATE:** ACCD programming and recent Act 250 discussion.

1C4. Consider options to reduce costs and expedite state permitting in state-designated centers to help protect rural lands, natural resources, and water quality.

- **UPDATE:** Recent Act 250 discussions.

1C5. Consider options to further encourage the infill of parking lots and strip malls, avoiding increases in impervious surfaces, for example:

- Increase funding for town greens, parks and urban forestry to better capture and retain storm water.
- Promote multiple modes of transportation to reduce the amount of pavement needed to support auto-dependent development.
- Help communities to plan for compact development and participate in the state designation programs (see ACCD -- Planning Manual).
- Increase the Regional Planning Commission's capacity help communities develop strategies, make informed development decisions, and implement best practices to improve water quality.
- Support efforts by DEC to help communities review their infrastructure needs, plan and bond for needed improvements. Target funding to promote water, wastewater, and stormwater upgrades to designated areas,

- **UPDATE:**

- FPR has been successful in securing USDA Forest Service funding through grants but has not secured a sustainable funding source. Development of [Vermont's Green Streets Guide](#) and the [Vermont Resilient Right-of-Ways Guide](#).
- ACCD and Agency of Transportation (AOT) programming, i.e., [Better Connections Program](#).
- ACCD programming – [2021 State Designation Program Annual Report](#).
- ANR programming.
- Department of Environmental Conservation programming.

1D. ENGAGE SCHOOLCHILDREN

1D1. Consider the merits of reinstating the state-wide Department of Education Science Coordinator position to work with the Agency of Natural Resources and non-profit organizations to coordinate curriculum and messaging related to natural resources, forests, and wildlife.

- **UPDATE:** FPR provides outreach to schools through various mechanisms including a redesigned Project Learning (PLT) training, State Park interpreters, county foresters, and Arbor Day programming. A broader opportunity still exists; **recommend a focus on this effort.**

1D2. Consider enabling legislation to create a Vermont *Forest To Schools* program similar to the successful *Farm To School* program that incorporates agricultural curricula in schools.

- **UPDATE:** The opportunity still exists; **recommend a focus on this effort.**

2. Increase Landowner Incentives to Keep Forests Forest

2A. SUPPORT USE-VALUE APPRAISAL (UVA OR "CURRENT USE")

2A1. Implement FPR recommendations in the Report on County Forester Staffing and UVA Delivery pursuant to Section 58 of Act 57 (H.489).

- **UPDATE:** Increased capacity is still needed to meet statutory requirements and greater outreach and support to all private forest landowners. A significant FPR investment will be needed to improve the administration. FPR established a Private Lands Advisory Committee (PLAC) to advise on policies and initiatives affecting landowners with forestland enrolled in UVA, other private lands issues, or other forestry related topics as requested by the Commissioner of FPR. Several new procedural policies and modernizations have been advanced as well as internal process improvements.

2A2. Allow clustered housing to be exempt from the current requirement for a 2-acre exclusion zone around each dwelling.

- **UPDATE:** [Act 158](#) passed in 2020 allowing more than one dwelling to share the same house site, effectively enabling cluster development within current use enrollments.

2A3. Consider a tiered eligibility with reduced property tax savings for certain additional enrollment categories, including parcels less than 25 acres when they are managed in aggregate through cooperative agreement and with shared management plans.

- **UPDATE:** Currently working with House Natural Resources, Fish and Wildlife Committee on expanded UVA eligibility, however after further exploration of this strategy, it is recognized that administrative realities create significant barriers to attaining eligibility through aggregation within UVA. Efforts are also currently underway with the House Natural Resources, Fish and Wildlife Committee to expand enrollment eligibility to advance old forest condition in the program and to remove barriers to enrollment for parcels permanently protected under forever-wild easements.

2B. MODERNIZE VERMONT'S PROPERTY TAX SYSTEM

2B1. Consider creating a Vermont Blue Ribbon Tax Structure Commission similar to the one in 2009 to develop a new approach to valuing undeveloped land for property taxation.

- **UPDATE:** Efforts on new approaches for valuing undeveloped land have continued to focus on UVA and expanding eligibility and benefits uses compatible with undeveloped land (old forests, recreation, carbon). **Recommend continued support.**

2B2. If major restructuring of the current ad valorem tax structure is to take place, eliminate the current use program, in favor of taxation at the current use value of all parcels (i.e., different rates for parcels based on their actual use value as residential, commercial, industrial, agricultural, forestlands, etc.).

- **UPDATE:** None.

2C. REDUCE TAX BURDENS DURING INTERGENERATIONAL LAND TRANSFER

2C1. Consider estate tax options to incentivize conservation easement donations on forest lands.

- **UPDATE:** [Intergenerational Transfer of Forestland Working Group Recommendations](#) developed in 2017 response to Act 171.

2D. MONETIZE ECOSYSTEM SERVICES

2D1. Explore whether a tax credit system that compensates landowners for maintaining or restoring ecosystem services on their land could work in Vermont.

- **UPDATE:** Currently exploring enhancements to the UVA program with House Natural Resources, Fish and Wildlife Committee.

2D2. Consider creating the capacity at FPR to develop a carbon offset project on a state forest. Use this to model carbon offset projects with private landowners.

- **UPDATE:** FPR is currently investigating the feasibility – see [Carbon Sequestration Working Group Report](#). In addition, FPR hired a Climate Forester, Dr. Alexandra Kosiba, in 2020 with grant from American Forests. Since then, she's authored several new informational documents on forest carbon: [What is Forest Carbon?](#), [Vermont Forest Carbon Inventory](#), and [Forest Carbon Markets for Vermont Landowner](#). She's a sought-after presenter providing science-based information on mitigating and adapting forests to climate change, conduct research to support better understand climate impacts and potential actions, and providing valuable support to Vermont's Climate Council.

3. Invest in Strategic Forestland Conservation

3A. CREATE A ROBUST FUNDING SOURCE FOR FORESTLAND CONSERVATION

3A1. Consider alternative funding mechanisms for long-term efforts by exploring conservation bonding and authorizing transferable tax credits.

- **UPDATE:** None.

3A2. Fully fund the Vermont Housing and Conservation Board (VHCB) at levels set forth in statute.

- **UPDATE:** Continue to recommend, as possible and recognizing other needs and priorities.

3A3. Consider redirecting a portion of Property Transfer Tax Return (PTTR) revenue toward a forest integrity program at the Vermont Housing and Conservation Board after the three-year dedication of PTTR revenue to the Clean Water Fund sunsets in 2019 (32 V.S.A. § 9602a).

- **UPDATE:** Continue to recommend, as possible and recognizing other needs and priorities.

3B. ESTABLISH A COMMON GOAL AND CLEAR CONSERVATION PRIORITIES

No legislative strategies were identified—however, a significant effort was the development of [Vermont Conservation Design](#). The Agency of Natural Resources is also updating our conservation plan for state lands.

3C. ENHANCE FORESTLAND CONSERVATION TOOLS AND PROGRAMS

3C1. Support development of enhanced tools (e.g. Lidar) for tracking forestland cover and condition and for evaluating and ranking highly productive and high-risk forests to better guide targeted conservation in high-priority forest blocks.

- **UPDATE:** Vermont Conservation Design and the Forest Ecosystem Monitoring Cooperative products, including statewide species distribution maps and regional maps on forest conversion risk, help inform conservation targets.

3C2. Support efforts to include forestland conservation strategies in estate planning.

- **UPDATE:** Investments made within Vermont Housing and Conservation Board's Farm and Forest Viability Program to provide outreach and technical assistance through Vermont Woodlands Association and Coverts partnerships. **Recommended continued support.**

3C3. Obtain support from congressional delegation to allow more forestland to be included in NRCS-funded farm easements.

- **UPDATE:** ACEP-ALE is the primary easement related practice available through NRCS. This practice, through recently updated, has not expanded eligibility of forestland that can be included under these easements. However, later this year (2021) additional practices will be available through the Regional Conservation Partnership Programs (RCPP) that can be applied to forestland. In Vermont, a water quality focused RCPP project through DEC may be able to utilize these practices and future RCPP projects may seek to utilize them as well.

4. Promote Sustainable Forestry and the Vermont Forest Economy

4A. SUPPORT & IMPROVE TRAINING FOR LOGGERS

4A1. Strengthen the pipeline of loggers through in-state training programs, including vocational programs at the high school and post-high school levels through apprenticeship and earn, serve & learn programs (e.g VYCC and Northwoods Stewardship Center).

- **UPDATE:** Little progress made; **recommend priority focus area.**

4A2. Support expansion of LEAP and develop a Master Logger program to promote, highlight, and incentivize excellence in logger professionalism.

- **UPDATE:** **Recommend priority focus.**
 - Act 83 in 2019 provided funding to LEAP and the Master Logger Program to support safety training costs and program enrollment. Recommend continued support to cost-share Master Logger enrollments and subsidize LEAP workshop costs supporting the Logger Safety & Workers' Compensation Insurance Program.
 - Opportunities exist to incorporate LEAP training and certification in vocational programs by enhancing the existing curriculum. Recommend working with forestry program instructors to incorporate LEAP learning objectives and content into vocational programs.

4A3. Appoint a Legislative Committee to study cost containment opportunities and recommendations changes to Workers' Compensation law. The current formula is prohibitively disadvantageous to loggers.

- **UPDATE:** Vermont Logger Safety and Workers Compensation Insurance Program has been established in partnership with the LEAP Program and the Departments of Finance and Regulation, and Labor. Loggers completing job-appropriate safety training qualify to be Safety Certified and employers can receive discounts on Workers' Compensation Insurance. In addition to safety

certification, DFR has made positive changes to Workers' Compensation rates within the existing authority. **Recommend continued support.**

4A4. Incentivize and support a partnership between the Vermont Technical College (VTC) and University of Vermont's (UVM) 2+2 program, creating a forest technician program at VTC to feed into UVM's Forestry Program.

- **UPDATE:** Program established and in its infancy. **Recommend additional support and involvement to advance the initiative.**

4A5. Create "Stars" based rating program for loggers and others in the forest sector.

- **UPDATE:** **Recommend considering investing resources to enhance support and outreach to loggers and landowners.** Such an investment would raise awareness about entering into contracts with loggers and help landowners' cut with confidence' and work against the handful of loggers that have notoriously taken advantage of landowners. Continued effort to identify mechanisms to address these few loggers should maintained.

4B. PROTECT AND IMPROVE INFRASTRUCTURE THAT SUPPORTS THE LOCAL WOOD INDUSTRY

4B1. Support current legislation bolstering forests and forestry, including:

- a. Forester licensing to ensure consumer (landowner) protection and forest health through requirements for adequate qualifications, experience, and professional conduct.
 - b. Strengthening statutes relating to timber trespass and theft, to provide enhanced landowner recourse, including institution of criminal penalties.
 - c. Implementing timber harvest notification system and trip-ticketing requirement for log transport to provide greater accountability and professionalism, as well as to optimize wood supply to Vermont manufacturers.
- **UPDATE:**
 - a. Established forester licensing in 2015 – [26 V.S.A. § 5201](#).
 - b. Crimes and Criminal Behavior, Trees and Plants - [13 V.S.A. § 3601 – 3609](#). Recommend additional support to provide landowner outreach and education before a timber harvest.
 - c. Developed [A Report on the Implementation of Harvest Notification in Vermont](#). 2016 Forestry Omnibus Bill: S.237.

4B2. Invest in three-phase power as critical infrastructure for wood-using industries.

- **UPDATE:** Investments made through Working Lands Enterprise Initiative (WLEI) grants and utility investments through [Act 56](#) – An act related to renewable energy standards.

4B3. Extend existing sales tax exemptions for agricultural equipment to logging equipment.

- **UPDATE:** In 2017, specific types of machinery and repair parts were exempted from the Vermont Sales and Use Tax. The exemption created by [Acts 75](#) and [77](#) targeted the types of machinery specifically used in timber cutting, timber removal, and the processing of timber or other solid wood forest products intended to be sold at retail.

4B4. Support the efficient trucking of wood products by modifying VTrans restrictions on forest equipment, providing adequate road and infrastructure maintenance, and creating consistency among all trucks and weight limits on town roads.

- **UPDATE:** Work has begun with the AOT within current authorities. **Recommend priority focus.**
 - Consistent, online process and weight limits for obtaining municipal excess weight permits for some, or all, municipalities, in one portal for the entire state.
 - Enact frozen roads policy to allow travel on posted roads below a certain temperature to reflect climate change impact on forest product transportation in shoulder seasons.

4B4. Consider changes to legal and regulatory requirements to support wood products industry, including:

- a. Streamlining permitting for forest-based enterprises and/or reform permitting for wood processing and manufacturing facilities.
- b. Establish, in statute, the right to conduct forestry operations.

UPDATE:

- a. Currently offering a grant program with one-time funds to support investments needed to meet permit requirements. Funds provided in [Act 83](#) of 2019. **Recommend continued support.**
- b. Vermont Right to Conduct Forestry Operations, 2018 - [12 V.S.A. § 5757](#).

4B7. Continue and increase financial support for the Working Lands Enterprise Initiative and forest viability assistance programs.

- **UPDATE:** Continue to support and consider adding capacity within FPR to support programming for the forestry sector.

4B8. Increase technical assistance and business planning along the forest economy value chain.

- **UPDATE:** Investments made within Vermont Housing and Conservation Board's Farm and Forest Viability Program to provide outreach and technical assistance through partnerships at the University of Vermont Extension. **Recommend continued and enhanced support.**

4B9. Consider the creation of a permit specialist position within FPR to support businesses in the forest products sector to meet regulatory permit requirements.

- **UPDATE:** **Recommend continuing support.**

4C. EXPAND MODERN WOOD HEATING IN VERMONT

4C1. Implement a state sales tax exemption on the purchase of qualifying modern wood heating equipment.

- **UPDATE:** This exemption sunsets in June 2023. **Recommend extending.**

4C2. Support state agencies as they consider adopting a goal of reaching thirty-five percent modern wood heating by 2030, and incorporating this goal into future state energy, carbon mitigation, working landscape, and economic development plans and strategies.

- **UPDATE:** Some movement, ongoing support recommended. H412 has been proposed that would require Building, Grounds, and Services (BGS) to only install non-fossil fuel heating systems as the

primary heating source in buildings owned or controlled by the Department. It would allow for a fossil-fuel system as a backup if needed. A similar bill for FPR buildings is anticipated.

4C3. Realign Efficiency Vermont thermal energy performance metrics to count units of fossil fuel reduction in addition to energy savings. There are "thermal energy savings" under the current metrics used when an old oil boiler is replaced with a new, more efficient oil boiler – so they offer incentives on fossil fuel boilers. State goals are to dramatically reduce the use of fossil heating fuels so there needs to be better policy alignment.

- **UPDATE:** This has been resolved. EVT is now able to count fossil fuel displacement towards their goals and no longer offers incentives on any fossil fuel equipment.

4C4. Reconsider Act 56 and the Tier 3 program. The current program design will result in one hundred percent compliance by the utilities installing electric powered heat pumps to displace fossil fuels, which runs counter to the original intent.

- **UPDATE:** Three utilities offer rebates on advanced wood heat equipment.

4C5. Encourage Vermont Department of Public Service (PSD) to track and report cordwood, woodchip, and bulk wood pellet prices in the same way they do with fossil heating fuels in the monthly fuel price report.

- **UPDATE:** PSD in partnership with FPR were doing this for a while - recommend revisiting with an enhanced outreach strategy.

4C6. Consider establishing commercial building codes with renewable energy targets and building efficiency benchmarks (e.g., ninety percent of heating and electricity needs of all new construction completed after 2020 will be supplied by renewable energy).

- **UPDATE:** Continue to recommend – may be visited by the Climate Council and may include code updates for mass timber construction of buildings.

4C7. Recognize European boiler safety standards in addition to ASME standards for boilers under 1.0 million Btu/hr.

- **UPDATE:** Vermont General Assembly passed Act 50 - An act relating to miscellaneous natural resources and energy - which directed ANR to commence rulemaking to allow for alternative methods of demonstrating compliance with the emission standards in lieu of having to obtain EPA certification for non-residential units. ANR AQ is currently drafting rules to meet this mandate.

4C8. Explore whether LiHEAP funds could be used to install modern wood heating systems.

- **UPDATE:** Continue to recommend.

4C9. Examine whether a Thermal Renewable Portfolio Standard for commercial buildings would be effective to incentivize renewables, reduce carbon emissions and diversify low grade wood markets.

- **UPDATE:** Continue to recommend.

4C10. Support efforts to establish a wood energy forester position within FPR.

- **UPDATE:** Limited-service position established with grant funds from the USDA Forest Service. Recommended sustainable investment in maintaining capacity.

4D. EXPAND MARKETS FOR VERMONT WOOD PRODUCTS

4D1. Support modern wood heating as outlined above in the expansion of markets for low-grade wood.

- **UPDATE:** The position of Wood Energy Coordinator was created in FPR in 2017 with grant funding, emphasizing the promotion of wood heating. FPR has secured grant funds through USDA Forest Service and USDA Rural Development to increase outreach to specific industry sectors and create/expand on modern wood heat project cost-sharing.

4D2. Promote the branding of products made from Vermont wood that recognizes consumers' interest in forest health and sustainability.

- **UPDATE:** Recommend a priority focus.

4D3. Increase the prioritization of wood for public building projects and grants. The state should be a lead innovator in the use of forest-based building products using regional species to support and highlight the role of wood in construction. Look at whether the state's institutional procurement policy could incentivize the use of Vermont wood for building projects.

- **UPDATE:** Recent innovation and the potential in the use of cross laminated timber (CLT)/mass timber (MT) should be considered for public investments, including affordable housing. Potential federal investment on brownfield sites. Recommend a priority focus – may be considered by Climate Council.

4D4. Support collaborative research, testing and verification services in both industry and state government to grow the market for Vermont-made engineered wood products.

- **UPDATE:** Continuing to support the dialogue with MA, NH, and NY on promoting mass timber and the development of mass timber manufacturing infrastructure in the region. **Recommend priority focus:**
 - Encourage higher education institutions to build teaching and research capacity in forestry, architecture, and engineering programs focused on advanced wood products.
 - Collaborate on testing and design work at the University of Massachusetts to use 'local' species. Explore opportunities for collaboration with UMaine Advanced Structures and Composites Center on applied research.

4D5. Support an increased in-state sawmill capacity to produce Vermont-sourced wood for in-state secondary processors.

- **UPDATE:** Recommend priority focus.

4D6. Support development of a statewide wood supply database tool to improve efficiency, availability of raw materials, and enable just-in-time delivery.

- **UPDATE:** Various 'tools' have been tried with limited success. Research is needed to specifically identify the needs of the industry before proposing additional tools.

4D7. Encourage expansion of entry-level furniture products and flooring from native species.

- **UPDATE:** Recommend considering a priority for investing time and resources into supporting 'wood goods from good woods.' This initiative would support affordable, durable wood products grown in

Vermont. This initiative would require design work and a manufacturing plant to achieve consumer acceptance and the required price point.

4D8. Enhance marketing of Vermont forest products and cross-promote with ongoing efforts to market Vermont food products.

- **UPDATE:** Happening on a small scale with cheese and cutting boards as one example. **Recommend supporting focused capacity to enhance outcomes.**

4E. RECOGNIZE AND PROMOTE THE VALUE OF FORESTS IN OUTDOOR RECREATION AND TOURISM

4E1. Develop and expand recreation and tourism uses within the forest economy by:

- a. Incentivizing public access to private lands (consider models such as the Public Benefit Rating System), providing funding for a grants program to help private landowners manage the public use of their lands, considering public education about existing landowner liability laws, and offer private landowner ombudsman services in the Attorney General's Office to provide advice regarding timber trespass, nuisance wildlife, and liability;
 - b. Explore possible new funding mechanisms to support expanded recreation and tourism;
 - c. Clarify that trails in the VT Trail System are considered public assets under ACT 250 and thus are subject to public project jurisdiction thresholds;
 - d. Consider ways to streamline the permitting process for minimal impact recreation projects;
 - e. Lift the gas tax cap on the in-state recreation trail program funds.
- **UPDATE:**
 - a. Continue to improve support and resources for private landowners.
 - b. Vermont Outdoor Recreation Economic Collaborative (VOREC) established with a community grant program with expanded funding being considered for the next three years with state and federal dollars.
 - c. & d. Current activity under Act 250 discussion and Executive Order on [Promoting and Providing Regulatory Certainty for Recreation Trails](#) report.
 - d. **Continue to recommend.**