Communities and Landscapes

The Vermont brand evokes strong images of working lands and thriving centers. For decades, Vermont has attracted tourists with beautiful natural and working landscapes surrounding quaint downtowns and village centers. These iconic images, however, represent more than marketing iconography. They represent Vermont's competitive advantage in creating economic opportunity and resilience in the face of a changing climate.

We are blessed with carbon sequestering forests and agricultural lands increasingly being used as productivity-enhancing carbon storage. We have traditional settlement patterns that will enable efficient and cost-saving energy reductions now and in the future.

To answer the GHG reduction component of our charge, Vermont must use building and transportation more efficiently. Vital the success of the recommendations discussed in those sections above is how we intentionally use land resources. We must realize compact development patterns, known as "smart growth," that will enable efficient use of transportation and building energy while fostering strong and thriving communities.

Vermont also has a tremendous opportunity to sequester additional carbon in our forests and soils. This has the potential to fundamentally alter our net GHG emission, but also provide economic benefit to our farmers and forest landowners. We should seize this opportunity where Vermont, despite its size, has a distinct advantage over more developed states.

Achieving Smart Growth

Smart growth represents an approach to land use that incorporates vital and compact city, town and village centers surrounded by working farms, forests and open space. This development pattern is more energy-efficient, environmentally sustainable, and economically responsible than the sprawling, auto-oriented patterns that defined the second half of the 20th century. Smart growth also provides a solid foundation to prepare and adapt Vermont's landscape for climate change.

Smart growth is energy efficient because it creates more housing choices close to jobs, stores, services and schools, which encourages more walking and biking and makes public transit work better. Supporting this type of development means fewer vehicle miles traveled. That reduces greenhouse gas emissions, creates cleaner water and air, saves energy and money, and helps us meet the efficiency goals in the state's Comprehensive Energy Plan. Additionally, compact development is often less intense to heat and cool – and can enable high efficient district heating options that simply are too expensive in more dispersed development.

Our scenic and working lands also provide critical environmental functions and provide economic vitality. Focusing growth in city, town, and village centers reduces development pressures to fragment agricultural and arboreal landscape. Large forest blocks, for example, clean and protect the water supply, minimize erosion, store flood waters, provide wildlife habitat, clean the air, capture carbon, provide outdoor recreation, and maintain Vermont's landscape. Farms and forests also provide food and cover for wildlife, help control flooding, and protect

wetlands. Protecting large blocks of productive agricultural soils and connected forest lands is critical to help Vermonters and wildlife adapt to climate change.

Not only does smart growth reduce our carbon footprint, it also creates economic activity and saves taxpayers money. [To add: information on the economic advantage of compact development]

Vermont's municipalities can realize significant savings by reducing long-term costs to provide and maintain public infrastructure and municipal services (i.e. water, wastewater treatment, public transportation, schools) through efficient economies of scale. In fact, development in compact centers generates more public wealth and costs less to service than the sprawl alternative on a per acre basis.

Demographic change, greenhouse gas emissions, severe weather, and financial challenges prompt a fresh look at Vermont's smart growth strategies and land use governance as means to address climate change. Smart growth works when development goals, investments, and regulatory structures align to make Vermont's centers attractive places to live, work and play, while ensuring the viability of farm and forest landscapes, and natural systems functions outside of centers.

Vermont has planned for and sought the implementation of smart growth principles for decades, but we have failed to consistently focus on implementing the many plans that have been written over the years. The recommendations below propose to focus almost exclusively on leading us to actual smart growth on the ground.

The commission recognizes that one obstacle for prioritizing such strategies for GHG reduction is that it can be challenging to measure the causal impacts of smart growth development patterns. This is the case partly due to available information, but also because the relatively slow pace of development in most of Vermont does not lead to short term returns – especially when compared with technological solutions that evolve more rapidly and demonstrate, on paper, a fast return on investment. Nevertheless, the Commission recognizes that Vermont's underlying land use pattern will ultimately make new technologies and other energy saving strategies far more successful than they would be if developed in isolation.

The smart growth and land use initiatives included below represent an important, foundational set of strategies to adapt to climate change and start reducing GHG emissions. Since changing land use patterns is a long-term undertaking, taking and investing in these basic steps now is essential.

However, this package of actions is only the foundation, and the Commission recognizes that additional work by state agencies will be needed to develop further innovations in this area and measure and communicate the long-term GHG reduction benefits of smart growth investments.

Increasing Carbon Storage and Economic Returns for Vermonters

[Add intro language from the sequestration group on the important of this as a GHG limiting piece and an economic engine for Vermont farms and forest landowners]

Communities and Landscapes Recommendations:

Recommendation:	**GHG Impact**	**Savings Impact**	**Investment Needed**	**Ease**
Develop Smart Growth Impact Metrics	NA	NA	$	👍 👍 👍
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Develop a set of indicators for Vermonters to use to evaluate the impacts of development, whether smart or otherwise		ACCD (ANR, NRB, VTrans, VDH, AAFM, RPCs, and land use stakeholders)		
Background: The application of conventional smart growth principles has proven positive economic and greenhouse gas emission reductions[1] but Vermont's form of compact development often does not reach the scale of conventional smart growth. Therefore, developing a set of indicators for Vermonters to use to evaluate the impacts of development will be critical to measuring and defining success in this arena.				

Recommendation:	**GHG Impact**	**Savings Impact**	**Investment Needed**	**Ease**
Develop Smart Growth Impact Metrics	NA	NA		
Action Step(s)		Designated Lead (Other Stakeholders)		
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[1] https://www.epa.gov/smartgrowth/smart-growth-and-climate-change

[2] https://www.epa.gov/smartgrowth/smart-growth-and-climate-change

Recommendation:	**GHG Impact**	**Savings Impact**	**Investment Needed**	**Ease**
Expand Interagency and Intergovernmental Support to Communities to Implement Smart Growth Principles	NA	NA	$	👍 👍 👍
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Develop an Inter-Agency Smart Growth Collaborative to integrate policies and programs that promote and incent compact, walkable development through coordinated municipal assistance		ACCD (ANR, VTrans, VDH, AAFM, RPCs, and municipalities)		
2. Create a pilot program to provide wrap around state and non-profit support to two communities for all-in approach		ACCD (ANR, VTrans, VDH, AAFM, RPCs, and municipalities)		
3. Develop funding model for unique rural wastewater challenges		ANR (ACCD, RPCs, and municipalities)		
4. Develop outreach materials for municipalities to better understand the value of smart growth		ACCD		
5. Conduct smart growth audits		ACCD/RPCs		
6. Encourage local planners to defer to regional plans in order to more efficiently complete the planning process		ACCD/RPCs		
Background: Many communities in Vermont lack the resources to be able to move from developing a vision and a plan to implementing smart growth principles. This recommendation serves to address some of the access barriers that smaller Vermont towns have trouble overcoming.				

Recommendation: Leverage Health Care Partnerships	**GHG Impact**	**Savings Impact**	**Investment Needed**	**Ease**
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Increase funding and technical support for programs that apply smart growth principles to improve community health and wellness, such as RiseVT and 3-4-50.		Green Mountain Care Board (VDH)		
2. Build capacity among health professionals and advocates to engage with local, regional, and state planning processes and infrastructure decisions.		VDH (ACCD)		
3. Explore mechanisms for increasing health care funds dedicated towards community investments that promote healthy living, such as through hospital community benefits.		Green Mountain Care Board (VDH)		
4. Explore ways to incentivize cities and towns to sign-on as healthy communities through RiseVT or 3-4-50 programs, such as including healthy community status as a scoring criterion for funding or technical assistance requests to state agencies.		VDH (ACCD)		
5. Integrate Health Department staff and/or community health partners into processes and decisions that affect community design and transportation systems.		Health in All Policies Task Force		

Background: Behavioral patterns, social circumstances, and environmental exposures account for 60% of health outcomes, with genetic predisposition accounting for 30%.[3] Even though healthcare only contributes to 10% of health outcomes, over $2 billion was spent in Vermont in 2016 to treat largely preventable chronic diseases.[4] Smart growth is a good investment for health because it helps increase opportunities for physical activity, reduce risk of transportation-related injuries, increase access to healthy food, and provide equitable access to education, employment, and vital services. Recognizing this, the public health sector has stepped up its efforts to promote healthy, active communities, which often also supports smart growth strategies. One example is the ongoing work of the Healthy Communities and 3-4-50 programs at the Health Department; a newer example is the RiseVT initiative. As the health care system shifts to a more prevention-focused approach, hospitals and other health care providers should be key partners and funders of smart growth strategies that promote better community health.

[3] https://www.nejm.org/doi/full/10.1056/NEJMsa073350#t=article

[4] http://www.healthvermont.gov/sites/default/files/documents/pdf/hpdp_3-4-50_Statewide%20Data%20Brief%20072617.pdf

Recommendation: Align Smart Growth Policies for an Evolving Transportation System	**GHG Impact** 	**Savings Impact** 	**Investment Needed** 	**Ease** 
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Continue to focus on integrated multi-modal planning; expand investments in complete-streets infrastructure and amenities to encourage walking and biking.		VTrans		
2. Align transportation investments in ways that reduce highway maintenance costs, support smart growth locations, and expand transportation choice.		VTrans (RPCs, municipalities)		
3. Convene a stakeholders group to identify barriers and propose pathways to complete-streets implementation.		VTrans, (ANR, VDH, RPCs, municipalities, schools, social service representatives, and advocacy organizations)		
4. Implement the March 2015 Work Plan, *Revising the Vermont State Standards (VSS), M2D2: Multimodal Development and Delivery*.		VTrans		
6. Prepare for autonomous vehicle technology by removing statutory barriers to deployment in ways that favor public transit, transit-oriented development, shared use of AVs, and other approaches that reduce overall vehicle miles traveled and scattered development.		VTrans (RPCs, municipalities, Governor, Legislature, advocacy organizations)		
Background: Transportation creates more greenhouse gas emissions than any other sector of the economy, both in Vermont and across the nation. Although vehicle electrification represents a critical strategy to reduce these emissions, technology alone will not be enough to meet Vermont's emission-reduction targets while growing the economy, accommodating an increasing population, preserving Vermont's scenic landscape, protecting the natural environment, and addressing the transportation needs of the variety of users of the transportation network. A multimodal transportation system organized around smart-growth principals can serve these purposes.				

Recommendation: Targeted Land Conservation	**GHG Impact**	**Savings Impact**	**Investment Needed**	**Ease**
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Make strategic, science-based land acquisitions and provide technical assistance to willing private landowners		DFW (conservation partners)		
2. Increase investment in land conservation and acquisition through funding mechanisms such as VHCB, LWCF, and general funds to the Fish & Wildlife Department and Forest, Parks, and Recreation.		Governor and Legislature		

Background: Targeted land conservation efforts to achieve important climate adaptation goals can yield significant results for both sequestering carbon and making Vermont more resilient. For example, focus investments in areas that will provide the most functional flood resilience value by looking at local regulations, land conditions, conservation easements, particularly in areas upstream of floodplain development. Additionally, provide technical assistance to willing private landowners to create healthy, functioning ecosystems that help sequester carbon and other greenhouse gases, improve flood resiliency, and maintain Vermont's working landscape. Investments in such parcels such as key habitat connectors or areas necessary to maintain important forest blocks will dissuade development in sensitive natural areas, and can support the working landscape and recreational opportunities.

Recommendation: Implement Act 171 Intergenerational Transfer Report Recommendations	**GHG Impact**	**Savings Impact**	**Investment Needed**	**Feasibility**
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Centralize technical assistance programs and funding.		Vermont Farm & Forest Viability Program		
2. Expand existing agricultural sector succession planning services/capacity to forestland owners.		Vermont Farm & Forest Viability Program		
3. Develop a VT Succession Planning Curriculum.		Vermont Farm & Forest Viability Program		
4. Increase Awareness of Succession Planning through UVA		Vermont Farm & Forest Viability Program		
5. Provide grants to landowners to help cover costs of legal, accounting and other necessary services.		Vermont Farm & Forest Viability Program		
6. Explore/Develop succession tax incentives, options and tools.		Vermont Farm & Forest Viability Program		

Background: Maintenance of large blocks of economically viable, working forestland discourages forest parcellation and fragmentation, and is a key smart growth strategy. Much of the state's forestland is privately owned and will change hands the coming decade; supporting programs that facilitate land transfer without parcellation is critical. Implementation of the Act 171 intergenerational transfer report is a primary strategy to achieve this goal. As outlined in that report, Vermont is at a critical demographic juncture where the majority of forested land is owned privately by people 65 and older. That land is at its greatest risk of subdivision and fragmentation when it changes hands, so outreach to current owners interested in keeping land intact is critical and can be relatively cost effective.

Recommendation: Expand Natural Resource Planning and Bylaws That Address Forest Blocks, Habitat Connectivity and River Corridors	**GHG Impact** 	**Savings Impact** 	**Investment Needed** 	**Ease** 
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Provide direct assistance to RPC's and municipalities though outreach and webinars.		DFW (VNRC and RPCs)		
2. Boost local and regional planning related to forest blocks and habitat connectors, per Act 171 and River Corridors (authorized by 24 V.S.A. § 4424).		ACCD (ANR, VNRC, RPCs, and watershed groups)		
3. Distribute existing guidance materials and promote trainings that were developed by ANR, ACCD, VNRC, and RPCs to implement Act 171.		ACCD, ANR, VNRC, RPCs		
4. Invest in increased staffing capacity at DFW, DEC and within RPC's to apply the best available science to assist with this work.		Legislature and Governor		
Background: Act 171 requires local and regional planning to identify important forest block and habitat connectivity areas, and to plan for development in these areas to minimize forest fragmentation. The ANR, ACCD and VRNC have already developed model bylaws, written guidance and a webinar on ways to implement Act 171 to maintain a resilient landscape that can respond to the challenges of climate change. In addition, Vermont's land use statutes strive to ensure that the design and construction of development in flood, river corridor protection, and other hazard areas are accomplished in a manner that minimizes or eliminates the potential for flood and loss or damage to life and property in a flood hazard area, and that minimizes the potential for fluvial erosion and loss or damage to life and property in a river corridor protection area. Together, these natural resource planning requirements support smart growth and provide a framework to promote climate change resilient communities, but action is needed to improve staff resources and the implementation of strategies to accomplish the planning goals.				

Recommendation:	**GHG Impact**	**Savings Impact**	**Investment Needed**	**Ease**
Regulation Aligned with Location-based Impacts			NA	
Action Step(s)		Designated Lead (Other Stakeholders)		
1. Support the Act 47 Commission by providing input, data, and policy recommendations.		NRB (ACCD, ANR, VTrans, AAFM, Act 47 advisors and stakeholders)		
2. Pass legislation making improvements to Act 250 and/or other land use statutes		Legislature		
3. Implement necessary guidance and rules		NRB (ACCD, ANR, VTrans, AAFM)		

Background: The Commission recommends supporting the Act 47 Commission (Act 250 at 50) in exploring, and subsequently addressing through legislation, jurisdictional and criteria questions that address changes needed to support development in compact centers and farm and forest integrity in the rural countryside. The economic challenges of compact development are often exacerbated by the regulatory structure. In addition, the maintenance of rural working lands and important natural resources are often hindered by gaps in the regulatory structure. The Commission supports the evaluation of challenges associated with redeveloping downtowns as well as protecting important natural resources and working lands that are critical to adapting to a changing climate with the goal of achieving comparable protections in a manner that flips the current paradigm where greenfield development is easier and cheaper than in areas that are targeted for concentrated growth.