























Strategically integrate planning and preparedness across disciplines and geographies addressing the interdependencies of transportation, energy, communications, and other systems.	No Action Taken
<b>Strategy 15c: Increase the resilience of critical infrastructure to severe weather and other climate change threats by reducing vulnerabilities of specific facilities.</b>	
Increase infrastructure investment needed to for walking, biking and transit; support planning for regional bike corridors to improve safety and transportation options between community centers. Identify and eliminate barriers to development, including inequities resulting from match, maintenance, and other requirements.	Advancing
<b>Strategy 15d: Increase the resilience of critical infrastructure to severe weather and other climate change threats by improving system efficiency, reliability and redundancies.</b>	
Deploy foundational informational and operational technology statewide to enable and optimize storage and other distributed energy resources (e.g., GridLogic, Virtual Peaker, other emerging distributed energy resource management systems, in particular those that are open-source to various technologies and vendors)	Advancing
Expand broadband to support remote work and tele-services to reduce the impact of travel disruptions.	Advancing
Update the 1995 Vermont State Highway Design Standards to create context sensitive, multi-modal projects that support smart growth per the Act 167 (2014) Sec 26 Report - VT State Standards Work Plan.	Advancing
Evaluate the risks and opportunities created by potential climate change in-migration to VT's critical infrastructure.	No Action Taken
Create a transportation flood resilience funding program to meet the requirements and related funding that are anticipated to be part of the 2021 reauthorization of the federal transportation act.	Advancing (Action Modified)
Improve road drainage around lakes / ponds to reduce stormwater runoff and erosion, especially on municipal roads.	Being Implemented (Action Modified)
Replace aging electric and communication infrastructure with the most appropriate resilient alternative when cost effective. For example, during normal replacement schedules for aging and unreliable lines, evaluate and where cost effective and feasible, improve resilience by relocating lines underground or through other options.	Advancing

<p>Identify mission critical facilities in collaboration with local and regional planners, utilities and transportation providers to identify actions, procedures, or investments to mitigate the impact of extreme weather events to services provided by these facilities. Examples of mission-critical facilities include designated emergency shelters, first responder facilities, hospitals and other medical facilities, key infrastructure such as water/wastewater pumping and treatment and sewer, key communications infrastructure such as fiber nodes, government offices, fuel suppliers, transportation hubs, supermarkets and other facilities municipalities identify as critical to serving communities during extreme weather events.</p>	<p>No Action Taken</p>
<p>Work with Vermont villages and property owners to relocate septic systems and public or private drinking water wells that are at risk due to floods.</p>	<p>No Action Taken</p>
<p>Develop programs to achieve net zero energy drinking water and wastewater treatment facilities including microhydro, solar energy, heat exchange, building envelope; AND operational and technological efficiencies.</p>	<p>No Action Taken</p>
<p>Expand public investment, particularly hazard mitigation funding to flood-proof or relocate drinking water and wastewater treatment infrastructure at significant risk of flooding, when flood damaged, or during end-of-life refurbishment.</p>	<p>More Information Needed</p>
<p><b>Pathway 16: Support the reduction of municipal, school district, residential, university, and hospital fossil fuel use in rural areas through equitable best practices that address the unique challenges of rural communities.</b></p>	
<p><b>Strategy 16a: Provide tools and resources to help assess data needs and establish best practices for rural communities, businesses, and institutions to reduce fossil fuel use.</b></p>	
<p>Ensure data on fossil fuel usage at the municipal level is available and accessible in one location for municipal and public use.</p>	<p>No Action Taken</p>
<p>Require the collection of fossil fuel usage data for municipal operations for buildings, vehicle fleets, and utilities; identify data gaps and ways to collect that data for measuring change in fossil fuel use going forward.</p>	<p>No Action Taken</p>
<p>Identify, develop, and share best practices for reducing municipal, school district, residential, commercial, and industrial fossil fuel consumption. Identify and assess existing practices and note gaps.</p>	<p>More Information Needed</p>
<p>Engage higher education institutions to actively participate in developing systems to gather, compile, update, extrapolate fossil fuel data and make that available to the public.</p>	<p>More Information Needed</p>
<p><b>Strategy 16b: Equitably expand access to programs that provide options to rural homeowners, landlords, municipalities, school districts, universities, and hospitals for weatherization, electrification, and utility upgrades.</b></p>	
<p>Develop cost-effective programs to support renewable energy development on school and other municipal property and evaluate and eliminate unnecessary statutory barriers related to capital financing and land purchase/lease.</p>	<p>Advancing (Action Modified)</p>

Entities that provide rebates for weatherization should stabilize rebate values year to year.	Advancing (Action Modified)
Evaluate all existing state-funded programs for effectiveness, access, and equity and consider increased funding for weatherization, energy efficiency and electrification programs in order to expand access to all Vermonters, and to expand programs with zero up-front costs. Existing programs may include Efficiency Vermont rebates, HEAT Squad - NeighborWorks of Western Vermont home energy audit program, and the Shared Equity program . In addition, the private sector should be engaged to provide innovative third-party financing opportunities that are paid for over time by the customer	Advancing
Provide funding to assist low-income homeowners to upgrade electric service to 200 Amps. Electric utilities and renewable energy developers could provide new incentives and financing options through third-party financing mechanisms, on bill financing, RES Tier III incentives , third-party power purchase agreements, and grants. All programs must include equal access to renters.	Advancing
Implement a statewide program to support electrification of municipal fleet vehicles ensuring it is designed to allow equitable access and participation to municipalities regardless of tax base.	Advancing
Ensure that there is broad and statewide public education and promotion of benefits, economic and otherwise, and opportunities for fossil fuel reduction.	Being Implemented
Revise state building energy codes and standards to require a minimum 200 Amp service for new construction as electrification expands.	Completed
Help individuals, municipalities, and businesses through the process of weatherization, energy efficiency and fuel switching upgrades by establishing and funding Weatherization and Efficiency Navigators at each Regional Planning Commission (RPC), expanding the services currently available at CAA agencies and VEIC, and ensuring coordination and a whole systems approach among the entities providing services.	No Action Taken
Explore Commercial PACE (Property Assessment Clean Energy) program for municipalities and other programs to elevate, such as bonding to support a statewide Tariffed On-Bill Finance Pilot and funding for a revolving loan fund for Public-Serving Institutions with retrofits. There may also be a need to continue providing the funding to support interest rate buydown (IRB) in EVT's Home Energy Loan and Business Energy Loan programs.	No Action Taken
The Public Service Department should ensure that all utilities provide similar opportunities for all customers (rebates, incentives) to encourage fossil fuel reduction, electrification, and energy savings.	No Action Taken
Support water and wastewater systems in conducting and implementing energy audits and recommendations for energy reduction and electrification.	More Information Needed

Create new educational programs to increase public outreach for existing energy efficiency, electrification, and utility upgrade programs.	More Information Needed
Review and expand existing programs to support landlords in weatherizing rental properties, including St. Johnsbury Rental Housing Improvement Program, and other programs in counties and towns.	More Information Needed
Increase low-income weatherization through the State Weatherization Assistance Program including technical assistance to help households and landlords manage the process.	More Information Needed
Expand workforce development programs such as the VT Training Program or the Department of Labor’s Workforce Education & Training Fund; cover costs for businesses to train in-house auditors/technicians. Pilot new programs in rural areas where workforce needed is greater.	More Information Needed
<b>Pathway 17: Change Vermont's land-use policies so current and future land development will be adaptive and resilient to climate change impacts</b>	
<b>Strategy 17a: Increase investment in the infrastructure (sewer, water, stormwater, sidewalks, bike lanes, EV charging, broadband, energy supply) needed to support communities that are more resilient to climate disruptions, equitable, resource efficient, and protects the adaptive capacity of natural resources.</b>	
Invest in enhancing water sources in vulnerable communities to enhance resilience to long-term drought.	Advancing
Increase investment to municipalities for new and expanded water and wastewater facilities to support reductions in inflow and infiltration into wastewater collection systems.	Advancing
Monitor and update stormwater permitting process as needed to ensure green infrastructure is preferred in design considerations.	Being Implemented
Complete a Climate Readiness assessments of drinking water, stormwater, and wastewater infrastructure. (This is an EPA tool that looks at all climate impacts including, fires, droughts, flooding, etc.).	No Action Taken
Examine regionalization efforts and sharing of resources for all water utilities.	No Action Taken
Increase investment in stormwater and green infrastructure, including separating combined wastewater and storm water systems, to protect public health and water quality.	More Information Needed
<b>Strategy 17b: Develop permanent private and public funding sources to floodproof, elevate and purchase commercial and residential properties, as well as conserve and restore ecosystem services upstream to protect our people, property, environment, and economy from flooding.</b>	
Fund ERAF for non-federal disasters in towns that have adopted floodplain and/or river corridor bylaws and to support the 25% non-federal match for buyouts and develop criteria for distribution when funding is limited.	No Action Taken

Establish a dedicated, comprehensive state level program with funding to strategically purchase or match funding for hazard-prone properties, easements to conserve river corridors, floodplains, forests, and wetlands to reduce overall flood risk and enhance flood storage statewide.	More Information Needed
Expand the eligibility criteria and increase funding for VHCB's conservation and buyout program, to address any flood-vulnerable structures.	More Information Needed
<b>Pathway 18: Ensure that all people have access to safe, accessible, energy efficient, and affordable housing.</b>	
<b>Strategy 18a: Update state and local land-use governance, regulations, practices, and investments to eliminate barriers to housing development.</b>	
Increase manufactured housing tax credits to replace older and inefficient manufactured homes.	Being Implemented
Expand pilot program to train a network of local builders in the design and building of small and mid-sized and accessory dwelling units (mother-in-law apartments) and fund homes starts within communities planning and investing in development-ready infrastructure, building development partnerships, and updating zoning bylaws to welcome new homes.	Being Implemented
Convene a statewide conversation on the Vermont Municipal and Regional Planning and Development Act's (24 VSA, Chapter 117) provisions on land use and housing to outline amendments and strategies that will expand housing choice, opportunity, and improve community resilience.	Completed
Expand the existing program to relocate mobile home park homes and residents outside of flood vulnerable locations.	No Action Taken
Create a rental registry and inspection program to locate all of Vermont's rental housing and improve their quality and safety.	No Action Taken
<b>Strategy 18b: Increase investments in the preservation and development of both private-market and nonprofit-owned affordable housing.</b>	
Continue to fund housing investments that leverage private initiative and funding to cost-effectively create housing units under models like the Re-Housing Recovery Program funding and the proposed Vermont Housing Investment Program.	Being Implemented
Create programs to assist prospective homebuyers to purchase and make improvements to homes that are energy inefficient and otherwise in need of immediate investment.	Being Implemented
Increase support for mission-driven, non-profit housing developers to maintain their ability to produce high-quality, energy- and location-efficient housing.	Being Implemented
<b>Strategy 18c: Increase access to fair and affordable housing for Vermonters who are housing instable</b>	

Implement the recommendations of the Analysis of Impediments to Fair Housing.	Being Implemented
Increase funding for community-based homelessness prevention and rapid re-housing.	More Information Needed
Audit existing residential building codes to ensure that standards account for anticipated climate change impacts to Vermont, including but not limited to increased temperatures extremes and precipitation (combine into a single building code action)	More Information Needed
<b>Pathway 19: Adaptation—Sustain, restore, and enhance the health and function of Vermont's lands and water to help both natural and human communities adapt to climate change</b>	
<b>Strategy 19a: Increase technical assistance, capacity, education, and resources to support private and municipal farm and forestland owners, planners, and managers for climate change adaptation.</b>	
Develop & fund climate adaptation planning and training for all farmers and foresters.	Advancing (Action Modified)
Increase funding to Regional Planning Commissions (RPCs) to hire and support natural resource staff, potentially through Natural Resource Conservation districts.	Advancing
Enhance and support funding for technical assistance to farmers (e.g. fully fund UVM Extension to support climate adaptation training for agriculture and support other institutions of higher education in this endeavor), landowners (e.g. fund climate adaptation training through FPR's Forests & Climate program), and municipalities (e.g. fully implement Act 171).	Being Implemented
<b>Strategy 19b: Promote and incentivize Climate Adaptation forest management practices</b>	
Make the state guide to maintaining and creating resilient forests more usable	Advancing
Develop education/outreach materials and training regarding climate adaptation forestry specific for Vermont forest types and conditions.	Being Implemented
Where appropriate, promote planting future climate adapted tree and crop species	Being Implemented
<b>Strategy 19c: Promote funding for nature-based solutions and traditional ecological knowledge efforts and incorporate into state funding and planning efforts.</b>	
Develop financial mechanisms (e.g. a revolving loan fund, green bank, loan guarantees, pension fund investments, etc.) to de-risk capital investment in and support for NBS and TEK projects	Advancing
Elevate the role traditional ecological knowledge (TEK) plays in climate adaptation and resilience and incorporate TEK into state- led climate assessments, planning efforts, and prioritization frameworks	Advancing



Incentivize nature-based solutions and traditional ecological knowledge (TEK) in state regulatory processes and funding programs	Advancing
Include Tribal members, traditional ecological knowledge traditional ecological knowledge (TEK), youth in state, regional and municipal resource management planning	Being Implemented
Complete a statewide audit of technical assistance, funding, and regulatory programs to review support for NBS and TEK and assess the degree to which they support or hinder climate adaptation, and use the findings to create planning and/or funding prioritization criteria that better align state programs	No Action Taken
<b>Strategy 19d: Manage natural and working lands for biodiversity, forest health, and climate resilience.</b>	
Fund support for local academic institutions, researchers, and applied research to evaluate best climate management practices for our lands	Advancing
Through direction to VT Fish & Wildlife and VT Forests, Parks and Recreation, establish primary land management objectives of protecting and improving forest health and biodiversity on state lands, and private lands enrolled in UVA; and promote adoption of these objectives through outreach to regional and municipal planners.	Being Implemented
Support research efforts to better understand forest ecosystems, local climate change and impacts to forests and ecosystem services	Being Implemented
Enhance resilience funds to support the financial capacity of land managers to respond and adapt to natural hazard and climate impacts	Being Implemented
Incentivize and provide appropriate support for invasive species control efforts, specifically where populations threaten the perpetuation of forest cover	Being Implemented
Fund increased investment in healthy soils education and implementation of practices	Being Implemented
<b>Strategy 19e: Plan and regulate for climate resilience and adaptation.</b>	
Establish "climate resilience zones" informed by existing data, bolstered with new research/science, to identify locations that have high resilience potential for both the natural and built environments and use to inform land use development and regulations	No Action Taken
Encourage the Legislature to authorize the creation a multi-stakeholder committee process with funding to support the development of a statewide land use planning policy and implementation plan that guides development to growth areas, town centers, and appropriate rural locations, and limits the development within ecologically sensitive/risk-prone areas. The Legislature should clarify how and if this plan informs or directs land use planning, policy and regulation at the local, regional, and state level.	No Action Taken

If a statewide land use planning policy and implementation plan is authorized, explore creation of a State Planning Office and/or other potential structures within the executive branch to implement the Plan at the state level.	No Action Taken
Per the formula in statute, fully fund Regional Planning Commissions (RPCs) to ensure sufficient capacity necessary to address climate change in regional and municipal plans	More Information Needed
<b>Strategy 19f: Increase flood resilience of the natural and built environments.</b>	
Invest transportation funding in improving flood resilience and aquatic and terrestrial connectivity	Being Implemented
Incentivize water storage in natural areas to promote flood resilience and biodiversity through expansion of wetland, floodplain, and/or river corridor easements that better compensate landowners/managers	More Information Needed
Ensure opportunities for floodplain reconnection and nature-based solutions are considered a high priority in the Statewide Conservation & Buyout Program through incorporation of multi-stakeholder developed prioritization criteria	More Information Needed
<b>Strategy 19g: Promote healthy, connected river corridors, floodplains, and wetlands.</b>	
Support and fund research and design to strategically invest in floodplain and river corridor reforestation efforts. Specifically, develop an inventory of priority/critical headwater and floodplain storage areas, prioritize investments for restoration and protection in these areas, and use to inform Compact Settlement planning efforts	More Information Needed
Expand support for riparian buffer enhancements to easements with a goal of increasing the amount of vegetation and biodiversity in riparian areas	More Information Needed
Increase support for wetland restoration and protection	More Information Needed
Develop a ‘pay-for-practice’ incentive program and explore state tax policy incentives for forest landowners and farmers to adopt climate adaptive management practices	No Action Taken
Create a mechanism, position, or body within the Executive Branch to ensure coordinated climate action across state government with just transitions and environmental justice expertise. This interagency body or mechanism is intended to connect actions both within and beyond the scope of the GWSA-required Climate Action Plan, with a goal of ensuring effective communication across agencies that work together to promote climate change mitigation/adaptation/resilience, and adding a consistent climate lens to the myriad of regulatory and funding programs.	Completed
<b>Pathway 20: Viability—Support and empower Vermont’s natural and working lands owners, managers, and caretakers to enhance farm and forest viability and to make informed decisions to increase resilience and adaptation to climate change.</b>	

<b>Strategy 20a: Support and enhance local food markets for greater viability, mitigation, and resilience benefits.</b>	
	More Information Needed
<b>Strategy 20b: Foster partnerships at all levels (state, federal, nonprofit, and private sector): essential to recognizing, capacitating, and building strategies for landowners to address climate change and enhance community resilience.</b>	
Dedicate funds to support Vermont Natural Resources Conservation Districts and farmer watershed organizations with the specific objective of allowing them to reach other farmers and do farmer-to-farmer education about improved soil and manure management.	Being Implemented
Maintain Ag & Ecosystems Subcommittee through development and implementation of GWSA and CAP to cultivate, build and reinforce state, federal, nonprofit, and private sector collaborations	No Action Taken
Fund a research project to fully understand household food insecurity in Vermont and how to invest in its elimination. The design and implementation of the research project should engage academics, advocacy groups, and impacted individuals, and include research on geographic spread, root causes, and costs to the health care, educational, and emergency response systems (as written in the 2021-2030 F2P Strategic Plan pg. 158). (collaborate with Hunger Free Vermont, Vermont Foodbank, VT Releaf Collective)	No Action Taken
Work closely with USDA NRCS's 2021 Action Plan for Climate Adaptation and Resilience to leverage resources and increase efficiencies of practice education and implementation	More Information Needed
<b>Strategy 20c: Expand funding for existing programs dedicated to farmland access, forestland ownership, and conservation, and leverage this funding to increase land access through flexible and new ownership financing mechanisms, policies, and models.</b>	
Assist food and farm businesses with navigation of municipal and state permit requirements and regulations. This will create a more supportive environment for business growth and diversification, especially as it relates to on-farm accessory businesses, farm employee housing, and development of off-farm processing, distribution, and storage infrastructure (as written in the 2021-2030 F2P Strategic Plan pg. 33).	Advancing
Investigate innovative funding mechanisms for assisting with implementation of climate smart agriculture practices, crop insurance for diversified Vermont-scale farms, and emergency recovery following extreme weather events, to better respond when climate change related events occur	Being Implemented
<b>Pathway 21: Economies—Grow and connect local and sustainable natural and working lands' economies, markets, and food systems while ensuring and providing equitable access to said economies, markets, and food systems for Vermont's people.</b>	

<b>Strategy 21a: Develop, expand, and sustain local markets specifically for food, agricultural, and forest products in ways that ensure food sovereignty and security and provide for all Vermont’s peoples.</b>	
Support research and development efforts, and expansion of new markets and opportunities for local wood products processing and manufacturing in Vermont	Advancing
Develop supply chain substitutions which better support local products	Advancing
Research the efficacy of food hubs as public infrastructure (e.g. libraries and public infrastructure)	Advancing
Map Vermont’s agricultural land base and production capacity, including geographic data about predicted climate change impacts, aggregation and distribution infrastructure, and regional dietary needs (as written in the 2021-2030 F2P Strategic Plan pg. 32)	Advancing
<p>Provide additional support for critical programs that help Vermont’s agricultural sustainability and ability to address climate issues including:</p> <ul style="list-style-type: none"> <li>• Support the growth of VAAFM Meat Inspection and Agricultural Development programs, which will help expand Vermont products into the regional marketplace and develop consumer education and public awareness campaigns around the steps involved in getting meat products from farm to table;</li> <li>• Fund a pilot aggregation and sales system that effectively serves both the charitable food system and institutional and other market channels, through a structured partnership among established processors, aggregators, and gleaners. The pilot would include data collection on specific marketable surplus food products;</li> <li>• Support the Vermont Farm to School Network;</li> <li>• Support organizations in the charitable food system to source food directly from Vermont farmers;</li> <li>• Create a Local Food Access Funding Program;</li> <li>• Develop a distribution and logistics infrastructure investment plan to guide strategic transportation investments with the express purpose of improving the efficiency and cost-effectiveness of in-state and regional food distribution. Include a business plan analysis for a public/private Vermont wholesale terminal market that would provide cross-docking, cold storage, and logistical service between Vermont producers and regional wholesale buyers;</li> <li>• Using the infrastructure study as a guide, increase public-private investment in intermediated market distributors to improve operational efficiencies and overall sales through improved marketing, infrastructure, route optimization and shared transportation-management software, and access to logistics professional development and consulting.</li> </ul>	Advancing
Develop a strategic plan for the forest economy, modeled on the Farm-to-Plate strategic plan but improved to better incorporate impacted stakeholders and principles of equity, as well as examining our current language and approach to forest management.	Being Implemented

Develop alternative markets for residue, by-products and otherwise not used wood, focusing on cellulose insulation, bioplastic composites, or biofuels	No Action Taken
Support robust funding for Working Lands Enterprise Initiative and prioritize funding to businesses that have climate/low carbon goals	More Information Needed
<b>Strategy 21b: Promote workforce development in all working lands sectors along all points of the supply chain.</b>	
Develop, endorse and implement fair trade and equitable labor practices and just livelihoods for the natural and working lands sector	More Information Needed
<b>Strategy 21c: Strengthen all aspects of working lands' supply chains and the associated infrastructure to support them.</b>	
Make significant investment in storage, processing, and distribution infrastructure in order to enhance product innovation and quality across all Vermont food and forest products.	Advancing
Support product-specific value chain development through facilitation of producer, distributor and buyer matchups and supporting producer-driven aggregation, distribution, and marketing enterprises.	Advancing
<b>Strategy 21d: Ensure equitable access to local foods, culturally relevant foods, land, funds, grants, and technical assistance for people who have been historically marginalized and come from impacted communities.</b>	
Uplift and resource the work of the Vermont Releaf Collective and other BIPOC led organizations	Advancing
Build out and utilize TEK to build out connections to our Tribal and Indigenous communities in the development and utilization of traditional products, e.g. birch syrup, sumac spices, etc.	No Action Taken
Improve funding opportunities and create equitable access for BIPOC organizations and BIPOC owned businesses by developing multi-year, unrestricted BIPOC centered grants and loan programs.	More Information Needed
<b>Strategy 21e: Develop a Vermont food security and sovereignty plan, centered around a thriving food system, and inspired by community-based responses to food insecurity and disruptive events.</b>	
Involve food insecure individuals as well as farmers in the planning, and investigate questions including, but not limited to, affordable housing, health care, transportation, siting of retail grocery stores, food distribution, and ensuring the continued production of food in Vermont.	Advancing
Work to adopt state and regional level policies, procedures, and plans to ensure that the Vermont food supply is sufficient to withstand global or national food supply chain disruptions caused by climate change and other disasters (as written in the 2021-2030 F2P Strategic Plan pg. 32).	Advancing

**Pathway 22: Land Use—Shape land use and development that support carbon sequestration and storage, climate resilience and adaptation, and natural and human communities for a sustainable and equitable future.**

**Strategy 22a: Promote and incentivize compact settlement and reduce forest fragmentation.**

Develop required climate-based framework and/or criteria for state grant and regulatory programs.

Advancing

Provide enhanced technical assistance and support to municipalities and regions, including outreach and education for landowners and community members, to develop and implement town plans intended to maintain forest blocks and connecting habitat as authorized by Act 171, and effective zoning and subdivision bylaws to maintain forest blocks and connecting habitat.

More Information Needed

**Strategy 22b: Include biodiversity and resilience goals in the planning and management of natural and working lands (both public and private).**

Support efforts to research, educate about, and implement practices informed by traditional ecological knowledge such as using fire to promote regeneration and coppicing, where appropriate for Vermont’s forests and ecosystems

Advancing

Identify lands needing conservation because they are in or adjacent to the built environment that have large impact to human health, wellbeing, and equity

Advancing

Improve statewide forest planning efforts on State and Federal Lands, including development of an action plan by ANR for how State Lands will help accomplish Vermont Conservation Design targets by 2030 and 2050, and collaborate with the U.S. Forest Service (Green Mountain National Forest) planners for more unified forest planning across the state.

Being Implemented

Examine the implications and consider establishing a state policy of no net-loss of natural and working lands (including active and passively managed forests, agricultural lands, and wetlands) accounting for the transitions of lands within and between these conditions, with aspiration for a net gain.

(1) As part of this effort, track land use trends to quantify degree of no net-loss, including aggregating data on subdivision, land transfers, and the loss and/or fragmentation of forests, agricultural lands and wetlands to inform progress and state policy.

(2) Develop a strategy to increase the area of land in functioning wetlands, with an initial focus on protecting and recovering the highest quality wetlands (“Class I Wetlands” in ANR’s wetlands rules), consistent with the goal of ensuring no net loss of other categories of natural and working lands.

Being Implemented

<p>Recommend amending the Use Value Appraisal (UVA) program to allow for</p> <ol style="list-style-type: none"> <li>(1) greater development of old forest structure as articulated in the targets of Vermont Conservation Design;</li> <li>(2) the enrollment of wildland reserves under the existing forestland category where conditions and eligibility criteria are met as defined by Forest Parks and Recreation, facilitating the development of old forest conditions through active restoration and/or passive management as a means of enrollment in the Old Forest ESTA (ecologically significant treatment area) category;</li> <li>(3) privately held parcels with 'Forever Wild' easements on them, held by a qualified 501c(3), to be enrolled in the UVA Program in the Conservation Category; and</li> <li>(4) the potential for, and implications of, developing a new category of enrollment for land in UVA which allows for passive management modeled on the 'open-space' designation included in similar programs elsewhere in New England.</li> </ol>	<p><b>Completed</b></p>
<p>Adopt legislation to authorize ANR to revise the Flood Hazard Area &amp; River Corridor (FHARC) rule to incorporate statewide jurisdiction and permitting authority for river corridors for all kinds of development.</p>	<p>More Information Needed</p>
<p><b>Strategy 22c: Invest in strategic conservation in order to increase the pace of permanent conservation towards 30x30 targets (described in federal report “Conserving and Restoring America the Beautiful”), with Vermont Conservation Design acting as the guiding plan for prioritization of efforts.</b></p>	
<p>Expand use of the Water Infrastructure Sponsorship Program (WISPr) to improve accessibility and use for restoration projects.</p>	<p>Advancing</p>
<p>Use best available data and mapping to analyze existing portfolio of conserved agricultural lands to identify forest, wetland or natural community restoration opportunities and prioritize funding for these projects</p>	<p>Advancing</p>
<p>Maintain a suite of Farmland Conservation &amp; Protection tool ranging from voluntary, regulatory and planning (e.g. easements, Act 250, planning, zoning).</p>	<p>Advancing</p>
<p>Per the formula in statute, fully fund the Vermont Housing &amp; Conservation Board (VHCB); including \$3M for the Farm &amp; Forest Viability Program, and increase annual VHCB funding above the statutory amount by 15%, targetting those funds for implimentation of conservation actions recommended in CAP, especially those related to forests.</p>	<p>No Action Taken</p>
<p>Promote statewide landscape connectivity and forest blocks conservation planning through robust support of the Staying Connective Initiative and use of Vermont Conservation Design and TNC’s Resilient and Connected Landscape in state program prioritization frameworks.</p>	<p>More Information Needed</p>

Through permanent conservation coupled with both active and passive restoration efforts on both public and private lands, allow approximately 9% of Vermont's forest to become (or be maintained as) old forest, specifically targeting 15% of the matrix forest within the highest priority forest blocks identified in Vermont Conservation Design to achieve this condition.	More Information Needed
Identify and protect climate refugia.	More Information Needed
<b>Strategy 22d: Increase technical assistance, capacity, education, and resources to support private farm and forest landowners in addressing the trends relating to intergenerational transfer.</b>	
Support forestland succession/estate planning efforts to reduce forest parcelization and fragmentation through implementation of the Act 171 'Intergenerational Transfer of Forestland Working Group Recommendations' of 2017.	Being Implemented
Develop and implement a farmer retirement program to facilitate the transfer of intact farmland.	More Information Needed
<b>Strategy 22e: Avoid, minimize, and mitigate the negative impacts of renewable energy generation, like other land development, on natural and working lands.</b>	
Incentivize or carefully consider mandating solar and wind capacity on new buildings as well as in previously-disturbed/developed areas and avoid and minimize forest clearing for renewables through incentives and other siting polices, rules, and regulations	Advancing (Action Modified)
Consider the need for incentives to site new renewable energy generation on parking lots, rooftops, and already altered locations. And discourage and penalize siting of new renewable energy generation on intact ecosystems, forests, and natural land	Advancing (Action Modified)
Evaluate the effectiveness of the program of Regional Enhanced Energy Plans and the application of these plans to decisions by the PUC in terms of their ability to direct the siting of renewable energy projects in a manner that avoids the conversion of working and natural lands and the loss of the carbon storage and sequestration, climate resilience, and other co-benefits that are associated with those lands. If the process of developing and implementing the system of Regional Enhanced Energy Plans is not achieving this goal, then adjust the laws and regulations applicable to renewable energy siting to ensure the effectiveness of the plans	No Action Taken
Create statewide environmental justice policy.	Completed
<b>Pathway 23: Maintain and expand Vermont's natural and working lands' role in the mitigation of climate change through human interventions to reduce the sources and enhance the sinks of greenhouse gases.</b>	
<b>Strategy 23a: Leverage, expand, and adapt existing State of Vermont programs that support the agricultural sector's mitigation of climate change.</b>	



	More Information Needed
<b>Strategy 23b: Create a system for tracking and accounting metrics and indicators for natural and working lands.</b>	
Based on the findings of the technical RFP mentioned in action step (b) of this strategy, the VCC should consider recommending that the State of Vermont GHG emissions inventory protocol established in 10 V.S.A. § 582 be amended to include an inventory of GHG emissions that align with the intent and standards of the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories that will include a net GHG emission accounting for the agriculture, forestry and other land use (AFOLU) sector.	More Information Needed
Develop a methodology and protocol for quantifying climate mitigation, resilience, and adaptation impacts of existing state and federal water quality implementation programs as reported through the annual Clean Water Initiative Performance Report. The Clean Water Initiative Performance Report “summarizes the State of Vermont’s clean water efforts and demonstrates how investments are making a difference through accountability measures.” As mentioned, most water quality conservation practices and programs also have climate mitigation, resilience, and adaptation benefits. Recommend using existing tracking systems and quantify the climate benefits from this existing implementation and data tracking. The data spans state and federal funding programs and regulatory programs that drive clean water efforts and coordinates across agencies to track these efforts and monitor progress.	More Information Needed
The Vermont Climate Council has recommended developing and issuing a Request for Proposals (RFP) that will review and analyze methodological gaps of emission inventory tools currently used by the State of Vermont to quantify greenhouse gas emissions for evaluating changes in the Agriculture, Forestry and Other Land Use (AFOLU) sector and the tools’ alignment with the Intergovernmental Panel on Climate Change (IPCC), Environmental Protection Agency (EPA), and peer state methodologies and approaches. The specific recommendations for this RFP can be found in the Carbon Budget Report memo found in Appendix 10.	More Information Needed
<b>Strategy 23c: Implement a Payment for Ecosystem Services (PES) program for natural and working lands.</b>	
Develop and implement a PES program for healthy soils and soil carbon sequestration on farms. Act 83 of 2019 convened the Payment for Ecosystems Services Working Group whose purpose is to recommend financial incentives designed to encourage farmers in Vermont to implement agricultural practices that improve soil health, enhance crop resilience, increase carbon storage and stormwater storage capacity, and reduce agricultural runoff to waters. Final program recommendations from the PES Working Group are due in January 2023.	Advancing
Develop and implement a PES program for forestland owners including water filtration/cycling, carbon sequestration, etc.	No Action Taken

<p>Incentivize management for ecosystem services through a tax credit system that compensates landowners/managers for maintaining or restoring ecosystem services.</p>	<p>No Action Taken</p>
<p><b>Strategy 23d: Address upstream waste and downstream emissions from food waste and synthetic fossil-fuel based inputs.</b></p>	
<p>Develop program for tracking and limiting the use of chemicals, substances, or products that contribute to climate change in Vermont and leverage existing legislative activity on this topic</p> <p>i. VAAFM currently tracks statewide commercial pesticide use as well as statewide fertilizer use. This data is currently used to establish trends in the use of these inputs as our agricultural systems evolve.</p> <p>ii. Programs to track these agricultural inputs already exist at VAAFM but have not been assessed through the lens of contributions to climate change. VAAFM or the new newly established Agricultural Innovation Board (AIB) established by Act 49 of 2021 can prioritize an assessment of the impacts and benefits our agronomic management systems have on offsetting climate change.</p> <p>iii. An assessment of Vermont’s different agronomic practices and management, such as, conventional, organic, no-till, and cover cropping, should be weighted for impacts on climate change based on agricultural inputs, fuel consumption, carbon sequestration and other measurable factors</p>	<p>Advancing</p>
<p>The state should identify simple, low- and no-cost mechanisms to increase organics diversion and provide incentives and business and workforce development to private organics haulers and composters (including farms).</p> <p>i. Act 41 of 2021 created an Agricultural Residuals Management Program to be administered by VAAFM. The purpose of this new chapter of law is to establish a program for the management of residual wastes generated, imported to, or managed on a farm for farming in Vermont</p>	<p>More Information Needed</p>
<p><b>Strategy 23e: Develop and implement programs which incentivize management practices which maintain or increase forest carbon storage.</b></p>	
<p>Apply these certification standards to the procurement of forest products utilized in energy or thermal generation facilities subject to PUC oversight (parallel to the existing review for state mapped deer winter yard, etc.) through potential revisions to the renewable energy standard.</p>	<p>No Action Taken</p>
<p>Create or adopt existing certification standards where management activities account for principles of Improved Forest Management towards increased carbon storage, as well as maintaining and creating resiliency (as described in existing state guidance such as Maintaining and Creating Resilient Forests in Vermont: Adapting Forests to Climate Change, VTFPR 2015, or as modeled in existing programs such as the American Forest Foundation’s Family Forest Carbon Program).</p>	<p>No Action Taken</p>

Explore additional market opportunities for certified products, expanding the potential revenue base to support Improvement Forest Management (parallel FSC, SFI, etc.)	No Action Taken
<b>Strategy 23f: Leverage market-based solutions, such as existing or new regional carbon market opportunities, to incentivize forest management practices which sequester and store greater amounts of carbon in our forests.</b>	
Incentivize in-state purchase of carbon credits developed by Vermont-based or regional carbon projects through a system which addresses concerns of accounting (i.e. additionality and leakage)	No Action Taken
Work to develop a new Vermont-Based or regional (modeled on RGGI) Carbon Credit marketplace with necessary research and standards which address concerns around the efficacy of baseline establishment, accounting for additionality, the potential for leakage, and address equity for the diversity of wood lot owners across the state	No Action Taken
<b>Strategy 23g: Increase tree coverage.</b>	
Expand tree and other planting efforts on private land to promote restoration efforts to reforest riparian areas, wetland buffers, and degraded lands	Advancing
Increase funding to tree planting via Renewable Energy Standard (RES).	No Action Taken
Expand funding and support to the Vermont Community Canopy Program	More Information Needed
Increase support, funding, and education for increased urban tree planting efforts expansion to increase access to natural spaces and improve carbon sequestration/storage in the urban environment	More Information Needed
Provide incentives for restoration and expansion of floodplain forests	More Information Needed
<b>Pathway 24: Support and empower Vermont's farmers, foresters, and land workers to capacitate renewable energy and building product transitions.</b>	
<b>Strategy 24a: Educate, track, and appropriately reward on-farm renewable energy.</b>	
Increase outreach and incentives to on-farm solar installation on existing built infrastructure.	Advancing
Reward and support renewables on farms on rooftops, barns, storage facilities, and minimize or avoid loss of working and natural lands to renewables development by siting solar in areas that retain some agricultural use, such as grazing, or in locations that do not meaningfully diminish the agricultural viability of a farm.	Advancing

<b>Strategy 24b: Promote and incentivize use of local wood and agricultural products to reduce embodied carbon footprint.</b>	
Develop alternative markets for non-timber wood, focusing on cellulose insulation, bioplastic composites, or biofuels	Advancing
Promote and incentivize use of agricultural and sustainably harvested wood -based construction materials (subject to existing certification criteria or procurement standards to be developed) over imported wood and/or non-wood materials with high carbon footprints (such as steel, concrete, etc.) Continue to research life-cycle accounting of these products for greatest impact.	No Action Taken
Develop a regional certification standard for forestry to validate carbon storage values for forest building products (methodologies supporting supply chain validation for carbon storage are frequently using FSC as a proxy; regional-scale certification standards focused around net carbon benefit are needed for product transparency)	No Action Taken
Through state procurement standards, require that publicly funded building projects use chain of custody certified wood products (MASS timber, cellulose insulation, etc.) that have been harvested under sustainable procurement standards over materials with a higher carbon footprint (such as steel, concrete, etc.), prioritize locally sourced wood products when possible.	More Information Needed
<b>Strategy 24c: Transition fuel sources for the forestry and maple sector.</b>	
Provide funding to incentivize sugar makers to switch evaporators from fossil fuels to wood pellets and incentivize elimination of diesel generators for sap vacuum pumps.	Being Implemented
Incentivize alternative fuels such as biofuels or offsets for logging equipment.	No Action Taken
<b>Strategy 24d: Sustainably source renewable energy products and materials.</b>	
Fund competitive research to track and innovate on the sustainability and ethical implications of renewable energy materials and products being consumed to meet the CAP	Advancing (Action Modified)
<b>Pathway 25: Support compact settlement patterns that contribute to the reduction of GHG emissions, enhance community and built environment resilience, and help conserve natural and working lands.</b>	

<b>Strategy 25a: Increase investment in the infrastructure (sewer, water, stormwater, mixed-use development, housing, sidewalks, bike lanes, EV charging, broadband, energy supply) needed to support compact, walkable development.</b>	
Expand the eligibility of the existing downtown and village center tax credit programs to revitalize neighborhood housing in and around state designated centers.	Advancing (Action Modified)
Support public private partnerships to fund the design and construction of new infill housing in existing neighborhoods.	Advancing
Increase Municipal Planning Grant (MPG) funds to support physical planning and design, zoning modernization and bylaw adoption that creates housing growth opportunities and more housing choices.	Completed
Expand the existing downtown and village tax credit program eligibility to offset the cost to elevate or flood proof existing buildings located in areas with increased flood risks.	No Action Taken
Increase investment in municipalities to improve, expand and build new drinking water and wastewater infrastructure to support compact development, including asset management tools to support long-term operation and maintenance.	More Information Needed
Establish a rolling planning grant for communities in need of consulting assistance to prepare Neighborhood Development Area (NDAs) applications. This designation works to align state and local regulations to increase housing options within compact centers.	More Information Needed
Make village centers permanently eligible for the downtown transportation fund that builds infrastructure needed to increase walking, biking and transit.	More Information Needed
<b>Strategy 25b: Update state and local land-use governance, regulations, and practices to remove barriers to compact settlement and improve coordination on land use issues across agencies, departments, municipalities, boards, commissions, and authorities.</b>	
Prioritize public funding for mixed-use developments near transit hubs in regional and rural centers	Advancing
Align development regulations and remove financial barriers to compact development in and around downtowns and village centers (i.e., Act 250, local zoning, aging infrastructure, etc.). Provide statewide guidance and incentivize housing in built up areas to encourage development away from open fields and forests, and river corridors.	Advancing

<p>If a statewide land use planning policy and implementation plan is authorized, explore creation of a State Planning Office and/or other potential structures within the executive branch to implement the Plan at the state level.</p>	<p>No Action Taken</p>
<p>Create an office of Strategic Investment and Coordination that supports achievement of land use planning goals by aligning and resolving conflicts in state and local regulations and funding and provides a permitting platform from both the customer and policy objective perspective.</p>	<p>More Information Needed</p>
<p>Hire a consultant to review and assess the state designation programs that recognize and support Vermont’s compact settlement areas.</p>	<p>More Information Needed</p>
<p>Encourage the Legislature to authorize the creation a multi-stakeholder committee process with funding to support the development of a statewide land use planning policy and implementation plan that guides development to growth areas, town centers, and appropriate rural locations, and limits the development within ecologically sensitive/risk-prone areas. The Legislature should clarify how and if this plan informs or directs land use planning, policy and regulation at the local, regional, and state level.</p>	<p>More Information Needed</p>
<p>Create a State-wide redevelopment authority to bank land , underwrite acceptable risk, address blight, vacancy, and brownfields, improve building flood resilience in settled areas, and plan for new neighborhood development and infrastructure.</p>	<p>More Information Needed</p>
<p>Provide enhanced technical assistance and support to municipalities and regions, including outreach and education for landowners and community members, to develop and implement town plans intended to maintain forest blocks and connecting habitat as authorized by Act 171, and effective zoning and subdivision bylaws to maintain forest blocks and connecting habitat. Because forest and habitat blocks do not end at state and national boundaries, support engagement in interstate and bi-national forest block and habitat connectivity efforts such as the Staying Connected Initiative at both the state and regional levels.</p>	<p>More Information Needed</p>

<p>Update Act 250 to promote compact settlement by:</p> <ul style="list-style-type: none"> <li>i. waiving the mitigation fees for prime agricultural soils for alternative or community wastewater systems that will serve a state designated center.</li> <li>ii. removing the population-based caps on the Act 250 exemption for priority housing projects</li> <li>iii. including criteria that better address climate change, forest fragmentation and forest loss, to incentivize growth in the state’s designated centers and better address the specific challenges to working lands enterprises;</li> <li>iv. updating its governance, staffing, public engagement, and the role of State Agency permits in the Act 250 process to create the enterprise capacity necessary to implement new climate related criteria and respond to future land use pressure from climate change and in-migration of climate refugees.</li> <li>v. removing Act 250 jurisdictional thresholds for housing development within and immediately adjacent to certain state designated centers to incentivize compact, dense settlement in areas with adequate local land use laws and existing infrastructure, reducing development pressures on open spaces such as greenfields and forested locations. These centers should grow in a manner by which walking and biking are preferred means of mobility, and mobility infrastructure should be designed for universal accessibility.</li> </ul>	<p>More Information Needed</p>
<p>Amend Neighborhood Development Area (NDA) enabling statute to allow the inclusion of river corridors upon local adoption of River Corridor bylaws.</p>	<p>More Information Needed</p>
<p><b>Strategy 25c: Fund research, data collection and digital maps to provide insights on land use decisions in Vermont and the impact it can have on climate and resilience goals and outcomes.</b></p>	
<p>Fund a study that quantifies the vehicle miles traveled and GHGs for both compact and dispersed areas of development as well as the co-benefits of compact centers.</p>	<p>Advancing</p>
<p><b>Pathway 26: Education: Create accessible, equitable research, partnerships, and education; promote shared understanding; and invest in sustainable workforce development for the natural and working lands sector.</b></p>	
<p><b>Strategy 26a: Provide funding for climate-related education at all levels, outreach, research, and technical assistance programs.</b></p>	

<p>Develop and make available accessible outreach and educational materials that communicate climate change science and local impacts to the general public, which include and highlight the role that Vermont's natural and working lands play in providing solutions to climate change.</p>	<p>Advancing</p>
<p>Enhance education, outreach, and technical assistance programming to support farmer learning and adoption of climate smart agricultural practices and ensure equitable access through the creation of two full time UVM Extension staff and part time staff for each National Resource Conservation District.</p> <p>Grow the capacity of additional VT academic institutions and indigenous-led &amp; BIPOC organizations to offer technical support to farmers and foresters, such as Middlebury College perennial program with TEK.</p>	<p>Being Implemented</p>
<p>Establish and fund an educational program that explains the role that Vermont farmers and foragers and their high-quality, local food products play in maintaining a low climate impact</p>	<p>Being Implemented</p>
<p>Establish stronger relationships between state agencies and regional planning commissions, and faculty at Vermont and adjacent state institutes of higher learning, creating opportunities for state and regional research needs to become an aspect of faculty research agendas.</p>	<p>More Information Needed</p>
<p>Create a climate curriculum teachers fellowship program to engage teachers in leading and sharing their climate curriculum ideas with other teachers</p>	<p>More Information Needed</p>
<p>Amend the Vermont State Board of Education's Education Quality Standards to incorporate environmental and climate change education at all grade levels (consider folding under "Science" and "Social Studies" curricula)</p>	<p>More Information Needed</p>
<p>Redesign the state education funding model so that Career and Technical Education centers have independent funding streams and budgets, and create and fund legislation to support other educational programs that strengthen the workforce pipeline, including a range of accessible postsecondary educational models (e.g. apprenticeships, concurrent enrollment, and stackable credentials)</p>	<p>More Information Needed</p>



Support increased investment in healthy soil education through educational mini-grants for teachers to all audiences (including agriculture, homeowner, forestry, publications, K-12 schools and institutions of higher learning) and implementation of practices through funding of Best Management Practices challenges, technical assistance programs, and cost shares.	More Information Needed
<b>Strategy 26b: Develop and promote climate-related educational materials for private landowners to empower them to make climate-informed decisions about their land and waters.</b>	
Expand infrastructure and educational programs around community and backyard composting and recycling	More Information Needed
Further educate Vermont landowners about the benefits of reducing lawn mowing frequency, and amount of mowed lawns to increase biodiversity and ecosystem health, and ultimately reduce emissions.	More Information Needed
Promote the values of planting of future climate adapted tree species and crops in an effort to expand tree planting efforts on private land. Thereby promoting restoration efforts to 304 reforest riparian areas, wetland buffers, and unhealthy soil.	More Information Needed
Create and deploy a river corridor and floodplain buffers extension-type program that provides educational material and technical assistance for private landowners	More Information Needed
<b>Strategy 26c: The language in Vermont agencies must be reviewed and updated to be more equitable.</b>	
Educate state staff on the history of Vermont, the harm that has been done in the name of conservation, the history of state involvement in the eugenics movement, and the role that language plays in the continuation of oppression and misunderstandings.	More Information Needed
Identify and develop alternative terms and words to those that are rooted in historical injustices, and invest in community outreach to create broad understanding of de-colonized words.	More Information Needed
Recommend that the legislature create a board to systematically review state government institutions to ensure that language intrinsically tied to historical injustices is removed from all active documents and policies.	More Information Needed
Leadership in all levels of state government must make this a top priority.	More Information Needed