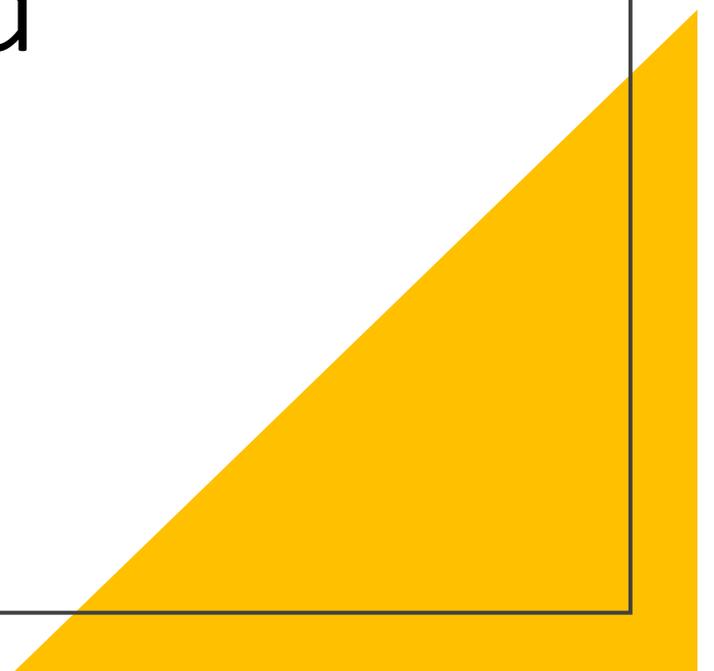


Rural Resilience and Adaptation Subcommittee – First Review of Prioritized Actions

October 15, 2021



Overall ranking

78 High Priority Actions

23 Medium Priority
Actions

26 Low Priority Actions

42 actions still need to be
ranked

Pathway 1 High Priority Actions

- Support Regional Planning Commissions through greater funding to implement the strategies and actions of the CAP. At minimum, create and fund one natural resource staff position at every Regional Planning Commissions to assist with implementation of climate policies and natural resources requirements such as Act 171 (forestry and habitat blocks). Use the Transportation Planning Initiative as a model to fund RPC natural resource staff and support trainings with ANR and other partners.
- Provide technical assistance to municipalities to assess the flood and erosion risks facing their drinking water and wastewater systems and identify potential mitigation improvements.
- Increase and create a permanent state fund for design and implementation of local and regional climate adaptation and resilience projects.
- Develop a toolkit, incorporating new and existing tools (such as the AOT Repeat Flood Damage Inventory Tool), for vulnerability assessments, resilience planning, and response planning that would help towns assess, identify, prioritize and mitigate climate vulnerabilities such as heat, air quality, drought, flooding, etc.
- Identify and develop new programs to address the full range of climate impacts, especially those that impact important Vermont industries, including drought, less or irregular snowfall, and shorter or irregular sugaring season.
- Complete a Statewide climate change impact assessment for Vermont's commercial sector, including the ski and sugaring industry.
- Provide workforce training and development to create an apprentice program to create more homegrown, rural builders with expertise in resilient and energy efficient building practices.
- Require remote meeting options (at minimum, call-in option) for all meetings of public bodies; allow fully virtual meetings of public bodies with guidelines similar to the state of emergency; evaluate options for online collaboration in preparation for a meeting that can be done with transparency.
- Increase funding to regional planning commissions and local municipalities to support climate and energy planning and target funds to support towns with limited staff and marginalized populations that score high on the vulnerability index.

Pathway 2 High Priority Actions

- Complete a flood vulnerability assessment of state-owned rail infrastructure to identify and prioritize needed improvements.
- Complete the flood vulnerability assessment of all bridges, culverts and road segments on the state and town highway systems, identify and prioritize needed investments.
- 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.
- Update or adopt as appropriate infrastructure design standards to reflect impacts from a changing climate, such as more frequent extreme weather as well as an increasing range of high and low temperatures, freeze/thaw cycles, and mixed precipitation (harden, incorporate redundancies, maximize life span, reduce annual maintenance and operational costs. etc.)
- Incorporate GHG reduction goals and CAP strategies and actions related to resilience in the VTrans transportation planning and project development process.
- Create framework for identifying and evaluating climate resilience threats and impacts to energy systems serving rural communities.
- Refine municipal electric/communications vulnerability index methodology and develop tool for broad use by stakeholders to identify priority areas for investment - This includes prioritization of locations where communications are served by solely by digital voice service (fiber, coax cable, Voip), which require electrical power at the home, that also lack cell coverage/copper wire landlines, to the extent that this information can be identified (in other words, where communications are entirely dependent on electricity)
- Seek federal stimulus (ARPA), infrastructure bill, and other non-ratepayer funding to defray costs of utility resilience upgrades that exceed benefits to ratepayers, such as:
 - Ubiquitous communications networks that enable full utilization and participation of distributed energy resources in an interactive grid.
 - Resiliency Zones: batteries installed at or near critical facilities, potentially paired with solar (and/or small wind) and with a microgrid /islanding where possible, to allow them to continue to operate in the event of extended disruptions to electric service.
 - Strategic upgrades to substations, distribution, and transmission capacity across the Vermont grid needed to enable the state's renewable and electrification goals, after first exploring feasibility of any lower-cost options, e.g. flexible load management, curtailment, and storage.
 - Emerging non-wires technologies that address major challenges system resilience (e.g. long-duration outages).

Pathway 2 Continued

- Provide on-going state financial support for the implementation of the 3-Acre Stormwater Permit Conversion projects .
- Strategically integrate planning and preparedness across disciplines and geographies addressing the interdependencies of energy, communications, and other systems.
- 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.
- Replace aging electric and communication infrastructure with the most appropriate resilient alternative where cost effective. For example, in the course of 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.
- Improve road drainage around lakes / ponds to reduce stormwater runoff and erosion, especially on municipal roads
- 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. Expand broadband to support remote work and tele-services to reduce the impact of travel disruptions.
- Evaluate the risks and opportunities created by potential climate change in-migration to VT's critical infrastructure
- Deploy foundational technology statewide to enable and optimize storage and other grid management technologies (e.g., GridLogic, Virtual Peaker, DERMS)
- 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.
- Implement the recommendations from an AOT study evaluating road usage charges such as a flat fee, mileage-based fee and per kilowatt hour fee to replace the decline in state motor fuel taxes resulting from vehicle electrification. (May also be a cross-sector mitigation action).

Pathway 3 High Priority Actions

- Collect existing fossil fuel usage data at the municipal level for buildings, vehicle fleets, and utilities; identify data gaps and ways to collect that data for measuring change in fossil fuel use going forward.
- Ensure data on fossil fuel usage at the municipal level is available and accessible in one location for municipal use.
- Engage higher education institutions to develop system to gather, compile, update, extrapolate fossil fuel data available to the public.
- Increase public education/promotion of benefits and opportunities for fossil fuel reduction.
- Increase funding for existing weatherization, energy efficiency programs in order to expand access to all Vermonters, and to expand programs for zero up-front costs. Existing programs include the VEIC Property Assessment Clean Energy (PACE) Program, Efficiency Vermont rebates, HEAT Squad - NeighborWorks of Western Vermont home energy audit program, and the Shared Equity program.
- Expand and create new educational programs to increase awareness of existing energy efficiency and utility upgrade programs.
- Amend PACE program eligibility to make all municipalities automatically eligible for PACE Program.
- Work with all utilities to equalize opportunities for all customers (rebates, incentives) to encourage fossil fuel reduction and energy savings.

Pathway 3 Continued

- Increase low-income weatherization through the State Weatherization Assistance Program including technical assistance to help households manage the process.
- Stabilize weatherization rebate values year to year.
- Expand workforce development programs to include training for energy auditors and weatherization technicians. Pilot new programs in rural areas where workforce needed is greater.
- Revise state building energy codes and standards to require a minimum 200 Amp service for new construction.
- Provide funding to assist low-income homeowners to upgrade electric service to 200 Amps
- 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.
- Support water and wastewater systems in conducting and implementing energy audits and recommendations for energy reduction.
- Evaluate and eliminate statutory barriers to renewable energy development on school property.
- Develop program to establish Weatherization Navigators at each RPC to help individuals, municipalities, and businesses through the process of weatherization and energy efficiency upgrades. Weatherization Navigators would help direct people to financial resources and programs to ensure understanding of financial investment and process for weatherization and energy efficiency upgrades are clear.

Pathway 4 High Priority Actions

- Revise stormwater permitting as needed to ensure green infrastructure is primary in design considerations.
- 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.)
- Examine regionalization efforts and sharing of resources for all water utilities.
- Increase investment in stormwater and green infrastructure, including to separating combined wastewater and storm water systems, to protect public health and water quality.
- Increase investment to municipalities for new and expanded water and wastewater facilities to support compact development and reductions in inflow and infiltration into wastewater collection systems. Examine public/private partnerships and more flexible permitting to expand water/wastewater opportunities in compact centers. Ensure that increased investments also make public drinking water and wastewater treatment plants more resilient to flooding, either by flood protection measures or relocation.
- Invest in enhancing water sources in vulnerable communities to enhance resilience to long-term drought.
- Create a state Land Use Plan that guides development to growth areas, town centers and appropriate rural locations and limits development within ecologically sensitive / risk-prone areas. Hire a consultant to engage stakeholders and support the development of the plan.
- Make village centers permanently eligible for the downtown transportation fund.
- 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.
- Increase Municipal Planning Grant (MPG) funds to accelerate efforts to update local zoning bylaws and increase housing growth opportunities.
- 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.

Pathway 5 High Priority Actions

- Remove the population-based caps on the Act 250 exemption for priority housing projects.
- Waive the Act 250 mitigation fees for prime agricultural soils for alternative or community wastewater systems that will serve designated areas.
- Increase manufactured housing tax credits to replace older and inefficient homes.
- Prioritize public funding for mixed-use developments near transit hubs in regional and rural centers.
- Increase the funding for downtown and village center rehabilitation tax credits.
- Amend Neighborhood Development Area (NDA) enabling statute to allow the inclusion of river corridors upon local adoption of River Corridor bylaws, and provide tax credits to support elevation of BFE and flood readiness (such as moving utilities out of the basement).
- Expand pilot program to train a network of local builders in the design and building of small homes/accessory dwelling units (mother-in-law apartments) in communities welcoming housing.
- Increase Efficiency Vermont's and other weatherization investments, and incentives, for energy efficient projects in buildings located in energy cost-burdened communities and communities with greater concentrations of older buildings, rental property, and low and moderate incomes.
- Expand the eligibility of the existing downtown and village center tax credit programs to revitalize neighborhood housing in state designated centers.
- 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.

Pathway 5 Continued

- Increase Municipal Planning Grant (MPG) funds to support zoning modernization to create more housing choices and improve community resilience.
- 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).
- Expand program to relocate mobile home park resident outside of flood vulnerable locations.
- Support public private partnerships to fund the design and construction of new infill housing in existing neighborhoods.
- Establish a rolling planning grant for communities in need of consulting assistance for Neighborhood Development Areas (NDAs) application preparation/work.
- Convene a statewide conversation on the state planning and development act's (24 VSA, Chapt 117) provisions on land use and housing to outline ways to expand housing choice and improve community resilience.
- Continue to fund housing investments that leverage private initiative and funding to cost-effectively create housing units under models like the Housing Rehabilitation & Recovery funding and the Vermont Housing Investment Program.
- Create a rental registry and inspection program to locate all of Vermont's rental housing and improve their quality and safety.
- Implement the recommendations of the Analysis of Impediments to Fair Housing.
- Increase funding for community-based homelessness prevention and rapid re-housing.
- Pilot a land value taxation study in five communities to evaluate grand list shifts and incentivize smart growth as taxes are levied based only on the value of the underlying land and not on the value of any buildings or other improvements to the site.
- 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 complete centers.

Prioritization needs

- Actions passed along by Ag & Ecosystems have been included under Pathway 2. Prioritization results should be reviewed by someone with expertise in water related infrastructure.
- Pathway 2 includes about 25 additional actions related to water, wastewater, and stormwater that were provided at Chris Cochran's request from ANR staff working in those areas. Since Pathway 2 working group did not include any subject matter experts in the water area, those actions have not been prioritized. Joe has a meeting scheduled next Tuesday with ANR staff to complete prioritization of those actions and get feedback on those provided by Ag & Eco.
- Pathway 3 still has a handful of actions that need to be prioritized.
- Pathway 4 – *Support Forest Pattern to reinforce compact settlements and strategically protect infrastructure from the impacts of climate change.* 14 actions under this strategy; do these actions need to be sent to Ag & Eco?
- Timeline to implement, lead implementer, key stakeholders

Actions to be elevated for inclusion in CAP

P1 - Establish a state level individual assistance program to provide financial assistance to uninsured or underinsured households impacted by disasters not federally declared. (low)

P3 - 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. (medium)

P4 - Hire a consultant to lead a process to combine and simplify the programs to designate Vermont's settlement areas. (medium)

P4 - Expand the eligibility criteria and increase funding for VHCB's conservation and buyout program, to address any flood-vulnerable structures. (low)

P4 - 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. (low)

Potential Actions for Equity Scoring Rubric Meeting

P2 - Identify modifications to policies and programs (eg net metering with storage) that could enhance resilience, while also seeking to align benefits/beneficiaries with costs/cost causers.

P2 - Deploy foundational technology statewide to enable and optimize storage and other grid management technologies (e.g., GridLogic, Virtual Peaker, DERMS).

P3 - Develop program to establish Weatherization Navigators at each RPC to help individuals, municipalities, and businesses through the process of weatherization and energy efficiency upgrades. Weatherization Navigators would help direct people to financial resources and programs to ensure understanding of financial investment and process for weatherization and energy efficiency upgrades are clear.

P3 - 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.