Community Capacity and Planning

Action	Proposed for 2025 CAP	Rational
Pathway 14: Increase capacity for climate resilience planning and implementation, and address inequities of under-resourced communities.		
Strategy 14a: Provide tools and resources to help communities assess climate vulnerabilities and create climate resilience plans.	Provide tools, technical support, and permanent funding for local and regional climate resilience planning and project implementation to enhance resilience to the impacts of climate change.	**combining 14 a and b.**
Develop a climate planning toolkit to help towns assess vulnerabilities to climate change impacts, such as heat, air quality, drought, flooding, high winds, heavy rain, hail and sleet, and identify and prioritize actions to increase their resilience to climate change. Include newly developed tools, such as the vulnerability index, and existing tools, such as the AOT Repeat Flood Damage Inventory Tool, and the NOAA Climate Resilience Toolkit.	Develop a climate planning toolkit that serves as a hub for existing tools, resources, and information, relevant for designing and implementation climate action measures or strategies at a municipal level.	simplified language
NEW	Expand capacity for the State to train on and support the use of the Municipal Climate Toolkit through development of education materials, expanded technical assistance, and streamlined tools to help municipalities access planning and implementation support related to climate action.	
NEW	Develop a Municipal Climate Planning Framework and Guide that helps Vermont municipalities develop and integrate climate actions into their planning processes that are locally relevant and aligned with State climate goals.	
NEW	Align the Municipal Planning and Resilience Grant Program with the Municipal Climate Planning Framework and Guide to provide funding for the development of municipal plans that incorporate and yield climate resilience outcomes.	

NEW	Establish permanent, dedicated funding for Regional Planning Commissions to cover overhead costs related to their application for and management of hazard mitigation grants.	
Strategy 14b: Establish permanent statewide funding and technical support for local and regional climate resilience planning and project implementation to enhance rural resilience to impacts of climate change.	*See 14a*	
Increase and create a permanent state fund for design and implementation of local and regional climate adaptation and resilience projects.	Secure sustainable funding for the Community Resilience and Disaster Mitigation Fund, to create a permanent state fund for design and implementation of local and regional climate adaptation including those "slow-moving" hazards that are difficult to fund through FEMA programs.	
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.	Assess the efficacy of and consider revisions to ERAF to contribute towards the 25% non-federal match for FEMA hazard mitigation funding applications and match for other flood disaster risk reduction opportunities.	
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.	Identify sustainable, long-term funding to support hazard mitigation and local match, to include: purchase of hazard-prone properties and easements to conserve river corridors, floodplains, and wetlands identified as key flood attenuation areas.	
Pathway 18: Ensure that all people have access to safe, accessible, energy efficient, and affordable housing.		
Strategy 18a: Update state and local land-use governance, regulations, practices, and investments to eliminate barriers to housing development.	**Strategy 18a: Update state and local land-use governance, regulations, practices, and investments to eliminate barriers to housing development, and support the creation additional year-round housing units in line with the State's Housing Needs Assessment**	explicitly mentioning housing need makes it more clear that resilience requires housing stock that is sufficient to house all Vermonters.

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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.	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).	Being implemented, but needs to remain a priority. lots of actions taken to eliminate land use policy barriers and encourage housing development in climate safe areas, but goal can't be realized without workforce that can build new housing per new policies, and funds to drive workforce/market towards those openings created by policy change (policy changes don't necessarily address market conditions that push builders to prefer building large/luxury SFH).
Expand the existing program to relocate mobile home park homes and residents outside of flood vulnerable locations.	Expand the Rapid Response Mobile Home Infill Program	
NEW	Adopt a residential building code	
NEW	Explore opportunities for resilient residential building codes and resilient zoning, including evaluation of impacts, and options for programmatic and/or regulatory structure to support implementation. Coordinate this effort with existing efforts to adopt the IRC, enforce and update the RBES and CBES codes, and update the IBC	resilient zoning for flooding likely to be addressed via RPC work to map areas suitable for growth. seems like looking at resilience via building codes should be coordinate/informed by that effort. also seems like it would be worth assessing opportunities to improve resilience to other climate impacts as well, through both zoning and building codes, and understand how these could work in tandem.
NEW	Create educational/informational materials for municipal leaders on the intersection of housing and climate crises	
NEW	Improve recovery communications	
Strategy 18b: Increase investments in the preservation and development of both private-market and nonprofit-owned affordable housing.		
	Increase funding and financing products for homes starts within communities that are planning and investing in development-ready infrastructure, building development	split from action in strategy 18a

	partnerships, and updating zoning bylaws to welcome new homes.	
Strategy 18c: Increase access to fair and affordable housing for Vermonters who are housing instable		give communities access to the design tools to do the conceptual design work to visualize what housing could look like in their community.
NEW	**Strategy 18d: Develop data sets and analyses on the intersection of climate and housing policy**	
NEW	Create a geolocated, searchable housing inventory that includes characteristics relevant to climate action planning, such as risk of flooding	Was originally focused on rental registry, which had very different purpose. use of housing could be included, but would not be only characteristic of interest for resilience
NEW	Map areas that are suitable for new, climate safe housing, and set regional targets for new housing units created	
NEW	Commission a study to identify how many Vermonters have been displaced by floods (Irene, 2023 and 2024 floods).	

Infrastructure and the Built Environment

Action	Proposed for 2025 CAP	Rational
Pathway 15: Proactively and strategically invest to enhance resilience in transportation, communications, water/wastewater, and energy infrastructure statewide.		
Strategy 15a: Create a policy, planning and organizational foundation to support effective investments in infrastructure resilience.	**…[add] by understanding exposure, identifying vulnerabilities and risks, investigating options, and prioritizing and planning**	**To include actions related to Planning and Assessments**
Develop a vulnerability index methodology and tool for broad use by stakeholders to identify priority areas for investment. The index will account for the vulnerability communication, energy, transportation, and water infrastructure in addition to socioeconomic and equity factors that affect community resilience.	Improve Municipal Vulnerability Index to be an index in addition to being an indicators tool so that it can be used to prioritize infrastructure investments across the state based on relative vulnerability. Ensure it includes currently missing data such as historic utility outage data, to the extent available, and ANR's Environmental Justice mapping tool, when complete.	MVI exists but lacks certain features/capabilities originally envisioned. Having a true index will help funders quickly identify areas of highest need within a broad geographic area based on relative vulnerabilities.
Create a framework for identifying and evaluating climate resilience threats and impacts to energy systems serving rural communities.	The state, through the Public Utility Commission and Public Service Department, should investigate resilience planning, including defining, valuing, measuring, and setting targets for grid resilience. Utilities should integrate resilience planning into their Integrated Resource Plans based on guidance resulting from this proceeding.	Action needed an actor and additional specificity. Grid resilience is undefined and therefore meaningless and problematic in the utility regulatory space without having standards to plan and invest to (if different from existing reliability standards), including a way to define value, a cost-benefit framework, and metrics to measure and reward progress or penalize lack of progress. The Department has secured technical assistance from the National Labs to assist with such a proceeding, and the Commission has invited a petition for a resilience proceeding.
"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. • Resilience Zones: batteries installed at or near critical facilities, potentially paired with solar (and/or small wind) and with a	Utilities should conduct benefit-cost analysis on resilience upgrades and seek non-ratepayer (e.g., federal, state, municipal, nonprofit, and private) funding for measures where costs exceed benefits.	Action needed an actor and an update to acknowledge the reality that the federal funds will be winding down, as well as the cost-benefit framework that will result from Action 15. Specific examples are unnecessary (though can certainly be part of the explanatory narrative in the CAP).

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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).		
Increase the number of public water systems and publicly owned wastewater treatment works are implementing an asset management program by expanding programs, funding opportunities, and incentives to develop and implement these programs.	Support the development and implementation of **asset management programs** for all public water systems and publicly owned wastewater treatment works.	
Understand source water vulnerabilities and invest in planning efforts to assist communities, especially those that are vulnerable for their long-term water supply needs. Revamp funding programs for source protection programs, increase funding for programs (include existing and new water sources) and conservation easements.	Understand and develop opportunities for creating water and wastewater systems performance efficiencies (i.e. SPAs, inflow, infiltration, pollution reduction)	Revised and combined previous actions related to w/ww "source" pollution reduction.
Increase investment to municipalities for new and expanded water and wastewater facilities to support reductions in inflow and infiltration into wastewater collection systems.	Increase investment to municipalities for new and expanded facilities to support water and wastewater systems performance efficiencies (reductions in inflow, infiltration, pollution).	Revised and combined previous actions related to investments for w/ww "source" pollution reduction.
Examine the climate impacts of sludge and biosolids to determine if regional facilities can reduce utility costs and climate impacts. Support investment in strategically placed facilities for sludge and septage processing (much is currently trucked to Montpelier/Chittenden Co.)	Examine pros and cons of regionalizing or sharing resources for all water and wastewater treatment utilities and practices.	Revised and combined previous actions related w/ww efficiencies through regionalization.
Increase efforts and funding towards pollution prevention programs at wastewater facilities to ensure that facilities protect available treatment capacity, which can focus development on already-served designated centers.	Understand and develop opportunities for creating water and wastewater systems performance efficiencies (i.e. SPAs, inflow, infiltration, pollution reduction)	Revised and combined previous actions related to w/ww "source" pollution reduction.

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Continue investments in traditional and green infrastructure to intercept, sink and treat stormwater.	Understand and develop opportunities for creating water and wastewater systems performance efficiencies (i.e. SPAs, inflow, infiltration, pollution reduction)	Revised and combined previous actions related to w/w "source" pollution reduction.
Strategically integrate planning and preparedness across disciplines and geographies addressing the interdependencies of transportation, energy, communications, and other systems.	TBD - Should be further modified to create more accountability.	Moved from deleted Strategy 15b. 15 a should include one or more actions related to preparedness. See stakeholder input. May not be needed for Infrastructure but considered for Community Capacity.
Strategy 15b: Public, private, and nonprofit entities should be prepared to respond and recover quickly to disruptions caused by severe weather and other climate change threats.	DELETE	Only one action and moved to Strategy 15a
Strategy 15c: Increase the resilience of critical infrastructure to severe weather and other climate change threats by reducing vulnerabilities of specific facilities.	DELETE	
Strategy 15d: Increase the resilience of critical infrastructure to severe weather and other climate change threats by improving system efficiency, reliability and redundancies, especially at critical facilities.	**Strategy 15b: Increase the resilience of <u>critical infrastructure</u> to severe weather and other climate change threats by reducing vulnerabilities and improving system efficiency, reliability and redundancies.**	**To include actions related to implementation.**
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.	[NEED TO FIGURE THIS ONE OUT STILL, COULD BREAK UP AND MOVE THE FIRST PART UNDER INVESTMENT (15B)]	
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	Local and regional planners, utilities, transportation providers, and state agencies should collaborate to identify mission critical facilities and develop preparedness, survivability, and recovery plans, procedures, and investments that mitigate the impact of extreme weather events to services provided by these facilities.	

hubs, supermarkets and other facilities municipalities identify as critical to serving communities during extreme weather events.		
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) [e.g., smart inverters, DERMs, and ADMS for managing, controlling, and optimizing DERs]	Utilities should deploy technology for management, control, and optimization of distributed energy resources, including energy storage, to improve reliability and resilience while reducing costs for all customers.	Updated to include an actor, avoid calling out specific technologies in a rapidly changing marketplace. Added reducing costs because most of these technologies can provide a win-win and not increase electric rates (which would make electrification - and therefore mitigation of GHGs - unaffordable)
Expand broadband to support remote work and tele-services to reduce the impact of travel disruptions.	Expand broadband to support remote work, tele-services, and reduce the impact of disruptions to travel, health, and safety.	Kept, added nexus to health & safety
Evaluate the risks and opportunities created by potential climate change in-migration to VT's critical infrastructure.	[NEED INPUT - DOESN'T SEEM TO FIT WITH CRITICAL FACILITIES ACTION, AS IT'S APPARENTLY ABOUT ALL FACILITIES.	IF KEEP, SHOULD BE MOVED TO PLANNING (15a)]
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.	In the absence of and/or in addition to dedicated federal funding, create a transportation flood resilience funding program to address identified transportation risks and vulnerabilities.	Previous action related to planning for funding and the modification speaks to the need for a state funding source for transportation projects especially if federal programs are not in place and especially for municipal infrastructure.
Improve road drainage around lakes / ponds to reduce stormwater runoff and erosion, especially on municipal roads.	Evaluate the cost benefit of road maintenance stormwater runoff and erosion practices, especially on municipal roads.	Move to 15a. This was more of an implementation action, which is occurring through the MRGP, and was revised to relate to planning.
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.	Assess the vulnerability of drinking water, stormwater, and wastewater infrastructure assets; and prioritize opportunities to address those vulnerabilities; including relocation of systems.	Move to 15a. Revision speaks to the need for planning and prioritizing at risk assets. Funding for implementation is in a separate revised action.
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.	Develop a funding program to deploy solar and storage at water and wastewater facilities to ensure continuity of operations during events that cause power outages.	Revised to relate more to resilience.

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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.	Provide a sustainable funding source for addressing identified drinking water, stormwater, and wastewater infrastructure vulnerabilities.	Revised and combine previous actions related investment for w/ww/sw resilience.
Pathway 17: Change Vermont's land-use policies so current and future land development will be adaptive and resilient to climate change impacts.		
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.		**10/25 notes: to achieve resilience, need compact settlement. and compact settlement needs W-WW infrastructure.**
Invest in enhancing water sources in vulnerable communities to enhance resilience to long-term drought.	Provide a sustainable funding source for addressing identified drinking water, stormwater, and wastewater infrastructure vulnerabilities.	Move to 15b. Revised and combine previous actions related investment for w/ww/sw resilience.
Increase investment to municipalities to support reductions in inflow and infiltration into wastewater collection systems.	Understand and develop opportunities for creating water and wastewater systems performance efficiencies (i.e. SPAs, inflow, infiltration, pollution reduction)	Move to 15a. Revised and combined previous actions related to w/ww “source” pollution reduction.
Monitor and update stormwater permitting process as needed to ensure green infrastructure is preferred in design considerations.	DELETE ???	Status is ‘being implemented’. Does it need to remain?
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.).	Assess the vulnerability of drinking water, stormwater, and wastewater infrastructure assets; and prioritize opportunities to address those vulnerabilities; including relocation of systems.	Move to 15a. Revision speaks to the need for planning and prioritizing at risk assets. Funding for implementation is in a separate revised action.
Examine regionalization efforts and sharing of resources for all water utilities.	Examine pros and cons of regionalizing or sharing resources for all water and wastewater treatment utilities and practices.	Move to 15a. Revised and combined previous actions related w/ww efficiencies through regionalization.
Increase investment in stormwater and green infrastructure, including separating combined wastewater and storm water systems, to protect public health and water quality.	Increase investment to municipalities for new and expanded facilities to support water and wastewater systems performance efficiencies (reductions in inflow, infiltration, pollution).	Move to 15b. Revised and combined previous actions related to investments for w/ww “source” pollution reduction.

Public Health

Action	Proposed for 2025 CAP	Rational
N/A	**Pathway 19: Support equitable adaptation to the public health impacts of climate change**	
	Strategy 19a: Improve tools and mechanisms for increasing awareness about climate impacts on health and potential adaptation strategies.	
	Routinely review and update publicly-available information about the highest priority climate-related health risks for Vermont.	
	Communicate to the public and community partners about climate-related health risks and offer guidance about what individuals and communities can do to reduce their risks, with specific focus on disproportionately affected populations (including overburdened and underserved communities, unhoused individuals, older adults, children, people with health sensitivities, and outdoor workers).	
	Direct state agencies to develop improved tools and approaches for communicating with community partners, with people in languages other than English, and with other underserved populations (including rural, unhoused, and isolated individuals).	
	Increase support for individuals and households to prepare and adapt to climate impacts on health.	
	Strategy 19b: Increase support for individuals and households to prepare and adapt to climate impacts on health.	
	Review/improve existing tools and/or develop new tools to better identify and support Vermonters needing extra assistance during an emergency, including the Citizens Assistance Registry for Emergencies, collaboration with local service partners, or similar alternatives.	
	Provide funding to support climate resilience for households that need extra assistance, which may include trees and other vegetative shade, window treatments (for shade), air conditioning, fans, air purifiers, mechanical ventilation (e.g. ERVs), moisture/intrusion mitigation & management, backup power, window screens, private drinking water testing and treatment, etc.	
	Strategy 19c: Increase support for regional, municipal, and community partners to mitigate, prepare, and respond to climate impacts on health.	
	Explore and implement strategies to enhance local emergency preparedness and response capacity (e.g., expand funding and authority of RPCs and/or	

	county government; increase direct funding, training, and technical assistance to municipalities).	
	Provide funding and technical assistance to local partners to develop community resilience hubs that can serve as places for learning, collaboration, resource access, and refuge in response to climate-related hazards and other community needs.	
	Provide funding and technical assistance to local organizations to support climate resilience for disproportionately affected populations they serve (including overburdened and underserved communities, unhoused individuals, older adults, children, people with health sensitivities, and outdoor workers).	
	Provide funding and technical assistance to hospitals, residential care facilities, homeless shelters, and places used for emergency shelter to develop emergency response plans and adapt facilities for climate-related hazards including flooding, extreme temperatures, power loss, and poor outdoor air quality.	
	Strategy 19d: Expand state capacity to plan, prepare, and respond to climate-related health hazards.	
	Direct state agencies to develop, maintain, and exercise state response plans and mechanisms for addressing climate-related health hazards including flooding, extreme temperatures, power loss, hazardous air quality, and infectious diseases.	
	Increase state staff capacity to plan, prepare, and respond to climate-related health hazards, including support for regional, municipal, and community partners.	
	Identify and address gaps in state-contracted community mental health services for individuals and communities to address anxiety, depression, distress, and trauma caused by climate change and climate-related disasters.	
	Strategy 19e: Prioritize state support for climate mitigation actions that enhance health, resilience, and health equity.	
	Adopt a policy to prioritize state climate mitigation spending on actions that maximize public health, climate resilience, and health equity co-benefits, while minimizing the potential for co-harms.	