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Addison County
REGIONAL PLAN



2026

Addison County
REGIONAL PLANNING COMMISSION

Approved by Full Commission Sept. 9, 2026
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Addison County
REGIONAL PLANNING COMMISSION

Introduction

Introduction to the Regional Plan

Welcome to the Addison County Regional Plan (the Plan). The 2026 edition represents the 12th amended revision of the Regional Plan since the Addison County Regional Planning Commission (ACRPC) first adopted it in 1994. We hope you enjoy reading it.

In this version, we aimed to streamline the content for improved readability, incorporate a more accessible layout, and include references to key foundational and informational documents via links to our website. Additionally, we've provided contextual information specific to the Addison Region.

It is organized following the statutory requirements for regional plans contained in Title 24, Section 4348a of the Vermont Statutes Annotated. The chapter subjects mimic the order provided in statute. The Plan begins with short Executive Summaries for easy reference. The summaries contain the Policy Statement guiding the chapter, a short narrative of the Region's existing conditions, the objective of the Plan within the chapters' subject matter, and the primary implementation actions ACRPC will take to advance that chapter during the Plan's eight-year lifespan. Each main chapter follows the same organizational format as its executive summary, with more extensive narrative, goals, objectives, and actions. We hope that you find the Plan informative and easy to read and find purpose and inspiration in its goals and implementation actions.

The Addison County Regional Plan serves several audiences. First, it provides information to the public regarding the Addison Region. Second, it demonstrates the Region's policies and objectives in a number of regulatory proceedings before tribunals charged with determining, amongst other things, that a proposed project conforms with the intent of the regional plan. These regulatory proceedings include Act 250 Environmental Hearings, Solid Waste Facility Certification, and Public Good Determination hearings related to the siting of electric generation and transmission facilities. The Plan also speaks to our member municipalities as many of our goals and implementation actions apply to both the Region and our municipalities.



ACRPC has existed since 1970. It is composed of delegates and alternates that are appointed to represent each of our 21 member municipalities. ACRPC's municipal representation reflects population, so larger municipalities have more delegates. All municipalities have at least one delegate. Alternates represent the municipality when the delegate cannot. ACRPC also makes space available for six citizen interest group representatives.

Delegates set the policy for the regional planning commission and approve its major decisions. They also serve on committees that create each section of the Plan. Commission representatives are supported by an Executive Director and staff that work to implement ACRPC's objectives. This Plan charts a course for the Region through 2034 and supersedes any prior plans. During this period, ACRPC's delegates and staff will work to implement the Plan's goals, objectives, and programs.

Since 1990, numerous committees, delegates, alternates, citizens, technical advisors, and staff have contributed significant time and expertise to revising the Addison County Regional Plan. The 2026 update reflects that legacy of collaboration and includes a robust public outreach component. In response to the Vermont Legislature's directive under Act 181 of 2024 to develop a unified Future Land Use Plan, ACRPC's delegates, alternates, and staff committed hundreds of hours engaging a broad cross-section of the Region's population. This extensive outreach was essential to shaping a Plan that truly reflects the needs and aspirations of the Addison Region. Thank you to all.

Adam Lougee, Executive Director

How to Read this Plan

The Addison County Regional Plan (the Plan) is organized to provide both comprehensive analysis and accessible guidance for regional stakeholders, municipal partners, and community members. Whether you need quick reference information or detailed background on regional issues, this Plan is structured to serve your needs.

SUMMARY PAGES: QUICK REFERENCE

The Plan begins with summary pages for each major planning element. These pages provide at-a-glance access to the most essential information and are organized into three components:

Statement of Policy: These statements articulate ACRPC's fundamental positions and principles regarding each planning element. The policies guide regional decision-making and provide the framework for the Region's future growth and development.

Regional Context: This section provides a brief discussion of conditions, trends, and considerations specific to the Addison Region as they relate to each subject area. The context grounds our policies and actions in local realities.

Implementation Actions: These are the selected action steps that ACRPC and its partners have prioritized for implementation during the lifespan of this plan.

Implementation Framework

The priority implementation actions featured on each summary page represent the Region's program for implementing the Regional Plan's goals and objectives, including our recommended investment strategy for regional facilities and services.

These priority actions represent carefully selected steps drawn from the comprehensive list of recommended actions found at the end of each full chapter. The selection process considered regional priorities identified through public input and committee deliberation:

- ACRPC's capacity and resources
- Municipal needs and capabilities
- Funding availability and feasibility
- Alignment with state and regional goals

FULL CHAPTERS: COMPREHENSIVE ANALYSIS

Following the summary pages, ten full chapters provide in-depth examination of key planning topics. Each chapter presents the Region's history, current context, opportunities and challenges, and priorities for the future. Chapters conclude with complete goals, objectives, and actions, along with indicators of progress for measuring advancement toward our targets.

Recommended Actions

While the summary pages highlight priority implementation actions, each full chapter concludes with a complete set of recommended actions. This comprehensive list provides detailed implementation steps with identified responsible parties.

The full actions list serves as a living document that responds to evolving regional needs, funding opportunities, and emerging challenges. Together, the priority actions and recommendations provide both clear direction for immediate implementation and flexibility to pursue additional strategies as opportunities arise.

This dual approach ensures that the Regional Plan remains both strategically focused and comprehensively resourced, enabling the Addison Region to make measurable progress toward our shared vision while maintaining the adaptability necessary for effective long-term planning.

SUPPORTING MATERIALS

Additional resources at the end of the Plan provide context and detail. A glossary of key terms defines technical and planning terminology used throughout the document. Appendices contain detailed information, data tables, maps, and supplementary analysis referenced in the chapters.

Natural Resources

Statement of Policy

ACRPC desires to protect, maintain, and enhance the quality and function of the Region's abundant natural resources—including groundwater and surface waters, prime agricultural lands, forests, wildlife habitat, scenic character, air quality, and mineral resources. It also supports a strong, diversified agricultural and forest economy, encourages responsible resource utilization, and supports providing safe, accessible recreational opportunities that serve the public health and well-being of the Addison Region's residents and visitors.



Summary

The Addison Region's natural resources are fundamental to the area's character, economy, and quality of life. Forests cover approximately half of the Region, providing water filtration, carbon storage, wildlife habitat, and timber resources. Over 750 farms manage nearly 178,000 acres of highly productive soils, generating more than $173 million annually and supporting local food systems.

Water resources—including the Otter Creek watershed, Lake Champlain, and numerous streams, ponds, and wetlands—provide drinking water, recreation, and vital habitat. Groundwater aquifers supply communities throughout the Region. Recreational opportunities and historic villages reinforce community identity.

The Region's natural resources face a number of challenges including climate change impacts, development pressure on agricultural soils and forest connectivity, water quality concerns from agricultural runoff and emerging contaminants like PFAS, and agricultural labor shortages. However, forest cover increased by more than 5,400 acres between 2000 and 2024. Conservation programs continue protecting resources and improving water quality.

While we can always improve natural resources' functions, we should also cherish all that ACRPC's natural resources continue to offer.

Implementation Actions

- **Protect Water Quality:** Support water quality monitoring and implement Basin 3 Clean Water Service Provider projects, promote Best Management Practices, and protect riparian buffers to reduce phosphorus loading to Lake Champlain and maintain drinking water supplies.
- **Conserve Working Lands and Wildlife Habitat:** Preserve prime agricultural soils, significant natural communities, and contiguous forest blocks through clustered development, conservation easements, and Vermont Conservation Design framework to maintain productive landscapes and wildlife connectivity.
- **Support Sustainable Use of Natural Resources:** Partner with municipalities to include sustainable farming, forestry, recreation, mineral extraction, and groundwater use in local planning and regulation.

Energy

Statement of Policy

ACRPC's energy policy supports two key pillars, reliability and affordability. Within this context, ACRPC has adopted three key energy priorities for this plan: **energy justice**–pursuing affordable, accessible, and clean energy for all of its residents; **climate change resilience**–reducing greenhouse gas emissions and improving energy infrastructure; and **energy security**—developing local energy sources to limit dependence on imported fuels and technologies.

Summary

The Addison Region is a largely rural area where more than 36,000 residents consume approximately 3,760 MMBtu of energy annually across transportation, thermal heating, and electricity sectors. Transportation currently consumes 1,591 MMBtu annually, with fossil fuels dominating all vehicle classes. Regional targets require transition to electric vehicles: 6,338 passenger EVs and 8,792 light-duty truck EVs by 2035. Other opportunities include expanding EV charging infrastructure, promoting carpooling and public transit through Go! Vermont, and encouraging denser development patterns in village centers to reduce vehicle dependence.

Residential thermal heating demands 1,610 MMBtu annually, with 85% from fossil fuels (46% fuel oil, 22% propane, 17% wood). Regional targets require eliminating fuel oil and coal by 2050 while dramatically reducing propane and natural gas use. Weatherization programs, cold climate heat pumps, and thermal energy networks capturing waste heat offer pathways to reduce fossil fuel dependence while lowering energy costs.

Electricity demand totals approximately 286 MWh annually, split evenly between residential and commercial/industrial users, and grew 5% annually from 2019-2023. While overall energy demand needs to decrease through efficiency measures, electricity use will increase as transportation and heating electrify. Meeting this demand requires substantial expansion of local renewable generation, alongside aggressive energy efficiency programs through Efficiency Vermont. The Region has exceeded its 2025 renewable generation target (152% of goal) and currently produces 102% of its 2035 target and 78% of its 2050 target, demonstrating significant progress in renewable energy development.



Implementation Actions

- **Collaborate with Regional Partners:** Expand energy resources available to residents through grant technical assistance, community education and outreach, and coordinating access to weatherization programs and energy efficiency services.
- **Encourage Energy Investment and Incentives:** Support municipalities in adopting energy-efficient policies and building codes, and planning community-scale infrastructure including solar arrays, EV charging stations, thermal energy networks, and municipal efficiency projects.
- **Advocate with State Agencies**: Support enhanced energy planning resources, expanded financial incentive programs targeting weatherization and renewable installations, improved utility programs infrastructure improvements, and policies that reduce barriers to local energy project implementation.

Transportation

Statement of Policy

ACRPC seeks to develop and maintain a transportation system that effectively moves people and commerce, safely supports all modes of travel, promotes energy efficiency, enhances the Region's sense of place, exhibits resilience to natural hazards, and receives sufficient funding to conduct timely, cost-effective maintenance to meet the Region's emerging and future needs.

Summary

The Addison Region's transportation system serves as the primary infrastructure connecting residents to jobs, services, and recreation across the Region's municipalities. The system includes air transportation, navigable waterways including ferry service, freight and passenger rail service, and an extensive roadway network anchored by major state routes. The Transportation Advisory Committee guides regional planning efforts and establishes project priorities with state agencies and local municipalities.

This Plan balances short-term needs—maintaining roads, bridges, and existing infrastructure—with long-term climate adaptation goals. Climate change has heightened the need for enhanced flood resilience, requiring transportation infrastructure to be designed and maintained to survive increased rainfall intensity and flooding severity. Transportation also contributes significantly to greenhouse gas emissions in Vermont. This Plan encourages incremental, systematic changes to reduce transportation energy use and emissions regionwide by promoting electric vehicle infrastructure, reducing vehicle miles traveled through alternative transportation modes, and promoting land use patterns that reduce reliance on personal vehicles.

The Region's transportation infrastructure must serve multiple goals simultaneously: supporting all modes of safe travel, enhancing the Region's historic communities and scenic landscapes, and leveraging sufficient funding for cost-effective maintenance. ACRPC supports expanding public transit services, improving bicycle and pedestrian infrastructure in villages and along key corridors, and utilizing Complete Streets principles appropriate to the Region's rural character. Regional planning efforts address ongoing challenges, including high crash locations, aging bridges, and truck traffic impacts on village centers, while preserving community character and supporting economic vitality.

Implementation Actions

- **Expand and Improve Multi-Modal Infrastructure:** Implement safety improvements at high crash locations, construct EV charging stations, support public transit electrification, and develop bicycle and pedestrian connections.
- **Support Freight and Commercial Transportation:** Implement alternative truck routes to reduce village impacts, upgrade rail infrastructure, and encourage best practices to minimize road damage.
- **Enhance Resilience and Reduce Environmental Impact:** Assist municipalities with compliance requirements, encourage hazard mitigation plans, and promote ridesharing and active transportation.
- **Strengthen Community Livability Through Context-Sensitive Design:** Utilize Complete Streets principles, encourage roundabouts and traffic calming, and ensure projects enhance regional character.
- **Secure Adequate Funding and Long-Term Planning:** Help municipalities implement capital budgeting, assist with alternative funding access, and advocate for increased state and federal support.

Community Infrastructure

Statement of Policy

ACRPC will support municipalities in developing and maintaining community infrastructure that enhances quality of life for all residents and visitors. We will provide technical assistance, regional coordination, and planning expertise to ensure communities have access to sustainable water and wastewater systems, high-speed broadband, well-maintained cultural and historic resources, and recreation facilities that preserve the Region's distinctive character.

Summary

The Addison Region's community infrastructure encompasses the essential systems, services, and cultural resources that define quality of life and enable communities to thrive. Critical infrastructure—water, wastewater, solid waste, and communications—face common challenges of aging systems, capacity constraints, and adapting to modern environmental and technological standards. The Region's mixed settlement pattern creates varied infrastructure needs, with some village centers relying on public systems while rural areas depend on private wells and septic systems that face different challenges related to drought, soil conditions, and system maintenance.

The Region's cultural infrastructure—historic buildings, libraries, museums, trails, and recreation facilities—strengthens community identity and connection to place while requiring ongoing stewardship. Many municipalities manage aging town offices, highway facilities, and community buildings that need expansion or upgrades to meet accessibility, environmental, and operational requirements. Historic structures originally built as churches, schools, and town halls continue serving civic functions but often lack space and features for modern needs.

Emerging priorities include expanding broadband access through community-owned solutions, addressing deferred maintenance in educational facilities, and developing recreation infrastructure that connects communities to natural resources. ACRPC supports municipalities navigating these infrastructure challenges through technical assistance, capital planning, grant writing, and regional coordination that enables small towns to access resources and solutions otherwise beyond their reach, ensuring investments support sustainable growth, environmental protection, and equitable access to services throughout the Region.

Implementation Actions

- **Protect Water Quality and Sustainable Resources:** Develop comprehensive regional water and wastewater strategies that protect water quality, ensure sustainable availability, enhance treatment capacity, replace failing systems, and support sustainable development in our villages.
- **Expand Broadband Access and Digital Equity:** Expand affordable high-speed broadband to all underserved areas through support for Maple Broadband and digital equity initiatives that address affordability, literacy, and device access while promoting communications infrastructure for economic development.
- **Preserve and Promote Historic and Cultural Resources:** Assist municipalities in promoting adaptive reuse of historic structures, establishing historic review boards, designating historic districts, developing regulations, and providing planning and grant support for historical and cultural resources.
- **Strengthen Community Facilities and Trail Connectivity:** Support municipalities with capital planning, facility improvements, and coordination for community buildings, facilities, and recreation resources while continuing to develop and link trail systems throughout the Region.
- **Foster Regional Collaboration for Shared Infrastructure:** Facilitate among educational institutions, municipalities, and organizations to strengthen shared facilities, support lifelong learning networks, and develop joint community use and capital improvement plans for public infrastructure.

Population and Housing

Statement of Policy

ACRPC is committed to increasing the supply of safe, affordable, and accessible housing for all segments of the community through collaborative partnerships, sustainable planning practices, regulatory reform, and public education that supports housing development in designated growth areas while preserving the Region's agricultural and natural resources.

Summary

The Addison Region is undergoing significant demographic shifts. It needs to create significant new housing units to meet and reverse its shifting demographics. Population growth has stagnated, and the median age continues to rise. Vermont now experiences more deaths than births annually and household sizes are declining. Despite population stagnation, the number of households continues to grow, as more people live alone or in smaller family units.

New housing construction has not kept pace with this demand. Low vacancy rates and rising costs compound this challenge, threatening economic vitality and quality of life. Rental housing is particularly scarce, and many households struggle with affordability, lacking options across all income levels.

To address these challenges, Vermont established housing production targets through Act 47, the Statewide Housing Needs Assessment, and Act 181. The Addison Region must add thousands of new housing units to meet demand and support workforce development. Meeting these targets requires coordinated action across municipalities, strategic use of designated growth areas, water and wastewater, infrastructure investments, and regulatory reforms that remove barriers to housing development while protecting the Region's agricultural character and natural resources.



Implementation Actions

- **Support Municipal Planning:** Work with municipalities to understand housing needs, identify growth opportunities, apply for grants, create infrastructure solutions, develop tax incentive programs, support Community Housing and Infrastructure Program (CHIP) applications for new infrastructure, and reform bylaws regarding dimensional standards, allowable uses, ADUs, parking, and density bonuses.
- **Provide Technical Assistance:** Support municipal development review of new housing projects in Act 181 designated growth areas.
- **Investigate Alternative Housing Models:** Research innovative and sustainable options for manufactured and modular homes.
- **Modernize Rural Housing Standards:** Support municipal planning for rural housing development through rewriting PUD standards that employ conservation design principles and incorporating density bonus standards.
- **Expand Housing Education and Outreach:** Develop outreach and educational programs including model bylaw language, housing forums and workshops, and research on regional septic solutions.

Economic Development

Statement of Policy

ACRPC will collaborate with regional partners to cultivate a dynamic and diversified rural economy by creating community infrastructure supporting local entrepreneurs, responsibly stewarding natural resources and working lands, promoting small business development, enhancing quality of life for residents, and leveraging tourism to strengthen the regional economy.

Summary

The Addison Region maintains a strong economic foundation with over 700 farms, 150+ retail businesses, nearly 1,400 service businesses, and approximately 70 manufacturers. Major employers such as Simmonds Precision, Middlebury College, and Porter Medical Center anchor the employment base. The Region enjoys low unemployment and median household income of $88,478, exceeding state and national averages.

Workforce challenges including housing shortages are being addressed through Act 181 and project-based tax increment financing. However, limited childcare availability and an aging population constrain workforce participation. The gender pay gap has improved from 33.49% in 2013 to 20.40% in 2023, though further progress is needed. Workforce development partnerships strengthen connections between employers, educational institutions, and service providers.

Working lands and natural resources define the Region's character and economy. Agriculture generates $89.8 million in net cash farm income, with 42% of county land enrolled in Current Use programs. Working landscapes provide raw materials to value-add manufacturers while enhancing quality of life. Farm consolidation and succession challenges require continued attention. Tourism and outdoor recreation represent growing opportunities through investments in trails and downtown revitalization.

Infrastructure improvements are advancing regionally. Fiber network development is expanding high-speed internet access. Vergennes and Middlebury are upgrading wastewater capacity, though gaps in municipal systems outside these centers constrain development. Over a dozen brownfield properties have been remediated, increasing development-ready land. Transportation infrastructure is generally in good shape, though six FEMA disaster declarations since 2020 highlight the need for climate resilience investments in roads, culverts, bridges, and electrical systems.

Implementation Actions

- **Coordinate Regional Business Support:** Support ACEDC's economic development initiatives by coordinating regional business support, connecting entrepreneurs with resources, assisting with market research, and collaborating on strategic development projects including industrial parks and downtown redevelopment.
- **Advance Housing Development:** Support municiapalities through Act 181 future land use mapping, in securing planning grants for zoning updates, and assist property owners in accessing state tax credits for adaptive reuse projects.
- **Expand Critical Infrastructure:** Advocate for water, wastewater, and telecommunications improvements, engaging businesses in infrastructure planning, and promoting mixed-use zoning that enables shared infrastructure financing.
- **Enhance Quality of Life and Economic Vitality:** Draft a regionwide master plan for municipal forests, measuring the economic impact of outdoor recreation, creating interconnected pedestrian and bicycle path systems, and supporting workforce health initiatives through partnerships like Community Health Needs Assessment (CHNA) and Children's Health Insurance Program (CHIP).

Flood Resilience and Emergency Management

Statement of Policy

ACRPC will encourage flood resilient communities by avoiding new development in flood hazard and river corridor protection areas, protecting and restoring natural flood mitigation systems, and maintaining robust emergency preparedness and response planning.

Summary

The Addison Region has done significant work to increase Flood Resilience over recent decades, but faces increasing vulnerability to flooding as precipitation patterns shift and extreme rainfall events become more frequent. Recent floods in 2023 and 2024, along with Tropical Storm Irene in 2011, have damaged homes, infrastructure, and farmland while isolating communities and prompting federal disaster declarations. These events highlight the ongoing need for proactive flood resilience planning.

The Region's flood resilience strategy emphasizes three priorities: directing development away from flood hazard areas and river corridors; protecting and restoring floodplains, wetlands, and forested areas that naturally store and slow floodwaters; and strengthening emergency preparedness through updated hazard mitigation plans and coordination of response strategies. Key waterways including Otter Creek, New Haven River, and Lewis Creek require protection from encroachment, while wetland complexes and upland forests provide critical flood mitigation benefits.

Municipalities in the Addison Region have done significant amounts of emergency planning. Nearly all towns participate in the National Flood Insurance Program. In contrast, only four have adopted river corridor protection regulations. By combining proactive land use management with ecological restoration and coordinated emergency planning, ACRPC can help communities adapt to increasing flood risks and safeguard public safety, property, and natural resources.



Implementation Actions

- **Update Flood Resilience Bylaws:** Guide municipalities in updating zoning and flood hazard bylaws to restrict new development in floodplains and river corridors, using current flood maps, river corridor data, and best practices for resilient land use.
- **Support Restoration and Conservation:** Advance reforestation of upland areas, wetland and floodplain restoration, and establishment of riparian buffers to enhance natural flood storage and reduce downstream impacts.
- **Strengthen Emergency and Hazard Mitigation Planning:** Help towns update Local Hazard Mitigation Plans, identify critical infrastructure at risk, and coordinate regional response and recovery strategies for future flood events.

Future Land Use

Statement of Policy

ACRPC seeks to plan development that maintains the historic settlement pattern of compact villages and urban centers separated by rural countryside, supporting the Region's working landscape, natural resources, and quality of life.

Summary

The Addison Region's distinctive character stems from its three urban centers and additional compact village centers surrounded by productive agricultural land and forested mountains, a pattern that has defined the area since the 1760s when most municipalities were founded.

The Plan organizes the Region into distinct land use areas ranging from compact Growth Areas and Village Centers to Rural Agriculture and Forested Areas comprising the working landscape, and Conservation Areas protecting natural resources. The Region faces a significant housing challenge, with targets calling for more than 1,600 new housing units by 2030. Sixty percent of targeted housing development is planned for Growth Centers and Village Areas, which encompass only 3.3% of the Region's land. The remaining development will occur in rural areas. Achieving these targets, especially in the villages, will require expanded water and wastewater infrastructure, supportive zoning regulations, and strategic use of programs like Community Housing and Infrastructure Program (CHIP) to leverage future tax revenue for infrastructure investment.

The Plan maintains the Region's commitment to preserving its working landscape. It balances growth needs with conservation of prime agricultural soils, forest blocks, wildlife habitat, and scenic resources that contribute significantly to the Region's economic vitality and character.



Implementation Actions

- **Direct Housing Growth to Village Centers and Growth Areas:** Reform municipal plan and zoning to clearly define compact settlement areas and promote development reaching regional housing targets.
- **Build Public Infrastructure for Compact Development:** water, wastewater, sidewalks, bike lanes, and energy systems in growth centers and villages.
- **Protect and Strengthen the Working Landscape:** Advance land conservation partnerships, Freedom to Farm policies, and support for value-added agricultural and forest product manufacturing.
- **Leverage CHIP Financing:** Use the Community and Housing Infrastructure Program (CHIP) Program to finance infrastructure investment using future tax revenue from development.



AT A GLANCE

Equity, Benefits, and Burdens

In 2024, the Vermont Legislature added the 15th State planning goal: to equitably distribute environmental benefits and burdens as described in **3 V.S.A. Chapter 72**. Beyond this statutory requirement, ACRPC recognizes that resilient, thriving communities provide residents with equal opportunity to shape government policy and equal opportunity to access governmental services, resources, and infrastructure.

ACRPC is committed to ensuring that all residents have access to the resources of the Region, receive just treatment, and have fair consideration in planning and decision-making processes. We recognize that equity—the consistent and systematic fair, just, and impartial treatment of all individuals—is essential to building a sustainable, thriving, and resilient future for the Addison Region.

Statement of Policy

- Structure policies and investments to benefit all residents and ensure they do not disproportionately burden areas containing priority populations.
- Structure the benefits of regional planning initiatives and economic opportunities to provide access to all residents.
- Develop community engagement practices that emphasize openness to questions and comments, promote transparency so that all can see and understand policies and decisions, demand civility to all groups and individuals, and provide equal opportunity for all groups and individuals to participate.
- Assess the impacts of proposed policies and objectives to understand who benefits and who may be burdened.

OUR APPROACH TO ASSESSING EQUITY IMPACTS

ACRPC's approach to equity assessment considers the following questions for each policy, objective, and decision:

- Who are the relevant stakeholders, target populations, and impacted communities?
- What are the intended outcomes and how will benefits and burdens be distributed?
- Are efforts being taken to mitigate or redress adverse impacts?
- What data and metrics are required to assess implications?

Throughout this Plan's development and implementation, ACRPC commits to evaluating policies, programs, and decisions that prioritize initiatives that reduce disparities and expand access to opportunities for all residents.

Implementation Actions

An equitable Addison Region is one in which:

- Infrastructure is planned, developed, and maintained to serve residents of all income levels, ages, and abilities, ensuring that essential services and mobility options are accessible and affordable throughout the Region.
- Resources, programs, and incentives that improve quality of life are accessible to all residents, particularly populations who face the greatest barriers or carry the highest burdens.
- Natural resources and landscapes are protected and accessible to the public, ensuring all residents can enjoy the environmental, recreational, and health benefits these resources provide without bearing disproportionate environmental burdens.
- Community representation reflects the diversity of our Region through intentional efforts to ensure diverse participation on our Full Commission, Transportation Advisory Committee, and among leadership in our member municipalities.
- Community engagement is accessible, inclusive, and designed to provide meaningful participation opportunities for all residents.

ACRPC commits to embedding these equity principles throughout our planning work in each of the areas identified above, consistent with the standards set by the State of Vermont. We recognize that achieving equity requires sustained effort, transparency, accountability to the communities we serve, and a willingness to continuously improve our practices as we learn and grow.

See Chapter 10 for additional analysis of benefits and burdens.

Natural Resources

This chapter advances the purposes and goals of Vermont's municipal and regional planning statute (24 V.S.A. § 4302) by outlining a coordinated approach to the management, protection, and enhancement of Addison County's natural resources. It emphasizes the critical role these resources play in the Region's quality of life, economy, and environment, and addresses key challenges posed by land use changes, development, climate change, and environmental concerns. This chapter promotes the wise and efficient use of land, water, forests, and wildlife to sustain public health, safety, and general welfare, and to maintain the Region's rural character and quality of life. In keeping with the state's planning goals, this chapter seeks to identify, protect, and preserve important natural features; maintain and improve air and water quality; strengthen agricultural and forest industries; and encourage flood-resilient communities. Recognizing that the long-term vitality of these resources depends on collective stewardship, the chapter emphasizes the need for coordinated and collaborative action among landowners, municipalities, regional and state agencies, non-profit organizations, and the public.

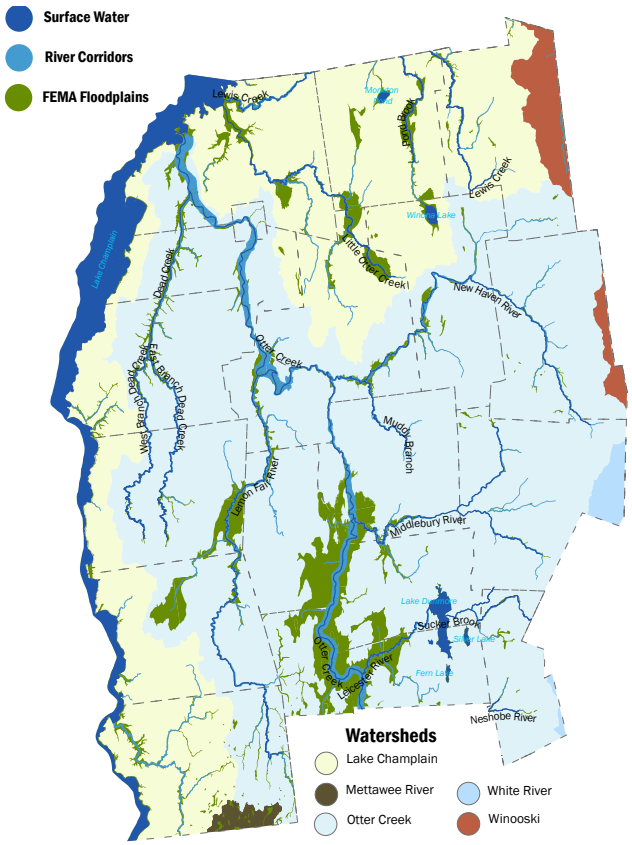
Surface Water

Flood resiliency is addressed in Chapter 7, Flood Resilience.

Surface waters—including rivers, streams, lakes, and ponds—are among Addison County's most important natural resources, providing drinking water, recreation, agricultural irrigation, habitat for fish and wildlife, and scenic and cultural value. Maintaining and improving both the quality and quantity of these waters is essential for the health of the Region's ecosystems and communities. Surface water also plays a critical role in flood control, groundwater recharge, and the overall resilience of the landscape to climate and land-use changes.

The Addison Region is home to a network of significant surface waters (**Map 1**). Most of these surface waters are part of the Otter Creek watershed, which drains into Lake Champlain. Lake Champlain forms the county's western boundary and is the largest and most prominent water body, supporting fisheries, boating, and tourism while providing critical habitat for migratory birds and aquatic species. The remaining surface water is part of the Lake Champlain watershed which drains into Lake Champlain. Major rivers, including the Otter Creek, Lemon Fair River, Middlebury River, and Little Otter Creek, drain much of the county, connecting upland areas to Lake Champlain and supporting diverse fish populations, including brook trout and smallmouth bass. Smaller lakes and ponds, such as Lake Dunmore, Silver Lake, and Monkton Pond, serve as recreational hubs and contribute to local water supply and habitat diversity. Numerous tributary streams and wetlands provide spawning grounds, nutrient filtration, and wildlife corridors. Additionally, two streams in the Region are designated Outstanding Resource Waters[1]

Map 1: Addison Region Watersheds and Waterways



for their recreational value, particularly for whitewater paddling. One is the New Haven River, from Eagle Park to Bartlett's Falls. The second is the White River mainstem in Ripton.

Many of these surface waters remain in excellent or good condition, particularly in areas with healthy forest cover and limited development. Monitoring by the **Addison County River Watch Collaborative (ACRWC)** shows that many of the Region's rivers generally meet Vermont's water quality standards and provide clean, cold habitat for fish as well as opportunities for swimming and paddling. Community stewardship, riparian plantings, and improved land management have helped stabilize eroding banks and reduce nutrient inputs along several tributaries, supporting high-quality recreation and aquatic life.

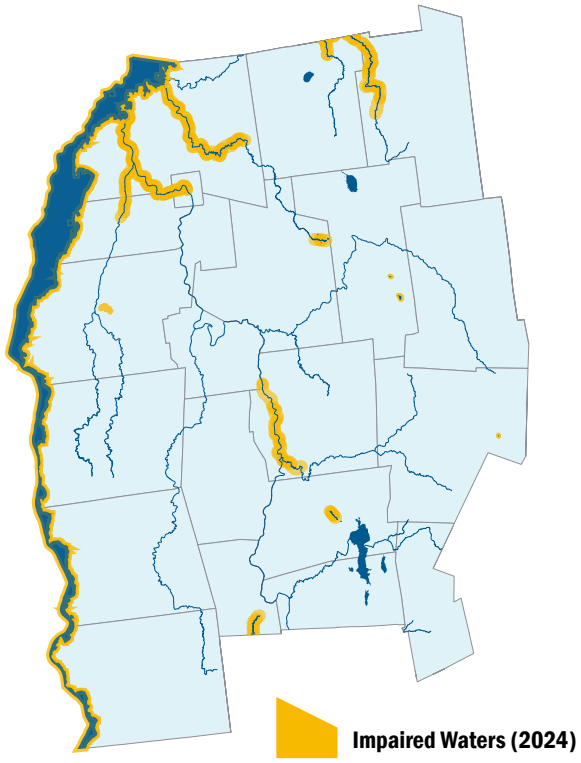
Even with these successes, ongoing challenges affect the Region's surface waters. Water quality challenges include nutrient loading from agriculture, sedimentation, stormwater runoff from developed areas, and the potential for contamination from residential and industrial sources. E. coli levels sometimes spike after heavy rains, especially at popular swimming spots such as Bartlett Falls and Middlebury Gorge, when runoff from farm fields, roads, and failing septic systems enters streams. Turbidity and suspended sediments also rise during storm events, clouding the water and transporting phosphorus—a key nutrient that fuels algal blooms downstream in Lake Champlain. These conditions are reflected in State water quality monitoring reports, which list several Addison County streams as impaired or stressed by excess phosphorus and sediment.

Another growing concern is aquatic invasive species (AIS) in and around Lake Champlain, which impact many waterbodies in the Lake Champlain basin including those accessible from Addison County. Species such as Eurasian watermilfoil, water chestnut, zebra

Table 1: 303(d) Impaired Waters in the Addison Region in 2024

Waterways	Pollutant	Impaired Use(s)	Likely Source
Lower Otter Creek	E. coli	swimming	pump station overflows
Pleasant Brook	nutrients	fish and wildlife habitat	agricultural runoff
Otter Creek	E. coli, sewage	aesthetics, swimming	agricultural runoff, possible failed septic systems
Little Otter Creek	sedimentation, phosphorus, E. coli	fish and wildlife habitat	agricultural runoff, lack of riparian buffer as contributing stressor
Halnon Brook	nutrients	fish and wildlife habitat	elevated nutrients affecting aquatic biota
Lewis Creek	E. coli	swimming	agricultural runoff
Pond Brook	E. coli	swimming	agricultural runoff
Middlebury River	E. coli	swimming	agricultural runoff
Jerome Pond	phosphorus	aesthetics, fish and wildlife habitat	runoff, atmospheric deposition, episodic acidification
Skylight Pond	phosphorus	aesthetics, fish and wildlife habitat	runoff, atmospheric deposition, episodic acidification
North Pond	phosphorus	aesthetics, fish and wildlife habitat	runoff, atmospheric deposition, chronic acidification
Gilmore Pond	phosphorus	aesthetics, fish and wildlife habitat	runoff, atmospheric deposition, episodic acidification
Lake Champlain	phosphorus	aesthetics, swimming, fish and wildlife habitat	agricultural runoff

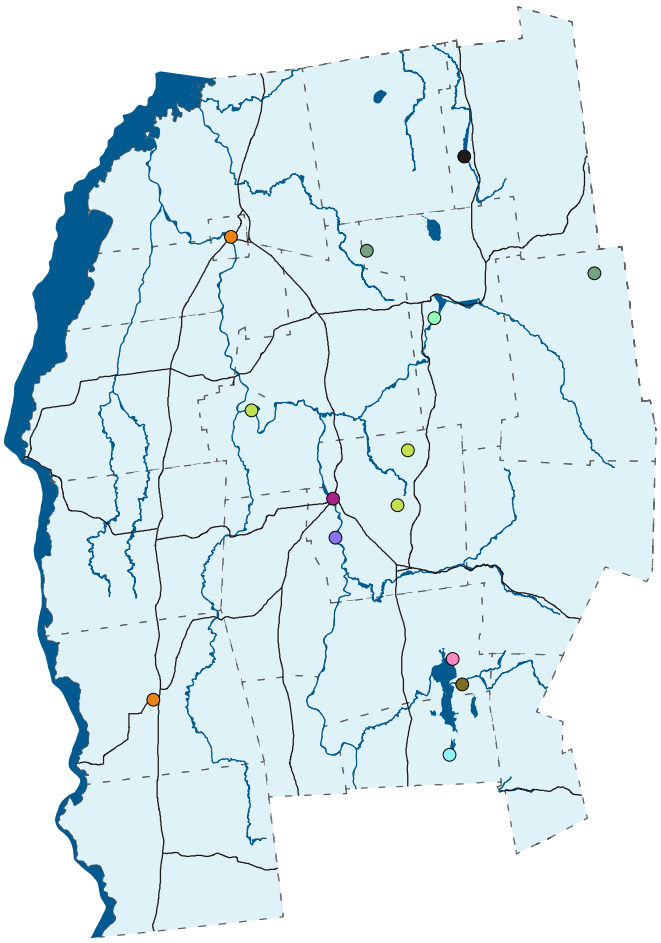
Map 2: Impaired Waters in the Addison Region



mussels, and spiny waterflea are already established in Lake Champlain, crowding out native plants, altering habitat structure, and interfering with recreational uses. The Vermont Department of Environmental Conservation (DEC) and partner organizations conduct regular monitoring and control, targeting water chestnut (via mechanical and hand harvesting), and surveying for new infestations of species like zebra mussels and watermilfoil. Volunteer programs such as the Lewis Creek Association and CHAMP! (Champlain Aquatic Invasive Monitoring Program) help map where invasives are present or spreading, supporting early detection and response.

Surface water protection in the Addison Region focuses on preserving water quality, maintaining flow and hydrologic function, and minimizing ecological disruption. Maintaining intact riparian buffers, reducing development in river corridors, and implementing agricultural Best Management Practices (BMPs) are key strategies to limit these impacts. Floodplain and wetland conservation and restoration also support natural storage and purification and reduce erosion and downstream flooding risks. Additionally, monitoring, control, and public education efforts are necessary to slow the spread of AIS.

Map 3: Clean Water Service Provider Projects Completed in the Region

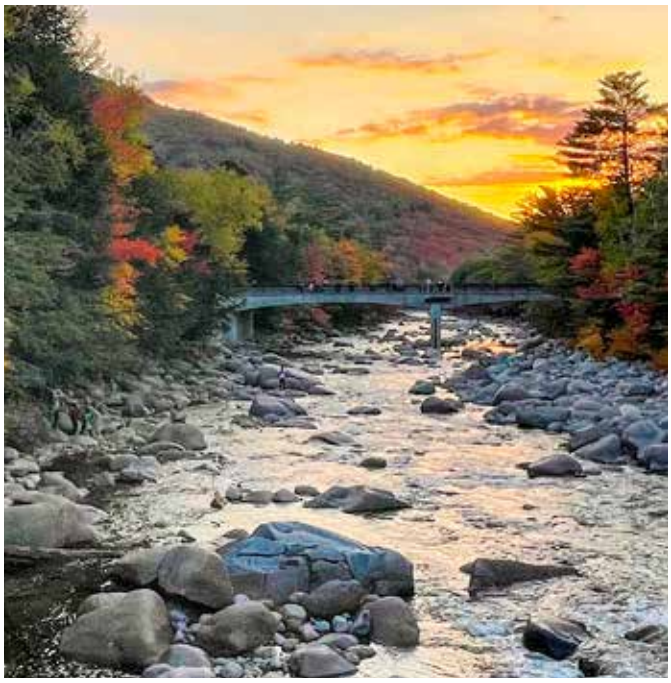


CWSP Project Type

- Stormwater Master Planning
- Project Development
- River - Planting (Riparian Buffer Planting)
- Road Project - Final Design
- Road Project - Implementation
- Floodplain/Stream Restoration - Final Design
- Floodplain/Stream Restoration - Preliminary Design
- Forestry - Design
- Forestry - Implementation
- Lake Shoreland - Implementation

A full list and description of all ACRPC Otter Creek Basin CWSP Projects since inception is available at acrpc.org

Long term planning and analysis of surface water conditions on the watershed scale in Addison County is carried out by the Vermont Department of Conservation's Tactical Basin Planning Program. The vast majority of the Addison Region falls into the Basin 3 watershed, of Otter Creek. The Basin 3 Tactical Basin Plan is updated every five years and serves as the guidebook for regional water quality protection and restoration efforts. By integrating tactical basin plan recommendations into municipal and regional planning, ACRPC links statewide water quality objectives with local actions and fosters a coordinated, watershed-based approach to protecting Vermont's rivers, lakes, and wetlands.



A central piece of enacting the Tactical Basin Plan is through the **Clean Water Service Provider (CWSP)** program. ACRPC serves as the CWSP for the Basin 3 (Otter Creek, Little Otter Creek, and Lewis Creek), which includes all or parts of 54 towns across six counties—most of which are located in Addison and Rutland counties. CWSPs were established by the Vermont Legislature under Act 76 of 2019 and are responsible for identifying, implementing, operating, and maintaining projects that improve water quality. Eligible projects must not be required by regulation and must result in measurable phosphorus reductions.

ACRPC's work as a CWSP is guided by the priorities outlined in the Otter Creek Tactical Basin Plan and directed by the **Basin Water Quality Council (BWQC)**. The BWQC sets policy and makes funding decisions based on the most significant water quality impairments identified in the basin plan, prioritizing projects that will best address those needs.

As of November 2025, the Otter Creek Basin CWSP has developed more than 25 projects, including dam removals, riparian plantings, floodplain restoration, forest road improvements, and other initiatives that enhance water quality and reduce phosphorus loading throughout the basin. See **Map 3** for CWSP projects completed as of 2025.

Map 4: Wetlands



WETLANDS

Wetlands are a unique and integral component of Addison County's surface water systems. They function as natural sponges, absorbing and slowly releasing water to maintain streamflow and lake levels, while also filtering sediments and nutrients to improve water quality. Wetlands provide critical habitat for fish, amphibians, birds, and other wildlife, and they act as buffers that reduce flooding and protect downstream communities. Because of these essential ecological and hydrologic roles, the protecting and restorating of significant wetlands plays a key part in maintaining the health, resilience, and recreational and economic value of the Region's rivers, lakes, and ponds.

The Vermont Wetland Rules establish a three-tier classification system for wetlands. Class I wetlands are considered "exceptional or irreplaceable" due to their contributions to Vermont's natural heritage. Class II wetlands include those assumed to have significant ecological functions that appear on the National Wetlands Inventory or are adjacent to mapped wetlands. Class III wetlands, also called advisory wetlands, have not yet been evaluated or are small and do not contain significant ecological functions. State regulations require a 100-foot buffer for Class I wetlands and a 50-foot buffer for Class II wetlands.

As of 2025, Addison County contains one Class I wetland, Beaver Meadows Wetland, located in Bristol and Ripton. The 66-acre wetlands contain a variety of wetland types, natural communities, and rare species. In addition, the area remains relatively unchanged by human activities as it is quite remote and is part of Green Mountain National Forest. Beaver Meadows Wetland plays an important role in flood resilience for the Middlebury and New Haven Rivers.

Addison County also contains a diverse array of Class II wetlands, including marshes, swamps, fens, and bogs, ranging from small vernal pools to extensive wetland complexes. Significant wetlands are found throughout the Region, often associated with major watercourses such as the Otter Creek, Lemon Fair River, and Lake Champlain shoreline. The Dead Creek Marsh—centered in the Town of Addison—represents one of the Region's largest and most ecologically valuable wetland complexes, providing critical flood mitigation as



Bristol Pond

PARTNER SPOTLIGHT

Addison County River Watch Collaborative

One of the partner organizations ACRPC works closely with on water quality is the Addison County River Watch Collaborative (ACRWC). ACRWC has been a community water monitoring group since 1997, taking water quality samples from six watersheds in Addison County each year and sharing the results with the public. They also organize riverbank restoration projects, especially in areas that lack woody vegetation, and engage the community through education and outreach, including farm visits, student macroinvertebrate sampling, water quality chats, and more.





well as habitat for migratory birds and other wildlife. Other notable wetlands include the Button Bay State Park marshes, the Weybridge Fen, and scattered vernal pools and forested wetlands that support amphibians, reptiles, and diverse plant communities.

Protecting significant wetlands is vital to maintaining the ecological health and resilience of the Region's surface waters. Wetlands are particularly vulnerable to development pressures, land clearing, agricultural expansion, and changes in hydrology. Loss or degradation of significant wetlands can lead to reduced water quality, increased flooding in adjacent and downstream communities, and the decline of native species. Local and regional planning efforts prioritize significant wetland conservation to safeguard these functions for future generations.

Strategies for wetland protection in the Addison Region include maintaining and enforcing state and federal wetland regulations, encouraging municipalities to incorporate wetland conservation into zoning and land use planning, and promoting BMPS on agricultural and developed lands. Conserving buffer zones around wetlands, restoring degraded wetland areas, and connecting wetlands to surrounding natural habitats enhance their ecological function. Public education and stewardship programs foster community awareness of wetland values and encourage participation in wetland monitoring, cleanups, and habitat restoration projects.

Groundwater

Groundwater is a vital resource in the Addison Region, providing drinking water for communities, supporting agricultural irrigation, and maintaining base flows in rivers and streams. The Region's aquifers vary from shallow glacial deposits to deeper bedrock formations, with significant sources including the Champlain Valley aquifer system, which underlies much of the western portion of the Region, and localized sand and gravel aquifers that supply smaller communities and private wells. It is essential to protect these resources for public health, economic activities, and ecological sustainability.

Overall, the Region has access to abundant clean groundwater. However, groundwater supplies in Addison County face pressures from climate change, land use, agriculture, septic systems, and industrial activity. Within that context, climate change and increasing drought conditions are expected to reduce groundwater recharge in Vermont by decreasing the amount of precipitation that infiltrates into soils and replenishes aquifers. Hotter temperatures and longer dry periods increase evapotranspiration, causing more water to be lost to the atmosphere rather than soaking into the ground. Reduced snowpack and earlier snowmelt may further limit spring recharge, leading to lower groundwater levels and potential impacts on wells, streamflow, and water availability during summer months.

Activities that degrade ground water quality in the Addison Region include the application of pesticides and fertilizers, the use of salt on roads, waste from livestock and other animals, mining operations, and unintentional releases from chemical spills or storage tank leaks. The State regulates public water supplies for these factors, but private wells frequently remain unmonitored, placing the responsibility on landowners to assess their water quality and take necessary precautions. Additionally, many residential septic systems installed before modern regulations inadequately treat septic discharge, resulting in pollution leaking into groundwater.

Emerging contaminants such as per- and polyfluoroalkyl substances (PFAS) and microplastics have been detected in some groundwater sources, (see **Map 5**) raising concerns about long-term drinking water safety and ecosystem impacts. PFAS, chemical carcinogens found in industrial products and firefighting foams, are persistent in the environment and can accumulate in drinking water supplies. Microplastics, originating from many sources including consumer products, compost, agricultural runoff, and wastewater, have also been detected in wells and springs in Vermont. Microplastics are known to accumulate throughout the human body and are thought to be linked to increased risk of cancer and fertility issues, though their health impacts are still under study.

Groundwater protection strategies focus on preserving aquifer recharge areas, maintaining safe wellhead and source water protection zones, and implementing land use practices that reduce pollutant infiltration.

These strategies include limiting high-risk development in mapped aquifer areas, promoting nutrient management and best management practices for agriculture, monitoring private and municipal wells, and coordinating with State agencies to address emerging contaminants.



Bristol Pond

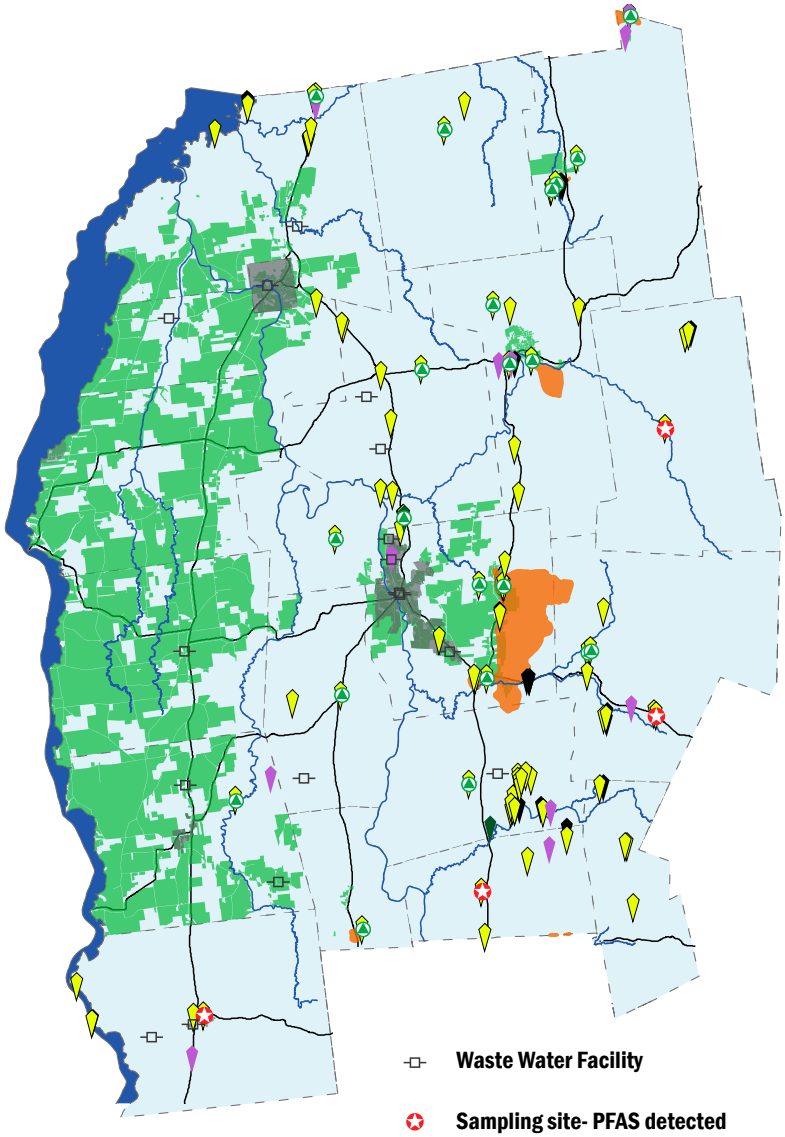


Water Works Beaver Pond



Bristol Flats

Map 5: Ground Water Resources



Agricultural Resources

Agriculture has long been a cornerstone of the Addison Region's economy, culture, and landscape. The fertile soils, favorable climate, and long farming tradition have shaped its open fields, rolling pastures, and iconic dairy farms. Today, agriculture continues to play a central role, not only producing food and fiber, but also supporting rural economies, preserving the Region's scenic character, and strengthening community identity.

In 2022, the county was home to 751 farms, encompassing 177,719 acres of land.[2] This represents a 4% increase in the number of farms and a 5% increase in farmland acreage compared to 2017. The average farm size is approximately 237 acres.[3] These farms contribute significantly to the Region's economy. In 2022, Addison County's farms had a combined market value of products sold totaling $262.9 million, with an average of $350,103 per farm.[4] This economic activity supports local businesses and provides employment opportunities in rural areas. See **Table 2** for a further exploration of Addison County agricultural statistics and **Table 3** for the rate of farm conservation over time.

Dairy farming has traditionally been the backbone of Addison County's agriculture. However, the number of dairy farms has declined in recent years due to various economic pressures. From 2009 - 2019, Addison County lost 35% of its total dairy farms.[5] While dairy farming continues to be a significant part of the Region's agricultural landscape, many farmers have diversified their operations in response to challenges in the dairy industry. There has been a notable increase in diversified farms that grow various crops, raise mulitple kinds of livestock, or include non-farming enterprises like agritourism. This diversification not only supports the local economy but also enhances food security and community resilience. See **Map 6.**

Strong local food systems play a crucial role in community resilience by providing consistent access to food during supply chain disruptions and fostering stronger social connections and community self-sufficiency. They also promote environmental sustainability through diverse, local farming practices and reduced transportation emissions, all contributing to a community's ability to adapt and thrive in the face of economic, environmental, and public health challenges. Further, by investing in value-added processing, local enterprises, and improved market access for agricultural products, communities can create jobs and generate income. Farmers markets, farm stands, community-supported agriculture programs, and farm-to-school initiatives help residents access fresh, healthy food and provide farmers with stable markets. (See Farmacy Program.)





However, the Region's agricultural sector faces several challenges. Climate change is creating unpredictable conditions, with increased flooding, drought, and heavy rainfall affecting crops, livestock, and soil health. Agricultural runoff remains a concern, contributing to phosphorus pollution in Lake Champlain and other waterways. Economic pressures—including rising land and equipment costs, limited access to labor, and fluctuating commodity prices—make it difficult for some farms to remain viable. Even when farms remain viable, the average age of farmers continues to rise, and many operations lack clear succession plans. This uncertainty



risks the loss of productive farmland, disruption of local food systems, and fewer opportunities for the next generation of farmers.

Vermont's agricultural sector is also experiencing growing challenges due to shifts in the availability of seasonal and migrant laborers. Farms increasingly depend on these workers for critical planting, harvesting, and processing tasks, yet tightening immigration policies, rising housing costs, and competition for labor have made it difficult to fill these roles. As a result, many farms face reduced productivity, higher labor costs, and difficulties maintaining consistent operations during peak seasons.

Additionally, the Region's farmers experience challenges consistent with national trends, including widespread mental health struggles within the agricultural community. Throughout the U.S., farmers face significant mental health challenges driven by financial pressures, unpredictable weather, labor shortages, and the demands of managing small or family-run operations.[6] Isolation, long work hours, and uncertainty about farm viability can contribute to stress, anxiety, and burnout. Limited access to mental health resources in rural areas further compounds the issue, affecting both individual well-being and the long-term sustainability of the Region's agricultural community.

Despite these challenges, there are opportunities to strengthen and sustain the Region's agricultural economy. Diversifying crops and expanding value-added production can increase farm income and create jobs. Adopting climate-smart practices, such as regenerative grazing, soil health improvements, and water-conservation measures, can reduce environmental impacts while increasing resilience. Farmland access programs, succession planning support, and technical assistance can help new and beginning farmers establish successful operations. Stronger farm-to-school programs, local food networks, and cooperative marketing efforts can improve food security and connect residents more closely to the land. Focusing these efforts on prime agricultural soils and soils of statewide significance will help to ensure the most productive farmland is protected and remains working land.

PARTNER SPOTLIGHT

Farmacy Program



One notable example of an innovative agricultural initiative in Addison County is the Farmacy program, launched by the Addison County Relocalization Network (ACORN) in partnership with Porter Medical Center, the VT Department of Health, and Middlebury Natural Foods Co-op. ACORN serves as a regional hub for local food system development and food education. Since its inception in 2019, Farmacy has addressed three critical community needs: diet-related illness, food insecurity, and the economic viability of local farms.

The program provides community members who are screened for food insecurity and/or diet-related illness with a free 15-week summer Community Supported Agriculture (CSA) share, including 10–12 pounds of fresh fruits and vegetables each week, along with a winter CSA extension featuring vegetables, proteins, and eggs. Each share is accompanied by a newsletter, recipe ideas, and, during the summer, additional gleaned local produce from Helping Overcome Poverty's Effects (HOPE). In 2025, Farmacy served 100 families and distributed more than 20,000 pounds of locally sourced food.

Table 2: Agricultural Statistics for Addison County

	2002	2007	2012	2017	2022
Number of Farms	676	773	814	720	751
Acreage in Farms	193,376	187,482	208,362	169,874	177,719
Average Size of Farm (acres)	286	243	256	236	237
Median Size of Farm (acres)	179	100	92	80	75
Market Value of Products Sold-Avg. Farm ($1,000)	156,691	208,819	227,928	240,889	350,103
FARMS BY SIZE					
1 to 9 acres	48	76	58	64	79
10-49 acres	167	197	243	224	244
50-179 acres	170	223	233	217	232
180-499 acres	180	178	160	129	112
500-999 acres	66	59	77	49	43
1,000 acres or more	45	40	43	37	41
LIVESTOCK AND POULTRY: INVENTORY					
Beef cows	1,209	862	1,480	2,222	1,891
Milk cows	32,797	32172	32,498	30,381	31,363
Hogs and pigs	123	269	474	475	1,074
Sheep and lambs	1,737	1552	1,960	2,920	4,296
Milk goats	1,056	1,367	1,798	1,469	1,142
Chickens - Layers 20 weeks and older	-	-	-	58,738	37,489
CROPS HARVESTED (ACRES)					
Corn for grain	1,279	943	3,200	618	1,963
Corn for silage or greenchop	24,330	22,727	23,250	19,352	22,795
Hay	80,608	76,047	88,251	69,590	70,114
Grass	55,134	36,276	-	-	-
Soybeans	920	1,634	2,858	3,612	3,660
Vegetables	258	140	258	273	232
Maple syrup (taps)	100,698	146,342	153,050	308,392	728,326
Land in orchards	1,328	1,109	431	896	493

Map 6: Agricultural Soils (Prime, Statewide, Local)

Prime: Soils with the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, and oilseed crops, and that are available for these uses.

Statewide Importance: Productive soils that would otherwise be considered prime but are limited by factors such as steep slope, erosion risk, poor drainage, flooding, shallow bedrock, or low water-holding capacity.

Local Importance: Soils used for agricultural production that are not classified as prime or statewide importance, or identified by local agencies as Additional Farmland of Local Importance.

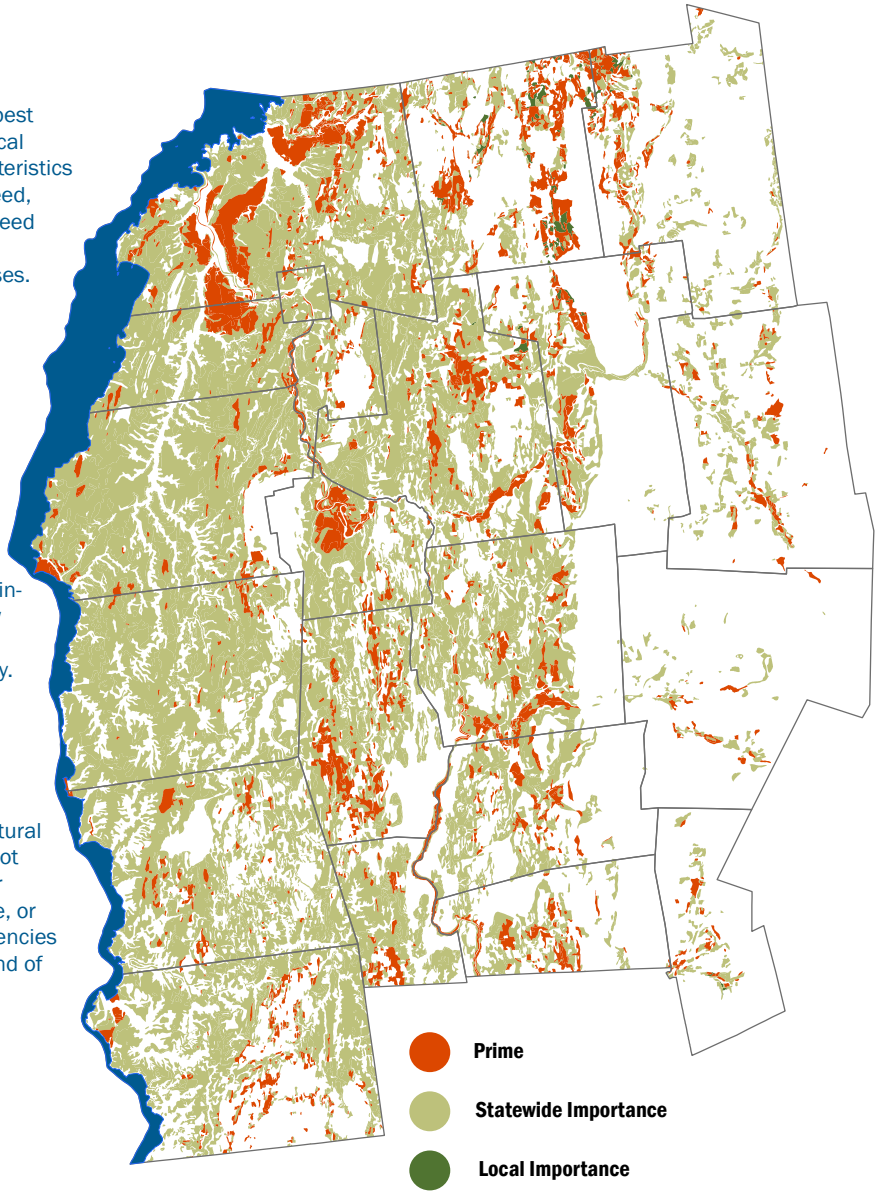




Table 3: Farms Conserved by the Vermont Land Trust in the Addison Region

Year	New Farms	Total Farms	New Farm Acres	Total Acres
2024	2	78	542	63,500
2023	4	76	600	62,958
2022	5	72	818	62,358
2021	8	67	999	61,540
2020	7	59	930	60,542
2019	4	52	876	59,612
2018	7	48	1,043	58,736
2017	1	41	233	57,693
2016	4	40	660	57,460
2015	3	36	633	56,800
2014	5	33	618	56,168

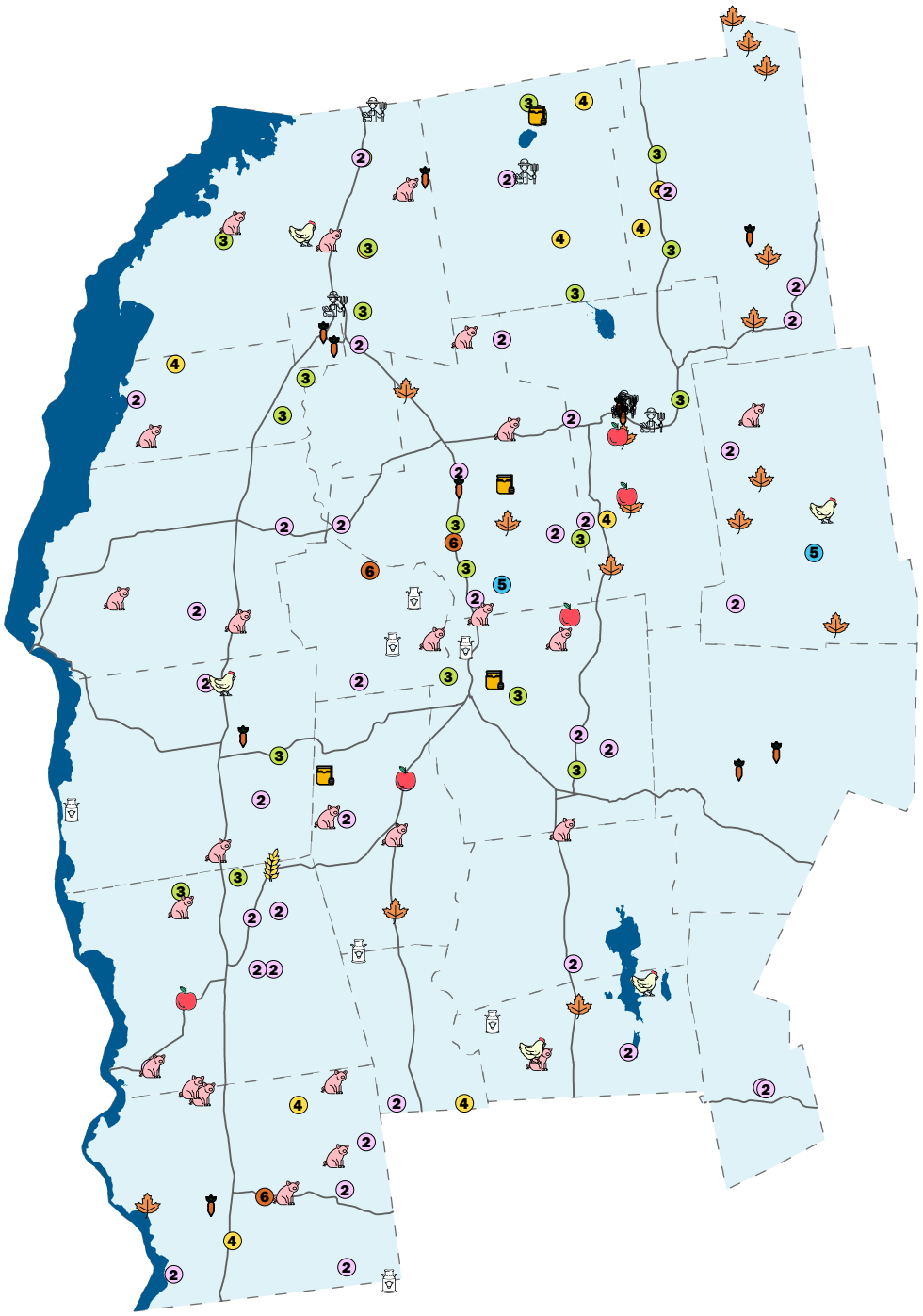
Agriculture is part of the Addison Region's identity and way of life. Farms preserve open spaces, provide scenic landscapes that attract visitors, and host cultural and educational experiences for the community. By supporting sustainable farming practices, nurturing new farmers, and investing in local food systems, the Region can ensure that agriculture continues to thrive, shaping the local economy, culture, and landscape for generations to come.

AGRICULTURE IS PART OF THE ADDISON REGION'S IDENTITY AND WAY OF LIFE

By supporting sustainable farming practices, nurturing new farmers, and investing in local food systems, the Region can ensure that agriculture continues to thrive, shaping the local economy, culture, and landscape for generations to come.



Map 7: Farm Location and Type



Single Product Farms

- Dairy
- Eggs
- Fruit
- Grain
- Honey
- Maple
- Meat
- Specialty
- Vegetables, Herbs, Flowers, & CBD/Hemp

Diversified Farms Total Product Types

- 2 Types
- 3 Types
- 4 Types
- 5 Types
- 6 Types

ACRPC would like to thank the Addison County Relocalization Network (ACORN) for providing access to the Champlain Valley Farm and Food Producers dataset, which was instrumental for this analysis.

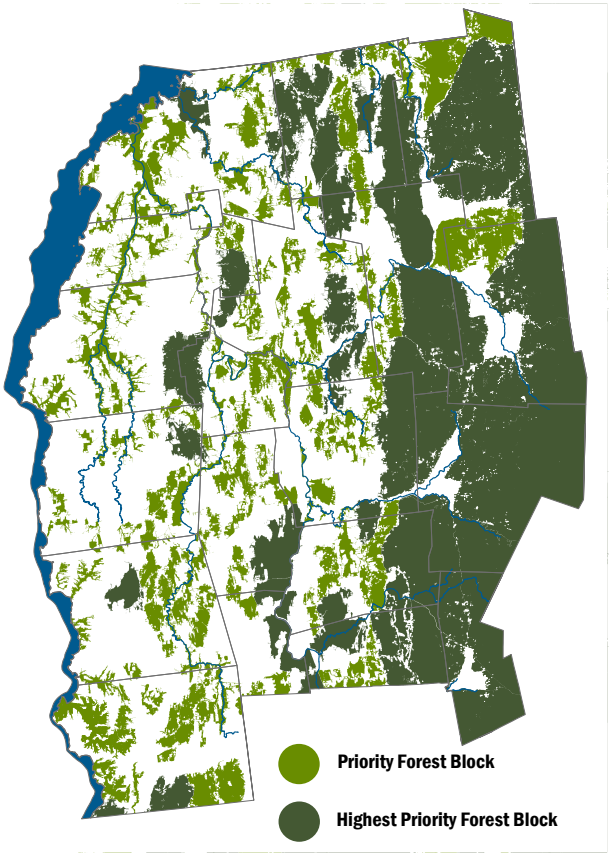
Forest Resources

Forests are a defining feature of Addison County's landscape, covering much of the Region's uplands and forming critical components of its ecological, economic, and recreational systems. The county's forests provide habitat for native wildlife, support biodiversity, contribute to water quality and carbon sequestration, offer recreational opportunities, and supply timber and other forest products that sustain local economies. Forests also deliver essential ecosystem services such as soil stabilization, flood attenuation, pollinator support, and climate regulation, while providing aesthetic and cultural benefits valued by local communities.

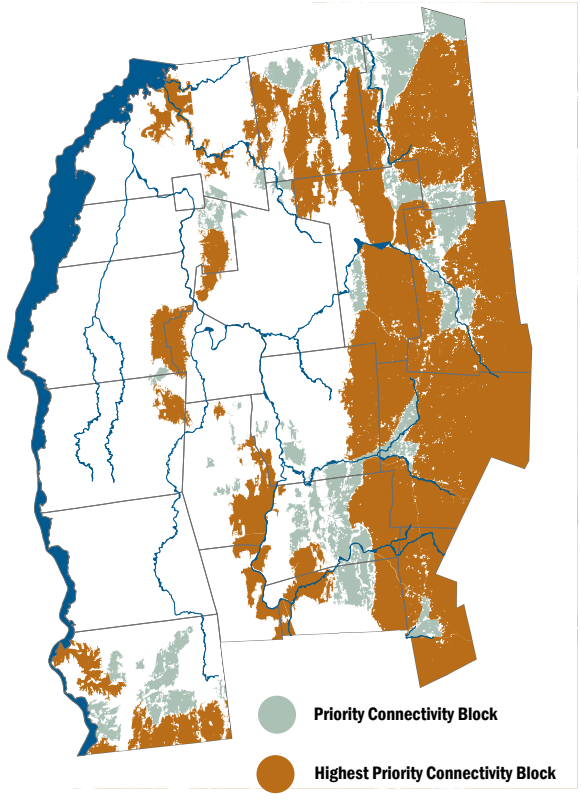
The county contains a diversity of forest types, ranging from northern hardwood and mixed conifer-hardwood forests in the Green Mountains and surrounding foothills, to subalpine and krummholz forests at the highest elevations, and floodplain and riparian forests along streams and rivers. Dominant species include sugar maple, American beech, yellow birch, red maple, red spruce, balsam fir, oaks, and hemlock, with rare or sensitive forest communities—such as Dry Pine-Oak-Heath Sandplain Forest and Subalpine Krummholz—occurring in select areas. These forests provide contiguous habitat blocks that support species, migration, dispersal, and genetic diversity, and include key corridors for wildlife such as bobcat, moose, Canada lynx, forest-dependent amphibians, and songbirds.

Addison County's forests have experienced both gains and pressures over the past decades. Between 2000 and 2024, the county gained an estimated 5,411 acres of forest cover (See **Figure 1** and **Map 10**). However, development and land conversion—particularly in the Champlain Valley and along major transportation corridors—remain a threat to habitat continuity and connectivity. Forest pests and pathogens—such as emerald ash borer, hemlock woolly adelgid, and beech leaf disease—are degrading forest health and changing species composition. Additional pests, including species like Spotted Lanternfly, are expected to arrive from neighboring states. Climate change presents additional long-term risks, including shifts in forest composition, increased vulnerability to pests and disease, and more frequent extreme weather events that can damage trees and disrupt ecological processes.

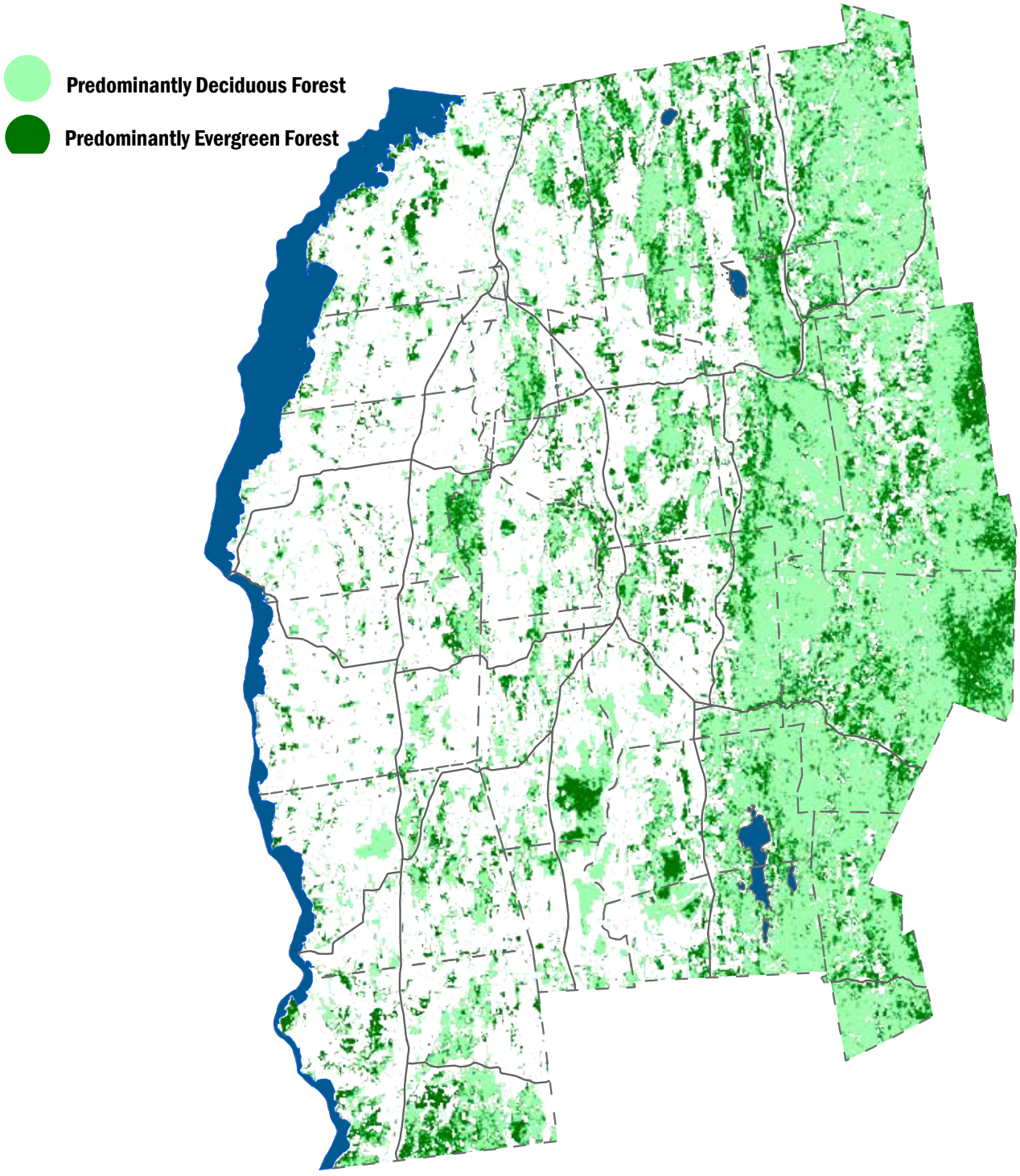
Map 8: Forest Blocks



Map 9: Forest Blocks and Habitat Connectors



Map 10: Forest Cover



A combination of protection, stewardship, and sustainable management practices will be needed to maintain and enhance forest health, viability, and function. Strategies for managing the Region's forests include preserving large contiguous forest blocks, maintaining and expanding riparian buffers and wildlife corridors, and employing clustered and conservation-oriented development to minimize fragmentation. Planning efforts should focus on maintaining and enhancing forest cover in priority forest blocks identified through the Vermont Conservation Design (see **Table 5**). This Plan encourages landowners to implement forest stewardship plans, manage harvests at sustainable levels, follow the Agency of Natural Resources "Acceptable Managment Practices for Maintaining Water Quality on Logging Jobs in Vermont," and leverage forest management practices that create and maintain wildlife habitat. ACRPC supports programs that provide education and financial incentives to landowners who want to engage in ecologically beneficial forest stewardship. ACRPC also supports efforts to restore degraded habitats, enhance pollinator forage, and protect rare and sensitive communities to support ecosystem resilience and biodiversity.

In addition to these strategies, monitoring and adaptive management are critical to long-term forest health. This includes tracking forest composition, age structure, and invasive species presence through forest inventories and aerial or ground-based surveys, as well as evaluating the effectiveness of habitat restoration and connectivity initiatives. ACRPC supports and facilitate collaboration among municipalities, private landowners, universities, state agencies, and conservation organizations to ensure that forest management aligns with

Map 11: Prime Forest Soils

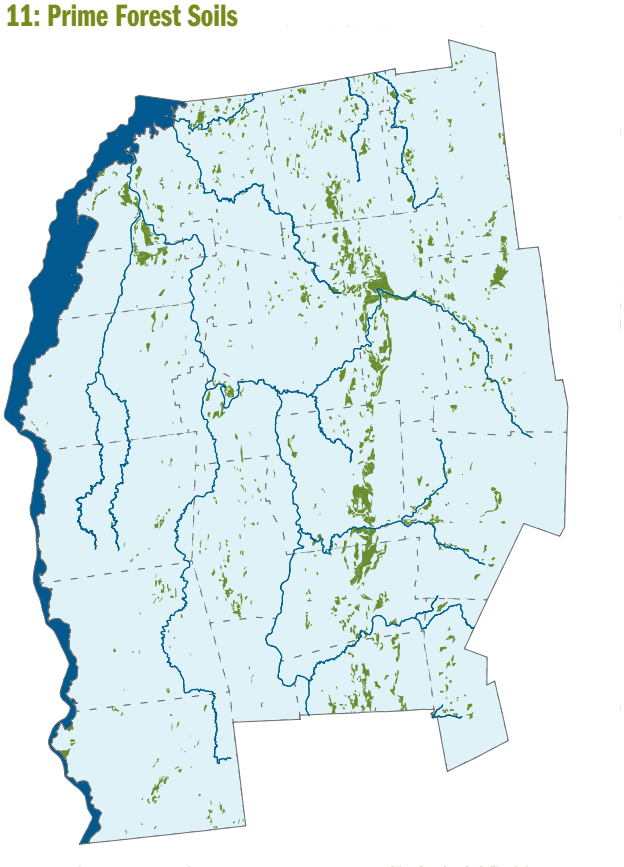
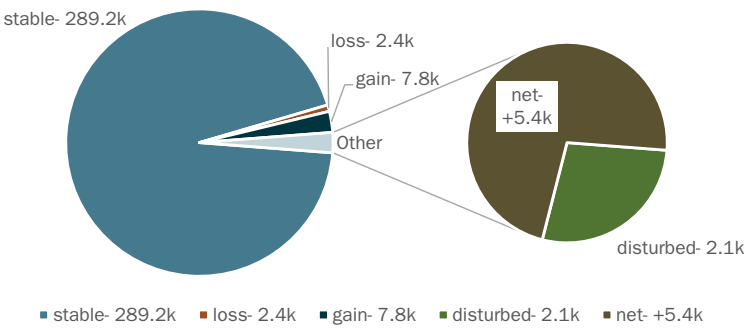


Figure 1: Net Forest Cover Change

From 2000 to 2020, Addison experienced a net gain of 5,400 acres (1.8%) in tree cover.



PARTNER SPOTLIGHT

Vermont Family Forests

Stewarding the Working Forest Landscape

Vermont Family Forests (VFF) is a Bristol-based nonprofit dedicated to sustainable forest ecosystem conservation that is concurrently ecologically viable, economically feasible, and socially responsible. Through its consulting conservation forestry program, VFF works directly with family forest owners to promote sustainable management practices. VFF also oversees long-term ecological monitoring on more than 700 acres of wild forest in Lincoln, applying research findings to guide stewardship on both private and community lands. Beyond the woods, VFF cultivates a vibrant culture of forest learning and celebration through workshops, community courses, and seasonal events like Beltane and Winter Solstice, deepening local connections between people and the forest landscapes they depend on.

both ecological and community goals. By prioritizing contiguous forest and connectivity blocks, sustainable use, restoration, and proactive stewardship, the Addison Region can maintain and enhance the ecological, economic, and social benefits provided by its forests.

Wildlife, Native Plants, & Natural Communities

Of the 105 Level III Ecoregions in the continental United States, two can be found in the Addison Region. Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources; they are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystem components. They are identified by analyzing the patterns and composition of biotic and abiotic phenomena including geology, landforms, soils, vegetation, climate, land use, wildlife, and hydrology, that affect or reflect differences in ecosystem quality and integrity. Our two ecoregions are Eastern Great Lakes Lowlands and Northeastern Highlands.

The **Eastern Great Lakes Lowlands**, subclassified as the Champlain Lowlands, cover the western side of the Region. This ecoregion has glaciated, gently rolling plains of relatively low relief with some hills, and low-gradient streams and rivers with mostly sandy and silty substrates. Prior to European settlement, valley clayplain forest of red maple, beech, hemlock, swamp white oak, bur oak, white oak, ash, and shagbark hickory dominated.

The **Northeastern Highlands** are subclassfied into three regions in Addison County: Green Mountain/Berkshire Highlands, Taconic Foothills, and Upper Mountain Alpine Zones. The Green Mountain Highlands, located along the eastern edge of the Region, are composed of low mountains and open low mountains, gently rounded to steep slopes, and narrow valleys. Waterways consist of moderate to high gradient, bedrock, boulder, and cobble-bottomed streams. On lower slopes, the forests are primarily northern hardwood forest or mesic red oak-northern hardwood forests with sugar maple, American beech, and yellow birch transitioning to montane yellow birch-red spruce forests that include some sugar maple, red maple, and American beech on mid-slopes and low summits. Taconic Foothills are found only in the southwestern-most portion of our Region. The Foothills have more southern-influenced forests with oaks and hickories on lower and drier slopes. The Upper Mountain Alpine Zones are found only at the highest elevations in the Region. There one finds subalpine forests, krummholz, and heath/krummholz communities with stunted balsam fir, some black spruce alpine areas with low mat-forming shrubs, sedges, rushes, grasses, mosses, and lichens.

The Addison Region's diverse ecoregions support a rich tapestry of natural communities. The State of Vermont has identified **97** different natural communities in the state. A natural community is an assemblage of plants and animals that repeats across the landscape wherever similar environmental conditions occur. These are finer distinctions than ecoregions, and include such habitats as floodplain forests, red pine forests, alpine meadows, and many others. Communities are ranked from S5, the most common, to S1, very rare in the state. There are five types of very rare (S1) communities that have been identified in our Region (see **Figure 2** for further details on these natural communities). Rare communities (S2) are included in the Chapter 1 Appendix.



Sharp-shinnedHawk

Each natural community in Addison County supports a variety of native plants and animals. A species is considered native if it has occurred naturally in a region for thousands of years without human introduction. Many native plants have co-evolved with wildlife, creating interdependent relationships that are essential for survival. For example, native oaks support hundreds of caterpillar species, which in turn feed songbirds, highlighting the deep interconnectedness of flora and fauna. Restoring native plant communities enhances wildlife habitat and strengthens ecosystem resilience against climate change and other stressors.

The Addison Region provides diverse habitats for mammals, birds, amphibians, invertebrates, and reptiles. Notable species include black bears, bobcats, white-tailed deer, Indiana bats, brook trout, blue-spotted salamanders, peregrine falcons, and common loons. Recent surveys have also documented the return of the Canada lynx, previously absent from Vermont, indicating positive trends in wildlife recovery.

Supporting the diversity of wildlife, native plants, and natural communities in our Region requires a landscape-level approach to conservation. This approach focuses on protecting and enhancing species and habitat types across the Region, recognizing that healthy ecosystems rely on connected habitats and ecological integrity. The **Vermont Conservation Design (VCD)** identifies key forest and habitat blocks (see the Forest Resources section for more detail) that serve as critical habitat and wildlife corridors, preventing fragmentation and allowing animals to find food, water, and shelter, migrate, disperse, and maintain genetic diversity. These connected systems also support climate change adaptation, pollination, seed dispersal, reduced human-wildlife conflict, and essential ecosystem services such as clean air and water.

In addition to maintaining connectivity, significant natural and fragile areas should be identified and prioritized for protection. Conservation efforts should focus on threatened, endangered, and rare species, especially in areas facing environmental degradation or development pressure. In addition to designated rare, threatened, and endangered species, conservation efforts should also seek to protect and enhance known sensitive and threatened habitats before their dependent species become rare or endangered. One such example is vernal pools, which are small, sensitive wetland habitats that can easily be disturbed or destroyed by human activities.

Vernal pools provide critical breeding habitat for am-

Table 5: Forest Resource Definitions

Habitat Block	A large area of natural cover, such as forest, wetland, or shrubland, that is contiguous and relatively unfragmented by human development, like roads, housing, or agriculture. These blocks are significant for supporting native species and ecological processes by providing essential resources and connectivity within the landscape.
Forest Block	A specific type of habitat block comprising a contiguous area of forest in any stage of succession, not currently developed for other uses. These areas can include recreational trails, wetlands, and agricultural and silvicultural uses currently exempt from municipal land use regulations.
Connectivity Block	A selection of habitat blocks that create a connected network of forest across Vermont and into adjacent states and provinces. They include the largest forests that serve as core habitat, as well as sometimes smaller connecting blocks. Connectivity Blocks are the network of forest blocks that together provide terrestrial connectivity at the regional scale, between all Vermont biophysical regions, and to adjacent states and Québec.
Forest Fragmentation	The division or conversion of a forest block by land development other than by a recreational trail or use exempt from municipal land use regulation.

phibians and invertebrates, many of which cannot breed anywhere else. Similarly, preserving, expanding, and enhancing pollinator habitat should be a priority. Pollinators are under threat in Vermont due to a combination of habitat loss, widespread use of systemic pesticides like neonicotinoids, and other factors like invasive species and climate change. The loss of wildflower habitats due to development and single-crop farming reduces food and nesting sites, while pesticides can directly harm or weaken bees, impacting their navigation, immune function, and reproduction. Outreach, education, and funding programs can help land managers enhance ecosystem health by supporting farm and forest practices that create, protect, and expand these habitats, promoting plant diversity and overall ecosystem function.

By emphasizing connectivity, proactive stewardship, and thoughtful land use planning, the Addison Region can maintain and enhance the integrity of its native plants, wildlife, and natural communities, ensuring resilient ecosystems and the continued provision of biodiversity and essential ecosystem services for future generations.



Eastern Painted Turtle

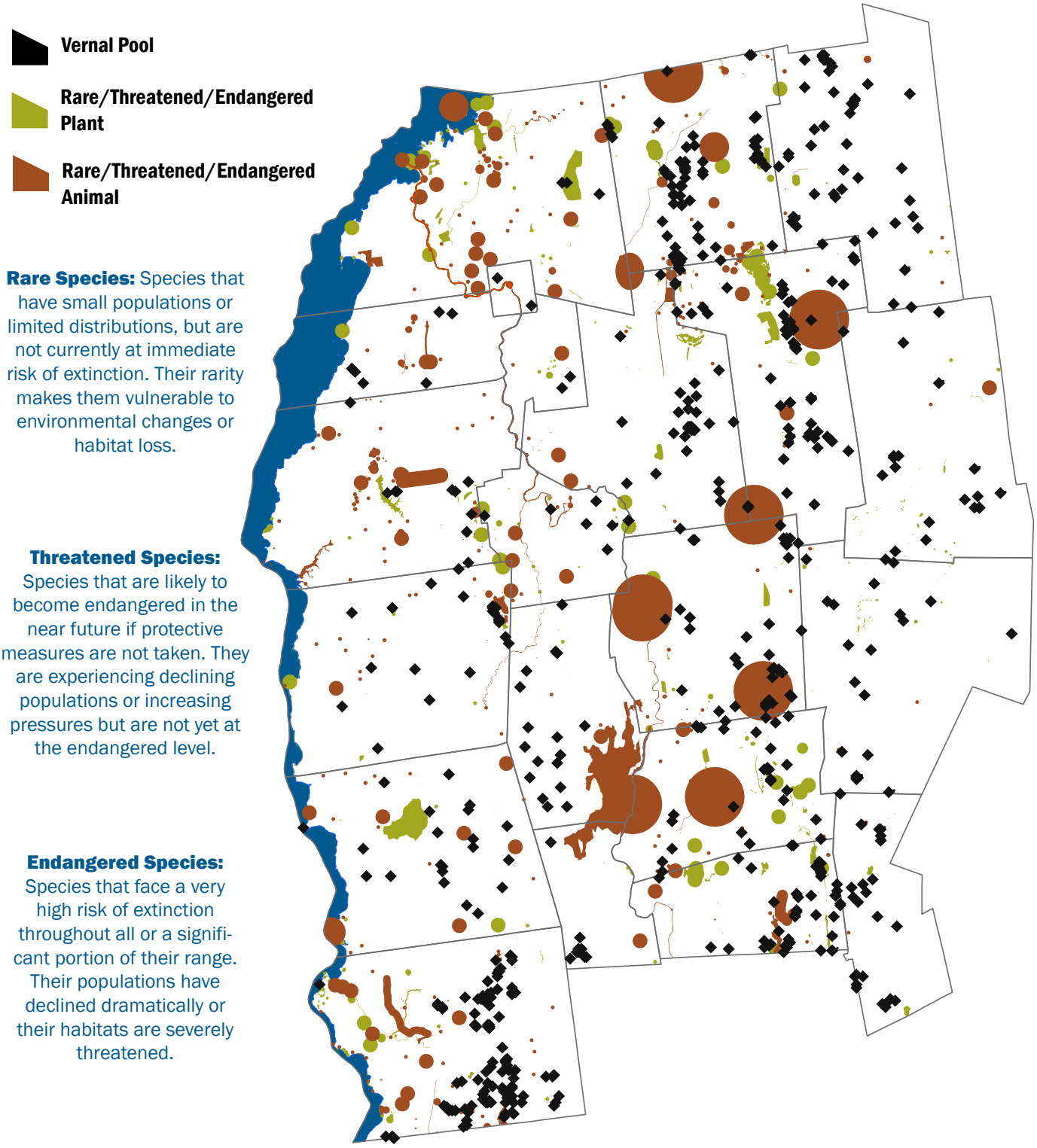


Wood Frog



Red Eft

Map 12: Rare, Threatened, and Endangered Species



Rare Species: Species that have small populations or limited distributions, but are not currently at immediate risk of extinction. Their rarity makes them vulnerable to environmental changes or habitat loss.

Threatened Species: Species that are likely to become endangered in the near future if protective measures are not taken. They are experiencing declining populations or increasing pressures but are not yet at the endangered level.

Endangered Species: Species that face a very high risk of extinction throughout all or a significant portion of their range. Their populations have declined dramatically or their habitats are severely threatened.

Figure 2: Very Rare (S-1) Natural Communities Present in the Addison Region

DRY PINE – OAK – HEATH SANDPLAIN FOREST

Pine-Oak-Heath Sandplain Forest is a very threatened community in Vermont. Overall plant diversity is low, although Dry Pine-Oak-Heath Sandplain Forests have a disproportionately high number of rare species. With their deep, well-drained soils, areas occupied by this community are in great demand for residential and industrial development, as well as for sand extraction.



PITCH PINE – OAK – HEATH ROCKY SUMMIT

These exposed, hot, dry, woodlands are typically very small and provide habitat diversity for the wildlife species that use adjacent forests. This is a fire-adapted community, so natural fires should be allowed to burn on hilltops where this community occurs. Without fire, leaf litter can accumulate and allow hardwood species to replace pitch pine.



RED CEDAR WOODLAND

These distinct narrow bands of scattered trees are found on south or west facing clifftops, where they contrast with the closed canopy forest behind them. Red Cedar Woodland is the only community documented in Vermont where red cedar maintains itself as a dominant species in a mid- to late-successional setting. This community is not especially vulnerable to human-induced change since it contains no marketable timber and is generally undevelopable.



RED MAPLE – WHITE PINE – HUCKLEBERRY SWAMP

Red Maple-White Pine-Huckleberry Swamps occur in the center of much larger wetland complexes. Very few examples of Red Maple-White Pine-Huckleberry Swamps are known in Vermont. All are in the Champlain Valley. No other states in the Region appear to have examples of this community.



SUBALPINE KRUMMHOLZ

"Krummholz" is a German word meaning "crooked wood." Subalpine Krummholz is found only on the highest peaks in the Green Mountains, with well-developed examples on Jay Peak, Mount Mansfield, Camel's Hump, and Killington. Areas of this community may be impacted by the development of communication towers and ski area infrastructure.



Scenic Resources

Housing and Land Use Planning are discussed in their respective chapters.

Addison County's scenic resources are a defining element of the Region's identity. For more than 200 years, family farms have shaped the Addison Region's landscape into a distinctive and highly valued pattern. The Region is characterized by a mosaic of open meadows, forests, and working farms. Visitors and residents alike experience panoramas of open fields interspersed with wooded areas, occasional glimpses of Lake Champlain, and rolling hills that rise to meet the backdrop of the Green Mountains. The natural rhythms of the seasons, combined with the productive use of the land, contribute to a landscape that is both varied and visually striking.

The rural pattern of villages and small industrial towns, established in the late 18th century, has largely been preserved. The human scale of buildings, the size of settlements, and the relationship of the built environment to surrounding farmland and forest create a sense of balance and comfort. Even historic and modern development of the Region has generally been modest in scale, fitting into rather than dominating the landscape. Visitors are drawn to the Region for its welcoming atmosphere, strong sense of community, and the charm that arises from the interplay of natural and man-made features. Notable scenic features include the Lake Champlain shoreline, Lake Dunmore, the Green Mountains, Dead Creek Marsh, and the Region's historic towns such as Middlebury, Vergennes, and Bristol, where architecture, streetscapes, and surrounding agricultural landscapes contribute to a strong sense of place.





Map 13: Ecoregions



This enduring landscape has been maintained through long-term family ownership, stewardship, profitable agriculture and forestry, and careful management of resources. However, pressures on the traditional land use pattern are increasing. The growth of small communities, changes in the agricultural sector, and the development of residential subdivisions for commuters to Burlington and Rutland are introducing new visual elements. Modern infrastructure, including telecommunications towers, industrial facilities, and alternative energy projects, can contrast sharply with the historic context of the Region. Development pressure along major roadways, lakeshores, and ridgelines, as well as subdivision of farmland and forested parcels, presents additional challenges to preserving scenic character. Evaluating the visual impacts of these changes is complex, as landscape alterations tend to be slow and cumulative.

Maintaining and enhancing the Region's scenic resources requires careful planning and coordinated

strategies. Approaches that help preserve the Region's character include encouraging clustered or conservation-oriented development to maintain open space and protect ridgeline and waterfront views, implementing design standards for buildings, lighting, and signage that complement the surrounding landscape, and conserving key natural and agricultural vistas. Protecting working farms, forested hillsides, and historic structures also helps maintain visual integrity. Public awareness and stewardship, including scenic easements, community engagement, and support for local conservation initiatives, are critical for long-term preservation.

The scenic resources of the Addison Region are more than just visually appealing; they contribute directly to quality of life, community identity, and tourism. By maintaining the balance between development and conservation, supporting sustainable land use practices, and fostering local stewardship, the Region can ensure that its landscapes—both natural and cultural—remain a defining element of Addison County for generations to come.

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View of the Addison Region from the Green Mountains

Air Quality

Greenhouse gas emissions are addressed in Chapter 2, Energy.

Overall, Vermont's air quality has seen significant long-term improvements in most monitored pollutants. See **Figures 3 and 4** for Vermont air quality trends over time. The State is consistently ranked as one of the cleanest in the Country.

The Clean Air Act (CAA) requires the Environmental Protection Administration to set National Ambient Air Quality Standards (NAAQs) for pollutants considered harmful to public health and the environment. The CAA identifies two types of national ambient air quality standards. Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards provide protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Six pollutants are measured in the NAAQs: particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide, lead, and ozone. In addition to the concerns addressed by the CAA and NAAQs, outdoor air pollution in significant concentrations can raise aesthetic and nuisance issues such as impairment of scenic visibility; unpleasant smoke or odors; atmospheric impacts to water quality; and can also pose human health problems, even for healthy populations.

The Region's air quality is impacted by both local and distant sources of air pollution. Local sources include discharges from industries and from non-point sources such as automobile operation. Additionally, local emissions from woodstoves and outdoor wood-fired boilers increase during the winter heating season. Inversion events, common in mountain valleys, can trap these pollutants and increase concentrations. In recent years, the Region's air quality has also been increasingly impacted by short periods of acute pollution, particularly driven by wildfires in Canada.

It will require proactive planning and collaboration to continue maintaining and improving air quality in the Region. Permitting and siting of new industrial facilities

Figure 3: Fine Particulate Annual Average

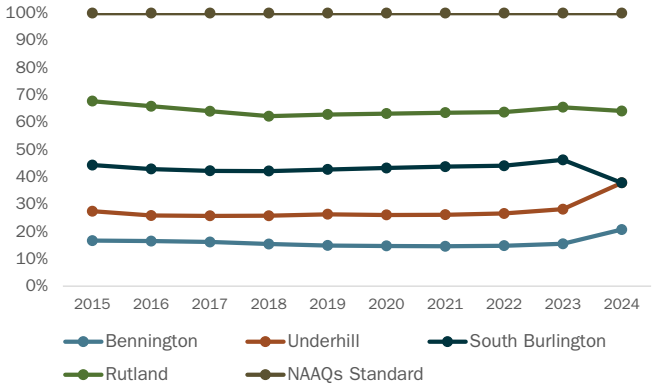
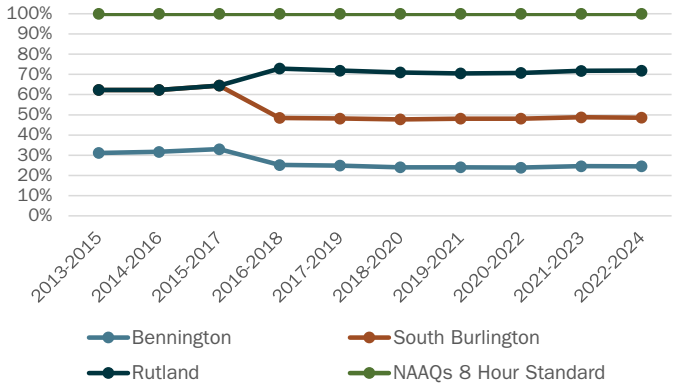


Figure 4: Ozone 8-hour Average



Ozone and **fine particulate matter (PM2.5)** are used in the **Air Quality Index (AQI)** because they are the two air pollutants that pose the greatest health threats to the public.

PM2.5 particles are small enough to be inhaled deeply into the lungs and bloodstream, causing respiratory and cardiovascular issues. **Ground-level ozone**, a major component of smog, is a potent irritant that can lead to asthma attacks and other lung problems.

Monitoring these specific pollutants allows authorities to inform the public about potential health risks and take steps to protect vulnerable populations.

There are four federal AQI monitoring stations in Vermont: Bennington, Underhill, South Burlington, and Rutland.

should consider particulate matter and ozone-depleting substance risks, ensuring that potential impacts are minimized before operations begin. In addition, regional planning efforts should support a multi-pollutant, integrated approach in coordination with in-state partners, allowing agencies to address emissions comprehensively rather than in isolation. Finally, state and regional entities should work together to identify localized air quality impacts, enabling targeted mitigation strategies where air pollution poses a risk to public health or environmental quality. These combined efforts aim to maintain Vermont's clean air standards while preparing for both ongoing and emerging challenges.

Mineral and Earth Resources

Earth and mineral resources include stone, sand, gravel, slate, and marble. These resources serve important functions in construction, road building, manufacturing, and within consumer products such as paper, paint, and medicine.

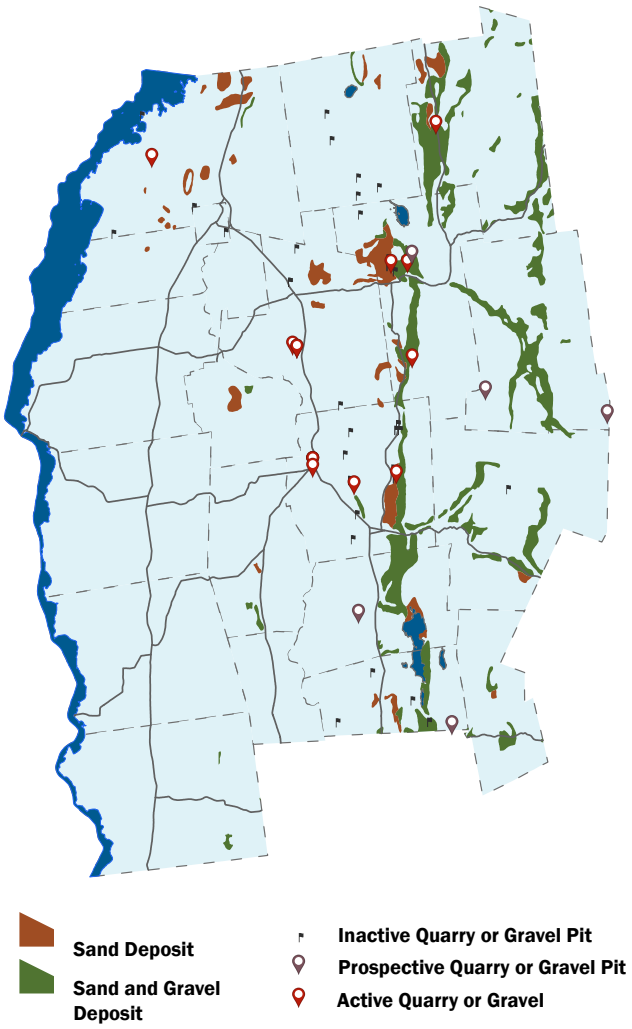
Addison County is endowed with a variety of earth and mineral resources that have historically supported local industries and continue to play a role in regional development. The county's geology features deposits of iron, marble, manganese, lead, and titanium, with eleven identified mines recorded by the U. S. Geological Survey (USGS). These resources were primarily extracted during the 19th and early 20th centuries, contributing to the Region's industrial heritage.

One large scale extraction operation still exists today. The OMYA Inc. Middlebury Quarry is a large-scale marble extraction and processing operation that produces high-purity calcium carbonate used in paper, paint, plastics, and a host of other consumer and industrial applications. In addition to marble deposits, the Addison Region has significant deposits of sand and gravel, which are essential for construction and infrastructure projects. Local businesses operate gravel pits that provide materials like crushed stone, topsoil, and winter sand. These operations support both residential and municipal development within the Region. The operations also contribute to the regional economy. See **Figure 5** for 2024 Addison County mineral extraction employment data.

Figure 5: Addison Region Earth and Mineral Extraction Employment

3 Active Operations
68 Employees
$84,687 Average Wage

Map 14: Mineral and Earth Resources



Looking ahead, several trends and challenges may influence the management of earth and mineral resources in the Addison Region. With ongoing population growth and infrastructure development, the demand for sand, gravel, and other aggregates is expected to rise. This may lead to the expansion of existing operations or the establishment of new sites. Mining and extraction activities can impact local ecosystems, water quality, and landscapes. Balancing resource extraction with environmental stewardship will be crucial to maintaining the County's natural beauty and ecological health.

Communities in the Region can take several steps to ensure the wise utilization of earth and mineral resources while minimizing environmental impacts. This Plan supports adopting BMPs for mining operations to help mitigate erosion, sedimentation, and other environmental impacts, promoting more sustainable resource extraction. Rehabilitating and reclaiming mined lands for alternative uses—such as agriculture, recreation, or wildlife habitat—can enhance both land productivity and ecological value. Engaging local communities in decision-making related to mining operations can foster transparency, address public concerns, and promote shared responsibility for resource management. Additionally, supporting research and innovation in sustainable mining technologies and alternative construction materials can reduce dependency on traditional mining practices and help minimize environmental footprints.

Recreational Resources

The Addison Region offers diverse outdoor recreation opportunities that contribute to public health, community well-being, economic development, and the protection of natural and cultural resources. The Region's varied landscapes—ranging from the Champlain Valley to the Green Mountains—support a wide range of activities, including hiking, biking, boating, fishing, hunting, skiing, snowmobiling, and wildlife observation. Public lands, state parks, and municipal recreation areas provide critical access for residents and visitors. Some of the key resources in the Region include Lake Champlain, Lake Dunmore, Silver Lake, Dead Creek Wildlife Management Area, Button Bay State Park, Green Mountain National Forest lands, and town-owned conservation and recreation parcels. The Long Trail, Cross Vermont Trail, Trail-Around-Middlebury, and numerous local hiking and multi-use trails connect communities and offer opportunities for both casual and long-distance recreation.

It is ACRPC's goal to provide safe, accessible, and sustainable recreational opportunities in our Region that enhance public health, support local communities, and protect the Region's natural and cultural resources. Challenges to achieving this goal include balancing recreation with conservation, addressing



View of the Addison Region from Eastern New York

increasing demand for outdoor access, managing maintenance and funding needs, and mitigating conflicts among different recreational uses. Climate change and extreme weather events can damage infrastructure and natural areas, while private landownership and limited public lands can constrain access. Ensuring equity and inclusivity in recreational opportunities is also critical, so that all residents can benefit from the health and social advantages of outdoor recreation.

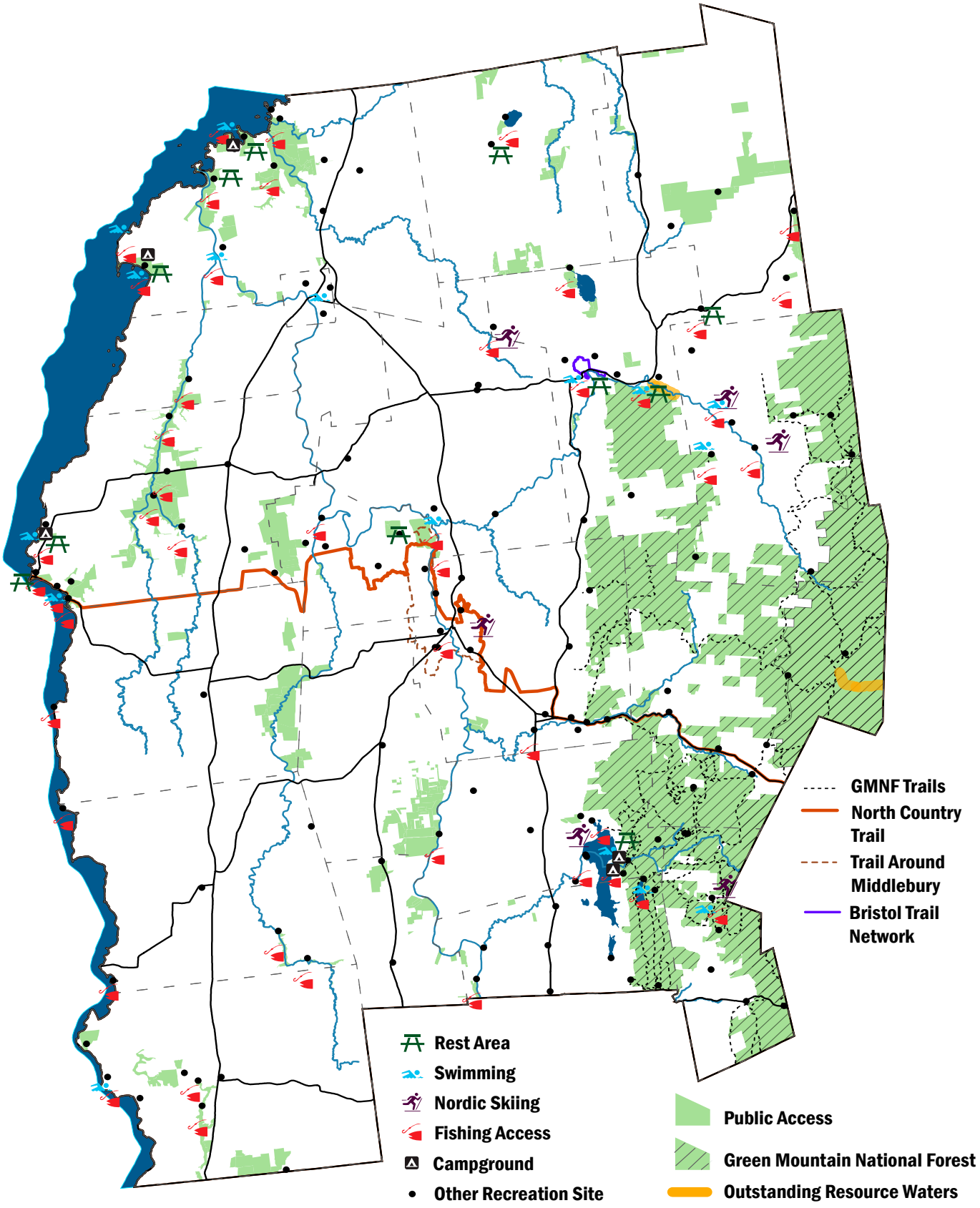
Supporting and developing recreation in the Region will require a proactive, coordinated approach that balances access, sustainability, and resource protection. Collaboration with municipalities, landowners, state agencies, and community groups is essential to maintain and expand public access while protecting sensitive natural and cultural resources.

Municipalities are encouraged to integrate recreational planning into local land use and development decisions, ensuring new projects support safe, accessible, and environmentally responsible outdoor opportunities. Trails, parks, and facilities include area designed to meet ADA standards and accommodate multiple user types, while sensitive natural and cultural areas—including wetlands, wildlife habitats, floodplains, historic landscapes, and archaeological sites—are identified and protected. Sustainable trail and facility design can help to prevent erosion, habitat disruption, and pollution, while integrating green infrastructure and native vegetation to enhance ecological function. This Plan encourages low-impact recreation practices, separating high- and low-speed trail users, and collaborating with local emergency services will improve safety and stewardship. Encouraging low-impact recreation, stewardship programs, and volunteer engagement can also enhance the sustainability of recreational assets. Finally, promoting eco-tourism, agritourism, and outdoor recreation businesses that align with sustainable land use will help ensure that recreational opportunities support the Region's economy while preserving its natural and cultural heritage.





Map 15: Recreational Resources



Goals, Objectives, and Actions

GOAL 1: To maintain, protect, and improve the quality and quantity of surface waters in the Region.

Objective 1:

Maintain, protect, and enhance functions and values of surface water systems including recreation, fisheries, wildlife habitat, water supplies, power generation, transportation, irrigation, and limited responsible waste disposal.

a. Support and expand ongoing monitoring of surface water quality to enhance tracking of water quality project impacts.
b. Support Lake Champlain Basin Planning efforts and Vermont DEC's Tactical Basin Planning efforts.
c. Work to restore and maintain stream equilibrium by developing and implementing river corridor plans.
d. Encourage watershed-based cooperation and educate towns and the general public about water quality and stream dynamics.
e. Acknowledge and address the interrelationships between various water resources in planning processes.
f. Encourage conservation of water resources by providing mapping and educational services.
g. Work with the Natural Resource Conservation Service and Basin Water Quality Council to support and implement farm and forestry practices that promote water quality.
h. Identify and mitigate sources of stormwater and wastewater contamination.



Objective 2:

Reduce pollutants entering rivers, streams, and lakes, including nutrients, sediment, and pathogens.

a. Identify and work to improve proposed and existing land use activities that have a reasonable potential to threaten surface waters through pollution, depletion, or other means of degradation.
b. Encourage development and implementation of improved wastewater treatment technologies.

Objective 3:

Protect and restore riparian buffers to filter runoff and stabilize streambanks.

a. Support projects that maintain or restore diverse areas of vegetation along surface waters sufficient to protect the dynamic viability of the stream or functional habitat or the waterbody.

Objective 4:

Preserve and restore wetlands, vernal pools, and other critical habitats that contribute to surface water quality.

a. Support research and development of local, small-scale hydro-power facilities that maintain adequate surface flow and do not compromise surface water quality or habitat.
b. Promote land use planning and zoning that minimize impacts on surface waters.

GOAL 2: To maintain, protect, and improve the quality and quantity of groundwater in the Region.

Objective 1:

Maintain, protect, and enhance functions and values of groundwater systems including drinking water supplies, water for industry, commerce and agriculture, and recharge of surface water.

a. Support and encourage efforts to protect groundwater resources in local planning and decision making.

b. Limit land uses in mapped source water protection areas to those uses that do not have a significant negative impact on water quality.

c. Identify, map, and monitor the condition of groundwater.

Objective 2:

Maintain, protect, and enhance the quality and quantity of groundwater resources, particularly where they might be degraded incrementally or where depletion has already occurred in violation of state and federal standards.

a. Require practices that reduce or eliminate the release of effluent that would have a significant negative impact on groundwater and aquifers.

b. Identify proposed and existing land use activities that have the potential to threaten groundwater resources through pollution, depletion, or other means of degradation.

c. Encourage development and adoption of innovative of wastewater treatment technologies that will help protect and improve the quality of groundwater.

GOAL 3: To protect prime and significant agricultural lands and promote a strong, diversified agricultural economy.

Objective 1:

Recognize the diverse values and benefits provided to the public by agricultural land (including but not limited to: food, energy, and fiber production, scenic and cultural landscapes for residents and visitors, and recreational opportunities).

a. Encourage sound land use planning and clustered development to protect viable agricultural land and to preserve the open landscape.

Objective 2:

Conserve important agricultural lands to maintain environmental integrity, provide for present and future agricultural use, and accommodate appropriate development.

a. Support the equitable taxation of agricultural lands through (but not limited to) local assessments that reflect current use. Encourage the Legislature to fully fund a program with serious withdrawal penalties that reduces the tax burden on agricultural and forest landowners who follow sustainable land use practices and are not holding their land for speculation, and ensure that it is adequately staffed (e.g., the Use Value Appraisal Program).

b. Promote and support conservation easements or land protection programs to prevent conversion of productive farmland to non-agricultural uses.

c. Work with municipalities to incorporate agricultural land protection and farm economic development into municipal planning efforts.



Roadside farmstands allow local farmers to attract visitors and tourists to their farms and offer fresh produce are value-added farm products in the local community.

Objective 3:

Encourage protection, enhancement, and sustainable stewardship of the quality of agricultural lands to minimize off-farm impacts.

a. Encourage implementation of Best Management Practices (BMPs) and Accepted Agricultural Practices (AAPs).

b. Work with the Natural Resource Conservation Service and Basin Water Quality Council to support and implement farm practices above and beyond AAPs that promote water quality.

Objective 4:

Support agricultural innovation and sustainable farming practices that increase productivity while protecting natural resources.

a. Encourage the strengthening and diversification of existing farming enterprises, including agricultural support services.

b. Encourage the local processing, manufacturing, distribution, and marketing of value-added agricultural products that are compatible with surrounding land uses in collaboration with local farms and the Addison County Relocalization Network (ACORN).

Objective 5:

Support a sustainable and growing farming community through retention and recruitment of farmers.

a. Support programs that provide assistance with business planning, marketing, and succession planning for farm operations.

b. Encourage programs that secure farmland for new farmers, including lease opportunities, conservation easements, and land trusts.

c. Encourage programs that provide resources for farm health, safety, and mental health support for farmers.

GOAL 4: To enhance the health, viability, and ecological function of forests.

Objective 1:

Encourage planning strategies that promote ecological health and sustainability at local and regional scales.

a. Encourage research and education to enhance economic viability of individual forest enterprises and the conservation of natural resources.

a. Support community efforts to develop and manage their forest sustainably and town forests.

b. Encourage ecosystem-oriented management on National Forest Lands, State Forest and Parks, and State Fish and Wildlife lands.

Objective 2:

Encourage the conservation and maintenance/restoration of contiguous forests to conserve native biodiversity.

a. Encourage and cooperate with private landowners and conservation organizations to conserve large tracts of productive forestland for sustainable harvest.

b. Encourage landowners to refrain from posting their land, allowing the open hunting tradition Vermont has enjoyed.



Objective 3:

Recognize and maintain the diverse benefits provided to the public by forestland (including resources to support forest economies and rural culture; habitat for native biodiversity; recreational opportunities; higher quality water and air supplies and carbon sequestration; and scenic working landscapes), and encourage the efficient use of the forest's resources and services to ensure economic viability of forest enterprises and a wide range of environmental and social benefits.

a. Encourage local processing and marketing of the forest's diversity of products.
b. Encourage use of Acceptable Management Practices (AMPs), Required Agricultural Practices (RAPs), and Best Management Practices (BMPs).
c. Promote the equitable taxation of forest land through, but not limited to, local assessments that reflect current use, zoning, and land capabilities.
d. Encourage the sustainable use of forests for local energy and heat production.
e. Work with the United States Forest Service to plan for diverse uses within the Green Mountain National Forest and Moosalamoo NRA.
f. Work with the Natural Resource Conservation Service and Basin Water Quality Council to support and implement forestry practices that promote water quality.

GOAL 5: To manage, protect, and improve the quality of plant and wildlife habitat in the Region.

Objective 1:

Support a landscape-level approach to the conservation and enhancement of species diversity and natural community types.

a. Identify significant natural and fragile areas in the Region, and support state and municipal efforts to protect and conserve these areas.
b. Share maps identifying significant contiguous habitat blocks in the Region with municipalities and landowners and support their efforts to maintain them.
c. Support conservation and stewardship of riparian forests and riparian buffer zones as key wildlife corridors.
d. Support efforts to establish and maintain interconnecting wildlife corridors by providing mapping and public education opportunities.
e. Support efforts to enhance pollinator forage through programs and land uses that support pollinator habitat such as hedge rows, native plant gardens, and no-mow areas.
f. Encourage conservation of contiguous habitat blocks and wildlife corridors across public and private boundaries, particularly where there are large tracts of open or undeveloped land.
g. Encourage a rate of harvest of plants and wildlife that is commensurate with the capacity of the area to replenish and support the species.
h. Recognize that generally accepted farm and forest management practices have helped create and maintain some species' habitats.
i. Encourage the sustainable management of game and nongame species.

Objective 2:

Manage and enhance functions and values of plant and wildlife habitat by understanding and maintaining contiguous habitat blocks, corridors, and unique areas, and by preventing the proliferation of nuisance species.

a. Encourage municipalities to create development regulations that preserve the functions of the natural communities (e.g. Planned Unit Developments (PUDs), clustered development, buffer areas, conservation easements, siting considerations).

GOAL 6: To maintain the existing scenic character of the Region.

Objective 1:

Keep agricultural land and forested lands in profitable and productive use to maintain a critical part of the Region's scenic resources.

a. Encourage development within or adjacent to existing mixed-use areas which utilize land efficiently and preserve visual resources.
b. Discourage strip development along regionally significant roadways due to conflicts with traditional settlement patterns and safety issues.
c. Preserve the scenic quality of lakeshores, ridgelines, downtowns, and villages.

Objective 2:

Minimize adverse impacts on scenic views or areas of historic significance from development.

a. Encourage PUDs and clustered development to preserve views.
b. Encourage municipalities to adopt standards for the siting of new buildings in settings which preserve the scenic quality of lakeshores and ridgelines.

Objective 3:

Promote aesthetic compatibility of new development with surrounding uses.

a. Encourage municipalities to adopt design standards governing the use of materials, architectural styles, color schemes, lighting fixtures, building mass, scale, and other design elements to promote aesthetic compatibility.

Objective 4:

Minimize undesirable environmental and aesthetic impacts from alternative energy facilities.

a. Support the development of alternative energy sources and an efficient telecommunication network when such facilities do not have adverse environmental or aesthetic impacts.
b. Require developers to minimize the aesthetic impacts of alternative energy facilities through careful siting based on thorough analysis and design standards.

Objective 5:

Balance nighttime ambiance, safety, and convenience while minimizing energy use and light pollution.

a. Encourage outdoor lighting installations that use only the amount of lighting necessary for a given task.
b. Require lighting fixtures that reduce reflected light or sky-glow from surfaces into the night sky.

GOAL 7: To maintain and improve the air quality characteristics of the Addison Region.

Objective 1:

Maintain or exceed EPA and State air quality standards.

a. Collaborate with in-state entities to address air emissions in a multi-pollutant, integrated approach.
b. Work with state and regional entities to identify localized air quality impacts.
c. Increase public awareness and education on air quality issues.
d. Support the use of best-available technology for all emission sources within the airshed.



View of Monkton Ridge

GOAL 8: To encourage wise utilization of mineral resources with minimum impacts to the environment.

Objective 1:

Protect sand and gravel deposits for future use and develop sites that would decrease transport costs and wear and tear on the road network.

a. Encourage towns to make sure that their conditional use standards are clearly written, are administered fairly, and that they balance the interests of the town, the facility owner/operator, and the neighboring landowners.
b. Require progressive reclamation in gravel pit operations.
c. Encourage appropriate land use that does not limit the future use of mineral resources.

GOAL 9: To provide safe, accessible, and sustainable recreational opportunities in the Addison Region that enhance public health, support local communities, and protect the Region's natural and cultural resources.

Objective 1:

Enhance accessibility to recreational resources for all residents and visitors.

a. Work with municipalities to integrate recreational planning into local land use and development decisions.
b. Promote ADA-compliant and multi-use trails, parks, and facilities.
c. Promote municipal forests and enhance recreational opportunities on community lands to expand public access to outdoor recreation.

Objective 2:

Protect and conserve natural and cultural resources while supporting recreation.

a. Identify sensitive natural areas (wetlands, wildlife habitats, floodplains) and cultural sites (historic landscapes, archaeological sites) and guide recreational planning to minimize impacts.



Birding group viewing from Buck Mountain.

b. Encourage sustainable trail design and facility placement to prevent erosion, habitat disruption, and pollution.
c. Promote low-impact recreation practices such as "Leave No Trace" and responsible boating or snowmobiling.
d. Facilitate the integration of green infrastructure and native vegetation into recreational development projects.

Objective 3:

Promote safe recreational opportunities and reduce conflicts among users.

a. Encourage multi-use trail planning that separates high-speed and low-speed users where possible.
b. Collaborate with local law enforcement, fire, and EMS services to develop emergency response plans for recreational areas.

Objective 4:

Support economic development and community engagement through recreation.

a. Encourage eco-tourism, agritourism, and outdoor recreation businesses that align with sustainable land use practices.

ENDNOTES

[1] Outstanding Resource Waters are designated by the Secretary of the Agency of Natural Resources under 10 V.S.A. §1424a.

[2] United States Department of Agriculture National Agricultural Statistics Service. (2022). Table 1 - 2022 Census of Agriculture.

[3] United States Department of Agriculture National Agricultural Statistics Service. (2022). Table 1 - 2022 Census of Agriculture.

[4] United States Department of Agriculture National Agricultural Statistics Service. (2022). Table 1 - 2022 Census of Agriculture.

[5] Vermont Agency of Agriculture, Food, & Markets. (2021). Vermont Agriculture and Food System Strategic Plan 2021-2030. (p.55).

[6] According to the National Rural Health Association, farmers are 3.5 times more likely to die by suicide than the general population. see Eisenreich, Rosalien & Pollari, Carolyn. (2017). National Rural Health Association Policy Brief: Addressing Higher Risk of Suicide Among Farmers in Rural America. https://www.ruralhealth.us/getmedia/98f1009e-5418-4c06-910c-cdbb965cdb2e/NRHA-Policy-Brief-Increases-in-Suicide-Rates-Among-Farmers-in-Rural-America.pdf

TABLES AND FIGURES

Table 1 Vermont Department of Environmental Conservation. (2024). Vermont 2024 303(d) impaired waters list report.

Table 2 United States Department of Agriculture National Agricultural Statistics Service. (2022). 2022 Census of Agriculture, Table 1.

Table 3 Moore, C. (2024). Conserved farmland data [Data provided by Vermont Land Trust GIS Director].

Table 4 United States Department of Agriculture Natural Resource Conservation Service. (2018). Farmland classification systems for Vermont soils.

Table 5 Vermont Agency of Natural Resources. (2018). Vermont conservation design: Maintaining and enhancing an ecologically functional landscape.

Figure 1 Potapov, P., Hansen, M. C., Pickens, A., Hernandez-Serna, A., Tyukavina, A., Turubanova, S., Zalles, V., Li, X., Khan, A., Stolle, F., & Harris, N. (n.d.). Net tree cover change data.

Figure 2 Vermont Fish & Wildlife. (n.d.). Natural community fact sheets.

Figure 3 and 4 U.S. Environmental Protection Agency. (2025). EPA design value report: PM 2.5 design values, 2024.

Figure 5 Mine Employ Vermont Department of Labor. (2025). Covered employment and wages: Mining, quarrying, and oil and gas extraction, 2024 annual data.



Energy

Purpose of the Plan

The Addison County Regional Planning Commission (ACRPC) developed the Region's first regional plan including an energy section in 1994. The policies in that plan expressed concern about the future location of large-scale electric generation and transmission facilities in the Region. It supported the development of locally generated energy sources and pointed to their potential contribution to the Region's economy. The plan also recommended encouraging the concentration of new residential development near existing employment centers and discouraging a scattered pattern of residential development in the rural countryside, thus reducing gasoline consumption. ACRPC subsequently updated its Energy plan in 2005, 2011, 2018, and 2024. ACRPC's completion of in-depth energy planning enables Vermont to achieve state and regional energy goals including:

A. To make efficient use of energy, provide for the development of renewable energy resources, and reduce emissions of greenhouse gasses, including:
   - increasing the energy efficiency of new and existing buildings;
   - identifying areas suitable for renewable energy generation;
   - encouraging the use and development of renewable or lower emission energy sources for electricity, heat, and transportation; and
   - reducing transportation energy demand and single occupancy vehicle use. 24 V.S.A. § 4302(f)(1)

B. Greenhouse gas (GHG) reduction requirements under 10 V.S.A. § 578(a)
   - 26% from 2005 levels by 2025
   - 40% from 1990 levels by 2030
   - 80% from 1990 levels by 2050



C. The 25 x 25 goal for renewable energy under 10 V.S.A. § 580
   - 25% in-state renewables supply for all energy uses by 2025

D. Building efficiency goals under 10 V.S.A. § 581

E. The recommendations for regional and municipal planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b

F. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005

Although the energy picture often appears abstract and beyond the influence of local communities, sound regional and municipal planning can effectively guide certain types of energy decisions. The Addison Region can move toward a position of sustainable energy use that will maintain a healthy environment and build a foundation for economic vitality. ACRPC and its member municipalities can promote appropriate land use patterns, participate in energy generation development decisions, facilitate alternative transportation options, and encourage energy conservation strategies in the Region. The purpose of this Plan is to identify the opportunities for the Region and member municipalities to facilitate the transition to a more efficient and sustainable energy system.

Introduction

ACRPC created this Plan, within the overall energy planning framework of the State Comprehensive Energy Plan, to prepare for our future energy usage and infrastructure in accordance with the guidance provided by the Public Service Department (PSD). This Plan advances three key energy priorities for the Addison Region:

- Pursuing a Just Energy Transition
- Improving our Climate Change Resilience
- Enhancing our Energy Security

ENERGY JUSTICE

Profound changes to the energy system of Vermont have been underway—our Brave Little State has been a leader in pursuing renewable energy development for decades. To have a just energy transition however, it is crucial that all Vermonters are treated fairly as these changes unfold. As such, it is critical to consider these four questions so that we can conduct more just energy planning in the Addison Region:

1. Who is being helped?
2. Who is being harmed?
3. Who is missing from the conversation?
4. How will we respond?



Lake Dunmore, Salisbury

Table 1: Total Energy Burden by Town

	Total Energy Burden
Addison	8%
Bridport	12%
Bristol	9%
Cornwall	8%
Ferrisburgh	8%
Goshen	10%
Leicester	13%
Lincoln	11%
Middlebury	9%
Monkton	7%
New Haven	9%
Orwell	12%
Panton	10%
Ripton	8%
Salisbury	9%
Shoreham	10%
Starksboro	10%
Vergennes	10%
Waltham	9%
Weybridge	7%
Whiting	11%

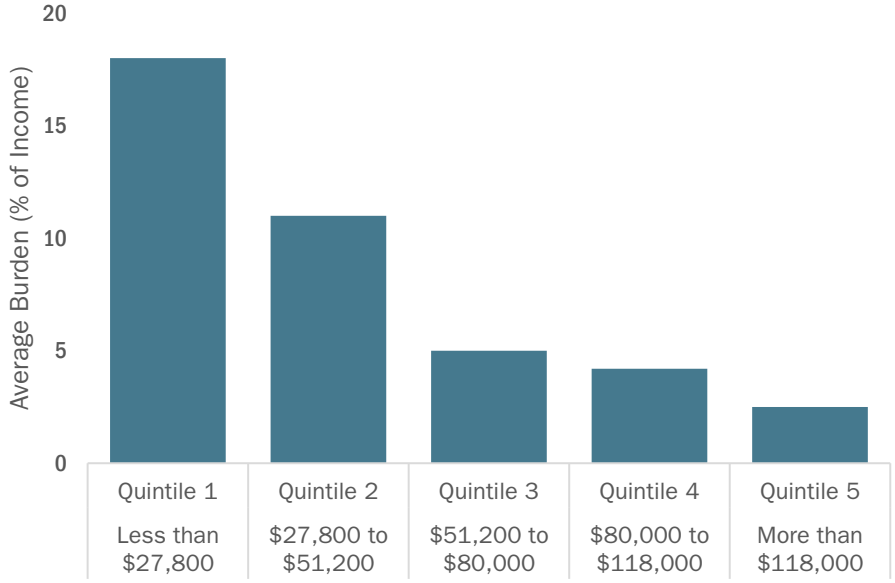
In addition, ACRPC's Energy Plan incorporates the ideals detailed in the Energy Equity Project (EEP) Framework[1] and establishes the following priorities:

- Reliability and affordability serve as the two foundational energy goals of the Region; and
- Utilities should prioritize affordability in the energy projects they provide to minimize the energy burden on consumers.

Beyond these basics, ACRPC supports energy choices that address climate change, reduce social inequity, and encourage participation in energy decision-making at the state, regional, and local levels.

Ultimately, ACRPC's Regional Energy Plan strives to improve the outcomes for environmental justice populations, as defined by Act 154. For more information on how to internalize equity into policy and a list of populations vulnerable to the impacts of climate change, see the State of Vermont Climate Council's Guiding Principles for a Just Transition.[2]

Figure 1: Total Energy Burden in Vermont by Income



ENERGY BURDEN

Our Region's strategy for enhancing environmental and energy justice is three-fold:

1. Transitioning from fuels that produce pollutants that have negative public health impacts;
2. Reducing the "energy burden," defined as the proportion of household income spent on energy costs, for our communities.[3]
3. Increasing access to weatherization, energy efficiency, and electrified appliances and vehicles to underserved households.

On average, Addison County residents face an energy burden of approximately 10% of the median household income, totaling +/- $7,300 in annual energy costs per household. **Table 1** provides a municipality-level breakdown of energy burden within the Region. Of Addison County household average energy costs, nearly half (45%) is spent on transportation, followed by heating (33%), then electricity expenses (22%). Nationally, an energy burden greater than 6% is considered high and is correlated with a "greater risk for respiratory diseases, increased stress and economic hardship, and difficulty in moving out of poverty."[4] These high energy costs take up a large share of household income, often forcing families to make difficult choices between essentials like food, medical care, and safe energy use.

Energy-burden data helps shape state, regional, and local energy programs. It helps direct resources to households with the greatest financial need.

In Vermont, energy expenses disproportionately hurt rural, lower-income, non-white, and non-homeowners.[5] Energy spending often competes with other basic needs such as housing, healthcare, and food. According to one Energy Action Network report (see **Figure 1**), households earning less than $27,800 spend more than 18% of their income on heating and electricity bills, compared to less than 5% for households earning more than $80,000.[6] Lower-income households are more likely to rent or own older homes, which are less efficient and more expensive to heat and cool.[7]

GENERATION BENEFITS AND BURDENS

The uneven distribution of energy costs felt at the level of individual homes is exacerbated by the uneven distribution of energy generation facilities across the northeast. Vermont has long benefited from energy produced outside its borders, enjoying clean air and a healthy environment while avoiding many of the environmental impacts tied to polluting energy sources.

One example is the effect on Indigenous communities in Canada, where large-scale projects have been developed by Hydro-Québec. As Vermont moves toward a future powered by distributed renewable energy, it must also take responsibility to contribute equitably to energy generation. This means embracing local, renewable energy systems that reduce reliance on out-of-state power and ensure that the benefits and challenges of energy generation are shared fairly. Vermont can lead by example by demonstrating how states can contribute to a more just and sustainable energy system.

CLIMATE CHANGE RESILIENCE

This plan seeks to enable greater climate resilience, defined as the ability to mitigate climate change through greenhouse gas emissions reductions, while preparing for and adapting to the impacts of climate change across the Addison Region.[8]

There is strong scientific consensus that the burning of fossil fuels has substantially increased the concentration of greenhouse gases in the Earth's atmosphere over the last two centuries. This trend began with the widespread adoption of coal and oil-based fuels during the Industrial Revolutions in Great Britain and the United States. It accelerated after World War II, as economic recovery in North America, Europe, and parts of Asia drove a sharp rise in fossil fuel consumption—particularly in the 1950s—and continues today.

Increasing greenhouse gases in the atmosphere have a direct impact on the Earth's natural systems with one of the most significant being the substantial rise in average global surface temperature (see **Figure 2**).

Sources of greenhouse gas emissions increases include the burning of fossil fuels - especially in transportation, electricity generation and heating- and refrigerant leaks from air conditioners, refrigerators, freezers, and heat pumps. Addison Region's climate resilience will increase as actions are taken to transition away from fossil fuel powered energy generation and minimize energy consumption as a whole.

Vermont is a small state, and its per capita CO^2 pollution from energy use is already much less than other U.S. states.[9] Vermonters can take pride in their state's relatively low per capita greenhouse gas emissions compared to national averages. In fact, because of its forests, Vermont absorbs more CO_2 than it produces. Within that context, climate change is real. The threats of climate change require continued and meaningful action. ACRPC recognizes its responsibility to contribute to state, national, and global economic and climate goals, while also upholding the Region's core planning values. Protecting the Region's natural beauty and environmental integrity remain a priority. Accordingly, ACRPC strongly supports best practices for orderly development and land-use—including siting energy generation and transmission projects in suitable locations, avoiding over-development, and designing projects that are compatible with local habitats.

The Addison Region is already experiencing the effects of climate change (see **Figure 2**). Since 1900, Vermont's average temperature has risen about 3°F and is expected to continue rising. These warmer temperatures pose risks to human health and disrupt ecosystems. Indigenous species that rely on cold winters are migrating north, while invasive species are expanding into Vermont. In addition, Vermont's average annual precipitation has increased nearly six inches since the 1960s, causing more frequent and significant flooding across the State. These extreme rainfall and flooding events threaten private and public infrastructure, including energy generation and transmission systems.

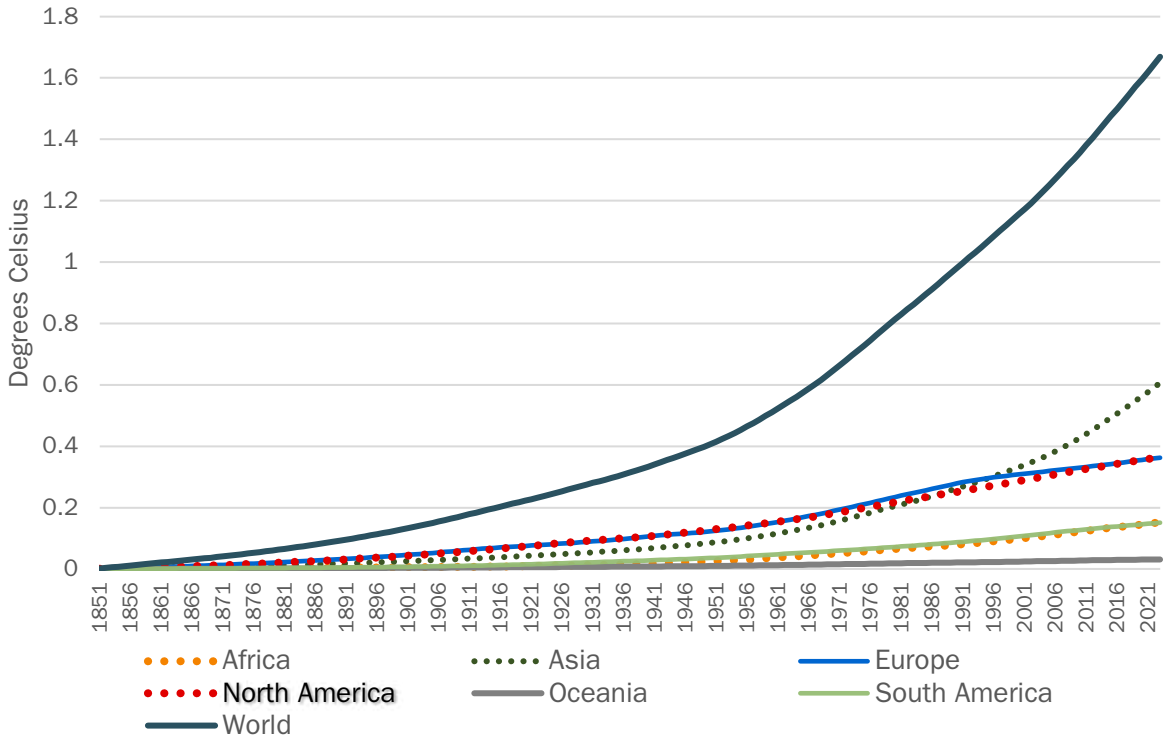
This trend is likely to continue. The U.S. Climate Vulnerability Index, for example, ranks Vermont as the 7th most vulnerable state to climate change-influenced extreme weather events (**Map 1**).[10] This ranking is most likely due to vulnerability to flood events. See Chapter 7: Flood Resilience. To build a climate resilient future, the Region must reduce fossil fuel use and adapt its infrastructure and natural systems to withstand more frequent and severe extreme weather events.

Green Mountain Power's **Zero Outages Initiative** is one noteworthy case that, among other measures, pairs the "hardening" of rural distribution infrastructure with strategically placed battery systems to enhance energy system resilience in the Region.[11] This initiative will enhance the resilience of the Region's energy system as the effects climate change continue to emerge.

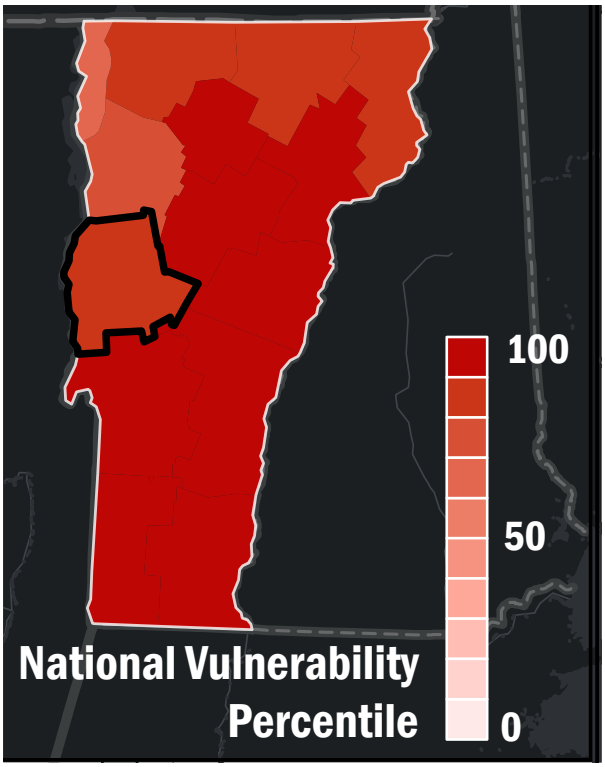
A two-pronged approach to climate resilience—focusing on both climate change prevention and adaptation—is essential to securing a safe, just, and prosperous future for the Region. In "Building for a Resilient Tomorrow: How to Prepare for the Coming Climate Disruption," researchers Alice C. Hill and Leonardo Matinez-Diaz argue that "cutting emissions is the best resilience strategy of all because it can safely spare us from some of the worst impacts of Climate Change." The authors note that adaption measures function as shock absorbers against climate change influenced disruptions—much like a seat belt or an airbag—and reduce harm during disruptive events and expedite recovery.

While adaptation is critical for limiting damage and speeding recovery, it cannot fully protect us from the most extreme climate threats. Just as a seat belt has limits, so too does our capacity to adapt to a rapidly warming world. A climate resilient region is one that

Figure 2: Change in Global Mean Surface Temperature Caused by Greenhouse Gas Emissions



Map 1: Climate Vulnerability From Extreme Events

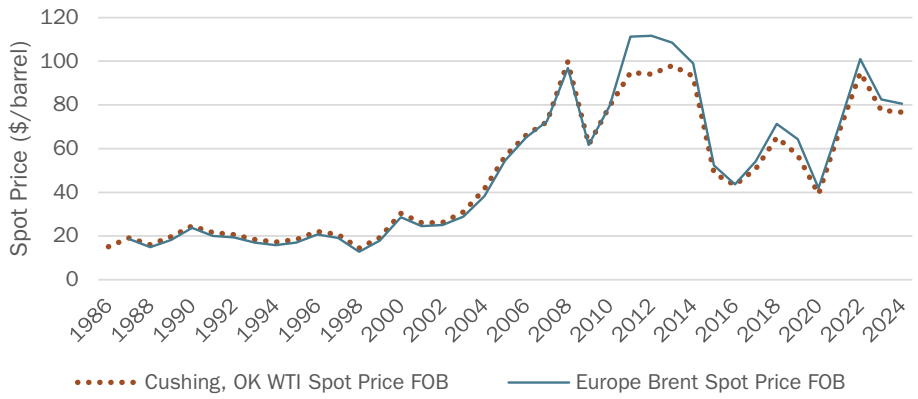




Solar installation, New Haven

has done what it can to limit the warming of the planet while also addressing the negative outcomes that come with a warmer world because there is likely to be a limit to our ability to adapt to that warmer world. As such, the Addison Region supports both climate change prevention and adaption as the core elements of its climate change resilience goal as it pertains to energy planning.

Figure 3: WTI and Brent Crude Spot Prices (1987-2024)



WTI (West Texas Intermediate) is a grade of US crude oil used as a major benchmark for oil prices, quoted FOB (Free On Board), meaning the price is set at the point of origin before shipping costs.

ENERGY SECURITY

From the oil crisis of the 1970s to the global disruptions caused by the COVID-19 pandemic and the 2022 expanded Russian invasion of Ukraine, geopolitical events have repeatedly posed threats to our energy system and exposed vulnerabilities.

The more an energy system depends on non-domestic sources, the more it is at risk of disruptions beyond its control. Increased and unstable energy prices and, in extreme cases, outright scarcity, demonstrates the need for greater energy security. **Figure 3** shows that Crude oil prices, which drive the cost of heating oil and gasoline, have become more volatile and are trending upward.

ACRPC emphasizes that energy security, defined as uninterupted access to reliable and affordable energy resources, is a central focus of the Regional Energy Plan to support public health and economic security.

Since 2004, ACRPC's Energy Plan has recommended reducing regional energy use through conservation, efficiency, and the transition to renewable energy. This includes replacing fossil fuel-based technologies with electric alternatives powered by clean energy sources. To support this vision, ACRPC has engaged in several planning projects to support this approach such as energy production on municipally owned properties and conducting local outreach and education on energy conservation.

ACRPC believes the Region has both the potential and the responsibility to reduce energy demand and increase local energy supply in ways that strengthen energy security. This includes expanding renewable energy generation and investing in advanced infrastructure like energy storage systems, SMART Grid, and Thermal Energy Networks (TENS).

ACRPC is planning for our Region's energy future by promoting energy justice, climate resilience, and enhanced energy security. These goals will be pursued in balance with other key social and environmental priorities, including orderly development and sustainable land use. Through this approach, the plan aims to promote the health, safety, opportunity, and well-being of Addison Region's residents, Vermonters, and the global community.



View of Bristol Fire Department, Recreational Fields, and Mount Abraham Middle and High Schools, Bristol

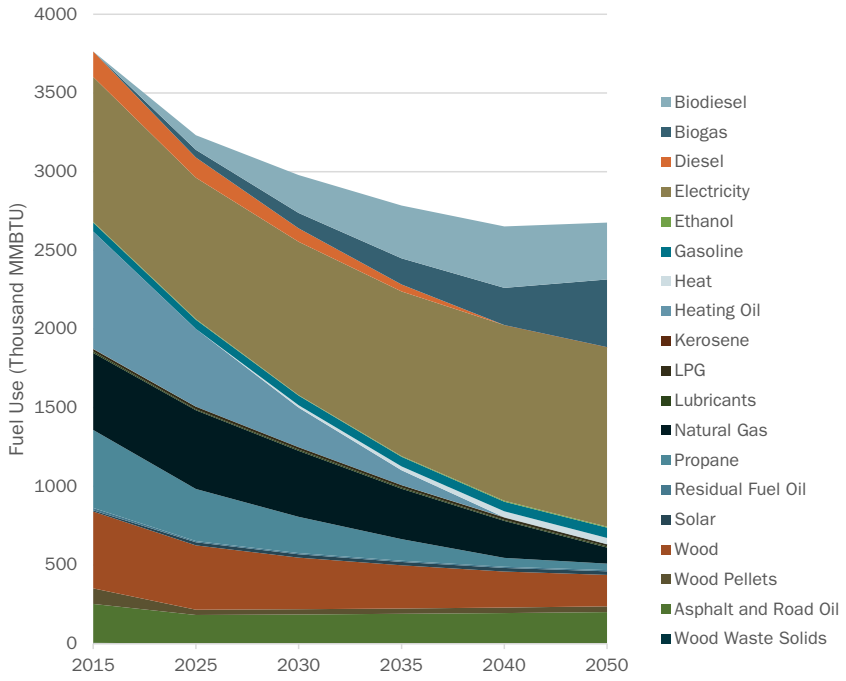
Energy Use

The Addison Region's 36,000+ residents use energy for transportation, space and water heating, and to power lights and appliances. This Energy Plan identifies technologies and practices that support a shift away from greenhouse gas-intensive systems, providing the Region with tools to help achieve Vermont's energy goals. **Figure 4** illustrates how energy use could evolve over the coming decades if ACRPC meets the established energy and GHG reduction targets.

In this scenario, Total Energy Use is projected to decline modestly, driven by a combination of reduced demand, fuel switching, and improved energy efficiency.

See Chapter 2, page 26 for additional information on the energy and GHG targets set for the Region.[12]

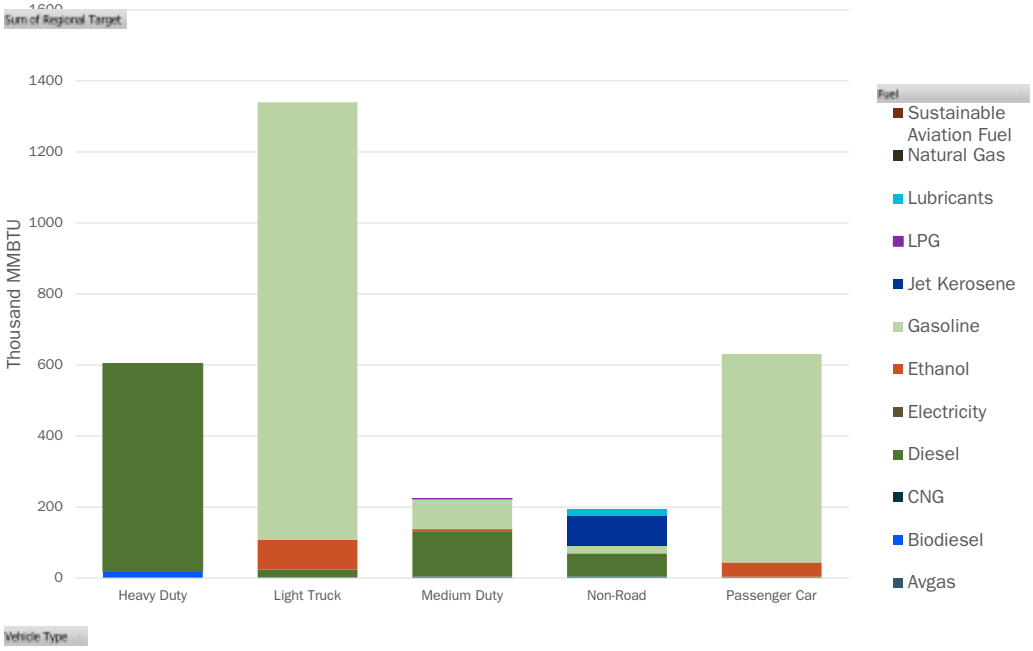
Figure 4: Projected Energy Use by Fuel Type



THE TRANSPORTATION SECTOR

The Addison Region is a predominately rural area, characterized by working farms, forests, small villages, and rural single-family homes, along with three densely populated urban centers. Most commercial and industrial development activity is concentrated in these urban hubs. Due to the Region's dispersed settlement pattern, many residents rely on personal vehicles for commuting to work, school, and accessing services and recreation. As a result, transportation accounts for a significant share of the energy use in the Region—estimated at 1,591,281 MMBTUs annually. **Figure 5** shows fossil fuels remain the dominant source of energy for transportation in the Region.

Figure 5: Transportation Sector Fuel Mix by Vehicle Type



Most transportation fossil fuel use comes from passenger vehicles and light trucks. Some opportunities to reduce that demand include increased use of public transportation, carpooling, walking, or biking to destinations. Many of these options are easy to access through the Go! Vermont website.[13] Additionally, the adoption of electric vehicles (EVs) and efficient internal combustion engine (ICE) powered vehicles, will itself reduce overall energy demand.[14] Further, while the Region desires to retain its rural feel, it can adopt land use policies that encourage more densely settled, urban centers while maintaining its rural aesthetic. These urban centers have the capacity to allow for more transportation alternatives within those areas, like walking or biking, which reduce energy use and promote public health. As with other conservation goals, conserving energy by reducing the need for cars can be more cost effective than fuel-switching to electric or other alternatively powered vehicles. Therefore, the Land Use Chapter of this Plan promotes greater density and housing options in the Region's villages. See Chapter 8: Land Use.

The third largest consumer of transportation fuels in the Region are heavy duty vehicles, a class that consumes nearly as much energy as passenger vehicles. Heavy duty vehicles are almost exclusively fueled by climate change inducing fuels (**Figure 5**). Unfortunately, alternatives—both fuel switching and behavioral changes—are currently more limited for heavy duty vehicles than they are for passenger and light duty truck vehicles. The LEAP model created for the previous version of this Plan assumed that heavy biofuels would replace fossil fuel in this area. Those technological advances have not happened. As such the Plan continues to support research, development, demonstration, and deployment projects for low-to-no CO^2 equivalent heavy-duty trucking.

From Gasoline to Electricity

Gasoline in the Region is primarily distributed through individual stations affiliated with major oil companies. In rural towns, these are often small, locally owned convenience stores under franchises. Along major highways, stations are more likely to be corporate-owned chains.

This distribution network has historically met the Region's needs, with gas readily available. However, over the past 30 years, economic shifts, changing consumer habits, and stricter regulations on underground storage tanks have affected the gasoline distribution system. Smaller stores, especially in rural areas, struggle to justify the costs of maintaining fuel services. Consequently, residents in these areas are gradually losing local access to fuel and must travel farther to refuel.

This Plan aims to reduce the Region's dependence on gasoline and other petroleum-based fuels by shifting to renewably generated electricity. It supports lowering gas use through efficient vehicles, public transportation, and active transportation, while promoting a transition to electric vehicles. This Plan supports the expansion of EV infrastructure and discourages new fossil fuel-based infrastructure that increases greenhouse gas emissions.

As of spring 2024, there are nearly 400 public EV charging stations across the state. In the Addison Region, public chargers can be found in 20 locations with about 32 level 2 chargers[15] located in Ferrisburgh, Panton, Starksboro, Shoreham, New Haven, Vergennes, and Middlebury. The 18 fast chargers in the Region are located in Vergennes and Middlebury.[16] While many EV drivers charge at home, expanding public and workplace charging is essential—especially for longer trips and commutes, visitors, or those without home access. ACRPC supports installing EV chargers at key locations such as transit stops, workplaces, schools, community centers, recreation sites, libraries, and village centers, including existing service stations, to provide broad and equitable access.

THE THERMAL ENERGY SECTOR

Residential

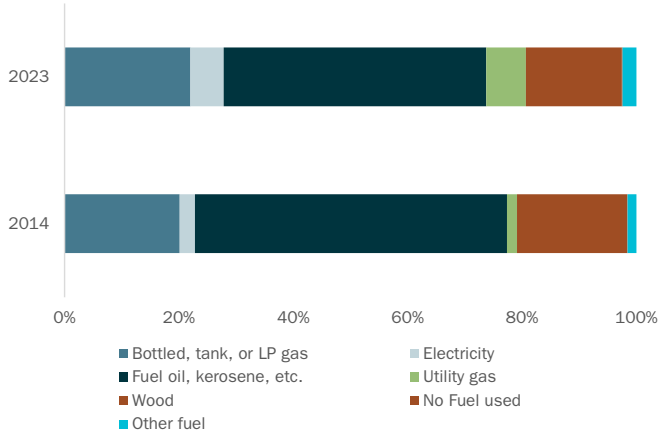
Residential users are the largest consumers of thermal energy in the Region. The greatest share of residential energy use goes toward space heating, cooling, and domestic hot water. Using housing data from the American Community Survey (ACS) and a heating model from the Public Service Department, regional residential heating demand is estimated at approximately 1,610,180 million British Thermal Units (MMBtu), as shown in **Table 2**. This represents about 5.4% of the State's residential space heating consumption .[17]

Table 2: Estimated Residential Thermal Energy Demand

Households in the Region	Average Annual Heating (MMBtu)	Total Residential Heating Demand (MMBtu)
14,417	110	1,565,827

A breakdown of that total demand can be seen in **Figure 6**. It contains five-year average estimates of the share of the Addison Region households that use a given fuel to heat their homes. Based upon to ACS data from 2010 to 2023 and projections estimated 2025, most homes in the Region heated with fuel oil or kerosene (about 43%), followed by propane (about 25%) and wood (about 18%). These three fuels comprise approximately 86% of the Region's residential heating fuel mix as of 2025. Notably, the estimated share of residential heating demand satisfied by fuel oil or kerosene for heating declined by about 16% over the ten-year period ending in 2025. The share of household demand for wood declined by about 5% during the same period; however, the share of household demand for propane heating increased by about 12% during the same period. Two other key changes highlighted within Table 3 are the increases in the share of households that are using electricity (111%), and the increase in natural gas from no use in 2016 to about 6% of demand in 2025. Although these two fuel sources currently make up a small share of household heating—about 5% and 6%, respectively—they represent the fastest growing segments of heating demand in the Region. Electricity use is expected to rise with more heat pumps in the area. Natural gas use is also growing due to VGS pipeline expansion, which made inexpensive utility gas more accessible.

Figure 6: Residential Heating by Fuel Type



Fossil fuels such as fuel oil, propane, and conventional natural gas are limited in supply, and their use contributes to climate change. Dependence on these fuels undermines our region's energy security and climate resilience. However, while fuel oil use for residential heating has declined in the region, a growing share of household heating demand is being satisfied by propane and natural gas use. To meet State mandates and climate goals, this plan supports the State goal to largely eliminate the use of these fuels for residential heating by 2050.

There are three key strategies to reducing fossil fuel consumption in residential heating:

- Improve thermal efficiency of homes through weatherization and insulation.
- Upgrade to more efficient heating technologies to reduce energy consumption.
- Switch to renewable, net-zero, or lower greenhouse gas-emitting fuel sources such as electricity, advanced biomass, or geothermal.

The upfront cost of new equipment is the primary barrier to fuel switching. While the Region cannot control energy pricing, it can promote conservation, efficiency, and affordability especially for low-income households. Incentives like subsidies and tax credits can help ease the financial burden of making the transition to cleaner technologies.

Services available currently providing cost subsidies and/or promoting weatherization and efficiency include:

- The **Champlain Valley Office of Economic Opportunity (CVOEO)** provides fuel assistance to income-qualified residents on both a seasonal basis and a crisis basis.[18]
- **Champlain Valley Weatherization Service**, part of CVOEO, provides free weatherization services to income-qualified Addison County households.
- **Efficiency Vermont** has several programs to improve energy efficiency.[19]

- **Neighborworks of Western Vermont** offers audits and subsidized weatherization services through their HEAT Squad program.[20]
- Several of the Region's municipalities run services that supply firewood or other sources of heat to their residents.

In 1997, Vermont enacted residential energy standards. The **Residential Building Energy Standards (RBES)** contains minimum standards and stretch code for energy efficiency for all new residential construction in Vermont.[21] The Vermont Residential Energy Code Handbook 2024,[22] the latest iteration, includes two primary requirements:

1. A list of technical requirements that includes minimum standards for energy-efficient building components and construction practices; and
2. A certification requirement for reporting compliance. Upon completion, State law requires every Vermont builder to self-certify that the home complies with the RBES standards as built. The builder must complete and sign a certificate and submit it to the Town Clerk for filing. This must be on record before the Zoning Administrator issues a Certificate of Occupancy.

The code assigns local Zoning Administrators the duty to distribute information about the Energy Codes. In theory, this provides an opportunity for all towns to communicate with homeowners regarding energy programs and conservation opportunities. In practice, information is rarely distributed and municipalities struggle to enforce the code.

Finally, not all barriers to fuel switching, particularly in the residential space, are financial. Some are behavioral and social.[23] There is also simply a "How do I do this, and where do I begin?" problem. The complexity of personally undertaking an energy transformation project is overwhelmingly difficult to know where to start, who to call, how to pay, how to choose the best option, and how to know what will actually work, especially for a particular house or building.

Without that guidance, it is much more hit-or-miss, likely to be more expensive and less satisfactory. Therefore, financial and regulatory incentives must be paired with effective counseling and guidance to support individuals in making this challenging transition. Programs such as the Climate Economy Action Center of Addison County's (CEAC) "Energy Navigator" program which provides residents of the Region with energy-use and weatherization consultations from volunteers within their community is one attempt to address these bundled or aggravated problems of residential fuel switching. Another is the Zero Energy Now (ZEN) program, which undertakes a strategic project design, tying together all the project components with incentives and financing to develop a work scope that is customized, effective, and affordable. ACRPC supports these and similar expanded efforts to address the challenges that prevent residents from adopting new technologies.

Commercial

Estimating thermal energy use in the commercial and industrial sectors is challenging due to variation in energy use between businesses within and between economic sectors. **Table 3** provides an estimate of commercial energy use based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (PSD).[24] While approximate, these figures highlight the significant thermal energy use by commercial establishments in the Region, underscoring the importance of their role in conservation and efficiency efforts.

Table 3: Estimated Commerical Thermal Energy Demand (5-year average, 2020-2024)

Number of Commercial Buildings in the Region	Average Annual Heating Load per Building (MMBTU)	Total Heating Load for Commercial Buildings (MMBTU)
967	1,776	1,717,885

THE ELECTRIC SECTOR

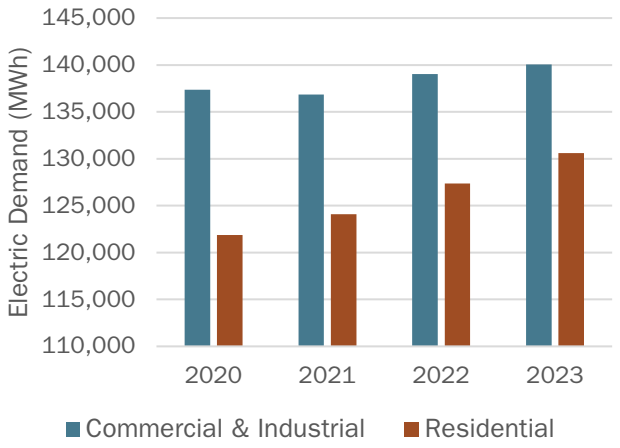
Electricity constitutes a significant portion of the Region's current energy use. **Figure 7** illustrates recent and current electricity demand in the Region. This Plan anticipates a major shift from non-renewable fossil fuels to electric-powered vehicles, heat pumps, and other new technologies, driving increased electricity demand. At the same time, the supply of locally generated, renewable electricity is expected to grow, changing the traditional model of centralized energy generation and delivery.

Residential Use

Efficiency Vermont data estimated that residential electricity demand for the Region increased from about 115,000 MWh to about 139,500 MWh between 2019 and 2023. This corresponds with an average change in electric demand of about 5% annually during that period. Additional data about Regional, residential electric demand can be viewed in **Table 4**.

This increase is to be expected. As shown in **Figure 7**, the American Community Survey (ACS) estimates that the number of households in the Region grew by about 3% between 2014 and 2023. As more households in the Region adopt electric appliances and vehicles, electricity demand is expected to rise. However, both policymakers and residents should remain aware of this growth and explore formal and informal strategies to help limit overall consumption. Encouraging energy-efficient technologies, promoting behavioral changes, and supporting local and state-level initiatives will be key to managing this transition sustainably.

Figure 7: Regional Demand for Electricity



Simple, inexpensive actions can significantly reduce energy use. Turning off lights in empty rooms, switching to energy-efficient bulbs, and using timers or sensors to regulate lighting, heating, and cooling are easy ways to cut consumption. Weatherization and insulation of buildings—both new and existing—can greatly improve energy efficiency. Additionally, upgrading to efficient appliances, motors, and heat pumps can further reduce electricity use and lower energy bills.

Table 4: Regional Electricity Demand, Residential (MWh)

End User Type	Residential
2019	115,091
2020	127,369
2021	134,454
2022	136,588
2023	139,482
Avg. Change	4.98%

Commercial and Industrial Use

As shown in **Table 5**, commercial and industrial users in the Region consumed about 146,159 MWhs of electricity in 2023, the most recent year with available data. This amount slightly exceeds residential demand and accounts for just over half of the electric energy used in the Region. Though commercial and industrial customers used more electricity than residential consumers, their demand has increased at a lower rate on average. Between 2019 and 2023, commercial and industrial users' electricity demand increased by about 1.5% from about 138,092.25 to 146,158.67 MWhs.

Businesses in the Region rely on electricity to power industrial equipment as well as everyday operations like lighting and computers. As sectors continue to electrify, some growth in demand is expected—but must be managed. Green Mountain Power has some excellent business-focused efficiency programs and incentives. To meet future energy goals, ACRPC encourages further investment in conservation and cost-saving measures.

Table 5: Regional Electricity Demand, Commercial and Industrial (MWh)

End User Type	Commercial & Industrial
2019	138,092
2020	134,912
2021	140,627
2022	140,543
2023	146,158
Avg. Change	1.47%

Generation and Infrastructure

Energy is fundamental to the modern economy. Businesses rely on it to produce goods and services, including emerging AI-driven technologies that are increasing demand. Households also depend on affordable, reliable energy to maintain comfort and daily conveniences. Developing new, competitively priced local generation would position the Addison Region to supply clean energy rather than rely on imported power. Distributed generation is beginning to offer this choice for a greater share of the power the Region consumes. Power from solar and wind—made more consistently deliverable by battery storage technology, renewable gas and heat from our farms and waste systems, and geothermal and thermal networks all offer generation potential to help power the Region. In order to continue to support their production, the Region needs right-sized infrastructure to deliver the power to the people and businesses that need it. Infrastructure such as electricity distribution lines, gas pipelines, and sewer systems support development by lowering costs and improving access. Decisions about extending or upgrading infrastructure should carefully consider potential impacts on regional growth patterns.

ENERGY ACCESS IN THE REGION

Residents and businesses in the Region access energy through a combination of the electric grid, delivered fuels (e.g., oil and propane), and the Vermont Gas Systems (VGS) natural gas pipeline. The grid includes:

- Transmission infrastructure that feeds or passes through the Region;
- Distribution infrastructure that delivers electricity to end users; and
- Local generation facilities that contribute to the Region's energy supply.

Electric Transmission

The Vermont Electric Power Company (VELCO) manages the transmission of electricity across Vermont and as part of the broader New England grid. The 2024 VELCO Long-Range Transmission Plan projects that peak electricity demand will rise due to the electrification of heating and transportation. Load management will be essential to accommodate electrification levels over the 10- and 20-year horizon. Load management will be essential to accommodate high electrification levels over the 20-year horizon.



Addison County Reliability Concerns

Within the 10-year planning window, sub-transmission reliability issues—such as high/low voltage and thermal overloads—are anticipated. A key concern is the Middlebury transformer, which is projected to fail between 2029 and 2033, depending on load growth, if it is not improved or other large-scale changes are not made prior to that timeframe.

VELCO's proposed solution is to increase the capacity of the West Rutland to Middlebury 115kV line, shown in orange in **Map 2**. The estimated cost of this upgrade is $215 million.

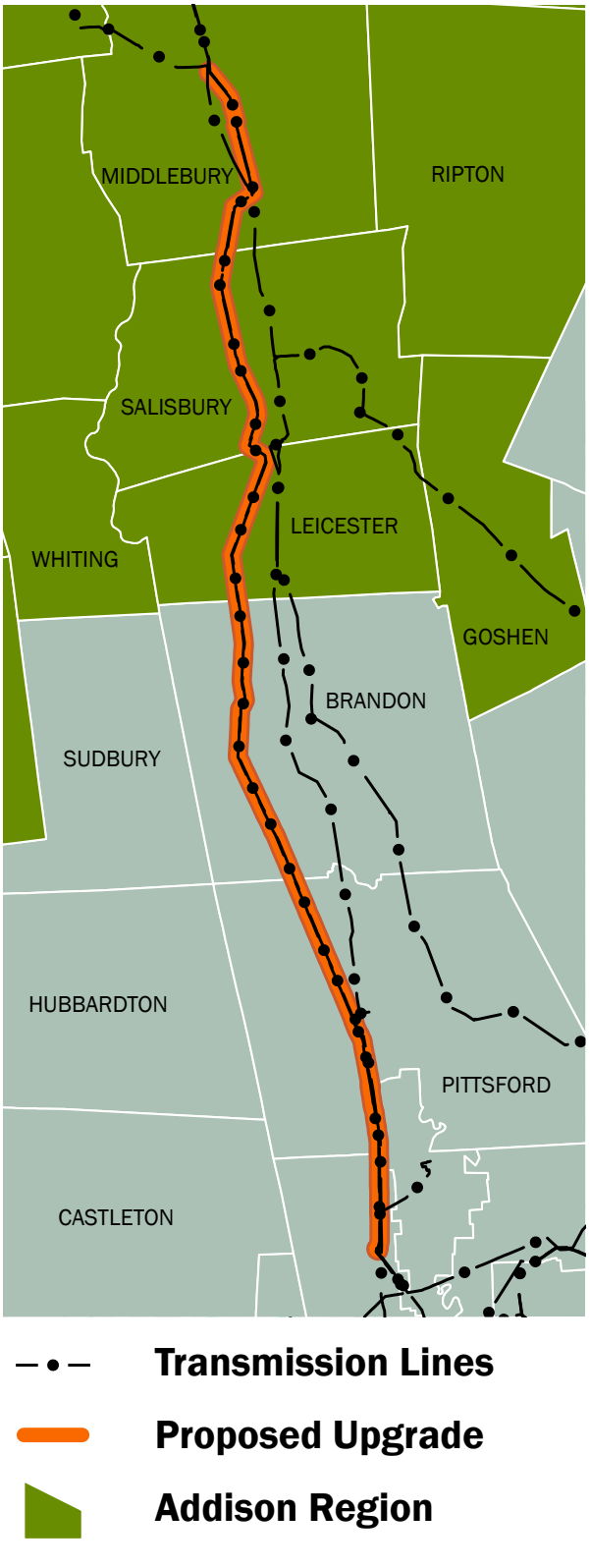
An alternative approach would reduce projected load growth by 80 MW by 2033, allowing existing infrastructure to remain functional in the short-term. This reduction could be achieved through:

- Weatherization
- Energy efficiency improvements
- Flexible load management
- Energy storage solutions

The Region appears to have ample rooftop, impermeable-surface, and land-based potential to meet its long-term renewable generation targets, but doing so will require substantial upgrades to the grid over the next decade. Although it is estimated that the Region currently produces about 152,898 MWh from local renewable generation sources compared to a 2050 target of 194,826 MWh, VELCO's 2024 Vermont Long-Range Transmission Plan identifies potential, near-term reliability concerns within and between the Region that will need to be addressed. These reliability concerns could emerge as early as 2029.

Further, addressing these concerns will require significant resources. VELCO estimates that increasing the capacity of the West Rutland–Middlebury 115 kV line could cost about $215 million, suggests that the Middlebury transformer may also require upgrades, and states that, absent such improvements, roughly 80 MW of load reduction by 2033 would be needed instead. Similarly, GMP's 2024 Integrated Resource Plan similarly emphasizes that hosting-capacity limits, managed load, strategic siting, and battery storage will influence how much new generation the system can actually accommodate. Battery storage may relieve some near-

Map 2: Regional Transmission Upgrades



term constraints and support resilience goals, but the Region will still need to explore distribution and transmission solutions in order to meet its generation targets reliably and affordably.

ACRPC supports alternative owner and operator models for energy utility functions such as cooperative, municipal, or other community-based models when they can expand or extend services or reduce costs in ways that traditional utilities firms cannot.

Proposed distribution and transmission projects should be reviewed for consistency with the *Regional Energy Project Siting and Design Standards*, including standards favoring co-location with existing corridors and minimizing skyline exposure, productive farmland conversion, and habitat fragmentation.

Electric Distribution

In 2021, Vermont distribution utilities purchased over 5.8 million MWh of electricity and retired just over 4 million renewable energy certificates[25] (representing just over 4 million MWh of electricity) to meet their obligations under Vermont's Renewable Energy Standards. 72% of the electricity Vermont accounted for was renewable; 90% was low-carbon with the inclusion of nuclear generation.[26]

Green Mountain Power (GMP) serves most of Addison County except for a portion of Starksboro served by the Vermont Electric Co-op. **Figure 8** shows sources of electricity distributed by GMP in 2021 (before the sale of renewable energy credits (RECs)[27]. GMP owns several generation facilities, enters into power purchasing agreements with individual power suppliers, and purchases power from the wholesale electricity market, ISO-NE[28], delivered to the Region through the transmission system described above. Green Mountain Power draws electricity from the transmission grid into substations that stepdown the voltage and disseminate it through the distribution grid. Currently, the substation and distribution grids constitute the biggest constraint in the electric system on the Region's ability to locally generate energy. See Chapter 2, Appendix E, **Map 9**, which shows most of the Region as constrained. If the Addison Region is going to meet its generation targets, we must solve the bottle necks at the substations and within the distribution grid.

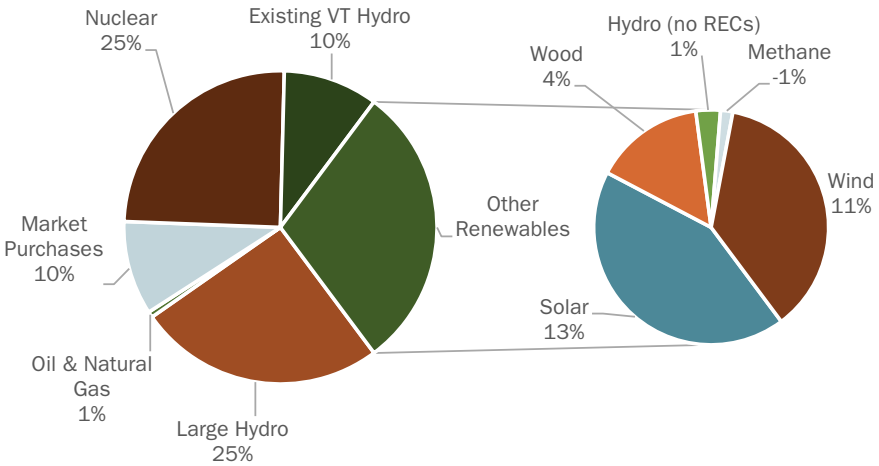
During this improvement process, proposed substations and related utility facilities should be reviewed for consistency with the Regional Energy Project Siting and Design Standards, including standards related to visibility, noise, setbacks, drainage, lighting, emergency access, neighboring land-use compatibility, and resilient grid modernization.

Distributed Generation and Grid Coordination

Currently, distributed generation (DG) projects—such as solar and wind—are reviewed individually, without considering their cumulative impact on the transmission system. This approach must evolve.

To avoid overloading the grid, Vermont must pursue coordinated, statewide transmission modernization. As more DG and storage projects come online, collaboration among VELCO, developers, municipalities, distribution utilities, and regional planners will be critical to achieving energy and emissions goals.

Figure 8: Green Mountain Power Energy Mix, Pre-REC Purchases



This coordination must also prioritize equity and environmental stewardship, ensuring that:

- Landscapes and natural resources are protected,
- Benefits are shared broadly, and
- Historically burdened communities are not left behind.

Delivered Fuels

Several companies in the Addison Region deliver propane and fuel oil to residential, commercial, and industrial customers, primarily for space heating and cooking. These fuels are mostly trucked into the Region, with additional deliveries and storage occurring at a rail facility in Leicester Junction. Retail distribution is available throughout the area.

While this Plan supports a long-term phase-out of fossil fuel use, it also acknowledges the essential role these businesses have played and continue to play in the community. ACRPC supports a just transition for fuel providers and the customers they serve, ensuring that economic and social impacts are addressed as the Region moves toward cleaner energy sources. The transition, while important, must be accomplished within the context of keeping power reliable and affordable.

Natural Gas

Vermont Gas Systems (VGS) has extended a 41-mile natural gas pipeline into the Region and continues to expand secondary distribution. The pipeline serves or is expected to serve customers in up to seven communities, including two of the Region's three employment centers—Vergennes and Middlebury—as well as village areas in Monkton, New Haven, and parts of Weybridge and Ferrisburgh.

The pipeline has been a source of regional debate. When proposed, natural gas offered a lower-cost alternative to other fuels. However, many residents opposed investing in long-term fossil fuel infrastructure. After extensive discussion, ACRPC conditionally supported the project through a Memorandum of Understanding (MOU) with VGS. Key conditions included:

- Extending service to villages along the pipeline route to support compact, planned growth;
- Providing training for local first responders; and
- Incorporating renewable natural gas (RNG) from agricultural and food waste into the fuel mix.

VGS is working to make RNG opportunities available to local farmers and food manufacturers.

Although natural gas was intended as a transitional fuel, its lower cost has generated strong interest in communities with access to the VGS network, helping reduce energy burdens in the short term. ACRPC will continue to collaborate with VGS to support sustainable economic development while exploring long-term solutions that align with climate and equity goals. These include additional opportunities to generate renewable natural gas from farm and waste products and creating and expanding thermal networks in the Region.

LOCAL GENERATION

The Region's energy generation is largely consistent with statewide patterns. As of December 2024, roughly 2,055 sites generate 152,898 MWh of solar, wind, hydro, and bio-methane power annually within the Region (**Table 6**).[29] The discussion below covers renewable generation types available to the Region's residents and how they might be harnessed to regional generation targets and statewide goals. A map of existing renewable generation systems in the Region with capacities above 15 KW can be found in the Chapter 2 Appendix D (**Map 1**).

Table 6: Regional Renewable Generation

Technology	Capacity (MW)	Annual Generation (MWh)
Farm Methane	1.67	10,983
Hydro	10.70	46,866
Solar	63.61	82,368
Wind	0.42	833
Biomass	1.93	11,847
Grand Total	87.69	152,898

Hydropower

The Region was historically developed with hydropower. The Middlebury River, New Haven River, and Otter Creek powered the first mills in Middlebury, Bristol, and Vergennes respectively. Green Mountain Power now owns seven hydropower facilities in the Region: five on Otter Creek, including one each on Sucker Brook and Leicester River. These facilities range from under 7,000 MWh to over 22,000 MWh annually, collectively producing close to 85,000 MWh, approximately 33% of the Region's electricity consumption.

Hydropower comes with benefits and drawbacks. Environmental impacts can be significant: projects can change stream character upstream, downstream, and at dam locations, and can alter water chemistry and biology. Both run-of-river and reservoir-based systems can also limit fish mobility and block spawning access. Reservoir fluctuations can cause shoreline erosion, habitat degradation, and harmful phosphorus and nitrogen levels in sediment collected behind the dam.

Climate change presents both challenges and opportunities. Drought threatens water availability and future capacity. However, climate change in Vermont has increased rainfall, generally increasing hydropower potential. Hydropower overall also offers substantial benefits: controllable, carbon-free renewable energy—a critical advantage over intermittent sources. When properly designed and managed, systems also contribute to flood control, increasingly important as climate change makes flooding more likely. Overall, the benefits of local renewable hydropower outweigh the burdens when those burdens are mitigated through run-of-river systems, fish ladders, access improvements and other programs.

Proposed commercial and utility scale hydropower projects shall be reviewed for consistency with the *Regional Energy Project Siting and Design Standards*, which prioritize upgrades and carefully designed additions at already altered sites and do not support projects that would substantially degrade aquatic habitat or increase flood risk.

Solar

Photovoltaic systems (PV) currently provide about one third of the generation capacity in the Region. Most PV systems in the Region have a nameplate capacity

Figure 9: Comparison of PV Sites by Facility Type



Residential scale	Commercial scale	Utility scale
Capacity < 15 kW	Capacity > 15 kW and < 500 kW	Capacity > 500 kW

below 15 kW. ACRPC expects solar generation to grow to meet future generation targets. Doing so would improve the Region's resilience to climate change—by reducing greenhouse gas pollution—and enhance its energy security with more domestic production; however, more solar generation will likely result in land use changes that could impact social and environmental considerations like rural river sheds or habitat connectivity. As **Figure 9** shows, the land use needs of commercial-scale and utility-scale solar can be substantial.

Careful consideration of such impacts is essential for a just energy transition in the Region. Fortunately, project design and development practices for solar PV that enhance eco-system function and enable continued agricultural use do exist. Solar canopies are solar projects that are located above parking areas, drive ways, and other impermeable storage areas. Their deployment would allow the Region to expand renewable generation while also encouraging mixed-uses on already developed land. These projects are consistent with the State's and the Region's intent to steer new renewable energy development toward preferred locations, including previously developed sites. Solar Canopy Potential Locations in Chapter 2, Appendix E, Map 11 assists with the identification of potentially viable sites for solar canopies. Focusing on appropriate types of impermeable surfaces that are greater than an acre in area, this map both illustrates that there are a substantial number of potentially viable locations for solar canopy deployment in the Region and provides spatial analysis support for the Region's preference for solar canopy development as type of preferred site and technology.

Beyond photovoltaics, passive solar through proper building orientation and high-efficiency insulation can offset 15-50% of lighting and heating costs.[30] Similarly, solar water heating can reduce water heating costs by up to 65%. This Plan supports additional commercial and residential solar projects within the Region. Commercial solar development must include design features preserving riversheds and must be located within areas designated by the local municipal energy plans.

Commercial and utility scale proposed solar projects shall be reviewed for consistency with the *Regional Energy Project Siting and Design Standards*, including the standards for preferred, possible, and unsuitable sites, project scale, agricultural and ecological mitigation, and storage-ready design.

Wind

Wind represents less than 1MW of generation capacity in the Region, mostly from systems under 15kW. The National Renewable Energy Laboratory identifies most of the Region as having Class 1 winds (below 12 mph), unsuitable for commercial-scale wind power. This Plan supports small residential wind development with sufficient setbacks following Public Service Department guidelines in "Siting a Wind Turbine on Your Property".[31]

A small portion of the Region has Class 3 winds (around 12 mph at 100 meters), marginally suitable for large-scale installations. Those economically feasible ridgelines at 2,000-3,500 feet elevation are located in Starksboro, Lincoln, and Ripton. However, much of this land lies in the Green Mountain National Forest, with significant portions designated as Wilderness. This Plan opposes commercial development within "Known Constrained" areas on Chapter 2, Appendix D, Map 2, including wilderness areas, but sets no further restrictions on commercial wind generation and supports member municipalities' wind policies.



Proposed wind projects shall be reviewed for consistency with the *Regional Energy Project Siting and Design Standards,* including the standards addressing ridgeline visibility, scenic impacts, habitat fragmentation, sound, shadow flicker, aviation safety, and access-road disturbance

Biogas and Biomass

Biomass resources—including manure, food waste, cheese whey, slaughterhouse waste, and brewery residuals—can produce renewable natural gas, often referred to as "Farm Methane" in state databases. While these projects require significant upfront investment, resulting in relatively few operations in the Addison Region, they offer valuable co-benefits:

- Diverting waste from landfills
- Producing fertilizer as a byproduct
- Generating methane for energy production
- Creating waste heat for capture through thermal energy networks

Biogas systems raise similar concerns as natural gas because they produce greenhouse gases—mainly methane during compost breakdown and CO_2 when burned. However, due to the co-benefits listed above and the absence of extractive mining, biogas is considered a more sustainable, preferrable alternative to traditional natural gas. These climate and co-benefits are part of why the State of Vermont views biogas as one climate solution for the State's agriculture sector.[32] Challenges with this solution remain, including finding ways to capture a greater share of the gases produced, preventing "fugitive leaks" of the methane captured, and minimizing the impacts of distribution from producers to customers.[33] As such, ACRPC supports climate solutions like biogas for rural and agricultural settings and encourages the adoption of strategies that minimize the social and environmental costs such as the recommendations from the Natural Gas STAR Program.[34]

Another primary form of biomass used to satisfy energy demand—particularly heating demand—in the Region

is wood. The use of wood for heating—and electricity in the case of wood-fired power plants – supplied about 6% of the nation's total energy consumption as of 2005, and, while 23% of wood energy used at that time was consumed residentially, 70% of residential wood energy went to heat rural homes.[35] A similar trend can be seen in the Addison Region: about 16.5% of the Region's homes were still heated primarily by wood stoves as of 2023. Wood heating using wood chips and pellets has also been encouraged as a heating solution for schools and other public or commercial buildings in Vermont. Due to the abundance of wood in Vermont, the renewable nature of the energy source, and its lower carbon footprint when compared to fossil fuels, wood energy will likely remain a key component of the fuel mix in the region.

This understanding is confirmed by State determined LEAP targets for the Region: targets for residential, commercial, and industrial wood energy use for the Region are 13.20%, 17.41%, 1.07% of total energy use by sector, respectively. As such, ACRPC recommends three primary actions be undertaken to support wood energy use into the future.

1. When residential, commercial, and industrial heating systems need to be replaced, ACRPC recommends that residents consider shifting from old-fashioned wood stoves and fossil fuel powered systems to advanced wood pellet stoves, such as "Catalytic Stoves" which are significantly more energy efficient and that produce less air pollution.[36]
2. The further development of the local wood-based economy including new "densified biomass fuel manufacturing facilities" and distribution centers to fuel the transition to advanced wood heating.[37]
3. The expansion of public wood banks such as Monkton and Starksboro Wood Banks as well as the subsidization of the upfront costs of switching to advanced wood stoves so that low to moderate income Vermonters in the Region can benefit from this transition.

Proposed commercial and utility scale biomass projects shall be reviewed for consistency with the *Regional Energy Project Siting and Design Standards*, including standards related to fuel sourcing, truck traffic, air emissions, noise, ash handling, fire safety, and compatibility with nearby land uses.

Energy Storage

The Addison Region currently hosts about 4.5 megawatts of battery storage capacity.[38] More than 60% comes from two large GMP projects in Ferrisburgh and Panton, with the remainder distributed across other municipalities. While lithium-ion batteries dominate modern renewable energy storage, alternative solutions include:

- **Thermal energy storage:** Stores heat in materials like molten salts or water for later electricity generation or direct heating/cooling use
- **Pumped hydro storage:** Uses excess energy to pump water uphill, storing gravitational potential energy that can be released through turbines
- **Solid-state batteries:** Next-generation technology using solid electrolytes instead of liquid, potentially offering greater energy density and safety

Each storage technology has distinct benefits and drawbacks. However, all address peak energy demand periods and transmission capacity limitations.

The Region strongly supports pairing new commercial or industrial generation facilities with storage capacity. Storage improves local energy system resilience and reduces expensive peak power purchases. Battery storage costs are declining rapidly at both industrial and residential scales.

At the residential level, programs like GMP's Tesla Powerwall offering demonstrate this potential. The program provides homeowners with a Powerwall and operating software in exchange for allowing GMP to draw power during peak demand. Homeowners gain backup power for several hours of typical use during outages. ACRPC supports this and similarly designed programs that address high upfront storage costs while fairly distributing benefits and costs.

Proposed utility scale battery storage projects shall be reviewed for consistency with the *Regional Energy Project Siting and Design Standards*, including standards related to location near existing infrastructure, fire safety, emergency access, setbacks, drainage, screening, and compatibility with neighboring uses.

Table 7: Renewable Energy Generation Capacity, by Municipality, by Generation Type

Municipality	Farm Gas (MW)	Hydro (MW)	Solar (MW)	Wind (MW)	Biomass (MW)
Addison	0.45	-	1.79	0.008	-
Bridport	0.01	-	3.13	0.02	-
Bristol	0.45	-	4.79	-	-
Cornwall	-	-	1.26	0.03	-
Ferrisburgh	-	-	10.83	0.15	-
Goshen	-	-	0.11	-	-
Leicester	-	-	0.47	0.01	-
Lincoln	-	-	0.85	<0.01	-
Middlebury	0.76	2.25	14.56	0.02	1.78
Monkton	-	-	1.7	-	-
New Haven	-	5.85	8.8	0.01	-
Orwell	-	-	1.19	0.01	-
Panton	-	-	6.23	-	-
Ripton	-	-	0.41	<0.01	-
Salisbury	-	-	0.82	-	-
Shoreham	-	-	1.81	-	-
Starksboro	-	-	1	<0.01	-
Vergennes	-	2.6	1.96	0.1	-
Waltham	-	-	0.57	<0.01	-
Weybridge	-	-	0.56	-	0.16
Whiting	-	-	0.76	-	-
TOTAL	1.67	10.7	63.6	0.358	1.94

Thermal Networks

Infrastructure investments that maximize co-benefits and energy efficiency—such as capturing waste heat or creating thermal energy networks—reduce demand on electric infrastructure while supporting cost and emissions reductions.[39]

Thermal networks capture existing waste heat from buildings such as heat from ventilation or wastewater and then use it to heat or cool buildings with air-to-water heat pumps, which are far more efficient than air-to-air source heat pumps.

Integrating waste heat recovery into planned wastewater system upgrades offers communities a significant opportunity. Heat recovery from wastewater can produce potable hot water and provide heating and cooling for buildings. Wastewater is a continuous, existing source of thermal energy—average residential wastewater temperature is 70°F, while commercial and industrial wastewater can reach 140°F or higher. Heat recovery systems are simple, low maintenance, scalable from single buildings to large district networks, and offer customers lower, predictable heating and cooling bills.

Emerging Technology

The energy resource and storage landscape is rapidly evolving. As new technologies become viable, ACRPC will continue to analyze and distribute information on appropriate uses for orderly economic development and land use in the Region.

Current Municipal Generation

Table 7 displays renewable generation capacity in the Region by municipality as of January 2024.

The data comes from several sources and should be considered an estimate, as new renewable generation sites may emerge, and existing sites may expand or close.

To assist with the cohesive implementation of the land use, conservation, resilience, and orderly development policies proposed within this Energy Chapter and its Appendix, the Region has adopted *Regional Energy Project Siting and Design Standards.* A copy of these standards is included in this Chapter on pages 21-25. These standards are intended to guide the siting, scale, design, mitigation, and review of proposed energy generation, storage, transmission, and related utility infrastructure projects in the Addison Region. They should be interpreted as a companion framework to this Chapter and read together with the energy maps and tables contained within the Chapter Appendix that show known constraints, possible constraints, and preferred locations. Additionally, it is crucial for duly developers to consider adopted municipal energy plans or enhanced energy plans that contain more specific local standards or identify locally significant resources as well.

The Region appears to have ample rooftop, impermeable-surface, and land-based potential to meet its long-term renewable generation targets, but doing so will likely require substantial upgrades to the grid over the next decade. The Region currently produces about 152,898 MWh from local renewable generation sources, when compared to a 2050 target of 194,826 MWh GMP's 2024 Integrated Resource Plan also suggests that hosting-capacity limits, managed load, strategic siting, and battery storage will influence how much new generation their system can actually accommodate.

ACRPC promotes the efficient use of resources through the application of non-transmission alternatives such as battery storage, demand response measures, efficiency measures, thermal energy networks and others—energy efficiency measures are frequently cheaper than supply expansion—in tandem with smart transmission and distribution upgrades. These combined effects of these efforts should reduce near-term grid constraints and support resilience goals, but the Region will likely need to explore distribution and transmission solutions in order to meet its longer-term generation targets reliably in the long term.







Energy Siting Guidelines for Transmision, Subtransmission and Commericial and Utility Scale Energy Projects

EXPLANATION OF SITING AND DESIGN STANDARDS

This section includes regional community standards for the siting and design of new energy projects proposed for the Addison Region. They constitute an element of Addison County Regional Planning Commission's (ACRPC) Enhanced Energy Plan and shall be followed by those proposing to develop energy projects in the Addison Region.

Purpose

These standards guide the siting and design choices made for energy generation, storage, and electric infrastructure projects proposed for the Region. These standards ensure that development takes place in an orderly manner that is respectful of the land use goals of the Region. Specifically, these standards support sustainable energy development while protecting farmland, forest blocks, scenic resources, wildlife and its habitat, water resources, public safety, and climate change resilience. The standards shall be read together and in concert with regional and municipal maps, plan policies, and applicable state review criteria.

How to Use the Standards

These standards distinguish between projects that are well sited and designed, projects that may be acceptable with mitigation, and projects that are unsuitable for and prohibited within the Region. The standards consist of policy statements supported by four tables created to direct development projects to acceptable outcomes.

Table 1 entitled, "Project Scale Based Standards" defines projects by their respective size and scale and includes this Plan's requirements for and treatment of each. Table 1 defines project scale by project name plate capacity. Table 1 is supported and enhanced by Tables 2, 3, and 4.

Table 2 entitled, "Regional Siting Framework" contains the Plan's siting standards. Table 2 details four types of locations or "Site Types" for energy developments: Preferred Sites, Good Sites, Possible Sites, and Unsuitable Sites. It also describes ACRPC's community standards for proposals. The site conditions described in Table 2 correspond to the mapped areas in Maps 2-9, included within the Energy Plan's Appendix and incorporated into the Plan.

Table 3, entitled "Technology Standards" contains criteria specific to the type of technology subject to the application. It shall be applied in tandem with project scale and site standards. The standards ensure that energy generation, storage, and distribution technologies are deployed, maintained, and decommissioned in the right way, at appropriate sizes, and in the right place.

Table 4, entitled, "Mitigation Strategies for Proposed Energy Projects." contains lists of mitigation strategies for applicants to deploy after considering the information contained within Tables 1 through 3. Not all mitigation strategies are appropriate for all places or all types of projects. Other mitigation strategies not contained on the list may be more appropriate for the project proposed. Therefore, applicants are not required to adopt all mitigation strategies. However, the applicant shall have the burden of showing that it has adopted the appropriate mitigation strategies to ensure its project meets ACRPC and its member municipalities community energy standards and that its project supports the orderly development of the Region. ACRPC will review alternative strategies proposed on a case-by-case basis.

Additional Planning Considerations

These standards, particularly Table 2, are supported by Regional Energy **Maps 1–11** showing known constraints, possible constraints, preferred locations, and other relevant conditions. (See Chapter 2, Appendix D.) Where municipalities have duly adopted energy plans or enhanced energy plans that provide more specific local community standards, including preferred sites, areas where energy infrastructure development is prohibited or areas that identify locally significant resources that are different or beyond those contained within the regional standards, this Plan adopts and incorporates those local standards into this Plan. Applicants shall follow the local community standards in addition to the regional community standards contained within this Plan. Finally, new energy projects proposed for the Region must also comply with applicable state and federal regulations.

Siting Standards Table 1: Project Scale-Based Standards

Scale	Capacity	Description
Residential/Small Commercial	X ≤ 15 kW	Residential/Small Commercial scale projects should avoid Known Constraints and should minimize Possible Constraints and obvious scenic or resource conflicts (see Table 2). However, because of their smaller footprints, Residential/Small Commercial scale projects will be viewed as compatible with the Regional Plan.
Commercial	15 kW < X ≤ 500 kW	Commercial scale projects must demonstrate that they avoid Known Constraints, minimize impacts on Possible Constraints, practice good siting techniques based upon the technology being deployed, and must adopt appropriate mitigation strategies included in Table 4 as necessary to reduce undue adverse impacts on visual and natural resources.
Utility	X > 500 kW	Utility scale projects shall demonstrate that they avoid Known Constraints, minimize impacts on Possible Constraints, and practice good siting techniques based upon the technology being deployed. They are presumed to have undue adverse impacts based upon their size and scale and must adopt appropriate mitigation strategies included in Table 4 to reduce undue adverse impacts. Utility scale projects shall demonstrate why the proposal does not impose unfair costs or community burdens.

Siting Standards Table 2: Regional Siting Framework

Site Types	Typical Characteristics	Regional Response
Preferred	Previously developed or disturbed sites including rooftops, parking lot canopies, and carports. Municipally designated preferred locations.	Projects that are located at Preferred Sites will be viewed as acceptable to this Plan upon demonstrating that they are sited in a Preferred Location. Additional scale and technology-specific considerations, supported by appropriate mitigation strategies, shall also be reviewed (see Tables 1, 3, and 4).
Good	Good sites include those with natural screening by topography or vegetation, co-location in or immediately adjacent to existing generation, storage, or utility corridor development, and locations near existing industrial buildings or infrastructure like quarries, substations, or utility infrastructure.	Additional scale and technology specific considerations, supported by appropriate mitigation strategies, shall also be reviewed (see Tables 1, 3, and 4.)
Possible	Sites with Possible Constraints, which include: • AE/VCE unconfirmed vernal pools • FEMA Special Flood Hazard Areas • Prime Ag soils as defined by Act 250 • Deer Wintering Areas • Hydric soils • Conservation Design Layers • Highest Priority Forest and Connectivity Blocks • Surface waters and riparian areas • May be capable of avoidance or mitigation	Projects that are located in areas with Possible Constraints or other undesirable characteristics shall require the applicant to demonstrate why the location is appropriate and how impacts will be avoided, minimized, mitigated and managed over time. (See standards in Tables 1, 3, and 4 and incorporated municipal standards.)
Unsuitable	Known Constraint locations, which include: • Vermont Significant Wetlands Inventory and advisory layer • AE/VCE Confirmed Vernal Pools • FEMA Special Flood Hazard Areas, Floodways Only • VTANR/DEC River Corridors • Significant Natural Communities • Rare, Threatened, and Endangered species areas • National Wilderness Areas in Vermont	Not Supported. Projects proposed for unsuitable sites shall be prohibited by this Plan.

Siting Standards Table 3: Technology Specific Standards

Scale	Description
Solar	Disturbed sites, like rooftops, parking lots, brownfields, quarries, and other regionally and municipally preferred locations are strongly preferred for commercial and utility scale solar projects. Commercial-scale and utility-scale solar should be developed within regionally or municipally preferred locations to the extent feasible. When proposing a project for open land, developers should avoid unnecessary conversion of productive farmland or ecologically important areas (See Table 4). Adoption of agrivoltaic or ecovoltaic project design features shall be considered for all projects and must be adopted as mitigation actions in Possible Site locations (see Table 2). Applicants shall design new projects to include storage, be storage ready, or capable of efficient future interconnection with nearby storage and/or other grid-supportive infrastructure.
Wind	Wind projects often occur on highly visible ridgelines. Applicants proposing wind generation development shall consider negative siting impacts including height, sound, shadow flicker, aviation safety, access-road disturbance, and habitat fragmentation concerns. Applicants shall include testimony discussion the siting techniques they used or technologies they deployed to site the project or as a part of their proposed mitigation strategies. Applicants shall design new projects to include storage, be storage ready or capable of efficient future interconnection with nearby storage and/or other grid-supportive infrastructure.
Hydropower	The Region supports upgrades, efficiency improvements, or carefully designed additions at existing dam or impoundment or diversion sites. New hydropower projects shall be designed as run of river and shall demonstrate how impacts on flow, temperature changes, fish passage, and other impacts on aquatic biota are mitigated.
Biomass	Proposed biomass projects should be sited on existing farms or near other manufacturing or waste treatment facilities that supply the feedstock for the proposed facility. Biomass facilities shall conduct careful review of fuel sourcing, truck traffic, air emissions, noise, ash handling, fire safety, and compatibility with nearby land uses. This Plan will prefer projects that use sustainable feedstocks, avoid undue truck dependence, and do not create disproportionate local air-quality burdens.
Battery Storage	Good sites for battery storage include sites located on, adjacent to, or within an industrial zoned area near existing electric distribution infrastructure, critical facilities (e.g. hospitals, large institutions), or existing generation. Applicants shall demonstrate they have met or exceeded fire safety standards, provided reliable emergency access, and provided contextually appropriate visual screening when designing projects. Pairing storage with existing or new renewable generation is encouraged where it improves resilience or grid integration.
Distribution and Transmission Infrastructure	Applicants shall generally co-locate infrastructure within or adjacent to existing rights-of-way, transportation corridors, or previously altered utility corridors where feasible to reduce landscape and resource impacts. New transmission facilities shall be designed to avoid unnecessary skyline exposure, mitigate impacts on productive farmland, and keep habitat blocks intact. Underground lines may be appropriate in particularly sensitive areas. Tower heights shall be limited to height of the existing treeline and shall be no greater than 72’ high unless extraordinary circumstances demand additional height.
Substations and Related Utility Facilities	Substations and related utility facilities shall be sited at locations near existing utility infrastructure, in commercial or industrial zoned areas, or near critical facilities, or other similar developed sites. Natural or designed screening shall be required for new substations and related infrastructure. Mitigation shall be required to reduce visibility, noise, lighting, and other similar impacts. Facilities shall be designed to support resilient and cost-effective grid modernization.
Emerging Technologies	Emerging and/or unlisted technologies will be evaluated under general standards.

Siting Standards Table 4: Mitigation Strategies for Proposed Energy Projects

Scale	Description
Visual and Scenic Resources	Applicants shall demonstrate how they used topography, setbacks, screening, and color and material choices to reduce noise, visibility, and avoid skyline intrusion or prominent contrast with the surrounding landscape. Applicants shall take reasonable steps to avoid shifting visual burdens from the host parcel to neighboring properties or public viewpoints. Where applicants employ screening or managed vegetation is part of a project's mitigation measures, a maintenance plan is required that identifies the material or species being used, installation timing, maintenance responsibilities, replacement methods, and invasive-species control.
Agricultural Resources	Applicants shall avoid unnecessary loss or fragmentation of productive agricultural land. Where projects are proposed on working lands, the applicant shall demonstrate how they have employed layouts and management plans that maintain meaningful agricultural use or that minimize long-term loss of productive capacity. Mitigation may include adopting "agrivoltaic" project designs that are cohesive with agricultural co-production, such as planting compatible crops between panels, using managed grazing for maintenance, supporting nearby honey production, and similar practices that produce agricultural co-benefits with solar.
Ecological Resources	Applicants shall retain hedgerows, riparian buffers, drainageways, forest edges, wetlands, and wildlife movement corridors. Avoid habitat blocks unless the mapped issue is shown not to exist on the ground or the project clearly avoids the constrained area. Projects may adopt "ecovoltaic" project designs that intentionally maintain or improve the ecosystem function of the site through native and biodiverse vegetation plantings, pollinator habitat, wildlife corridor use, and similar practices that produce ecological co-benefits. For example, where fencing is necessary, design it to reduce fragmentation and allow the passage for smaller animals in ways that are consistent with project safety and security needs.
Stormwater, Erosion, and Soil Stability	Applicants shall minimize impervious area, unnecessary grading, and soil compaction. Use site design, drainage controls, and vegetation management to reduce runoff, erosion, and sediment transport.
Emergency Planning and Public Safety	Projects shall provide safe access, appropriate setbacks, and technology-appropriate emergency response information. Battery storage, biomass, and substation projects shall demonstrate that they incorporated features supporting to fire safety, access, and incident response.
Decommissioning and Restoration	Applicants shall decommission and restore project areas at the end of their useful life in accordance with applicable state requirements. Projects shall include restoration assurances. Utility-scale projects shall demonstrate that they will create and maintain a funding mechanism structured to pay for decommissioning (although the mechanism by which they demonstrate that ability may vary).

Regional Energy Targets

This Energy Chapter catalogs the Region's current energy demand and generation capacity. This subsection creates targets for regional energy conservation, use, and generation to guide the Region toward achieving state and regional energy goals. Achieving these goals will be challenging, requiring intensive conservation across all sectors, increased electrification of transportation and space heating (with subsequent decreases in fossil fuel use), and decreased total energy demand despite population growth. Chapter 2, Appendix C contains a comprehensive list of regional energy targets. Appendix E provides the methodology for how regional and municipal targets were developed. Total regional energy demand targets can be viewed here in **Table 8**:

Table 8: ACRPC Total Energy Demand Reduction Targets, MMBtu

	Current	2025	2035	2050	Change
Residential	1,713	1,332	946	731	(982)
Commercial	990	832	735	727	(263)
Industrial	1057	1,068	1,101	1,217	160
Total	3,760	3,232	2,782	2,675	(1,085)

BUILDING TARGETS

Building targets for the Region include reducing total energy demand across residential, commercial, and industrial sectors. PSD's modeling estimates the Region's overall energy demand must decrease to meet state goals by 2050. The largest contributors to this reduction will be conservation and efficiency improvements. Thermal conservation and more efficient equipment are projected to shrink the Region's energy use by about one third. This change is represented by white space in **Figure 10**. VEIC's model projects that fossil fuel use in the Region will significantly decrease by 2050 (orange, green, and beige bars). Fossil fuels will be replaced by increases in biomass, wood chips and pellets (purple and pink bars) for heating commercial and industrial spaces, biodiesel (blue bar) for heavy equipment, and electricity (yellow bar) in residential space heating and light vehicles.

THERMAL TARGETS

To achieve energy goals, according to the LEAP model, space heating demand is expected to fall regionally between the present and 2050 due to electrification with the rise of heat pumps and increasing energy savings from weatherization retrofits of existing structures and construction of new buildings compliant with the State's building energy standards.

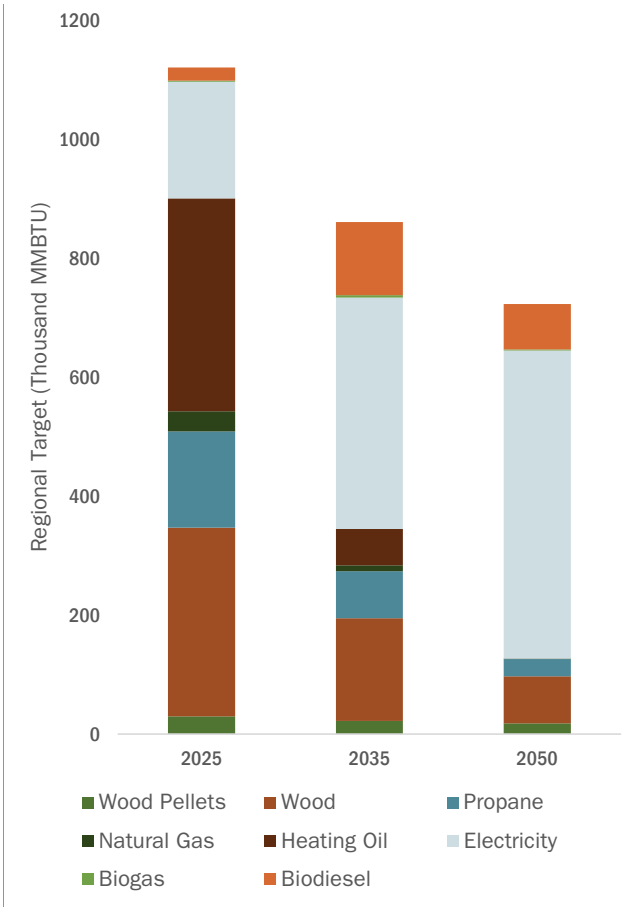
The model results also show significant reductions in fossil fuel use (or in some cases, complete elimination) as a residential home heating source. The regional model shows elimination of coal and fuel oil as heating sources by 2050. Liquid propane and natural gas use are projected to drop substantially during the model time frame. In contrast, electricity demand will increase as heat pumps replace other systems. Heat pumps are most effective when residential properties are fully weatherized; therefore, weatherization rates should dramatically increase, although this version of the model does not provide a specific target. Industrial and commercial space heating demand is also estimated in the LEAP modeling.

Due to the lack of existing data on commercial energy heating, it is difficult to accurately determine the

Table 9: Regional Thermal Energy Project Targets

Building Type	Target	2025	2035	2050
Commercial	New Cold Climate Heat Pumps	2,336	7,064	9,034
Residential	New Cold Climate Heat Pump	4,637	12,468	18,374
	New Heat Pump Water Heaters	3,048	10,151	13,928
	New Weatherization Retrofits	3,356	7,253	11,734

Figure 10: Residential Fuel Demand Change Targets



scale of change necessary. However, industrial and commercial uses will need to transition from fossil fuels to electricity to meet energy goals, including nearly eliminating natural gas usage. This will require a large increase in the number of commercial cold climate heat pumps.

ELECTRICITY TARGETS

The Region will need to focus on efficiency and conservation to minimize electricity use. Since electrical consumption in the Region is split almost evenly between residents (48%) and commercial and industrial entities (52%), targets will require participation from both individual homeowners and commercial and industrial users.

However, even with significant efficiency steps taken by businesses and residents, the Region's electrical usage will likely increase. This is because many new technologies needed to reduce fossil fuel consumption, like heat pumps and electric cars, replace fossil fuels with electricity. Importantly, this strategy only reduces greenhouse gases if electricity is generated renewably. **Table 10** shows the Region must increase efficiency and conservation by about 52,000 MWh by 2050 to meet proposed targets. This target is based on efficiencies available today. Future technological advances, such as better fuels or motor efficiencies, may help drive this change. However, the Region and its residents will also need significant capital

Table 10: Regional Program Achievable Electric Energy Efficiency Savings (MWh)

Energy Efficiency Source and Type		2025	2030	2035	2040	2050
Residential	Incremental Annual	1,428	1,500	1,627	1,572	1,748
Residential	Cumulative Annual	2,823	9,620	16,197	20,410	29,880
Non-Residential	Incremental Annual	2,532	2,300	2,303	2,270	2,640
Non-Residential	Cumulative Annual	5,075	16,614	25,489	24,914	22,984
Total	**Incremental Annual**	**3,961**	**3,800**	**3,929**	**3,842**	**4,388**
Total	**Cumulative Annual**	**7,898**	**26,234**	**41,686**	**45,324**	**52,865**

investments in new technologies and efficiencies to meet targets.

Efficiency Vermont is a statewide energy efficiency utility, the first of its kind in the nation. Efficiency Vermont helps consumers reduce energy costs by making homes and businesses more energy efficient. It provides technical assistance and financial incentives to help Vermonters identify and pay for cost-effective approaches to energy-efficient building design, construction, renovation, equipment, lighting and appliances. Efficiency Vermont is funded by an energy efficiency surcharge on electric bills.

TRANSPORTATION TARGETS

Transportation energy demand is a major contributor to regional energy and greenhouse gas emissions. Therefore, ACRPC proposes that regional targets for overall reductions in fossil fuel usage across all vehicle classes must be met to achieve climate change resilience. Further, reducing demand for these non-domestically produced transportation fuels will also enhance energy security by making the Region less dependent on fuel imports. Projections of necessary reductions in demand by fuel type and vehicle type can be seen in **Table 11**.

Much of this transition involves shifting from fossil fuel-powered vehicles to electric vehicles. As EV use grows, this should lead to declining demand for gasoline, diesel, and ethanol. Targets for EV adoption can be viewed in **Table 12**. Meeting these EV and PHEV targets, plus shifting single-traveler, single-destination travel to public options, should help substantially reduce demand for fossil fuels and their additives for road transportation.

Currently the national political climate has moved away from electric vehicle adoption. However, the car manufacturers have made great strides in producing reliable electric vehicles at prices comparable to traditional internal combustion engines. Fast, convenient public charging infrastructure, driver anxiety about mileage range, and resistance to change remain the biggest hurdles to electric vehicle adoption. Even in the current climate, this Plan supports the long-term investment in electric charging infrastructure to support EV adoption.

Public transit, compact land uses, and active transportation constitute the other strategies the Region supports to improve transportation and reduce costs and consumption. See Chapter 3 for a discussion of those transportation resources.

Table 11: Transportation Fuel Demand Targets, thousand MMBtu

	Passenger Car			Light Truck			Medium Duty			Heavy Duty		
Fuel	2025	2035	2050	2025	2035	2050	2025	2035	2050	2025	2035	2050
Electricity	11	93	192	14	167	295	20	165	352	10	81	147
Natural Gas	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	416	202	26	1,050	477	64	147	98	26	0	0	0
Diesel	2	1	0	20	12	1	190	108	22	283	91	9
LPG				-	-	-	2	1	0	-	-	-
Ethanol	35	21	3	90	50	7	13	10	3	0	0	0
CNG	-	-	-	-	-	-	-	-	-	-	-	-
Biodiesel	0	0	0	1	1	0	13	14	5	20	12	2
Total	**465**	**317**	**222**	**1,176**	**707**	**368**	**384**	**396**	**408**	**312**	**183**	**159**

Table 12: CAP Regional EV and PHEV Targets (Number of Vehicles)

Vehicle Type		2025	2035	2050
Passenger Vehicle EV and PHEV Stock	Battery Electric	606	6,250	14,719
	Plug In Hybrid	115	88	20
	Total	721	6,338	14,739
Light Duty Truck EV and PHEV Stock	Battery Electric	622	8,705	17,753
	Plug In Hybrid	65	86	21
	Total	687	8,792	17,775

Road vehicles are not the only sources of fossil fuel-based transportation fuel demand in the Region. Reducing demand for fossil fuels from non-road vehicles is also a long-term priority to improve energy security and climate change resilience the Addison Region. **Table 13** shows the primary goal for reducing fossil fuel demand for non-road vehicles is encouraging fuel switching from traditional jet kerosene to sustainable aviation fuels (SAF).



GENERATION TARGETS

The PSD's "determination standards", or the standards to achieve "enhanced energy plans", require regional plans establish 2025, 2035, and 2050 targets for renewable energy production. ACRPC worked with PSD guidelines and the provided Generation Scenarios Tool to produce municipal and regional targets for new renewable generation. These targets are listed in **Table 14**.

These generation targets represent only one possible pathway to derive 90% total energy from renewable sources by 2050. The purpose of these targets is to provide an idea for planning future electricity generation in our Region based on estimated demand.

Other potential electricity generation combinations exist and could be better suited for our Region. For instance, this model represents a generation mix that almost certainly would require industrial scale wind. Depending on individual municipalities' planning, this may not be practical, and a model with more solar and less wind generation might be more appropriate.

Table 13: CAP Regional, Non-Road Energy Targets (Thousand MMBTUs)

Fuel	2015	2025	2035	2050
Diesel	64	61	61	62
Biodiesel	2	4	8	14
Avgas	2	3	3	3
Jet Kerosene	83	82	69	48
Sustainable Aviation Fuel	-	1	16	37
Gasoline	22	20	21	21
Ethanol	2	2	2	3
Lubricants	18	14	14	14
Natural Gas	-	-	-	-
Total	193	187	194	202

Table 14: New Generation Targets

Municipality	Current Generation	Generation (MWh) Targets		
	2024	2025	2035	2050
Addison	5403	4294	6359	8296
Bridport	4178	3807	5638	7355
Bristol	9164	8083	11,970	15,616
Cornwall	1659	2701	4000	5218
Ferrisburgh	14,376	7665	11,351	14,809
Goshen	136	858	1270	1657
Leicester	621	2186	3236	4222
Lincoln	1084	3362	4978	6495
Middlebury	44,759	27,623	40,904	53,366
Monkton	2161	3943	5839	7617
New Haven	37,044	6946	10,286	13,419
Orwell	1528	3419	5062	6605
Panton	8166	2493	3691	4816
Ripton	521	2450	3628	4733
Salisbury	1039	3013	4463	5822
Shoreham	2302	3957	5859	7644
Starksboro	1277	3866	5725	7469
Vergennes	14,093	6280	9300	12,133
Waltham	728	931	1378	1798
Weybridge	1668	1870	2769	3613
Whiting	992	1098	1627	2123
Total	**152,898**	**100,843**	**149,333**	**194,826**

The targets analysis using the generation scenarios tool found that annual generation from local renewable energy sources must increase to 100,843 MWhs, 149,333 MWhs, and 194,826 MWhs, by 2025, 2035, and 2050, respectively. As summarized in this Chapter and detailed in **Table 7**, the Region has a nameplate capacity of about 87.69 MWs and produces about 152,898 MWh of electricity annually from renewable generation as of December 2024. Therefore the Region has exceeded its 2025 total generation target early (152% of total generation target), currently produces enough electricity to meet 102% of its 2035 total generation target, and currently generates about 78% of its 2050 renewable generation target.

The Region's electricity demand may increase somewhat, perhaps significantly, over current demand levels by 2035 and 2050. It is quite likely that generation data and targets will change over coming decades. If reduction of industrial electrical demand proves overly optimistic, then additional generation might well be needed. If energy efficiency improvements produce less demand reduction for direct use electricity or heating, and substantial EV uptake occurs, this could also impact generation needs for the Region. Additional housing developments will also likely increase demand and the need for new generation.

Conversely, technological developments in the energy sector are progressing rapidly and new electric, heating, and transportation technologies may require less energy than currently anticipated. To address these concerns, distributed generation targets for this plan were generated using population and electricity demand estimates that grow gradually over time. Annual population growth was estimated at about 1%, whereas electricity demand was projected to grow 1.5% annually. As such, these projections are best viewed as educated estimates of what will need to be done to usher in the energy future of the Region and meet state standards.

ACRPC supports additional orderly expansion of the Region's renewable generation capacity and will continue to evaluate impacts of new generation to determine both the feasibility of targets and how they relate to the Region's demand.

HABITAT BLOCKS, RENEWABLE ENERGY GENERATION TARGETS, AND CLIMATE CHANGE RESILIENCE

Conserving large, contiguous habitat blocks in the Addison Region helps maintain the Region's ecological functioning. Connected and healthy habitats provide spaces for work and recreation, support wildlife, and sustain local food systems. They also directly contribute to climate change mitigation goals. Intact habitats support biodiversity, facilitate species migration, and sustain ecosystem services such as carbon sequestration, flood attenuation, wind buffering, and drought resistance—services that are increasingly critical to preventing and responding to changing climatic conditions. Conserving these areas also reduces landscape disruptions that can amplify greenhouse gas emissions through increased soil disruption and the need for expanded infrastructure. Habitat conservation and strategic energy planning are complementary components of a regional energy plan that seeks to increase the region's climate change resilience.

To evaluate how renewable energy development could proceed without compromising high-value habitat blocks, ACRPC conducted a GIS-based spatial analysis. This analysis relied on data from the Vermont Agency of Natural Resources (ANR), Vermont Center for Geographic Information (VCGI), and the Department of Public Service. First, technical potential for solar and wind energy was assessed across the county using land cover data, slope thresholds, and proximity to transmission infrastructure. Next, land was screened for compatibility with both land conservation priorities and renewable energy siting requirements, with further filters applied to remove hydric soils, wetlands, and steep slopes. Finally, core habitat blocks were identified and excluded from the developable land base. This approach examined whether remaining land area available for renewable energy development was sufficient to meet the Region's renewable energy targets while advancing climate pollution reduction objectives. Spatial analysis results can be found in **Maps 6 and 7** in Appendix D.

The analysis demonstrates that Addison County has more than sufficient land available to meet its renewable electricity generation targets without encroaching upon core conservation blocks. Both the 2050 generation target of 194,826.08 MWhs of domestic, renewable energy generation and an even more aspirational target of 100% of current demand—275,079 MWhs—are well within reach. Even after excluding all high-value ecological areas from the more restrictive "preferred sites" locations, substantial technically suitable land remains for distributed, utility-scale solar and wind projects. The Region's future generation potential is even greater when considering the role that future rooftop solar will play in our energy transition. This finding underscores the feasibility of decoupling renewable energy development from habitat loss in our communities and reinforces the County's commitment to climate resilient energy planning. By pursuing energy development goals through conservation-aware siting, The Addison Region can preserve local biodiversity, protect the ecological assets that are foundational to long-term climate adaptation and community well-being, and pursue orderly energy development. Therefore, this Plan requires that commercial scale energy generation projects in the Region avoid core habitat blocks as identified in the study above and locate in other areas, in line with municipal plans better suited to development.

Table 15: Regional Ground-based Solar and Wind Potential, Controlling for Habitat Blocks

	Prime sites, no constraint	Prime sites, no constraint, no habitat blocks	Preferred sites	Preferred sites, no habitat blocks
SOLAR				
MW	1,424	847	854	494
MWh	1,871,403	1,113,383	1,123,075	649,800
WIND				
MW	579	495	149	86
MWh	1,143,140	977,053	294,807	170,572

Energy Resources:
A Guide to the Chapter 2 Appendices

- **Appendix A:** Plan Goals, Objectives, Actions, and Impact
- **Appendix B:** Energy Units and Conversions
- **Appendix C:** Comprehensive Energy Targets List
- **Appendix D:** Energy Map Package
- **Appendix E:** Target Generation Methodology

These Appendices are hereby incorporated into the Addison County Regional Plan and shall be considered an integral part of the Plan.



Goals, Objectives, and Actions

GOAL 1: Build regional capacity for energy planning and public engagement to support the transition to renewable energy and improved energy efficiency.

Objective 1:

Educate consumers regarding efficiency and energy conservation.

a. Regularly host a regional energy fair.

Objective 2:

Expand targeted ACRPC energy services for municipalities.

a. Expand the regional staff position to focus on developing municipal energy projects and advising municipalities on regulations and enforcement.

b. Work with municipalities to learn what types of energy projects are needed in each town.

GOAL 2: Increase the Region's thermal energy efficiency through municipal leadership and support for residential and commercial heating improvements to meet local and State targets of 90% renewable energy by 2050.

Objective 1:

Promote energy efficiency in municipal buildings.

a. Work with towns to develop and implement MERP energy assessment recommendations, including facilitating access to grant or bond funding and group purchasing programs to reduce costs.

b. Advocate for a state-wide, municipal utility tracking software to support ongoing evaluation of the costs and benefits of municipal energy efficiency and weatherization projects.

Objective 2:

Encourage local and sustainably harvested wood and efficient wood heating.

a. Promote EPA III approved energy efficient wood stoves through education and outreach.

b. Promote sustainable timber harvest from regional and town forests, in accordance with Natural Resources goals, to provide local heating and electricity fuel sources, prioritizing access for low-income citizens.

Objective 3:

Support weatherization efforts and optimize building design for energy conservation.

a. Coordinate with CVOEO, Neighborworks, Efficiency Vermont, Vermont Energy Education Program, and CEAC's Energy Navigator program to encourage weatherization participation, including event support, grant assistance, project development, and education/outreach collaboration.

b. Promote the installation of air source and geothermal heat pumps.

c. Support thermal energy network development and explore community-based utility models (municipal, neighborhood, cooperative) that build local capacity and resilience.

d. Encourage municipalities, businesses, organizations, and homeowners to build to higher energy standards (RBES/CBES "Stretch energy code") and work with willing local planning commissions to incorporate these standards into municipal plans and zoning regulations.



John Graham ZEM program, KTP Mobile Home Park, Bristol

GOAL 3: Modernize the Region's electrical systems and promote efficient energy use in buildings.

Objective 1:

Support energy conservation and efficient use of electricity in buildings.

a. Discourage the use of "always on" lighting in parking lots and other indoor and outdoor lighting in public places. Encourage the use of technology like motion sensors to light areas when needed.

b. Advocate for the availability of smart meter technology to help consumers understand and regulate their electricity usage.

Objective 2:

Work with municipalities, electric utilities, and community groups to modernize grid infrastructure and support the clean energy transition.

a. Help the Region's municipalities investigate and install, or purchase, cost-effective municipal solar and/or wind net-metered facilities to power municipal energy use.

b. Work with GMP to ensure that as the Region transitions to distributed electric generation and increased electricity reliance, GMP regularly updates its distribution and transmission infrastructure to provide cost-effective, reliable service to all communities and eliminate current congestion in the Addison Region.

c. Advocate for interconnection cost policies that support residential-scale distributed generation as a preferred site and as a resilience-enhancing form of energy development, while requiring larger commercial and industrial projects with greater access to capital to fund the interconnection upgrades needed for their development.

d. Share info with VELCO, GMP, and VEC to ensure that targets for renewable generation in the Region and across the State are optimized to enhance the cost effectiveness of the transmission and distribution system for the State of Vermont. Support grid upgrades where they will provide the greatest cost/benefit.

e. Strongly encourage the Region's electric utilities to adopt the new standards for digital substations from the National Electrical Manufacturers Association.

f. To reduce costs and promote local resilience, strongly encourage new renewable energy projects proposed for the Region to be designed from the outset so they can be connected to onsite or nearby strategically sited energy storage systems to avoid significant retrofitting in the future.

g. Require newly installed generation systems to meet the following standards when relevant IEEE1547-2018, IEEE2800-2022, IEEE 2030-2011, and IEEE 2030.7-2017 for connection to the grid.

GOAL 4: Reduce transportation energy consumption by transitioning to electric vehicles and promoting a shift away from single-occupancy vehicles.

Objective 1:

Support the development of electric vehicle infrastructure and promote EV adoption.

a. Plan for and install electric vehicle charging infrastructure on municipal property.

b. Encourage major employers in the Region to install (additional) EV charging stations for employees.

c. Develop an EV Readiness report that includes strategic infrastructure improvement recommendations as well as assessments of municipal fleets.

d. Promote the Drive Electric Vermont website and resources.

Objective 2:

Reduce vehicle miles traveled and support the development of alternative transportation options.

a. Support Walk-Bike Council of Addison County efforts to increase safe walking and biking access by facilitating complete streets infrastructure and helping municipalities secure funding for incremental bicycle and pedestrian improvements.

b. Support public transit expansion by working with Tri-Valley Transit to improve rural service access,

encouraging municipal representation on transit boards, promoting park-and-ride and ride-sharing programs, and advocating for enhanced public transit access during planning proceedings.

c. Support employer programs to encourage telecommuting, carpooling, and vanpooling for employees' commute trips.

GOAL 5: Transition medium and heavy-duty transportation to cleaner fuel alternatives.

Objective 1:

Support improvements to rail infrastructure and encourage cleaner fuels for large vehicle fleets.

a. Support transportation goals for expanding passenger and freight rail service (See Chapter 2) to reduce vehicle miles traveled and fossil fuel consumption.

b. Work with Clean Cities Coalition to encourage large vehicle fleets to switch to conventional natural gas use in situations in which switching to EVs or renewable natural gas is not feasible.

GOAL 6: Advance renewable electricity generation while protecting natural resources.

Objective 1:

Encourage municipal renewable energy generation.

a. Analyze the feasibility and support the deployment of municipally or community-owned, leased, or otherwise operated distributed generation facilities that are consistent with the *Regional Energy Project Siting and Design Standards*.

Objective 2:

Support responsible siting and development of renewable energy resources.

a. Work closely with municipalities affected by proposed energy development projects and participate in the PUC process to ensure those projects are consistent with the *Regional Energy Project Siting and Design Standards.*

b. Support the expansion of energy storage, microgrids, and other energy system infrastructure in locations and with designs that are consistent with the *Regional Energy Project Siting and Design Standards.*

Objective 3:

Encourage compact settlement patterns and conserve forest land as renewable resources.

a. Support housing goals for compact development, infill, village center growth, and shared utility infrastructure (see Chapter 5) to reduce transportation energy demand and enable efficient energy systems.

b. Discourage the conversion of forest blocks and other important ecosystems into exclusively energy generating sites.



ENDNOTES

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Transportation

ACRPC envisions a transportation system that promotes the economy by effectively moving people and commerce, safely supports all modes of travel, promotes energy efficiency and conservation, enhances regional land uses and the Region's sense of place, exhibits resilience to natural hazards, and receives sufficient funding to conduct timely, cost effective maintenance and growth or adaptation to meet the Region's emerging and future needs.

TRANSPORTATION ADVISORY COMMITTEE (TAC)

The Transportation Advisory Committee provides local input and involvement in the transportation planning process. The TAC is composed of delegates from the Region's 21 municipalities. Each municipality may have a delegate and an alternate. Alternates represent the municipality when the delegates cannot.

The TAC is responsible for updating the Regional Transportation Plan, recommending transportation-related planning studies and projects in the Region, and commenting on transportation policy. The TAC also is responsible for establishing local priority for capital program projects that are in the project development process. The TAC solicits input on local and regional transportation or traffic-related issues and problems. The TAC works with regional planning commission staff, Vermont Agency of Transportation (VTrans), and other agencies and officials to provide local input into the statewide transportation planning and project development process.

LONG AND SHORT RANGE PLANNING

Regional Plans expire after eight years. However, Regional Commissions must consider how the Region may change in the next 10, 20, even 30 years. This Plan takes two approaches. Short-range planning looks at the current transportation system and determines how to maintain it to serve the needs of the Region in the next 10-15 years. The long-range planning looks at population trends, state and national policy, environmental changes, etc., and considers how the transportation system may need to be adapted to accommodate these changes in the more distant (15-30 years) future. In this plan, short-term planning focuses largely



on maintaining transportation corridors with a focus on roads and bridges. Long-term goals plan for alternative modes of transportation, electrifying the vehicle fleet, and increasing energy conservation.

To meet State-established greenhouse gas reduction targets, almost 90% of all vehicles will need to be powered by electricity by 2050. Additionally, the Region's pattern of land use and related travel will need to change to reduce daily trips. This Plan seeks to balance the immediate short-range needs of the transportation system, with long-range planning goals.

The **Regional Transportation Goals** are intended to be universal and address both short and long-term goals. The first part of this Transportation Chapter looks at the Regional Transportation System and focuses on existing conditions. It includes recommendations for transportation infrastructure and modes of transportation for the near term. The remainder of this chapter considers planning for the transportation system of the future. It includes ACRPC's planning process: the intersection of transportation and energy planning; the intersection of transportation and land use planning; and, the intersection of transportation and natural resource planning. It also includes broader policy recommendations regarding each of those opportunities.

Regional Transportation Goals

Promotes the Economy

The primary purpose of the transportation system is to facilitate the movement of people, goods, and services. Transportation networks serve the local, regional, and the statewide economies. In some cases, these different levels will have different needs and uses of the transportation system. For example, bicycling on Addison County's scenic rural roads contributes to the local economy, as does large scale agriculture and trucking. Sharing the road between these two uses can be problematic. The policies in this Plan must balance the needs of the larger statewide transportation system and its value to the economy with the needs of the Region and its municipalities. The impacts of transportation, both positive and negative, on the local economy must be considered in regional transportation planning.

Safely Supports All Modes of Travel

The Addison Region's transportation infrastructure supports all modes of travel to benefit all people. Especially in and around its villages, all people have options to safely walk, bike, or take public transit to work, school, or participate in social activity. It should receive timely preventative maintenance and selected reconstruction of substandard elements in order to keep functioning safely and efficiently for residents, businesses, and travelers using all modes of travel. Sections of several of the Region's roadway corridors experience conditions that strain their carrying capacity.

Promotes Energy Efficiency and Conservation

This Plan encourages incremental and systematic changes to the Region's transportation infrastructure and practices to reduce transportation energy use and reduce greenhouse gas (GHG) emissions region-wide. Transportation contributes about 40% of greenhouse gasses in Vermont.[1] This Plan encourages reducing vehicle miles traveled by using alternative transportation modes, as well as promoting land use patterns and transportation design choices that reduce reliance on single-occupancy vehicles. It also promotes the use of electric vehicles and other technological innovations to reduce greenhouse gas emissions.

Enhances Regional Land Uses and the Region's Sense of Place

The Region's historic communities, buildings, and landscapes constitute scenic and cultural resources unique to the Addison Region. Transportation projects should support and enhance historic downtowns and village centers, and the rural, scenic landscapes that define this Region.

Exhibits Resiliency to Natural Hazards

The Region's transportation infrastructure should be designed, constructed, maintained, and improved to survive increased rainfall intensity and flooding severity predicted under future climate change scenarios to preserve the infrastructure's use and promote clean water and functioning ecosystems.

Leverages Sufficient Funding

Investments in the Region's transportation infrastructure should position the Region for a more sustainable future in terms of energy utilization, environmental quality, and financial stability. Municipalities and the State should use a life cycle, least-cost approach in the planning and design of infrastructure, which considers the full costs and impacts to residents, municipalities, and state agencies. Investments should focus on achieving an efficient, cost-effective system that reduces energy utilization per trip over time.

As part of our business in the ordinary course, ACRPC works with the TAC and VTrans to prioritize the needs for future projects, identify alternatives, and assist municipalities in determining costs and identifying financing opportunities.



First Train, Middlebury 2021

Regional Transportation System

Existing Conditions

The following sections provide a description of the diverse elements that form the Region's transportation system. The Plan divides the system into four different types of infrastructure:

- Air
- Navigable Waterways
- Rail
- Roadways

Each section describes the existing conditions of each type of infrastructure, includes details of the infrastructure's condition and use, identifies the challenges or opportunities the infrastructure faces, and makes recommendations to maintain and/or improve the functionality of each type of infrastructure.

This Plan further divides the Roadway Section as follows:

Roadway network general conditions including:

- Functional Classification
- Traffic Volumes
- High Crash Locations
- Bridge Infrastructure
- Major Roadway Corridors

Modes of transportation including:

- Cars
- Truck Traffic and Freight
- Public Transit
- Ridesharing, Car-sharing, and Ride-hailing
- Pedestrian and Bicycle Facilities

AIR TRANSPORTATION

Middlebury State Airport, located adjacent to East Middlebury Village and just outside Middlebury's town center, is classified as a "local service" facility. Its primary purpose is to serve recreational and personal flying activities to the community – 66% of all flights are made for local aviation purposes. Corporate activities include flight training, storage for aircraft, specialized local travel businesses, and most notably College use. Middlebury College brings a large number of users to the airport, including students, their parents, and other visitors. While the Middlebury State Airport does not have national or international significance, it is an important asset to Middlebury and the Region.



Middlebury State Airport

The 2021 Vermont Airport Systems Plan identified a need to add non-precision approach capability and extend the runway to 5000'. This Plan supports the safe, thoughtful expansion of the airport.

The **Basin Harbor Airport** is a specialty service facility for single-engine and smaller aircraft (e.g. ultralights and gliders). The airport is open seasonally, closing during the winter. The majority of flights to and from this location are transient general aviation, many of them relating to the Basin Harbor Club's operation (guests, etc.).

NAVIGABLE WATER TRANSPORTATION

The Addison Region borders Lake Champlain, a large navigable lake. Also, historically, many of the Region's rivers were used for travel corridors. Today however, water transportation is related almost exclusively to recreational uses. The Region's only formal water transport is the Ticonderoga Ferry, which connects Shoreham with Ticonderoga, New York. It was originally established in 1759 and operates seasonally on a cable system. Year round (weather permitting during winter) ferry service is available from nearby Charlotte, via Lake Champlain Ferry, connecting passengers to Essex, New York.



RAIL TRANSPORTATION

The Vermont Rail System provides heavy-haul freight service across Vermont, New Hampshire, and upstate New York through five affiliated short lines. Vermont Railway runs through ACRPC municipalities including Leicester, Salisbury, Middlebury, New Haven, Vergennes, and Ferrisburgh, following a corridor parallel to Lake Champlain. This Plan supports continued freight rail expansion, particularly where it can reduce truck traffic and improve roadway efficiency.

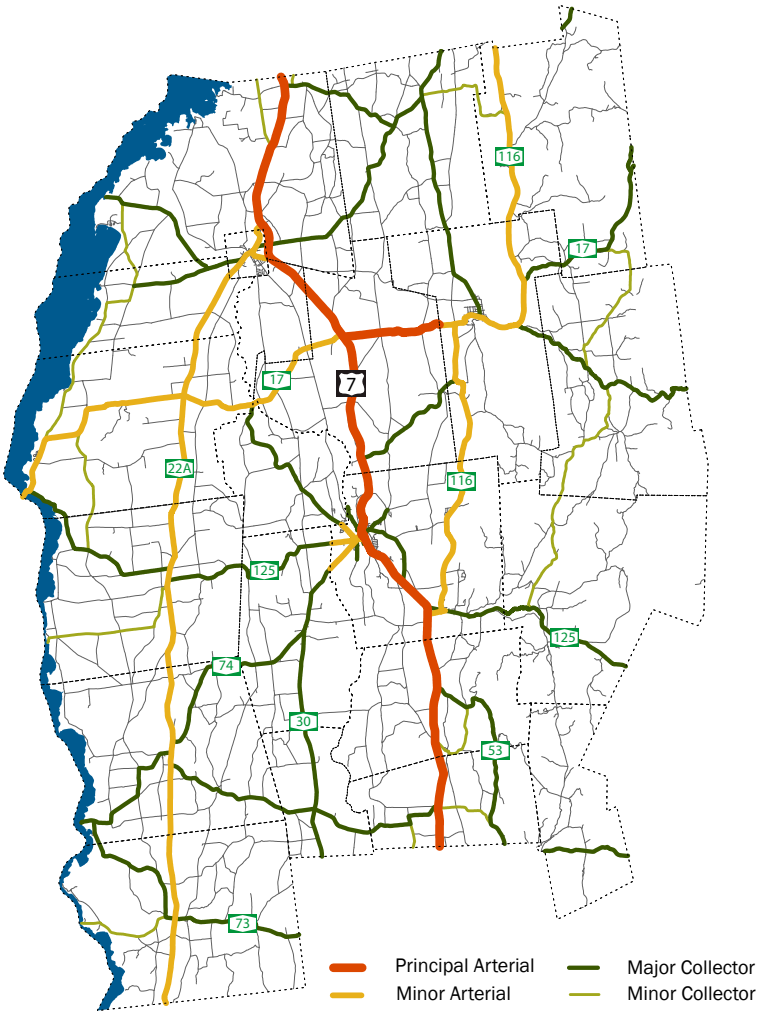
The 2025 Vermont State Rail Plan recognized significant upgrades along the Western Corridor, such as Middlebury's new rail tunnel, and recommended further signal and track improvements to increase speeds to 79 mph.

Passenger rail service expanded in 2022 with Amtrak's Ethan Allen Express extension from Rutland to Burlington. Addison County is now served by daily stops in Middlebury and Vergennes/Ferrisburgh. Supporting infrastructure includes a new platform in Middlebury and the relocation and renovation of the historic Vergennes Rail Station, now adjacent to the Vergennes/Ferrisburgh Park and Ride.

Communities are encouraged to seek opportunities to improve connections between commuter rail and adjacent commercial centers for all modes of travel. Transit-Oriented Development studies currently underway in Middlebury and Vergennes/Ferrisburgh are anticipated to provide additional suggestions for improving such connections.

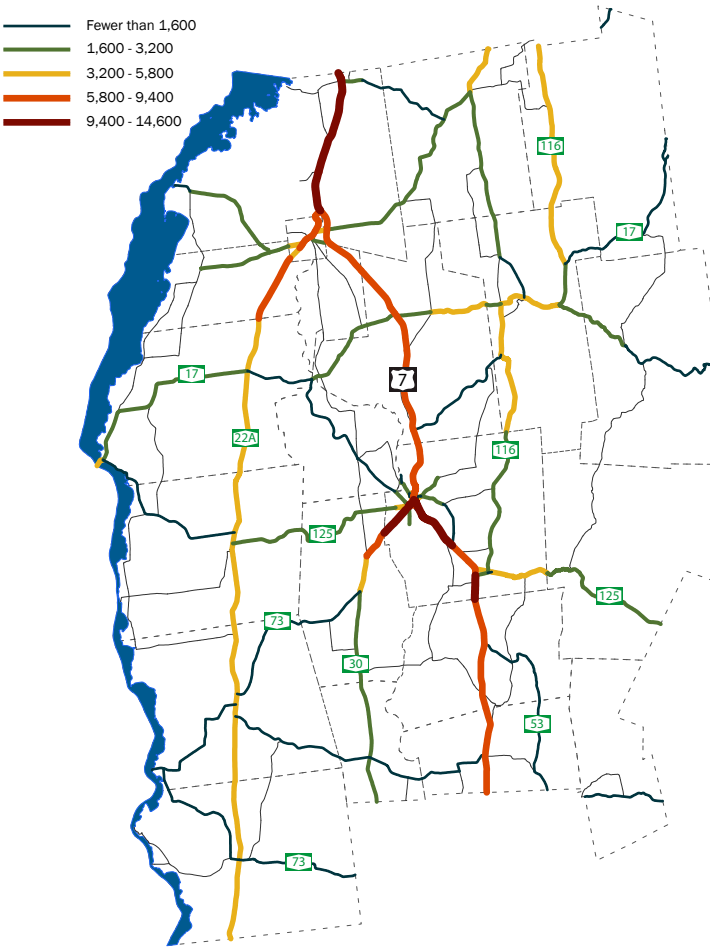


Map 1: Functional Class of Significant Addison County Region Roads





Map 2: Traffic Volumes on Significant Addison Region Roads





Roadway Network

While the Region's transportation networks are complex and multimodal, the roadway network currently serves as the Region's primary transportation infrastructure. The Addison Region is bracketed by the Green Mountains to the east and Lake Champlain to the west, which means that the primary movement corridors are north/south.

FUNCTIONAL CLASSIFICATION

The State of Vermont maintains a system to classify state-owned routes by their highway function with US Route 7 as the highest level of Principal Arterial. While there are no interstate highways in Addison County, Route 7 is the most heavily traveled. Minor Arterials are the next highest classification. Vermont Routes 22A, 17, and 116 function in this category. Among these, Route 22A has higher traffic and higher truck volumes than the other two routes.

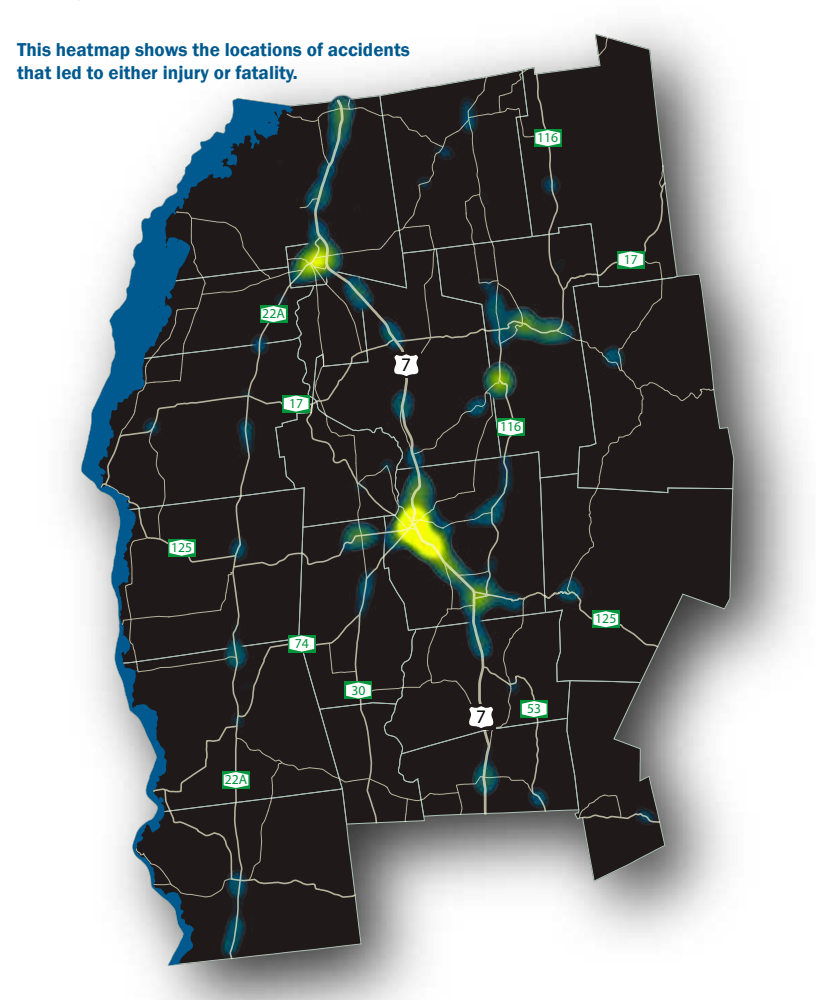
The remaining state highways, plus a number of more significant town highways that serve as key connectors between communities, are classified as "Major Collectors." Town-owned major collector routes can disproportionately burden municipalities, as they serve a regional need, but are funded and maintained through municipal budgets. In theory, Major Collectors are eligible for federal aid, but in practice, as funding is limited, these corridors seldom rise on the priority list for investment. While the state's functional classification system does not always match the local or regional perception of a road, it can affect both funding and state priorities. (See **Map 1**.)

TRAFFIC VOLUMES: HISTORIC TRENDS AND FUTURE PROJECTIONS

Traffic volumes in the Region generally align with the roadway functional classification system, with the highest volumes along the US Route 7 corridor. Middlebury experiences the most congestion, where local and through traffic on US 7 converge during peak hours. Volumes are also elevated at the northern end of US 7 near the Chittenden County line, where it serves as a key commuter route from Addison County. (See **Map 2**)

Other congestion points include Route 22A through downtown Vergennes and Route 116 through downtown Bristol. Both carry a mix of local and through traffic. In smaller communities, traffic congestion is typically limited to school drop-off and pick-up times. Traffic volume trends in the Region vary considerably, with some corridors seeing traffic growth, others are stable, and some are even declining. More detail on trends is presented later in the Major Roadway Corridors section later in this Chapter.

Map 3: Locations of Accidents Leading to Injury or Fatality



SAFETY AND CRASHES

Crash data collected by the Vermont State Police and reported to VTrans provides valuable data on the safety of our roadway network. Fatalities are relatively rare, with 17 occurring from 2019–2023. Crashes resulting in injuries are more common, and provide useful information on locations where recurring serious crashes should be evaluated for interventions or countermeasures. **Map 3** shows a "heat map" of injury crashes, and also "High Crash Locations" as reported by VTrans, which are highway segments or intersections with statistically elevated crash rates.

Map 3 and **Table 1** analyze the region's crash data, and provide some insights on the conditions that are associated with injuries and fatalities, in particular. Injuries and fatalities are most prevalent on roads with posted speeds of 50 mph.

Table 1 shows the type of collision. The most prevalent consists of a single vehicle crash; typically a driver leaving the road, often due to excessive speed for the road conditions or distraction. These types of crashes are not often correctable by infrastructure improvements. Rather they might be prevented through education and enforcement. Additional crash data is available online through the **VTrans Crash Public Query Tool**.

High crash locations are also shown as part of each roadway corridor. ACRPC recommends evaluating high crash locations in each corridor (on pages 11-14) for improvements to reduce their susceptibility to accidents.

For a section of road or intersection to be identified as a High Crash Location (HCL), the location must have experienced five or more crashes in a five-year period, or the average of one crash per year. **Table 1** below provides some summary information by corridor based on High Crash Location Reports 2019-2023

Table 1: Crashes in ACRPC Region 2019-2023 (Source: VTrans Crash Query Tool)

Collision Direction	Fatal	Injury	Property Damage Only	Grand Total
Unrecorded		28	144	172
Head On	3	44	33	80
Left and Right Turns, Simultaneous Turn Crash			6	6
Left Turn and Thru, Angle Broadside		23	32	55
Left Turn and Thru, Broadside	2	16	16	34
Left Turn and Thru, Head On		5	8	13
Left Turn and Thru, Same Direction Sideswipe/Angle Crash		2	21	23
Left Turns, Opposite Directions, Head On/Angle Crash			3	3
Left Turns, Same Direction, Rear End			1	1
No Turns, Thru moves only, Broadside	3	32	69	104
Opp Direction Sideswipe	1	19	44	64
Other - Explain in Narrative	2	16	62	80
Rear End		76	199	275
Rear-to-rear		1	37	38
Right Turn and Thru, Angle Broadside		1	5	6
Right Turn and Thru, Broadside		6	1	7
Right Turn and Thru, Head On			1	1
Right Turn and Thru, Same Direction Sideswipe/Angle Crash		1	13	14
Right Turn, Same Direction, Rear End			1	1
Same Direction Sideswipe		13	91	104
Single Vehicle Crash	6	174	291	471
GRAND TOTAL	*17*	*457*	*1078*	*1552*

Bridges

Bridges constitute an important part of the Region's roadway infrastructure. VTrans develops bridge sufficiency ratings through detailed inspections that assess structural integrity, hydraulic capacity, and functional components such as width and alignment. These ratings help determine whether a bridge should be considered for replacement or rehabilitation — and they affect eligibility for federal funding. Municipalities are responsible for maintaining bridges less than 20 feet in length, while VTrans pays close attention to state system bridges and town bridges over 20 feet.

Bridge ratings are not the only consideration when investing in bridge improvements or repairs. VTrans also weighs contextual factors such as historical status and cost, and solicits input from regional commissions through the Project Selection and Prioritization Process (VPSP2) to capture qualitative factors that are difficult to quantify. The TAC rates bridges regularly, and ACRPC expects rankings to shift as bridges are repaired, upgraded, or flagged for rehabilitation. These rankings inform VTrans project prioritization and are reflected in roadway corridor recommendations, which are updated as the bridge list changes. Note that sufficiency ratings are not reflected here, as Addison County data is not fully current.

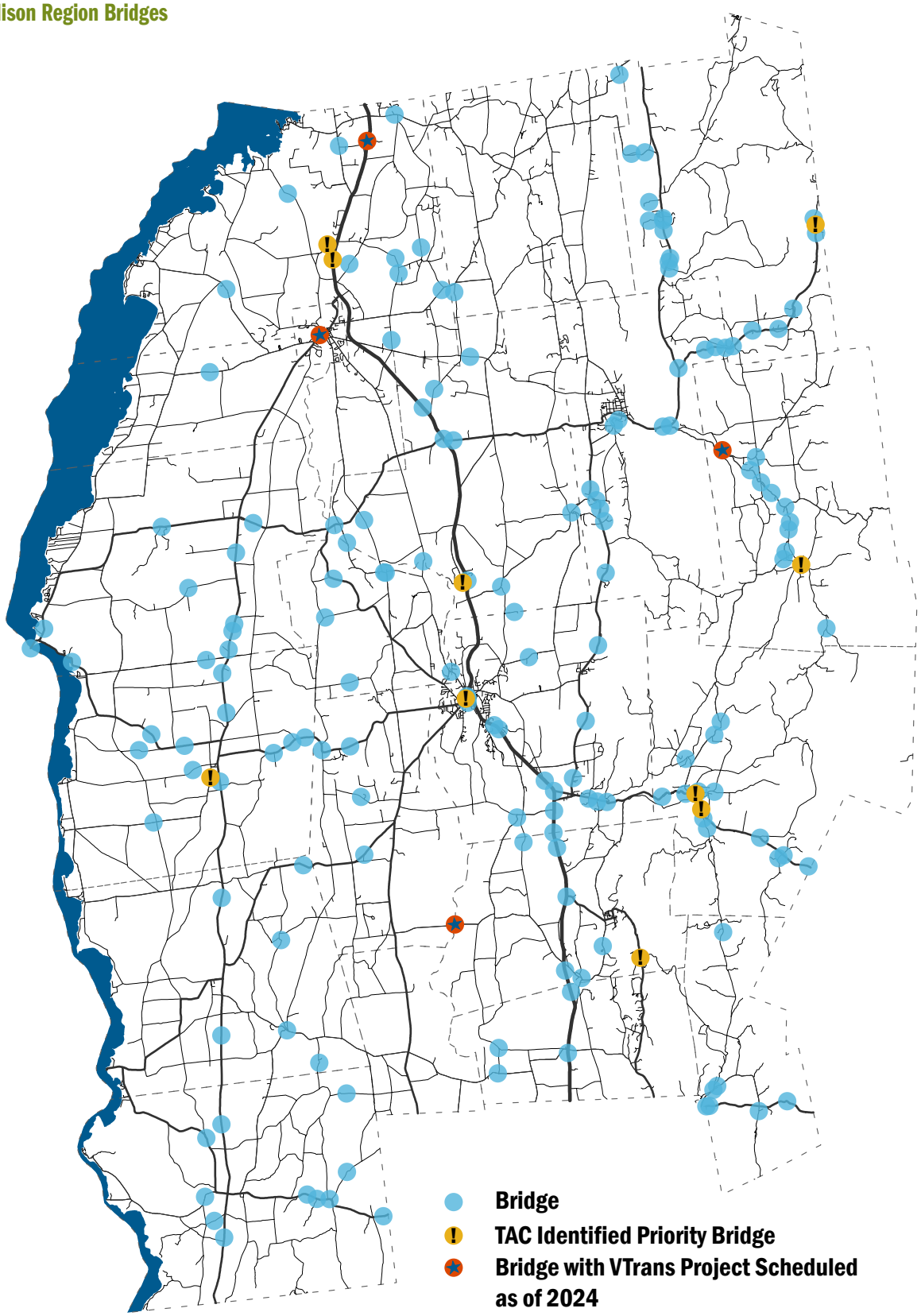
Table 2: Addison Region Bridges with VTrans Projects Scheduled as of 2024

Muncipality	Bridge #	Road	Crossing	Project ID
Ferrisburgh	139	US 7	Lewis Creek	BF 019-4(35)
Lincoln	46	York Hill Road	New Haven River	BO TRUS(7)
Salisbury/ Cornwall	8	Creek/Swamp Road	Otter Creek	BO 1445(39)
Vergennes	27	VT 22A/Main Street	Otter Creek	BF 017-1(19)

Table 3: 2024 TAC Identified Priority Bridges

TAC Rank	Town/City	Bridge #	Location	River
1	Ferrisburgh	137	US Route 7	Little Otter Creek
2	Salisbury	6	Lake Dunmore Road	Sucker Brook
3	Middlebury	101	Main Street	Otter Creek
4	Bridport	4	Crown Point Road	Potash Brook
5	Ripton	15	VT Route 125	Middlebury River Middle Branch
6	New Haven	30	Dog Team Road	New Haven River
7	Lincoln	18	Grimes Road	New Haven River
8	Ferrisburgh	11	Little Chicago Road	Little Otter Creek
9	Starksboro	7S	Gore Road	Huntington River
10	Ripton	5	Old Town Road	Middlebury R. South Branch

Map 4: Addison Region Bridges



Major Roadway Corridors

Corridor planning allows ACRPC to understand transportation, environmental, land use, and community development issues in a comprehensive manner that can help identify priorities for implementation. The following sections review the conditions and issues for the Region's primary roadway corridors to inform needs and priorities for action.

US ROUTE 7

Route 7 is the primary route of travel through the Addison Region, and is the primary north-south travel corridor in Vermont between the Green Mountains and Lake Champlain. Important considerations include:

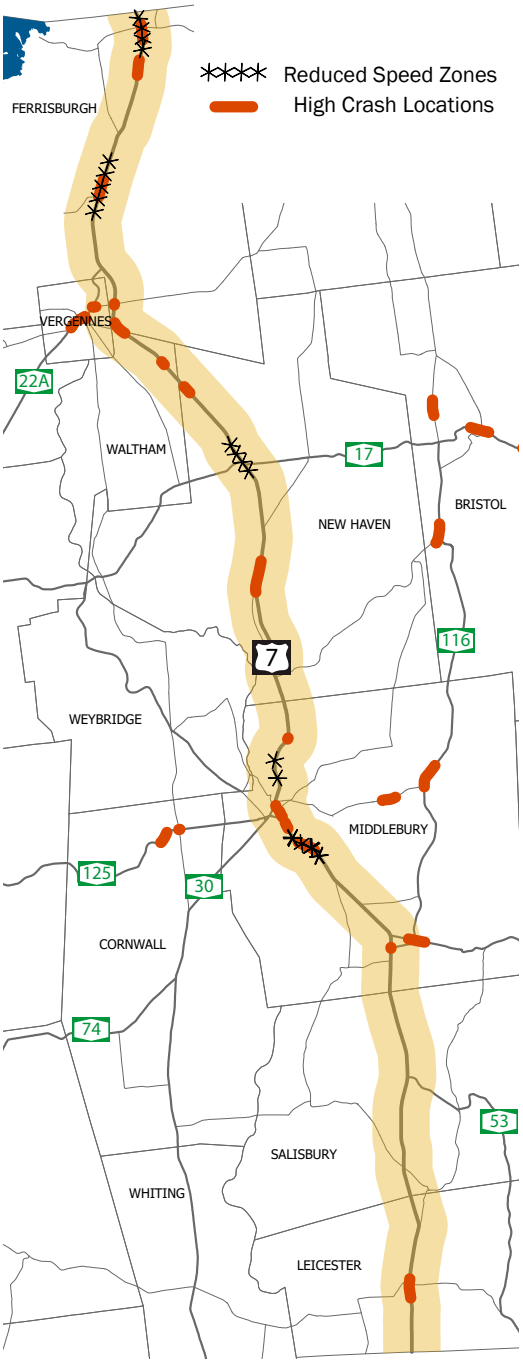
- Numerous high crash locations along the corridors, with most at intersections with higher volume side streets. Particularly in the northern end, high through volumes make it difficult for side road traffic to enter the corridor. The high volumes in this area may warrant the installation of roundabouts. ACRPC supports installation of roundabouts, not signals, to preserve the carrying capacity of the Route 7 corridor.
- High crash locations, such as at US Route 7/River Road in New Haven, warrant investigation through a road safety audit or scoping study.
- Exchange Street roundabout is advancing through VTrans Capital Program.
- Bicyclist traffic should utilize parallel north-south routes on local roads that are safer, more scenic, and nearly as direct (Greenbush Road in Ferrisburgh is a great example of this).

Figure 1 shows that traffic has increased overall since the 1970s, but has leveled off in the most recent decade. Several locations show a very recent uptick in volume, but not enough yet to indicate a long-term trend.

Table 4: Primary Corridors in the Addison County Region with High Crash Locations

Route Name	Max. Volume and Location	High Crash Locations	Features
US 7	17,700 Middlebury	7	Primary arterial travel corridor through the Region, which also passes through a number of villages serving local traffic
VT 22A	11,400 Vergennes	7	High level of concern in Vergennes with increasing truck volumes and impacts
VT 116	5,800 Bristol	4	Provides an alternate to US Route 7; passes through downtown Bristol
VT 125	4,700 Middlebury	2	East-west route over the Middlebury Gap Scenic Highway to Middlebury
VT 74	2,000 Cornwall	1	Major collector route
VT 30	6,350 Cornwall	4	Rural collector route parallel to US Route 7 and VT Route 22A
VT 53	2,100 Leicester and Salisbury	2	Town Highway major collector; eligible for federal aid; provides access to Lake Dunmore
Monkton Ridge/ Bristol Road/Silver Street	4,000 Monkton (South of Hinesburg townline)	4	AKA Bristol Rd + Silver St: Growing commuter traffic, avoiding US 7 and VT 116 corridors
New Haven Road	3,400 Vergennes	1	Minor arterial connecting Vergennes to US Route 7
Panton Road	4,600 Vergennes	1	Major Collector
River Road	1,900 Lincoln	2	Major Collector and route over Lincoln Gap

Figure 1: Route 7 High Crash Locations



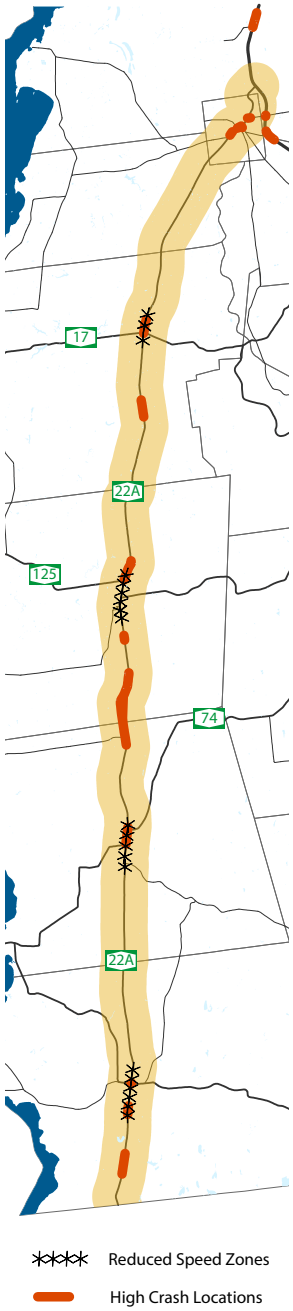
VT ROUTE 22A

The Route 22A corridor is an important link connecting the Route 4 corridor in New York with Chittenden County. Compared to other major routes in the Region, it has higher rates of traffic growth. Concerns and observations include the following:

- A study of potential truck bypasses of downtown Vergennes has been revisited through a Planning and Environment Linkages (PEL) Study. The study conclusion recommended three alternatives to advance to the federal NEPA process for selection and implementation.
- Outside of Vergennes, crashes primarily occur at intersections, involving conflicts between through traffic and turning or crossing vehicles. There are several intersections with poor sight lines and difficult turns in Addison, Bridport, Shoreham, and Orwell; some are high crash locations. The rural stretches of the corridor need to provide passing lanes, to alleviate driver frustration and reduce risky maneuvers.
- Narrow shoulders along most of the corridor are not adequate for bicycle use. Further, the high speeds and high proportion of tractor trailer traffic make it a very low priority for bicycling, which should be routed onto parallel local roads when possible.
- VTrans has programmed pavement reclamation, shoulder reconstruction, and widening between Orwell and Addison.
- ACRPC should discuss qualifications and benefits of reclassification of Route 22A as a Principal Arterial and pursue reclassification if warranted.

Traffic growth along all segments in the corridor has been steady over the past four decades, compared to other corridors.

Figure 2: Route 22A High Crash Locations

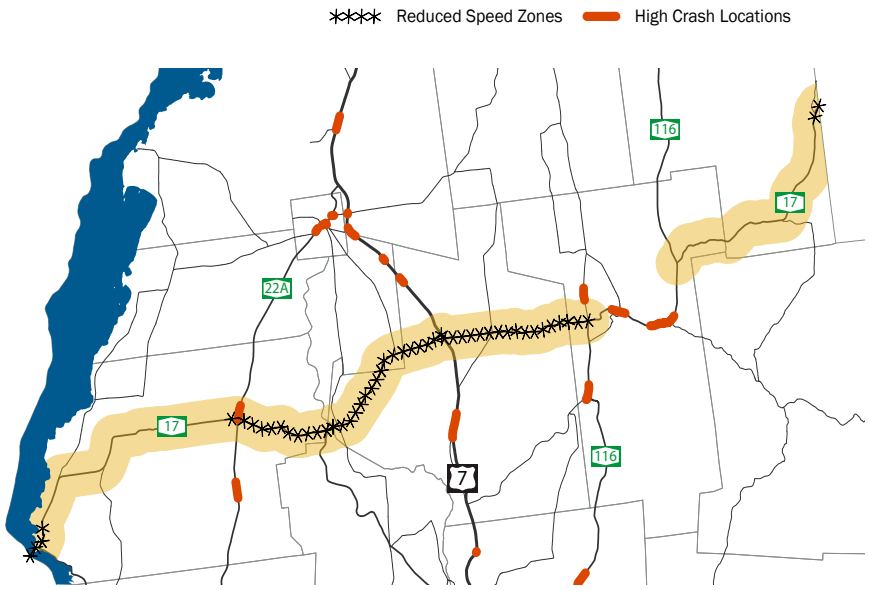


VT ROUTE 17

This corridor has relatively low volumes, limited traffic congestion, and very few high-crash locations. Its character is narrow and not well-suited for high volumes, and many stretches, especially between Addison and Bristol, have reduced posted speeds for this reason. Key issues to consider include the following:

- Difficulty at VT Route 22A intersection for crossing traffic due to high volumes and speeds; yet volumes are not sufficient to warrant a traffic signal or roundabout.
- The City of Vergennes has suggested the segment between VT Route 22A and US Route 7 as a possible northbound truck route around Vergennes. The option has been considered as part of the PEL Study and recommended as an option to advance to a NEPA study.
- Intersections (i.e. with Hallock Road/Quaker Village Road) have poor sight lines.
- East of Bristol, narrow shoulders and high bicycle popularity strain the corridor suggesting the need to widen the corridor to allow for safe biking.

Figure 3: VT Route 17 High Crash Locations

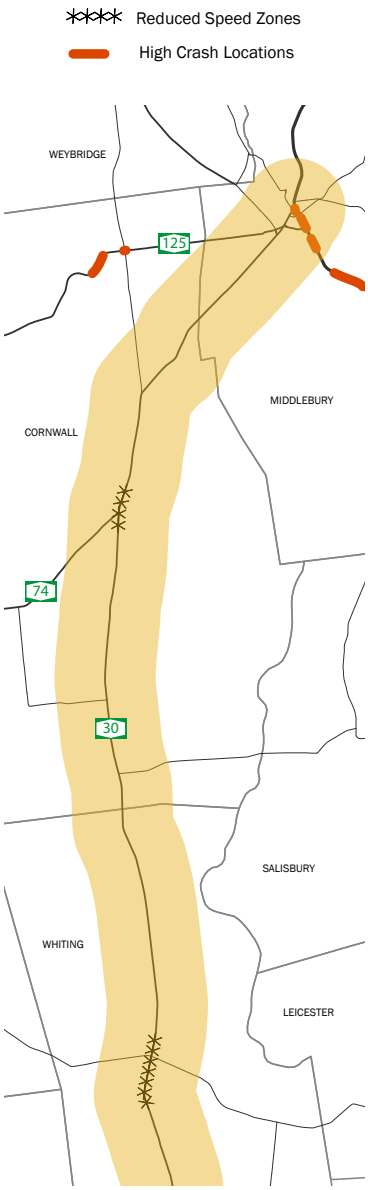


VT ROUTE 30

This corridor is very rural, also with low traffic volumes and low traffic growth. No high-crash locations exist and public comments were limited to the narrow shoulders, making bicycling challenging.

- VT Route 30 is a popular bike route. Like much of the region's roads, narrow shoulders and high bicycle popularity impact the route and, therefore, there is a need to find a way to expand the corridor to allow for safe biking.

Figure 4: VT Route 30 High Crash Locations



VT ROUTE 116

This corridor experiences comparatively higher traffic volumes and has seen more recent increases in traffic, suggesting it may be functioning as an alternative route to US 7 for commuters aiming to avoid congestion. Several high-crash locations exist along the corridor, particularly at intersections with side streets that either carry significant traffic or have limited visibility. This Plan encourages prioritization for further evaluation and potential improvements, such as the installation of roundabouts or realignment, to enhance safety and sightlines.

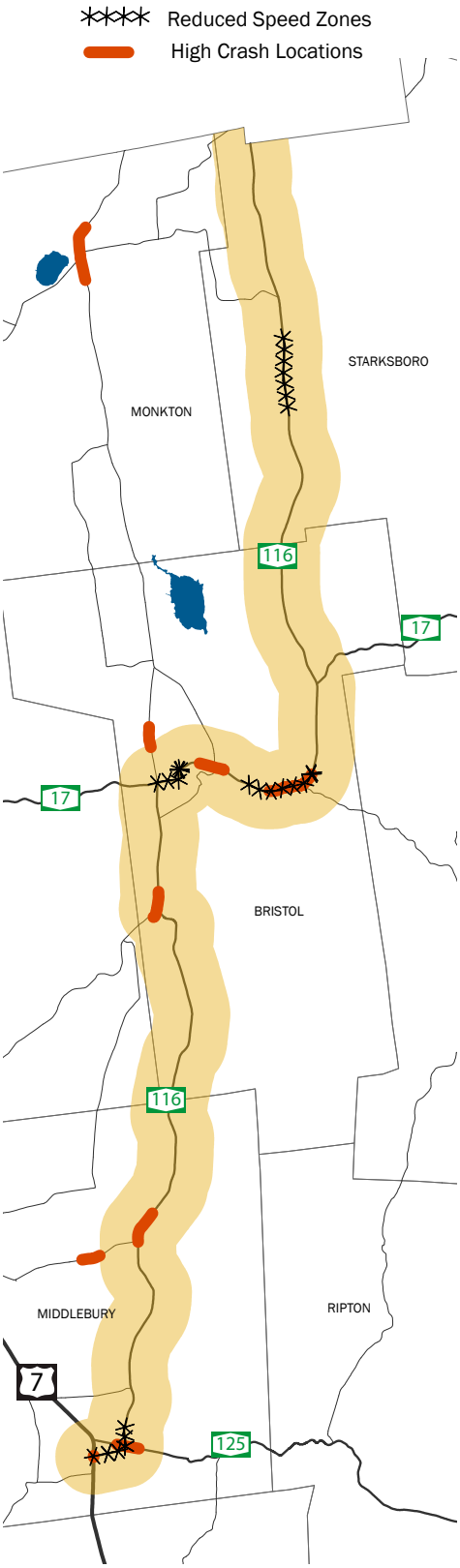
Issues along this corridor include:

- East of Bristol, narrow shoulders and high bicycle popularity strain the corridor; corridor expansion is needed to allow for safe biking.
- Establish a gateway into the Village at the Daniels Four Corners intersection with Bristol.
- Examine solutions to address high accident locations in Middlebury, Starksboro, and Bristol to reduce the number of vehicle conflicts.



Bristol Flats corridor on Route 116

Figure 5: VT Route 116 High Crash Locations



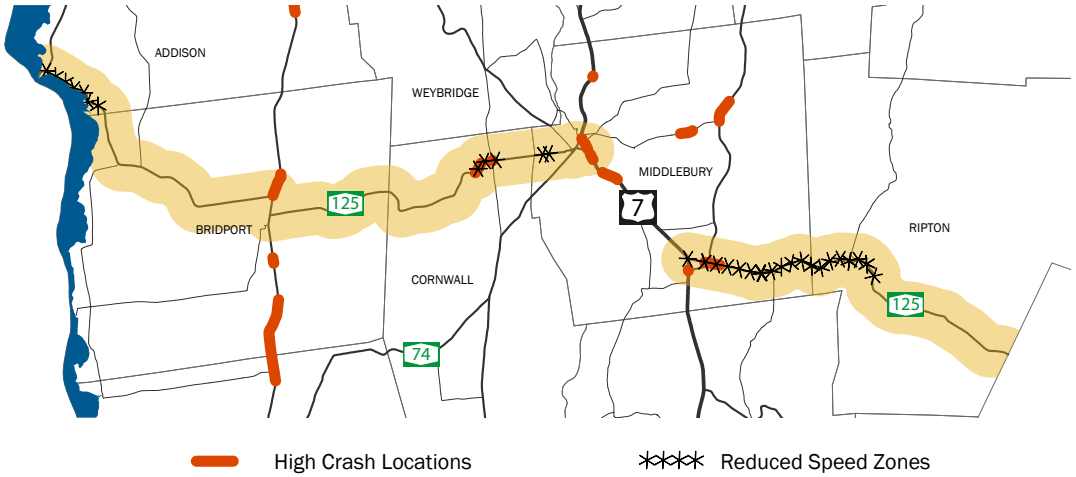
VT ROUTE 125

Outside of Middlebury, the traffic volumes on VT Route 125 are generally low. The character of the corridor varies tremendously, from high elevations of the Middlebury Gap Scenic Highway, through the Ripton Gorge, and then traversing a rolling rural landscape to Lake Champlain. Several known high crash locations sit on this route, primarily at intersections. The Ripton Gorge section is narrow and winding. It is also a popular bike route for advanced cyclists seeking a challenge. Issues include the following:

- West of Middlebury, narrow shoulders for walking and biking and poor site lines create conflicts. Demand is significantly higher for bicycling in this area, therefore it should be considered a high priority bike road. In 2024, VTrans completed a study on safety improvements for this portion of the corridor. ACRPC recognizes and endorses the importance of such safety improvements.
- Resiliency through Ripton Gorge - Old Town Road, a Class 4 Road from Middlebury to Ripton, offers an alternate road corridor in the event that Route 125 suffers catastrophic damage from flooding.
- High accident locations should be analyzed to determine the most practical mitigation methods.

Traffic growth on the corridor has been nearly flat for decades, according to VTrans data.

Figure 6: VT Route 125 High Crash Locations



ROUTE 53

Route 53 is a small, rural highway that parallels Route 7, traveling on the eastern side of Lake Dunmore. Issues include:

- Becoming a cutoff route between Route 73 East and US 7 North.
- The close proximity of Route 53 presents the potential for stormwater runoff impacts on Lake Dunmore.
- Increased traffic creates many conflicts in summer months especially with vehicles, walkers, and bicycles.

Figure 7: VT Route 53 High Crash Locations



LOCAL CORRIDORS OF CONCERN

There are a number of local road corridors that play an important role in the Region's roadway network as alternate routes or connectors between communities. Their regional use can burden local budgets. The following is a partial list of local corridors which have Regional use and demands:

- Monkton Road - commuter traffic impacts and speeds
- Monkton Ridge/Silver Street - increasing use by commuters
- Leicester-Whiting Road - drainage and flooding
- Many local parallel roads offer better and safer biking experiences but are not considered by VTrans when evaluating the biking network.

ACRPC and VTrans should work together to recognize the benefits and burdens of the entire roadway network. VTrans should create a system to allocate funds to local networks where they demonstrate a higher cost/benefit than improvements to the State system.

Municipal Roads General Permit (MRGP)

Vermont established a general permit for the discharge of pollutants to waters of the state from municipal roadways. Municipalities are required to implement a customized, multi-year plan to stabilize their road drainage systems. Roadways must be brought up to basic maintenance standards and corrective measures must be implemented to reduce erosion. Actions taken to implement the MRGP should also increase the resilience of the local road network. The state has provided funding to implement MRGP provisions through the Grants in Aid program.

Modes of Transportation

PASSENGER VEHICLES

Like much of Vermont, Addison County is rural, with small communities connected primarily by roadways. As a result, the dominant mode of transportation is the personal vehicle. Residents rely on cars and trucks to commute to work, access goods and services, and conduct business.

According to the 2023 American Community Survey, 70% of Addison County's workforce commuted alone by car. While 7.4% carpooled, the average number of workers per vehicle was just 1.8. Most residents (70%) work within the county, resulting in a relatively short average commute time of 24 minutes.

While single-occupancy vehicles offer convenience, they also contribute to fuel costs, energy consumption, and environmental impacts. This Plan aims to reduce reliance on solo driving by expanding access to alternative transportation options and promoting cleaner fuel sources. It outlines strategies to maintain access to jobs, goods, and services while supporting more sustainable and affordable travel choices.

TRUCK TRAFFIC AND FREIGHT

According to the 2021 Vermont Freight Plan, trucks carry approximately 84% of all goods moving in, out, within, and through the state by weight. Trade with New York accounts for 60% of total trade weight (15 million tons) and over 50% by value ($14.7 billion). Freight demand in Vermont is projected to grow 68% between 2018 and 2045, with direct impacts on the Addison Region.



Right: ACRPC staff working with municipal road crew members to evaluate road consitions for the MRGP program described above.

Two key segments of the Vermont Truck Network—US Route 7 and VT Route 22A—run through the Region, serving as major north-south freight corridors along Vermont's western edge.

This growth in truck traffic places increasing pressure on local roadways and raises safety and quality-of-life concerns. Heavy vehicles contribute to road wear, noise, dust, and vibration, particularly in village centers and downtowns. Residents also expressed concern about the types of materials being transported.

Recently there were two significant natural gas truck fires at nearly identical locations in Ferrisburgh. Both trucks were part of "virtual pipeline" of container trucks moving compressed natural gas daily from Milton, Vermont to a paper mill in Ticonderoga, New York (using Routes 7, 22A, and 17), and to businesses in Rutland, including the Rutland Regional Medical Center (using Route 7 through Middlebury).

An ACRPC inventory from 2010 found that 8% of trucked materials through Addison County are classified as hazardous, including fuels, chemicals, and blasting agents. The majority (60%) are heating and vehicle fuels, typically delivered by bulk rail and semi-truck to local distribution centers. VT 22A carries a higher share of hazardous materials (11.8%) compared to other routes (6.8%).There are frequent shipments of compressed natural gas (CNG) through Addison County, and explosions of CNG freight trucks in Ferrisburgh occurred in June of 2023 and July of 2024.



Trucking through the Addison Region is a constant and places growing pressure on the local roadways and transportation corridors. East Shoreham above.

Tracking hazardous materials transported by rail is challenging due to confidentiality policies. However, ACRPC has observed that Vermont Railway regularly transports gasoline and petroleum products, with daily northbound trains through Addison County carrying approximately 15 loaded gasoline tank cars to depots in Middlebury and Burlington.

The most significant hazardous materials incident in the Region occurred in 2007, when a 20-car train derailed in downtown Middlebury, including 14 tank cars of gasoline. Several cars caught fire, and fuel leaked into Otter Creek, prompting the evacuation of schools, homes, and businesses, and activation of the State Hazardous Materials Response Team.

While major incidents are rare, minor hazardous materials releases occur regularly, requiring notification to the state HazMat hotline. These shipments pose ongoing risks to communities and challenges for local emergency responders.

To address these risks, Addison County's Local Emergency Planning Committee adopted a Hazardous Materials Emergency Plan (HMEP) in 2021. The plan outlines response procedures, hazard analysis, emergency resources, and training requirements to support municipalities and first responders in the event of a hazardous materials release.

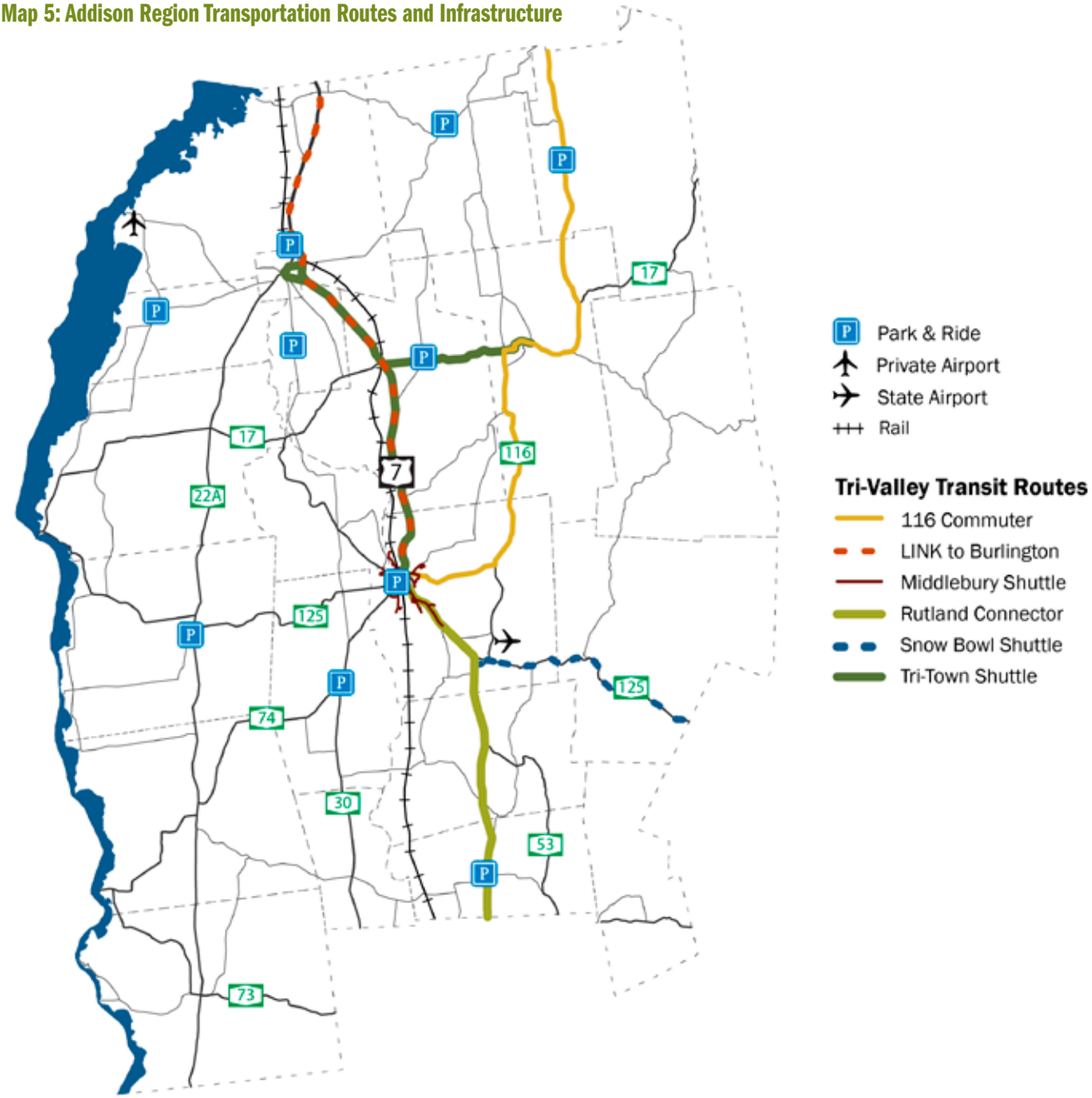
AGRICULTURAL IMPACTS

This Plan supports the continued growth of agriculture, a key component of the Region's economy. Farms rely heavily on the regional road network to access fields, transport equipment, and bring products to market.

As agricultural operations expand, the movement of large farm equipment over longer distances has increased. This can lead to road wear, traffic congestion, and safety concerns for other drivers. While municipalities can set weight limits on local roads, Vermont law exempts agricultural vehicles under 60,000 pounds from permit requirements, limiting a town's ability to recover costs for road damage. Heavier vehicles do require permits.

Additionally, new access points to public roads—whether state or local—require permits and should be carefully evaluated. Poorly planned access can damage infrastructure and create traffic hazards.

Map 5: Addison Region Transportation Routes and Infrastructure



As farm activity continues to grow, this Plan encourages collaboration between municipalities, farmers, and state agencies to balance agricultural needs with road safety and infrastructure preservation.

Public Transit

Passenger transportation in the Addison Region is served primarily by **Tri-Valley Transit** (**TVT**), a non-profit public transit provider that offers a number of routes throughout the Region. TVT's primary goal is to "provide services that are safe, reliable, accessible, and affordable for everyone." Utilizing western Vermont's primary transportation corridor, US Route 7, TVT links the three primary employment centers in the Region – Vergennes, Bristol, and Middlebury. TVT also links many communities in the Region to Rutland and Burlington, which is a particularly valuable resource for residents who are employed in those communities.

Table 5: Transit-Dependent Population by Town[2]

	Residents with Physical Challenges Age 18+	Auto-Less Households	Residents Below the Poverty Line Age 18+	Residents Age 65+	Residents Age 15-19	Total Town Population
Addison	203	13	59	375	21	1,365
Bridport	124	9	86	284	42	1,225
Bristol	719	86	356	700	207	3,782
Cornwall	126	5	14	314	49	1,207
Ferrisburgh	431	12	114	553	77	2,646
Goshen	52	2	12	55	4	172
Leicester	194	4	98	262	76	990
Lincoln	140	6	64	277	89	1,323
Middlebury	1,629	251	879	1,931	1724	9,152
Monkton	283	7	85	403	62	2,079
New Haven	289	7	47	385	104	1,683
Orwell	176	15	115	287	56	1,239
Panton	84	`10	52	110	36	646
Ripton	146	0	79	217	45	739
Salisbury	123	3	98	358	41	1,221
Shoreham	218	24	115	312	54	1,260
Starksboro	241	8	114	262	178	1,756
Vergennes	396	73	278	416	163	2,553
Waltham	61	2	31	190	16	446
Weybridge	71	2	74	201	52	814



Rural roads and narrow bridges present challenges for transportation planning.



OVERVIEW OF CURRENT ROUTES

TVT offers two distinct services, the Dial-a-Ride system, which provides older adults, persons with disabilities, and other vulnerable populations with access to medical services, shopping, and eating destinations, and the TVT Bus System, which runs to multiple locations within and outside of the Region. For up-to-date route information, visit **trivalleytransit.org**

POTENTIAL SERVICE EXTENSIONS

TVT bus routes are currently active Monday - Friday with Saturday service available on selected routes. Trips are generally offered multiple times a day, but are not available earlier than 5:30 a.m. or later than 7:00 p.m.

TVT's long-range plans have identified several potential areas for expansion which would be dependent on available funding and ridership needs. In addition to the fixed routes discussed above, this plan also supports the expansion of TVT's Demand Response services to meet the needs of the Region's transit dependent population. This includes harnessing new technology to facilitate ridesharing.

Communities that have a specific need, such as congestion, high levels of commuters, or an underserved population, should reach out to TVT to determine what criteria they would need to demonstrate to allow TVT to access State and Federal funding to support new services.

In May of 2024, TVT initiated a weekday microtransit program called EZ Trip to serve the downtown Middlebury area. This is a door-to-door on-demand ride service as an alternative to fixed route bus services. Ride coordination is handled by a central dispatch that seeks to optimize ride sharing to increase efficiency. See details under the Ride-Hailing section on page 20.

TVT RIDERSHIP

In fiscal year 2019, the last complete service year before COVID, TVT provided 7% more rides than the year before. 2020 was trending to surpass those numbers, but then the pandemic forced lockdowns, and TVT had to curtail its services to the most essential elements. Ridership dropped 60% and telecommuting became more common. Since then, TVT has "built back better" to match services with shifting demands, and ridership has grown significantly each year.

Table 6: TVT Ridership

Year	Dial-A-Ride	Bus	Combined Total
2019	59,783	114,418	174,201
2020	44,571	93,588	138,159
2021	19,864	49,333	69,197
2022	30,260	66,571	96,831
2023	29,919	85,964	115,883



Tri-Valley Transit bus service for all ages

TVT'S TRANSIT-DEPENDENT POPULATION

The Region has a significant population of people characterized as "transit dependent" who may not be able to afford a car, are unable to drive, reside in a household without a car, are elderly, or for other reasons are more likely to rely on the public transportation system. **Table 5** summarizes this population by town. Readers should note that the categories often overlap, resulting

in a person being counted more than once. However, the numbers also demonstrate that a significant portion of the Region's population relies on public transportation. These numbers are projected to increase as the Region's population ages.

TVT's programs offer low or no cost opportunities for a significant portion of the Addison Region's population to work, shop, and participate in the community.

They constitute an essential part of the Region's transportation infrastructure to ensure all people can participate in community activities and services.

EMERGING INFRASTRUCTURE NEEDS AND OPPORTUNITIES

Strategic infrastructure investments enable Tri-Valley Transit (TVT) to operate efficiently and effectively, while advancing the state of public transportation in the Region alongside other modes of travel. Recent projects include the relocation of TVT's downtown Middlebury transit hub—displaced by the reconstruction of the railroad bridge—to a new permanent location on Academy Street. TVT also installed new passenger shelters in downtown Bristol and enhanced the shelter in Vergennes with a public art installation.

Looking ahead, TVT is committed to supporting Vermont's statewide carbon reduction goals by transitioning its aging gas-powered fleet to electric buses. The statewide goal is 10% electrification by 2025 and 100% by 2050. To meet these targets, TVT requires key infrastructure upgrades at its Addison County Community Transportation Center (ACCTC), including:



The Starksboro EV Charging Station sits at the Park and Ride, which is also a TVT bus stop and is adjacent to the Town Pavilion, Town Office, and Library.

- Covered bus storage to protect electric vehicles and extend their lifespan
- Dedicated Phase III power to support fast-charging stations
- Enhanced fire suppression technology to meet new safety standards

TVT is seeking funding to construct a new bus barn that will support these electrification efforts. In addition to enabling the transition to electric vehicles, the covered storage will reduce fleet wear and tear, extend vehicle life by over 15 months, lower labor costs, and cut greenhouse gas emissions by eliminating winter pre-trip idling. The project also includes an expanded rooftop solar array, which will make the facility net-zero, and an upgraded rain and snow collection system to wash more buses without relying on treated municipal water.

These operational efficiencies will allow TVT to reinvest cost savings into service expansion—adding up to **2,288 additional service hours annually**. More service on the road not only benefits individuals who cannot drive, but also enhances convenience for all riders, encouraging a shift from single-occupant vehicle trips to public transit.

RIDE-SHARING, CAR-SHARING, AND RIDE-HAILING

To encourage reduced single-occupancy vehicle trips and collective travel either by ridesharing or by use of public transit, the Region contains a system of 11 formal and informal Park and Rides. Of the 11, one is maintained by the State of Vermont, eight are maintained by municipalities, and one is an informal lot. These facilities are rarely at capacity, indicating that the current number of spaces available at the existing park and ride facilities in the Addison Region is sufficient.

The following Park and Ride facilities are served by TVT Addison Region and can also be used for ride-sharing:

- **Ferrisburgh:** (Vergennes border): Junction of Route 22A and Route 7
- **Hinesburg:** Behind Town Hall, Route 116
- **Leicester:** At Town Office on Leicester-Whiting Rd
- **New Haven:** Behind Town Hall, North Street
- **Salisbury:** Junction of Maple Street and West Salisbury Road, just off Route 7
- **Starksboro:** Behind Town Hall, Rte 116


Sidewalk planning supports walking and biking and a walkable community.

Additionally, ride-share only Park and Rides can be found in the following towns:

- **Bridport**: Across street from Town Office
- **Cornwall**: Town Office parking lot, Route 30
- **Monkton:** Monkton Central School
- **Panton:** Across street from Town Office
- **Waltham:** Co-located with Town Office

In Middlebury, overnight parking spaces are available behind Ilsley Library on the lower level as well as in the Frog Hollow municipal lot.

Car-sharing services, which have similarities to traditional car rental models, have expanded over the past decade, but have not penetrated the Addison County market. Occasional contractors for Uber and Lyft are available in and around Middlebury and in areas near Burlington. As technology advances, these services may become more effective in the lower-density areas of Addison County. This may present an opportunity to provide transportation to populations that need it such as elderly individuals who are no longer able to drive themselves, people with disabilities, and people with low incomes.

TVT's microtransit pilot, **EZTrip Middlebury**, started in 2024 and replaced MSB College, Hospital, Marble Works, and Shaw's fixed route neighborhood loops with a much larger Middlebury Trip Zone. EZ Trip Middlebury offers free rides by reservation to bring riders door to door. Reservations may be self-booked by app or internet portal. Riders may also call TVT for assistance with a booking. The goals of the EZ Trip microtransit project are to increase transit ridership of current riders, create new access to transit for more Middlebury residents, decrease the cost per transit trip, and reduce greenhouse gas emissions through use of electric vehicles.

The VTrans "Go! Vermont" program helps commuters connect statewide to encourage ride-sharing. The traditional ride-sharing model, when a driver makes a seat in his or her vehicle available for passengers who may or may not pay for the trip, is changing due to growing technological connectivity.

TRAVEL DEMAND MANAGEMENT (TDM)

A vast majority of daily vehicle trips involve residents driving to and from work. Major employers in the Addison Region are well positioned to play an active role in reducing vehicle trips by encouraging carpooling, bicycling, and allowing telecommuting. The Region's three largest employers are **Middlebury College**, **The University of Vermont–Porter Medical Center**, and **Simmonds Precision**. Local schools are also a significant employer. Employers can employ some or all of the following Transportation Demand Management (TDM) practices to reduce vehicle trips and increase vehicle occupancy:

- **Financial Incentives** - Employers can offer financial incentives to employees that reduce their single-occupancy vehicle (SOV) trips through carpooling or, like Middlebury College, they can provide free access to local public transit.
- **Facilities** - They can provide facilities for employees, such as secure locations for bicycles and access to showers and lockers, or carpoolers can be given preferred parking.
- **Services** - Employers can offer access to van-pooling, shuttles or car-sharing. In addition to their on-campus Zipcars, Middlebury College provides shuttle access for students and employees to the village.
- **Flexible Scheduling** - As high-speed internet access expands across the Region, remote employment is more easily accessible. With the right equipment and a connection to the internet, employees can access their office workstations remotely, make and receive calls via the office phone system, and otherwise work productively from home. For those occupations that are not well-suited to telecommuting, employers can allow for flex

time or a compressed work week. By enabling employees to be able to work more hours over fewer days, the number of vehicle trips to and from work can be reduced.

A 2015 project led by TVT concluded that TDM programs for employers require the following conditions:

- An ongoing commitment from leadership.
- An investment on the part of the business to create a fringe benefit program that could:
  - Offer commuter benefits to employees;
  - Organize vanpool or carpooling options for its employees;
  - Provide facilities for bike/walking commuters, such as showers and bike rack; and/or
  - Establish a telecommuting policy.
- The existence of employer expenses that could be mitigated with TDM techniques (e.g. parking constraints, retention/recruitment issues).

Few of these conditions currently exist in the Addison Region.

Pedestrian and Bicycle Facilities

Vermont's Complete Streets law (Act 34) requires that all roadway users—drivers, pedestrians, cyclists, and transit riders—be considered in the planning, design, construction, and maintenance of transportation infrastructure. This Plan supports the implementation of Complete Streets principles at a rural scale appropriate to the Addison Region.

Shared roadways in rural areas, sometimes including widened shoulders, may serve pedestrians and cyclists, with traffic calming measures used to enhance safety. In village centers and downtowns, a broader range of accommodations—such as sidewalks, bike lanes, shared lanes, and separated paths—are appropriate. Transit stops should also be designed to support safe and convenient pedestrian access.

WALKING AND BICYCLING INFRASTRUCTURE

Active transportation plays a key role in the Region's goals for sustainability, reduced emissions, and public health. While Vermont's Complete Streets policy supports these modes, additional programs like Safe Routes to School help promote walking and biking among children, especially in communities near schools and downtowns.

Bicycle and pedestrian infrastructure is concentrated in Middlebury, Bristol, and Vergennes, where distances to jobs, schools, and services are within typical walking (0.5–1 mile) or biking (2–5 miles) ranges. These towns have actively planned for future improvements, and their relatively flat topography makes them well-suited for increased cycling, which could help reduce congestion and parking demand.

RECREATIONAL CYCLING AND REGIONAL CONNECTIVITY

Addison County is a premier destination for recreational cycling, thanks to its scenic landscapes and extensive network of bike routes. Key routes include:

- Lake Champlain Bikeway – a 1,400-mile international loop through VT, NY, and QC
- Western New England Greenway – connecting Montreal to New York City
- Triangle Bike Loop – linking Middlebury, Bristol, and Vergennes via low-traffic local roads
- Moosalamoo National Recreation Area – offering off-road cycling opportunities



Walk-Bike event 2023

These routes, along with numerous local and regional connections, support both recreation and tourism while enhancing the Region's active transportation network.

ELECTRIC BIKES

Electric bikes (E-bikes) have become more popular. Sales in the United States leaped by 269% between 2019 and 2022. A study from the Physical Activity Council found that in 2023, 19.4% of Americans who rode a bike at least once reported using an e-bike, up from 7.8% in 2021. The use of E-bikes was incentivized by the Vermont Legislature. In 2022, the State launched the nation's first statewide E-Bike incentive program. The transportation bill reauthorized the program with Incentives available on a first-come, first-served basis.

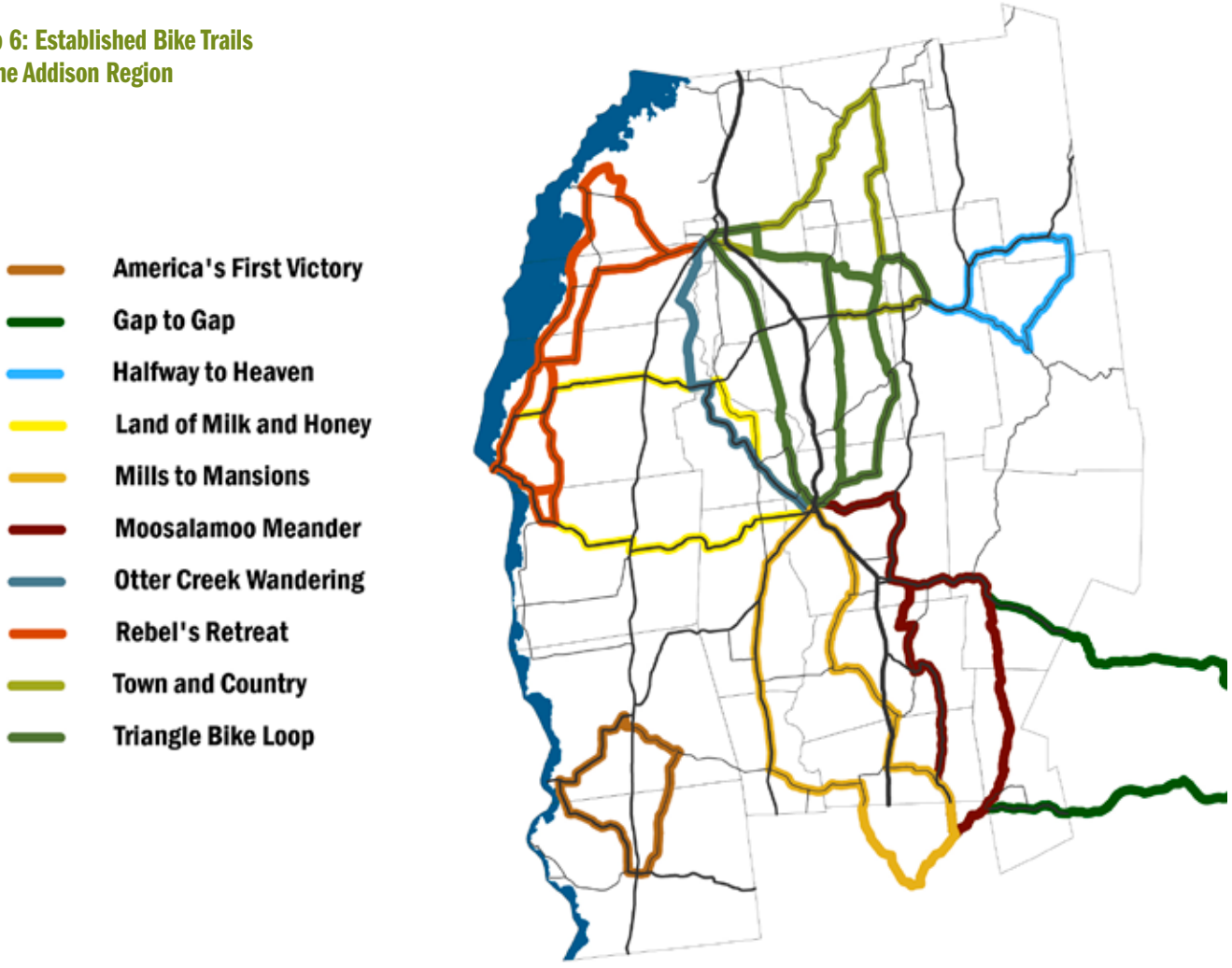
Some elements of public bike infrastructure are insufficient for E-bikes. E-bikes are heavier and more expensive than traditional bikes and require charging. Adapting public infrastructure to E-bikes will require increasing access to secure parking that includes shelter and charging opportunities. In many cases, E-bikes exceed the weight limit of bus bike racks. Loading a bike that is heavier than the rack weight limit may result in damage to the E-Bike, or the bus, or cause rack failure.

BIKE AND PEDESTRIAN SAFETY

The primary concern for cyclists as they travel through the Region is safety. While statewide bicycle crash trends have been moving slightly downward, the average yearly number of reported crashes in Vermont is 42. A majority of all bicycle crashes take place during the day, on a weekday at intersections.

It is unlikely that bike/pedestrian (bike/ped) improvements will occur in every area of the Region, therefore it is important to focus on where bike/ped infrastructure

Map 6: Established Bike Trails of the Addison Region



is used the most. A significant amount of foot travel occurs in areas where population density is highest – villages and downtowns. In these areas communities should:

- Develop bike/ped plans (stand alone or as part of their municipal plan) that plan for new pedestrian infrastructure (where appropriate) and provide connections between important areas of the community, whether for recreation or commerce, as well as connections between other communities.
- Identify local priority bike/ped routes.
- Utilize innovative and inexpensive techniques such as "tactical urbanism" to test possible bike/ped improvements.
- Maintain existing infrastructure and address safety issues quickly.
- Focus improvements on key intersections where pedestrian and bicycle movements conflict with vehicular traffic.

For cyclists, connections between population centers are also valuable. Many riders choose to commute via bike to their jobs, often traveling from more rural areas to employment centers such as Middlebury or Vergennes. This makes the stretches of municipal and state roads between the Region's population centers an important focus of long-range transportation planning.

The Vermont Agency of Transportation (VTrans) developed their Bicycle and Pedestrian Strategic Plan (BPSP) in 2021. The goal of the BPSP was to identify strategies that will broaden the inclusion of bicycling and walking throughout VTrans projects and activities. ACRPC recognizes that many of the best cycling opportunities occur on local roads, and has worked with and will continue to work with municipalities in the region to cost-effectively promote interconnected routes that provide the greatest benefit at the least cost. For example, ACRPC has assisted in development and promotion of the Triangle Bike Loop which connects Middlebury, Bristol, and Vergennes through New Haven and includes parts of Ferrisburgh, Weybridge, and Waltham.

When safe environments for exercise exist, communities have been shown to experience a 35% increase in physical activity.

Residents are 65% more likely to walk in a neighborhood with sidewalks.

REGIONAL HEALTH BENEFITS OF WALKING AND BIKING

It is important not to understate the added health benefits that safer walking and biking opportunities can bring to the Region. The Vermont Department of Health estimates that more than one in three adults in Addison County do not get the recommended amount of physical activity and more than half (63%) are above a healthy weight, making them susceptible to chronic disease.

Using a context sensitive Complete Streets approach to developing the Region's transportation system will support safe walking and biking. When safe environments for exercise exist, communities have been shown to experience a 35% increase in physical activity. Residents are 65% more likely to walk in a neighborhood with sidewalks.

WALK-BIKE COUNCIL OF ADDISON COUNTY (WBCAC)

Following two fatal bicycle crashes in the Region, ACRPC partnered with nonprofit bike/ped advocacy group Local Motion and concerned citizens to form the Walk-Bike Council of Addison County (WBCAC). The WBCAC includes residents and experts in such fields as law and enforcement, transportation planning, marketing, recreation, health, and community planning.

The Council's primary goals are to:

- **Improve on-the-ground conditions for walking and biking** through technical review of regional transportation projects, walk-bike planning guidance, and other technical assistance.
- **Increase public officials' knowledge** of and engagement in walk-bike issues by building relation-

ships with law enforcement and local transportation officials, providing training and outreach to key stakeholders, and reviewing local land use regulations.

- **Build community acceptance** of and respect for everyday walking and biking through grassroots outreach and the marketing of a "walk-bike identity" for Addison County.
- **Increase rates of walking and biking** across all ages, abilities, and communities by supporting the Safe Routes to School Program throughout the Region, identifying opportunities for promotions that incentivize and highlight biking and walking, and advising businesses and municipalities about bike infrastructure.

As is the case in many parts of Vermont, not all areas of local transportation are well-suited for walking or biking. In order to ensure safe travel for pedestrians and cyclists, the road network must be designed, strategically adapted, and maintained to accommodate more than vehicular traffic.

ELECTRIC VEHICLES

The range of electric vehicles (EV) in the 2024 model year varied from 114 miles to over 500 miles on a full charge. Most EV owners charge at home, however given the distance between our communities and centers of employment, it is essential that the ability to recharge EVs is readily available to the EV owner, if more EVs are to be encouraged. A Level 1 charging station (120 volts) provides 2-5 miles per hour of charging while a Level 2 charger (240 volts) provides 10-20 miles, and a DC Fast Charger (up to 1000 Volts DC) provides 180-240 miles per hour. While Level 3 chargers are the most appealing because of their short charging time, they are significantly more expensive to install and require the availability of 3-phase power.

Since 2014, the State of Vermont has invested over $14.5M in Community EV charging stations in the state. Park and Rides in Panton, Starksboro, and New Haven host Level 2 chargers, and the Mill Street municipal parking lot in Middlebury has a fast charger. Providing regular fast charging opportunities along the Region's major travel corridors (US Route 7 and Route 22A) is essential to encouraging the use of EVs in the Region. The federal Infrastructure Investment and Jobs Act of 2021 provided dedicated funding to states for deployment of EV charging infrastructure. New stations constructed with these funds must be within one mile of an intersection with a designated Alternative Fuel EV Corridor intersection, and within 50 miles of the next charging station. US Route 7 through Addison County is the only Alternative Fuel EV Corridor in the Region.



Goals, Objectives, and Actions

GOAL 1: The Region's transportation **promotes the economy** through the efficient movement of people, goods, and services to support local and regional economic vitality.

Objective 1:

Support the Middlebury Airport's economic role through infrastructure investment and thoughtful implementation of improvements recommended in the 2021 VT Airport System Plan.

a. Work with VTrans and ACEDC to recruit new business to the Middlebury Airport and support infrastructure improvements including hangars and parking.

Objective 2:

Maintain the Region's access to safe and efficient water transportation for commerce and recreation and promote the recreational travel aspects of the Region's rivers and Lake Champlain.

a. Encourage continued use of the Ticonderoga Ferry and other ferry services.

Objective 3:

Improve rail infrastructure and encourage passenger and freight rail service, where practical, by working with VTrans to prioritize investments.

a. Implement signal system and track improvements called for in the 2021 VT State Rail Plan.
b. Improve multimodal connections between rail transit stops and commercial centers.

GOAL 2: Transportation infrastructure **safely supports all modes of travel** including vehicles, freight, public transit, bicycles, and pedestrians while mitigating heavy truck impacts on communities.

Objective 1:

Encourage and support the planning and implementation of safety, resilience, and efficiency improvements to the Region's roadways.

a. Implement locally identified roadway corridor improvements as identified in Appendix 3A.
b. Study High Crash Locations along Route 22A and identify recommended improvements.
c. Continue to support the Vermont Western Corridor Transportation Management Plan and its recommendations for improvements.

Objective 3:

Structure, operate, and maintain the Region's roadway network to mitigate the impacts of traffic and freight on the Region's communities, especially in villages and downtowns.

a. Encourage farms and government agencies to use best management practices to minimize road damage.

Objective 4:

Support sound, equitable, and well-planned alternative routes for freight transport that will reduce negative impacts on villages and downtowns.

a. Explore and create truck routes that address concerns of Vergennes and neighboring communities as identified in the Vergennes PELS Study.

Objective 5:

Support the Addison County Regional Emergency Management Committee and regular updates to the Hazardous Materials Emergency Plan and Local Emergency Operations Plans.

a. Encourage towns to develop hazard mitigation plans addressing hazards from transported materials.

Objective 6:

Support TVT and town and human service agencies in providing public transportation services for a greater percentage of the Region.

a. Implement public transit improvements identified in Appendix 3A.
b. Actively support public transit including TVT services and van-pool programs between Chittenden and Addison County.

GOAL 3: The Region **promotes energy efficiency and conservation** reduces greenhouse gas emissions and energy consumption by increasing walking, biking, public transit use, and electric vehicle adoption.

Objective 1:

Support alternative transportation infrastructure including public transit, ride-sharing, car-sharing, park and rides, and bicycle/pedestrian connections to reduce single-occupancy vehicle dependency and vehicle miles traveled.

a. Work with TVT and others to make emerging ride-sharing technologies available in the Region.
b. Provide technical assistance to the Walk-Bike Council to increase walking and biking region-wide.
c. Promote expansion of the park and ride system, focusing on low-cost options in or adjacent to village centers.

Objective 2:

Develop bicycle and pedestrian connections between the Region's population centers with adequate travel space along significant routes.

a. Implement bicycle and pedestrian actions as identified in Appendix 3.

Objective 3:

Encourage development of a comprehensive EV charging station network, including DC Fast Charge stations, along the Region's major transportation corridors.

a. Identify locations and develop strategies for EV charging stations along major corridors, in village centers, and at community facilities.
b. Encourage municipalities to adopt regulations providing for EV charging in commercial areas and 220-volt receptacles in residential developments.

GOAL 4: Transportation design **enhances regional land uses and sense of place** in historic villages, downtowns, and scenic landscapes while balancing mobility needs with community livability.

Objective 1:

Support land use patterns within the Addison Region that maintain the traditional pattern of densely populated villages and downtowns surrounded by open countryside.

Please see the Land Use chapter for actions related to this objective.

Objective 2:

Transportation projects should incorporate Complete Streets principles, treating bicycle and pedestrian accommodations as central to project purpose.

a. Encourage appropriately scaled roundabouts and traffic calming features as safety improvements and community gateways.

b. Incorporate Complete Streets principles at appropriate scale to location.

c. Support access management efforts, focusing on keeping major arterial roads moving freely.

GOAL 5: Transportation infrastructure exhibits resilience to natural hazards becasue it is designed, maintained, and improved to withstand flooding and severe weather events predicted under climate change scenarios.

Objective 1:

Design, maintain, or relocate transportation infrastructure to mitigate flood damage, meeting VTrans Hydraulics Manual and ANR Stream Alteration Standards at minimum.

a. Assist municipalities with MRGP compliance, adoption of hazard mitigation plans, and flood mitigation measures to maximize ERAF funding eligibility.

GOAL 6: The Region maintains sustainable investments as well as secures and allocates adequate resources for cost-effective transportation maintenance, improvements, and adaptation to emerging needs.

Objective 1:

Support municipalities in implementing capital budgeting and securing transportation funding.

a. Help municipalities implement capital budgeting, access funding for infrastructure and water quality improvements, and evaluate road reclassification opportunities.

b. Diversify transportation funding sources and address limited availability of infrastructure and maintenance materials.

c. Advocate for increased non-municipal dollars to support the regional transportation network

d. Ensure VTrans investments in bicycle and pedestrian infrastructure in the Addison Region include locally identified priority areas.



Endnotes

[1] Energy Action Network. (2025). Annual Progress Report 2025: Vermont on Energy, Affordability, and Emissions. https://eanvt.org/wp-content/uploads/2025/10/Final_EAN-APR-2025.pdf

[2] U.S. Census Bureau. (2022). Household size by vehicles available [Table B08201]. Retrieved April 1, 2024, from https://data.census.gov/

Community Infrastructure

The Addison Region's community infrastructure encompasses the physical facilities, systems, and cultural resources that enable residents to live, work, and thrive in their communities. This infrastructure includes physical infrastructure like water and wastewater systems and essential services such as healthcare, education, public safety, and communications technology. It also includes the historic sites, cultural institutions, recreational facilities, and governmental buildings that define the character and quality of life in the Region. These interconnected systems and resources support the daily needs of residents, nurture public health and safety, preserve the Region's heritage, and create opportunities for community engagement and cultural enrichment.

This chapter examines the current state of the Region's community infrastructure and identifies strategies to maintain, improve, and expand these critical resources to meet present and future needs. As the Region continues to evolve, ensuring that infrastructure investments align with patterns of growth, support economic vitality, and enhance community resilience will be essential. The goals, policies, and recommended actions in this chapter are designed to guide municipalities, service providers, and regional partners in planning for infrastructure that serves all residents equitably while preserving the distinctive character and quality of life that define the Addison Region.

Water Supply

WATER SUPPLY REGULATIONS

The Drinking Water and Groundwater Protection Division (DWGPD), reporting to the Department of Environmental Conservation (DEC) under the Agency of Natural Resources (ANR), regulates public water supply systems to ensure compliance with drinking water quality standards. Its purpose is to safeguard public health and the environment—now and for future generations—by overseeing Vermont's drinking water systems, preserving the quality and availability of the state's groundwater, and regulating wastewater disposal to prevent contamination. The Division fulfills this mission through a combination of education, outreach, technical assistance, and regulatory oversight.



Robert Frost Bridge, Ripton

The regulations for water supplies differ depending on how the system is classified, initially starting with public and non-public delineations. The Vermont Water Supply Rule, most recently updated effective January 1, 2026, further defines different types of systems.[1] In addition, it outlines all facets of water supply standards, including but not limited to permitting, water quality, facility and operational requirements, and construction and isolation standards for wells.

In 2007, Vermont began to require permits for new non-public water systems, modifications, or replacements under the "Wastewater System and Potable Water Supply Rules" to ensure that the necessary isolation distances are maintained between potable water supplies and on-site septic systems.[2] Well drillers must be licensed with the State and follow proper protocol, including submitting well completion reports and including well tags for identification ease.[3]

As the Region's public systems continue to age, ACRPC recognizes the importance of planning and improving drinking water infrastructure. Public water infrastructure, often combined with public wastewater systems, constitute the most critical infrastructure needed for Vermont and the Addison Region to meet their housing targets. Public water supplies support housing density. Without them, given the rules and isolation distances required between wells and septic systems, it is impos-

sible to achieve density beyond a few units. In order for the Addison Region to achieve its housing targets, it will need to increase the capacity and reach of its municipal water systems. The Drinking Water State Revolving Fund (DWSRF) offers affordable financing to public water systems for both planning and infrastructure projects that enhance public health protection and support compliance with the Safe Drinking Water Act.[4] The loan program is funded annually through a U.S. Environmental Protection Agency (USEPA) capitalization grant, a State match appropriated through the Capital Bill, and repayment of prior loans. The capacity of this system and other financial providers, like the Vermont Bond Bank, will need to be increased to repair aging systems and build new infrastructure. In addition, there are many small municipal water supply systems that may need technical assistance. In 2025, the Regional Planning Commissions, in partnership with the Vermont Bond Bank, kicked off a project to identify and assist small municipal water districts with topics ranging from electronic document storage to capital and succession planning.



Vergennes-Panton Water District



Middlebury Town Reservoir

PUBLIC MUNICIPAL WATER SYSTEMS

There are currently 6 public municipal water systems in the Addison Region. A Vermont municipal water system is a public water system that is owned or controlled by a municipality (including water districts and fire districts) and provides drinking water to the public through pipes or other constructed conveyances serving at least 15 connections or 25 people daily for at least 60 days a year. It includes all collection, treatment, storage, and distribution facilities used for the system.[5]

Middlebury Town Water System

The Middlebury Town Water System supply is sourced from three gravel wells located at the base of the Green Mountains.[6] The Town's water system includes approximately 54 miles of pipeline and around 2,300 service connections including residences, commercial, and industrial customers along with some additional customers in Weybridge and New Haven equaling roughly 6,000 year-round customers and 2,500 Middlebury College students.[7]

A 2017 sanitary survey conducted by the State identified that the existing Chipman Hill water storage facility was insufficient to meet the Town's average daily water demand. As a result, the State mandated that the Town increase the storage capacity of its municipal water system resulting in a newly constructed 1.3-million-gallon reservoir that will be completed in 2026 to complement the existing 1.5-million-gallon reservoir.[8]

In 2024, the water system experienced a significant uptick in maintenance activity, with 42 water main breaks and 12 curb stop or service line repairs—well above the typical annual average of 12 to 15 incidents. A major system failure occurred in January when a frozen hydrant thawed, triggering a severe water hammer that led to 33 additional main breaks over a six-week span. Despite these challenges, the system delivered approximately 421 million gallons of water for the year, a decrease from 449 million gallons in 2023, partly due to the extensive repairs that were carried out.[9]

Vergennes-Panton Water District

The Vergennes-Panton Water District was established in 1966 and currently serves the City of Vergennes, Panton, and portions of the towns of Ferrisburgh, Addi-

son, and Waltham.[10] The distribution system includes nearly 26 miles of District-owned waterlines, 28 miles of private waterlines, and 3 miles of water line owned by the Ferrisburgh Fire District.[11] The system has 2,140 connections, of which over 2,100 are residential; it services a population of approximately 5,100.[12]

Water from Lake Champlain is drawn, treated, and pumped from a facility in Panton. The water plant filters and pumps out to the public an average of 593,000 gallons per day and an average of 18,200,000 gallons per year. The district utilizes a storage tank that holds 750,000 gallons and is approximately 40 years old.[13]

In early 2025, residents of Vergennes and Panton approved bonds and/or loans totaling up to $3.52 million to replace nearly a mile of the most problematic water mains in the Vergennes-Panton Water District, located in both Vergennes and Ferrisburgh. Construction is slated to start in 2026.[14]

Tri-Town Water District

The Tri-Town Water District began operating in 1965 and serves the towns of Addison, Bridport, and Shoreham, covering the largest geographic area of any of the Region's systems.[15] The system draws water from Lake Champlain at a facility in the Town of Addison. The district has two reservoirs; one in Addison that holds roughly 625,000 gallons and another in Shoreham with a capacity of an estimated 1,000,000 gallons.[16]

The system has 1,800 residential connections and services a population of approximately 3,800. The Tri-Town and Vergennes-Panton systems are inter-connected, allowing them to have potential to serve as back-up systems for each other.[17]



Addison Tri-Town Water District

The Tri-Town Water District continues to add customers onto existing lines and make improvements to the infrastructure. However, residents on East Street in Bridport are unable to tap on at this time due to an inadequately sized water main and elevation changes, which lead to pressure and flow issues in the neighborhood. Tri-Town will continue to look for funding to assist with this improvement.

Bristol Water Department

The Bristol Water Department serves Bristol's village area.[18] There are 695 connections, the vast majority of which are residential, and serve about 2,103 residents.[19]

The system is supplied by a local spring referred to as the "New Haven Spring", an approved groundwater source, on the south bank of the New Haven River. The water is pumped to the reservoir tank off Mountain Terrace Extension. The system's current reservoir holds approximately 650,000 gallons.[20]

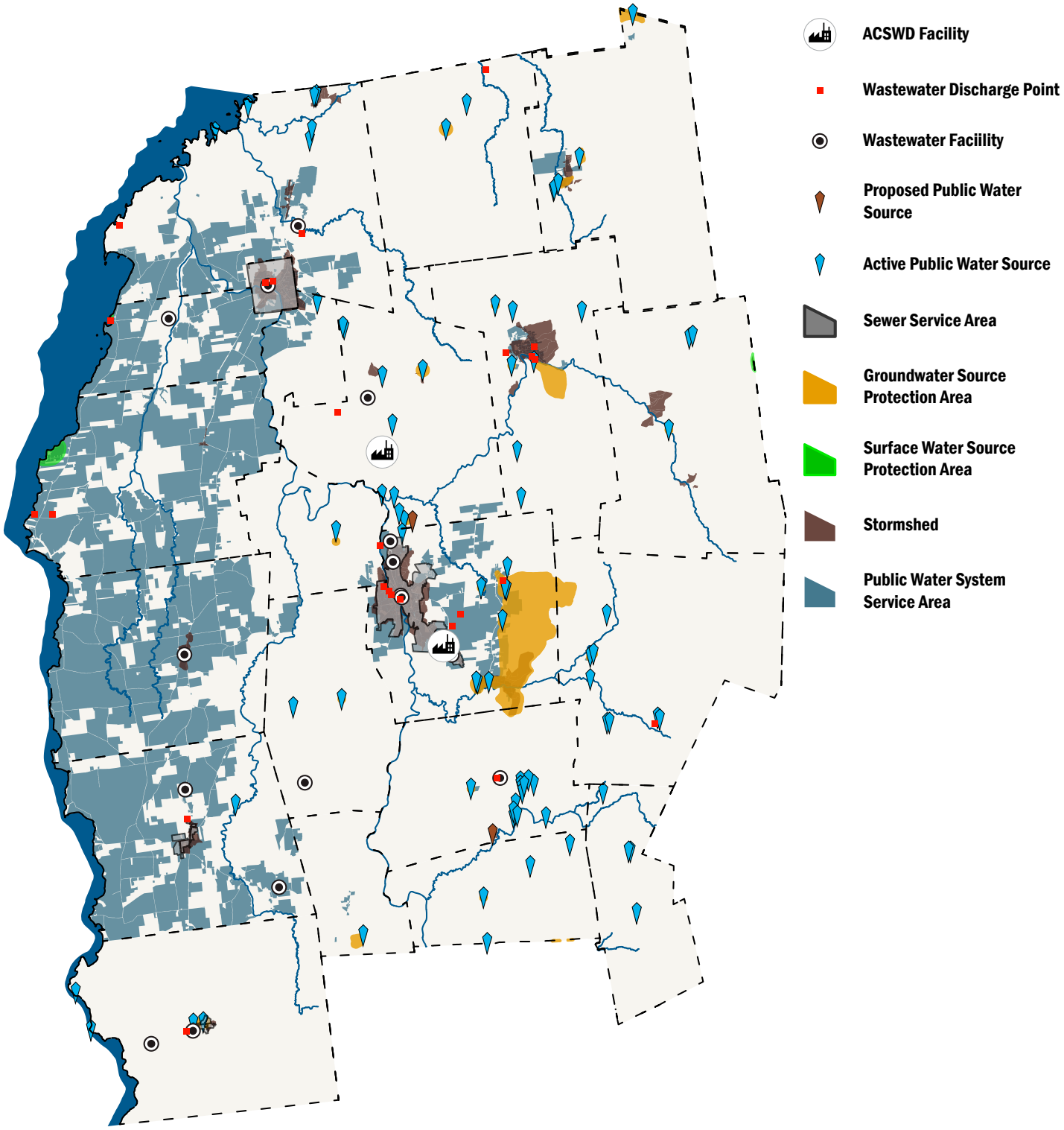
As most of the system was installed in or around 1905, over 100 years ago, bond votes have been put forth to the community for improvements. In recent years, the town engaged an engineering firm to conduct a study of the entire water line distribution system, leading to the recommendation of replacing about 30,000 feet of the 1905 water line. In 2022, Bristol voters approved a bond to fund the replacement of the Pine Street water line which was completed in 2023. In November 2024, voters approved the Bristol West water line replacement projected to be completed in 2026-2027. Two additional phases are planned after completion of the Bristol West project.[21]

East Middlebury Fire District #1

Fire District #1 in East Middlebury, establishing service in 1936, serves approximately 642 residents with 260 residential service connections, along with a handful of businesses and community buildings.[22] The system is supplied by two gravel wells in the East Middlebury village area and by shallow springs along Route 125, although the latter are currently inactive. The system not only provides potable water service to its customers, but also a fire protection benefit within its boundaries.[23]

In an emergency it would be possible to supply the East Middlebury system by connecting fire hoses to the

Map 1: Water Systems and Service Protection Areas (SPA) in the Addison Region



Middlebury Town water mains. A permanent connection does not exist because the Middlebury water system operates at a different reservoir level and higher pressure and because the East Middlebury Fire District has preferred to remain separate.

Specific to infrastructure, the Fire District has submitted several related grant applications in recent years and has potential future projects listed with the DWSRF program. East Middlebury has received funding for a hydraulic analysis and Preliminary Engineering Report (PER) related to their system and for a lead line survey.[24]

Ferrisburgh Fire District #1

Ferrisburgh Fire District No. 1 (FFD #1) was formed in 1989 to bring water from Vergennes-Panton Water District to Ferrisburgh. It owns a system of water transmission pipelines within the Town of Ferrisburgh, specifically north to the Rokeby Museum and the Ferrisburgh Fire Station. There are currently 107 members/connections. As Vergennes-Panton Water District owns the water and FFD #1 owns the waterlines, Fire District members receive two bills. This is the only public "municipal" water district in Ferrisburgh. While others in this town have access to water from Vergennes-Panton Water District, those connections are owned by private associations.

NON-MUNICIPAL PUBLIC COMMUNITY WATER SYSTEMS

A public community drinking water system is a public water system which has the ability to serve at least 25 individuals or 15 residential connections through a common distribution system. Community water systems in Vermont include condominium associations, mobile home parks, co-housing associations, and homeowners' associations. There are a number of shared community water systems serving residents throughout our Region.[25]

SCHOOL WATER SUPPLY SYSTEMS

All elementary schools in the Addison Region are required to have their own water supply systems, nearly all of which get water from on-site wells. Important issues for these school systems include source protection, the need for technical assistance in meeting state regulations, and funding the continued operation or upgrades of their systems.

Under Act 66 enacted in 2019, all Vermont school districts, supervisory unions, independent schools, and childcare providers are required to test their drinking and cooking water for lead every three years. If lead levels are found at or above 4 parts per billion (ppb), the affected tap must be taken out of service immediately, and corrective actions must be taken to reduce lead levels below the action threshold.[26]

OTHER PUBLIC SYSTEMS

There are many additional water systems in the Addison Region that meet the State's definition for public water supplies. Most of these are campgrounds, motels, and restaurants that are not hooked up to a community water supply. There are also a number of National Forest Service facilities in and around the Green Mountain National Forest and several state parks in the Region with public water systems.

GROUNDWATER

Groundwater description and challenges are addressed in Chapter 1, Natural Resources.

Except for those areas served by the public systems that draw water directly from Lake Champlain, most residents of the Addison Region rely on groundwater for their potable water supply. Parts of the Region that are not served by public water systems have private or shared wells and springs. According to Vermont Well Completion Reports, there have been 7,316 wells drilled in the Addison Region since 1966. Most serve domestic water systems (81.5%) and most are drilled to bedrock (73.4%).

Groundwater Recharge Areas

Groundwater supplies are recharged through precipitation and run-off percolating down through the soil to aquifers. Shallow, dug wells and springs tap groundwater before it reaches the aquifer, while drilled wells take

water directly out of the aquifer. Therefore, springs and dug wells are more susceptible to drought or contamination. Water travels through areas with sand or gravel soils more quickly than through denser clays, affecting the rate at which groundwater is recharged. Due to topography and soils, the recharge and source protection areas (SPA) for a significant amount of the Region's water supply is within the Green Mountain National Forest or along its edge.[27]

In the Addison Region, there is little specific information on the quantity and location of groundwater resources. State environmental protection rules have required that well drillers file reports, which include data such as well yield, well depth, and depth to bedrock. The new state water and wastewater rules require more accurate information on well locations be reported. However, a regional assessment of groundwater based on the information in the filed reports has never been done. Additionally, aquifer mapping examining the underlying geology of the Region has not been done.

Drought

In recent years, there have been several periods of drought in the Addison Region affecting groundwater. Lack of rain and snow cover during 2001 caused a drop in both surface water and groundwater levels. In the Region, many springs and shallow wells went dry. In the summer of 2025, 95% of the County experienced severe drought, leading to historically low water levels in Lake Champlain and Otter Creek, and low and dry wells, stressing both farms and residents.

Drought affects the Region's rural areas most severely and poses a threat to the the Region's water supply. In mountainous communities, many households get their water from springs or shallow, dug wells. Drought also impacts farming operations, potentially causing crop loss. Farms in the Addison Region are generally not equipped to irrigate fields. Periods of drought, especially during times of high temperatures, also lead to increased household water usage for activities such as watering lawns and filling swimming pools, thus increasing demand at a time when there is little to no recharge of groundwater supplies.

Groundwater Contamination

Contamination of groundwater is another threat to potable water supply. In the Addison Region, potential sources of contamination include leaking fuel storage tanks, improperly stored road salt, old dump sites or illegal dumping of waste, failed on-site septic systems, and improperly stored or spread farm wastes. Several Addison Region towns have had to supply drinking water to nearby residents when improperly stored road salt has contaminated their wells.

Contamination of groundwater can be in the form of high bacteria levels; excessive amounts of nitrates, petrochemicals, pesticides, or herbicides; and elevated amounts of elements like lead, arsenic, or sodium. Once contaminated, groundwater is extremely difficult to treat and, in some cases, may not be safe to drink for many years. The Vermont Agency of Natural Resources Waste Management Division tracks potential sources of groundwater contamination. There are over 80 sites in the Addison Region currently listed on the active hazardous sites list. A large percentage of these are locations of abandoned or leaking underground storage tanks. These sites are in various stages of monitoring and remediation.

While public water supply systems generally have source protection plans and regularly test their water, very few private well owners are certain about where the groundwater recharge area for their water source is located and very few have their water tested annually.



East Middlebury Source Protection Area

Wastewater

WASTEWATER REGULATIONS

The Agency of Natural Resources' (ANR) Department of Environmental Conservation (DEC) oversees the State's programs and regulations relating to wastewater treatment and disposal, as well as stormwater discharge. Under the National Pollutant Discharge Elimination System (NPDES) Program, all facilities that discharge pollutants from any point source into the waters of the United States are required to obtain a permit. All wastewater treatment facilities in Vermont need a water pollution control permit from DEC.

The Lake Champlain Total Maximum Daily Load (TMDL) establishes phosphorus discharge limits for wastewater facilities located within the Vermont portion of the Lake Champlain watershed. The TMDL was first established in 2002 and reissued in 2016. Wastewater discharges account for less than 10% of total phosphorus discharge to the Addison County portion of the lake.

Additionally, Middlebury and Vergennes have combined sewers in at least part of their sewer system. Though these are subject to DEC's Combined Sewer Overflow (CSO) policy, the TMDL does not include a separate allocation for phosphorus loads from CSOs in Addison County. Both communities have Long Term CSO Control Plans as part of their permits and report annually on CSO discharges.

WASTEWATER TREATMENT FACILITIES

Absence of wastewater treatment presents a significant impediment to denser development of the Region's villages. Four municipalities currently have wastewater treatment facilities: Middlebury, Vergennes, Shoreham, and Orwell. Two additional domestic systems serve Basin Harbor Club and Button Bay State Park. Additionally, a limited portion of Bristol's downtown is served by a community septic system, and the Town of Addison has a small system that serves the "Four Corners," at the intersection of Route 22A and Route 17. Together the municipal systems serve approximately 2,800 households or 22% of Addison Region households.[28] Expansion of community wastewater systems to other villages will be integral to the Addison Region meeting its housing goals.

Table 1: Large Wastewater Treatment Facilities

Regulated Facility	Design Flow (mgd)	2016 Permit Load (mt/yr)	TMDL Wasteload Allocation (mt/yr)
Middlebury	2.200	1.823	1.823
Orwell	0.033	0.228	0.228
Salisbury Fish Hatchery	1.310	0.181	0.181
Shoreham	0.035	0.242	0.242
Vergennes	0.750	0.621	0.621

Middlebury Wastewater Treatment Facility

The Town of Middlebury is served by a municipal sewer system that covers the downtown area and a portion of Route 7. The sewer system serves a somewhat smaller area than is covered by the municipal water system. There are approximately 1,550 residential and around 390 non-residential connections. Middlebury's facility went online in 1999, replacing an older plant. The facility utilizes sequencing batch reactors, has a system for phosphorus removal, and uses ultraviolet radiation for disinfection. The facility discharges into Otter Creek and has a permitted limit of 2.2 million gallons per day. In 2024, the facility treated approximately 378,180,000 gallons of domestic and industrial wastewater, averaging 1,036,110 gallons per day, roughly 38% of design capacity.[29] The Middlebury treatment facility is currently permitted to discharge over 1.823 metric tons of phosphorus annually under the Lake Champlain TMDL.

Community Septic Systems

Community septic systems provide a vital solution for Vermont towns where aging or inadequate wastewater infrastructure threatens housing stability and environmental health. By pooling resources, these systems allow neighborhoods to maintain safe, affordable housing while protecting water quality. They are particularly valuable in rural areas where individual septic systems may fail due to soil conditions, age, or cost barriers, ensuring residents can remain in their homes without facing displacement or financial hardship.

Vergennes Wastewater Treatment Facility

Vergennes currently has a lagoon wastewater treatment system with a filter to remove phosphorus and chlorination for disinfection. The City is in the process of upgrading their facility with construction scheduled to begin in 2026 and last two years. The system discharges into Otter Creek. The facility serves the entire city and some customers in the Town of Ferrisburgh. In total, there are approximately 1,145 residential and 90 non-residential connections. The current plant has permitted capacity of 750,000 gallons per day and an average annual flow of over 330,000 gallons per day. The facility has an uncommitted reserve capacity of over 405,000 gallons per day. The Vergennes facility is permitted to discharge 0.621 metric tons of phosphorus per year under the Lake Champlain TMDL.

Shoreham Wastewater Treatment Facility

Shoreham's wastewater treatment facility began operation in 2001. The gravity collection system serves around 55 residences and 15 non-residential connections in the village center. The facility is an in-ground recirculating sand filter with a permitted flow of 35,000 gallons per day. The effluent is disinfected with ultraviolet radiation and discharged underground into Cedar Swamp. The average annual flow is 9,000-12,000 gallons per day. Shoreham has an uncommitted reserve capacity of nearly 24,000 gallons per day. Under the TMDL, Shoreham has a phosphorus limit of 0.242 metric tons. In lieu of dedicated phosphorus removal at the facility, Shoreham implemented a town-wide, non-point source phosphorus reduction program.

Orwell Wastewater Treatment Facility

Orwell has a lagoon wastewater treatment system, which serves approximately 65 households and a handful of businesses and community buildings in its village center. The system uses chlorine to disinfect the effluent before it is discharged into the south fork of East Creek. Currently, the facility does not remove any phosphorus from its effluent. The Orwell facility has a permitted capacity of 33,000 gallons per day. The average annual flow is about 14,000 gallons per day. Orwell has an uncommitted reserve capacity of over 21,000 gallons per day. In the TMDL, Orwell's phosphorus load is set at 0.228 metric tons annually.[30]

The existing capacity of these four systems can serve as a catalyst for housing development within their growth area.

Bristol Community Septic System

Bristol's downtown has a large septic system that serves 34 properties on Main Street, East Street, South Street, and Prince Lane.[31] Vermont Utility Management Services operates the system on a contract basis. The system is essentially two large conventional in-ground septic systems. It is regulated by a state wastewater permit, similar to other on-site septic systems. It is not considered a wastewater treatment facility like the previous systems. Currently, there is little additional capacity in this system.

Lindale Community Septic Project

Addison Housing Works led the initiative to replace failing septic systems in the Lindale Mobile Home Park, a neighborhood where residents faced serious risks of losing their homes due to wastewater issues. The project created a shared, modern septic system that preserved affordable housing, safeguarded public health, and protected local waterways. The new system is a 20,000 gallon-per-day system that is fully compliant with the state Agency of Natural Resources' Indirect Discharge Program permitting requirements and will safely serve the park for decades to come, ensuring adequate wastewater treatment before it reaches Addison County waterways.

Recognized statewide for its innovation, the Lindale project demonstrates how community-driven infrastructure investments can stabilize vulnerable housing, strengthen neighborhoods, and serve as a model for other Vermont communities facing similar challenges.[56]



Other Domestic Wastewater Treatment Facilities

The Basin Harbor Club has a wastewater treatment facility consisting of septic tanks and a lagoon. The system has a permitted flow of 52,400 gallons per day. Button Bay State Park has a wastewater treatment facility with a permitted flow of 5,000 gallons per day. The system consists of septic tanks, a sand filter, and chlorination for disinfection.

The Town of Addison constructed a performance-based mound system in 2020 with a capacity of 4,300 gallons per day. The system serves the Town Clerk's Office, the Historic Town Hall, the Addison Fire Station, and the Addison Baptist Church.

Other Wastewater Treatment Facilities

There are five industrial facilities in the Region that pretreat waste before sending it to the municipal wastewater facilities. One, Simmonds Precision, discharges to Vergennes; the other four discharge to Middlebury: Whistle Pig, VT Hard Cider, Agri-Mark, and the Middlebury Resource Recovery Center. Agri-Mark has a permitted flow of 450,000 gallons per day, accounting for 44% of the Middlebury facility's average flow. In 2023, the business received funds to improve their wastewater pretreatment infrastructure.

The Salisbury Fish Hatchery's wastewater facility has a design flow of 1.31 million gallons per day. Their TMDL allocation of phosphorus is 0.181 metric tons per year. The facility discharges to a tributary of Halnon Brook.

ON-SITE WASTEWATER SYSTEMS / SEPTIC SYSTEMS

Only a small percentage of the Addison Region's land area is served by municipal wastewater treatment facilities. Structures outside those service areas are dependent on individual, on-site septic systems to treat wastewater. Wastewater systems, commonly known as septic systems, treat wastewater from homes and businesses, ultimately returning clean water to the local groundwater supply. A properly functioning system holds solids, scum, and grease in a septic tank, while directing the liquid portion to a leach field, where it encounters an oxygen-rich environment that supports microbial activity to help purify the water. The final stage of treatment occurs as the water filters through the soil, which naturally removes remaining impurities and restores it to a potable state.

Vermont was the last state in the nation to require state-wide permits for all properties. The Clean Slate Act went into effect in 2007 for wastewater systems and potable water supplies specific to: construction of new buildings including single family residences; construction or modification of a wastewater system and/or potable water supply; new connections to an existing wastewater system and/or potable water supply; subdivision of land; and repair or replacement of a failed wastewater system and/or potable water supply. The Vermont State Drinking Water and Groundwater Protection Division collaborates with licensed designers and engineers to ensure these systems are properly located and designed, helping to safeguard the health and sustainability of Vermont's groundwater resources.[32] Previous to 2007, Wastewater System and Potable Water Supply Program only issued permits for any such systems with flows less than 6,500 gallons per day.[33] The regional office serving Addison County is based in Rutland.[34]

Soil condition, site condition, and depth to bedrock or water table are a few of the determinants defining what type of wastewater system one may need, such as conventional, mound, or innovative/ alternative systems. Large areas of the Addison Region, mainly in the lakeshore towns, have heavy clay soils. It is also common in these areas for the seasonal high-water table to be close to the surface during the spring.[35] Due to these reasons, a mound system is often required, which can be much more costly than a conventional soil-based system, leading to an increase in overall building expenses. This Plan urges DEC to continue to collaborate and adapt with the engineering community to permit new systems that can operate safely, economically, and efficiently.

DISPOSAL OF SEPTAGE AND SLUDGE

Septage is the residue remaining in on-site, individual septic tanks. Septic tanks are periodically pumped and the septage removed. The Middlebury Wastewater Treatment Facility is the only system that accepts septage in the Addison Region. In 2004, Middlebury took in 2,429,050 gallons of septage, equivalent to 2,429 homes not served by the Middlebury Municipal Sewer, that were still served by Middlebury's treatment facility.[36]

Solid Waste

In 1968, the Vermont State Legislature passed legislation that required every municipality to provide for the proper disposal of solid waste. At that time, the Addison Region hosted ten operating disposal sites and dumps. Municipalities, businesses, and individuals disposed of all types of waste in these dumps, then burned it periodically. These waste disposal practices created concerns about air pollution, groundwater contamination, and human health.

To protect public health and the environment, state legislation required that all municipal dumps be turned into lined sanitary landfills and required waste to be compacted and contained with an approved daily cover material. Municipal dumps began closing during the 1970s as disposal shifted towards regional and private market solutions for solid waste management. By the early 1990s, five unlined municipal landfills remained active in the Region. VT Act 78, passed in 1987, required these unlined landfills to close by 1992 or obtain an exemption to accept less than 1,000 tons of trash per year. Currently, all unlined landfills in Vermont have closed.

The 21 municipalities comprising the Region have joined together to create the **Addison County Solid Waste Management District** (**ACSWMD**), and accept the ACSWMD's solid waste planning and management efforts as their own.

The New England Waste Services of Vermont (NEWSVT) landfill is currently Vermont's only operating lined landfill, located in Coventry, and receives approximately 80% of the State's solid waste. A few large solid waste management companies operate most of the collection and transportation infrastructure. While independent municipalities, solid waste alliances, and solid waste districts are still responsible for solid waste management, most utilize private sector services and facilities to meet this responsibility.

VERMONT MATERIALS MANAGEMENT PLAN

The Vermont Materials Management Plan (**MMP**), referred to as the State Solid Waste Plan, was last adopted in 2024. Statute requires the State's MMP to be revised every five years. It also requires that municipalities manage solid waste in conformance with the MMP. As the State's independent municipalities, solid waste alliances, and solid waste districts (Solid Waste Management Entities, or "SWMEs") develop their solid waste implementation plans, they must decide on the actions they will take to meet the goals and targets of the MMP.

The new MMP's goals expand on the sustainability goals that anchored the last plan and also emphasize climate resiliency, educational outreach, and economic justice.

The MMP goals are to:

- ☑ maximize overall waste reduction and minimize disposal;
- ☑ promote sustainable materials management;
- ☑ reduce toxicity of waste and the quantity of toxic products used;
- ☑ reduce greenhouse gas emissions through better materials management and promote climate change resilience; and
- ☑ promote equity, accessibility, and environmental justice.

In a press release for the MMP, Josh Kelly, DEC Solid Waste Program Manager stated, "In light of the flooding in 2023 and 2024, there are new priorities related to disaster planning and response to better prepare for future natural disasters." He continued, "There are also sections connecting climate change and equity to waste management."[37]

Under the MMP, outreach is a priority. Web-based resources will be proactively available to the public and connections will be made with libraries, schools, municipal offices, businesses, and transfer stations to build better community awareness around waste reduction, recycling, and waste management.



Horse-drawn trash collection, Bristol

ADDISON COUNTY SOLID WASTE MANAGEMENT DISTRICT

The Addison County Solid Waste Management District (ACSWMD) was established by charter in 1988. ACSWMD's Solid Waste Implementation Plan (SWIP) guides the management of solid waste for its 21 member municipalities and includes two adopted ordinances, a Waste Management Ordinance and an Illegal Burning and Disposal Ordinance, which provide implementation and enforcement of the SWIP. ACSWMD is a union municipal district, 501(c)(1), funded primarily through tipping fees at its Middlebury transfer station and a per ton surcharge on all municipal solid waste (MSW) and construction & demolition debris (C&D) generated within the ACSWMD that is destined for disposal. Other revenues include donations or fees from special events, revenue sharing from the sale of recyclables, state or federal grants, reimbursement from manufacturers as part of an extended producer responsibility (EPR) law, and sales of items like compost bins.

The ACSWMD completed and received approval of its most recent SWIP in October 2025 and currently operates pursuant to that plan. The District manages a transfer station in Middlebury for the collection of MSW, C&D, single stream recyclables, mattresses, appliances, scrap metal, fire extinguishers, food scraps, maple sap tubing, leaf and yard waste, clean wood waste, tires, asphalt shingles, drywall, books, textiles, cooking oil, documents for shredding, asbestos, and plastic film. The District also collects special wastes such as electronics, used oil, oil filters, batteries, light ballasts, propane cylinders, and items containing mercury. The District's HazWaste Center is co-located at the transfer station for collection of household hazardous wastes and Very Small Quantity Generator (VSQG) wastes. Although the transfer station accepts all waste items except for bagged trash and bagged single stream recyclables from residents, it is designed primarily to serve licensed waste haulers and local businesses. Private haulers provide curbside collection services in the ACSWMD, and bring MSW, C&D, recyclables, food scraps, and special wastes to the transfer station.

Waste haulers who operate in the ACSWMD are required by state law and district ordinance to be licensed. Haulers who offer trash collection must also offer collection of single stream recyclables. Haulers must also offer curbside collection of food scraps to businesses and residential properties. The transfer station is a registered collector under Vermont's EPR laws for electronic waste, mercury lamps, mercury thermostats, household batteries, household hazardous waste, and architectural paint.

All ACSWMD residents have access to a local drop-off that offers Saturday or every other Saturday service. Per state law, all solid waste facilities (including vehicles parked at those facilities) that collect trash must offer collection of single stream recyclables, food scraps, and leaf and yard waste (at least seasonally).

In 2024, the District opened its Regional Residential Drop-Off in New Haven, which currently accepts household trash, recycling, yard waste, and food scraps from residents within all 21 of its member towns. The District continues to track participation rates and gauge the evolving level of need for additional services to be provided at the New Haven drop-off, which may necessitate the completion of an already designed and permitted expansion of the facility. This expansion would allow for the collection of other materials such as electronic waste, books, scrap metal, and tires and would likely require financing through a general obligation bond.

ACSWMD waste collected at the Middlebury transfer station is transported to the NEWSVT landfill in Coventry. ACSWMD does not plan to site or own a landfill during its current SWIP term, but intends to maintain reliable weekday and Saturday drop-off options for residential bagged trash and recyclables. A concurrent goal of the SWIP is to provide ongoing education to the District's households, schools, and businesses about waste reduction, reuse, and recycling.

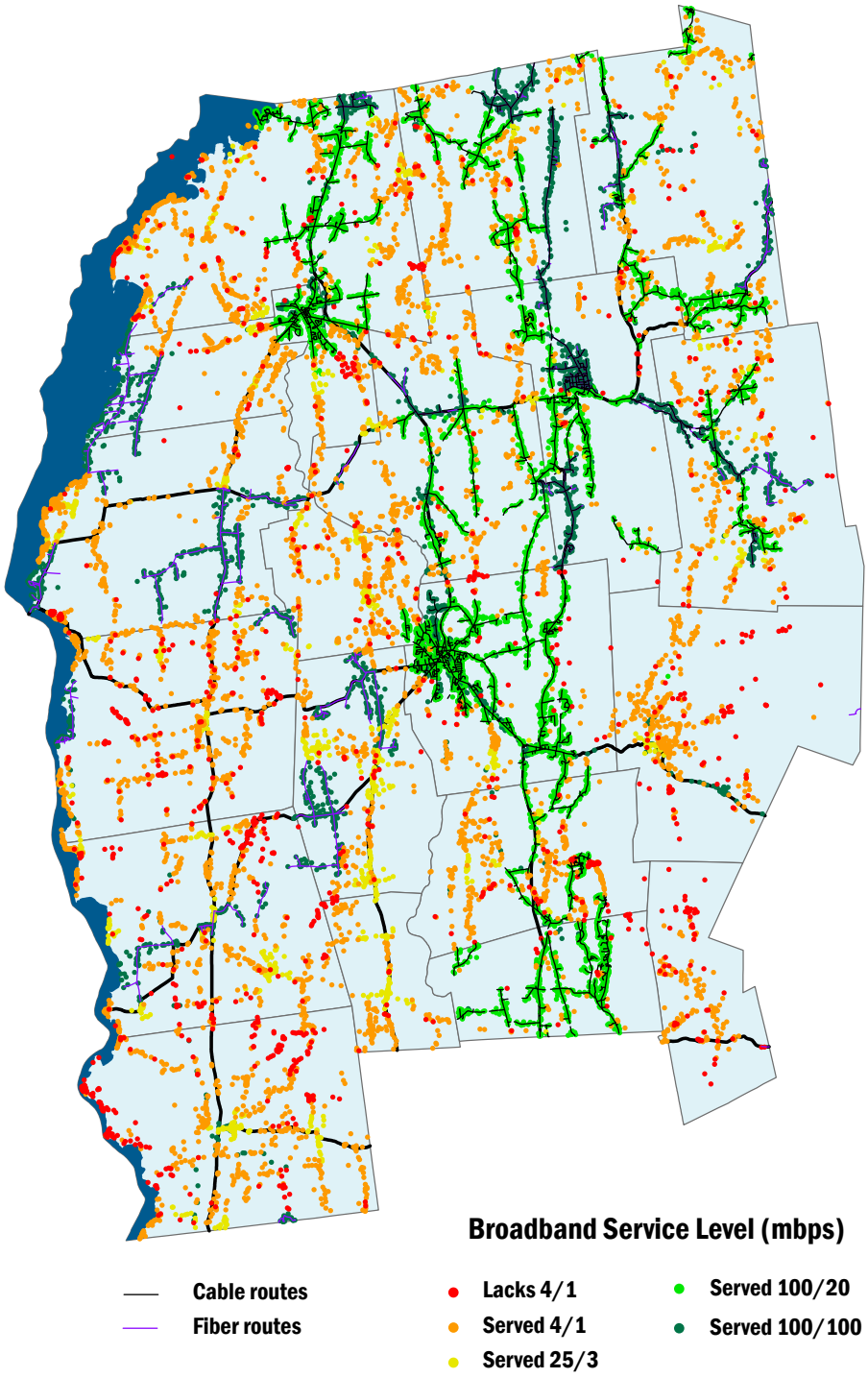
In their 2025 SWIP, ACSWMD estimated a 2024 MSW disposal rate of 2.26 pounds per person/per day, up slightly from the 2.17 pounds per person/per day estimated in 2023. It also noted the overall 2022 MSW diversion rate was 54.24%. ACSWMD has exceeded the state's 50% diversion goal since 2006. While Vermont did not include a specific waste diversion target in its 2025 MMP, ACSWMD considers waste diversion tracking as an important planning tool and will continue to calculate its diversion rate moving forward.

Read the ACSWMD 2025 Solid Waste Implementation Plan - ACSWMD[38] for more information.

Communications Technology

Access to reliable communications infrastructure is essential for economic vitality, educational opportunity, healthcare access, and quality of life in the Addison Region. Modern telecommunications systems—particularly high-speed internet—enable businesses to compete globally, students to access educational resources, residents to receive telemedicine services, and communities to stay connected and informed. Over the past two decades, the Region has worked to address the digital divide through innovative regional collaborations, with significant progress now being made to bring fiber-optic broadband to every corner of the Addison Region.

Map 2: Broadband Service Levels, 2025



BROADBAND INFRASTRUCTURE AND ACCESS

Like many rural areas, Addison County has faced persistent challenges with broadband access. According to Vermont Department of Public Service data from 2022, approximately 23% of Vermont locations (nearly 70,000 business and residential addresses) lacked access to broadband service at or above 25/3 Mbps (the federal definition of broadband at that time). Outside of Chittenden County, only 15.6% of Vermont buildings had access to service at 100/100 Mbps, the modern standard for high-speed broadband. These gaps were particularly acute in rural areas like Addison County, where low population density made it unprofitable for private telecommunications companies to extend fiber-optic networks.

High-speed internet service in the Addison Region is provided by a mix of private telecommunications companies and the community-owned Communications Union District dba Maple Broadband. Traditional providers including Comcast, Consolidated Communications (Fidium Fiber), Waitsfield and Champlain Valley Telecom, and Verizon serve portions of the Region with cable, fiber-optic, and DSL connections, primarily in more densely populated areas and along main transportation corridors. However, many rural areas and less densely populated communities have lacked

access to fiber-optic service. Maple Broadband was established specifically to fill these gaps, focusing its network deployment on underserved and unserved locations where private providers have not extended high-speed infrastructure.

Maple Broadband and the Communications Union District Model

In 2015, the Vermont Legislature passed legislation enabling the creation of Communications Union Districts (CUDs), codified at 30 V.S.A. § 82. CUDs allow towns to join together as a municipal entity to build communications infrastructure, organized similarly to water and solid waste districts. CUDs cannot levy taxes; they fund operations through grants, loans, donations, and service subscriptions. In 2020, Addison County towns formed the Addison County Communications Union District (ACCUD), operating as Maple Broadband, to ensure every on-grid address in member towns has access to high-speed fiber-optic broadband service.

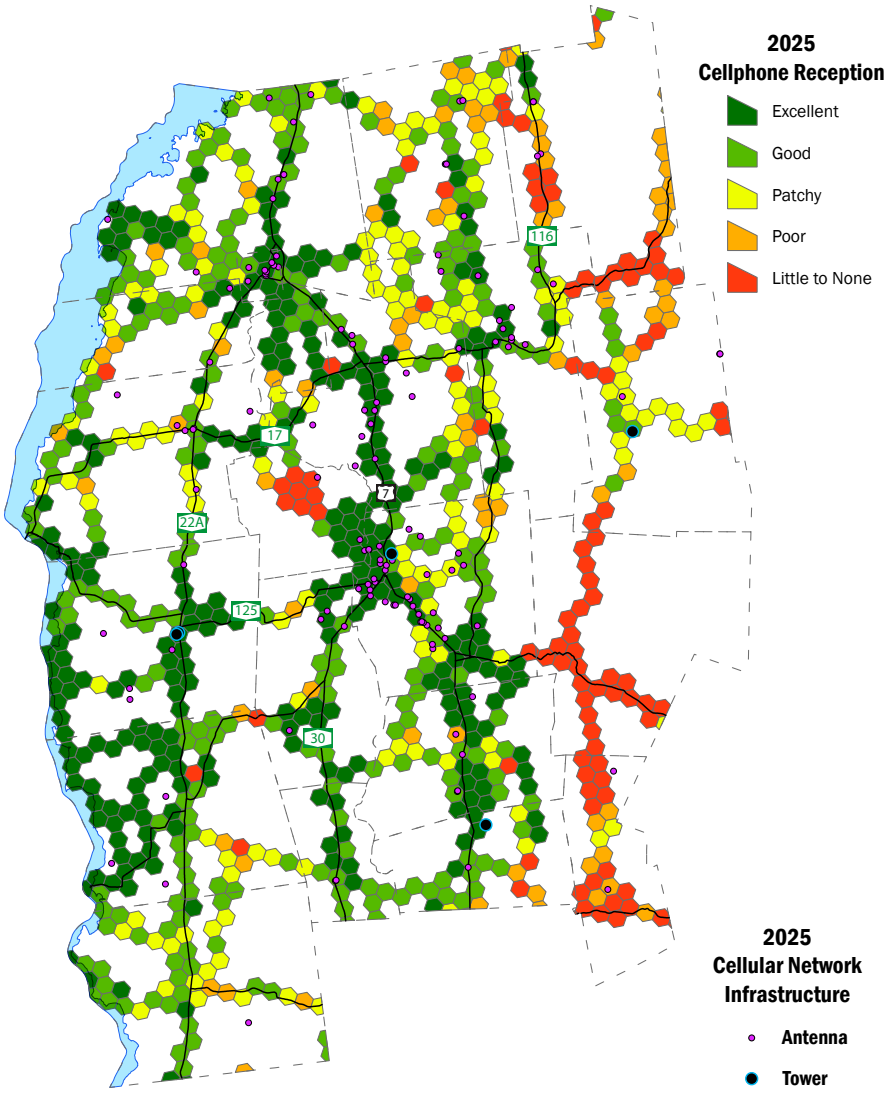
Maple Broadband partnered with Waitsfield and Champlain Valley Telecom (WCVT) to build and operate the fiber network. Construction began in October 2022, with service launching in February 2023. By April 2024, the district had deployed 143.5 miles of fiber passings in 1,647 locations in Cornwall, Orwell, Shoreham, Whiting, Salisbury, and Middlebury, and began Phase Two construction covering 68 miles and 1,468 passings in Vergennes, Ferrisburgh, Waltham, Monkton, and New Haven. The district continues expanding to reach all underserved locations in its member towns.

As a community-owned, not-for-profit provider, Maple Broadband offers competitive pricing compared to private providers, with transparent rates, no contracts, no data caps, and no hidden fees. This community ownership model allows revenues to be reinvested in network expansion and maintenance rather than generating shareholder profits, providing cost savings to customers while extending service to areas that would otherwise remain unserved.

Federal and State Funding for Broadband Expansion

To date, Maple Broadband's construction has been funded through federal ARPA funding, state grants, and local ARPA contributions. The Vermont Community Broadband Board (VCBB) administers funding and provides technical support to CUDs. For its next construction phase, Vermont received $228.9 million from the federal Broadband Equity, Access, and Deployment (BEAD) Program to expand broadband access, with Maple Broadband selected as a provisional subgrantee. The State aims to complete broadband deployment by

Map 3: Cell Reception, 2025



2028, with nearly 90% of BEAD funds designated for fiber-optic infrastructure.

The creation of Maple Broadband also spurred significant private investment in the Region. WCVT, Maple Broadband's partner, will receive and invest over $20 million in the Addison Region upgrading its DSL lines to fiber. Fidium Fiber, Comcast/Xfinity, and Go Net Speed have also spent millions improving their systems.

With improved broadband connectivity enabling access to advanced digital tools, artificial intelligence (AI) represents an emerging technology that could significantly expand capacity and economic development opportunities for Addison County if applied safely and appropriately. It is important for ACRPC to work with regional and state partners to develop and provide education on AI best practices for residents and municipal staff. Additionally, data centers are estimated to consume anywhere between 6.7% to 12% of all U.S. electricity consumption by 2030.[39] ACRPC will need to incorporate AI infrastructure demands—including electrical grid capacity, water resources, and potential impacts on utility rates—into future regional planning. This will ensure technological advancement does not compromise existing community services and resources.



TRADITIONAL TELECOMMUNICATIONS INFRASTRUCTURE

Wired Telephone Service

Three local phone service providers serve the Addison Region through 16 telephone exchanges. Most of the remaining lakeshore and northern part of the Region, except for an area around Vergennes, is served by Waitsfield and Champlain Valley Telecom. Consolidated Communications, GoNetSpeed (formerly Shoreham Telephone Company), and Xfinity serve the rest of the Addison Region. All of these providers are investing in providing internet service in their service territories.

Wireless Communications

Multiple cellular providers serve the Addison Region, including Verizon, AT&T, T-Mobile, and regional carriers. Cell phone coverage has improved significantly over the past two decades as providers have expanded their networks and upgraded to 4G LTE and 5G technologies. Coverage remains variable across the Region, with strong signals along most of Route 7 and other major corridors, but weaker or absent coverage in some rural and mountainous areas. (See **Map 3**.)

Much of the Region's cellular infrastructure utilizes antennas mounted on existing structures such as silos, church steeples, and utility poles, minimizing visual impacts compared to traditional freestanding cell towers. This approach has allowed the Region to expand wireless coverage while preserving the rural character of the landscape. ACRPC strongly supports this creative approach, complemented by new fiber internet, to build a robust and resilient telecommunications network for the Region.

Emergency Communications

Radio communications in Addison County are structured to support both statewide coordination and localized emergency response. The Vermont State Police operate on UHF frequencies in the 460 MHz range for dispatch and law enforcement communications statewide. Meanwhile, local fire departments, ambulance services, and EMS units use VHF frequencies in the 150 MHz range for their operational needs. Many towns maintain independent radio systems, with transmitters located on towers such as Chipman Hill in Middlebury, Cream Hill in Shoreham, and Knox Hill in Orwell, or mounted on buildings. Ferrisburgh Fire Department relies on a transmitter atop Mount Philo in neighboring Chittenden County. Dispatching is decentralized, with the Addison County Sheriff and the police and EMS departments in Vergennes, Bristol, and Middlebury managing their own radio traffic. All 9-1-1 calls, whether from landlines or mobile phones, are routed through a Public Safety Answering Point (PSAP) and then directed to the appropriate radio channels for emergency re-





sponse. Vermont's official RACES (Radio Amateur Civil Emergency Service) program has been discontinued as of November 1, 2025, but amateur radio operators can still contribute to emergency communications by joining the state's Medical Reserve Corps (MRC) or the Addison County Amateur Radio Association.

Local News and Information Resources

Residents of the Addison Region access local news and information through multiple platforms:

- **Print and Online Media:** The Addison County Independent (weekly), *Burlington Free Press* and *Rutland Herald* (daily regional papers), and *Seven Days* (weekly) provide local, regional, and statewide news coverage through print and online platforms.
- **Radio:** Local commercial stations include WVTK FM(92.1), WFAD AM (1490), WCLX FM (102.9), WIZN FM (106.7), WRMC FM (91.1, Middlebury College), and WVPS FM (107.9). Vermont Public Radio provide news, entertainment, and emergency information with particular reliability during power outages and disasters.
- **Public Access Television:** Middlebury Community Television and Northeast Addison Television (Bristol) provide Public, Educational, and Governmental (PEG) programming, including coverage of local government meetings and community events, accessible through cable and online streaming platforms.
- **Local Broadcast Television Channels:** ABC 22 (WVNY), CBS 3 (WCAX), NBC 5 (WPTZ), and Fox 44 (WFFF)



Addison County Field Days, New Haven

Regional Cultural Resources and Facilities

The Addison Region, with its varied topography and wealth of natural resources, has an equally rich collection of archeological, historic, and cultural resources. The character and history of the Addison Region are reflected in the sites, structures, events, and traditions built or established by residents over more than 250 years. That period represents only a brief portion of a much longer history of human habitation in the Region, which goes back more than 10,000 years.

The importance of these cultural and historic resources is reflected in their ability to provide a sense of continuity between generations and a connection to place. A shared sense of history and cultural pride creates stronger communities and encourages connections between people. Historic and cultural sites, buildings, and events can also provide economic benefits from the reuse of existing structures as unique community gathering places for the enjoyment of music, theater, and other cultural performances.

ARCHEOLOGICAL SITES

Vermont's archeological sites are critical links to our recent and distant past. In many cases, these links help us to understand our rich social, economic, and technical traditions. The sites range from Native American campsites used by the earliest Vermonters (called the Paleo-Indians), to revolutionary war shipwrecks, from 12th century Native American farming sites (the earliest known in northern New England), to abandoned 19th century mining communities. More typical are the hundreds of long deserted 19th century farmsteads with their telltale cellar holes and stone walls, and the small, largely invisible, Native American seasonal campsites that span both the very long period of prehistory and the shorter period of recorded history. Pre-contact sites in forested landscapes can be especially important since they may be undisturbed by land management and agricultural practices. The archeological record can also provide information about past climate and landscape changes. Although only a few sites in the Region have been designated in the Vermont Archeological Inventory, there may be many other areas that contain significant artifacts to pre-European settlement.

Some landscapes have a higher potential for containing pre-contact settlement sites; these are archaeologically sensitive lands. These lands exhibit a combination of environmental characteristics that would have attracted indigenous peoples. Archaeologically sensitive lands generally have less than 8% - 15% slope and are often found in the following landscape settings:

- 200' from a river, stream, lake or pond, wetland, spring, or relict (i.e. now dry) drainage
- adjacent to a confluence
- adjacent to falls or rapids
- on a flood plain or river terrace
- on an elevated knoll in a flood plain
- on the flat at the head of a drainage
- at a natural portage between two watersheds or pass through mountains
- at chert, quartz, or quartzite outcrops
- on post-glacial (or "paleo") landforms (some examples: sandy beach line from the Champlain Sea, edges of former post-glacial lakes and ponds or bays, edges of former post glacial swamps or wetlands)

Winter habitation sites might be located on south facing, sheltered terraces along a valley edge, and summer planting fields may be located in a sunny floodplain.



Orwell Town Office

HISTORIC RESOURCES

Please see the Land Use Chapter for a discussion of the history and development of the Region.

There are a wide range of historic sites and structures in the Addison Region, several thousand of which are listed on the Vermont Register of Historic Places. These sites and structures include military sites and covered bridges, churches and community buildings, grand mansions and one-room schoolhouses, farmhouses and their outbuildings, as well as industrial and commercial buildings. There are approximately 75 buildings or sites listed on the National Register of Historic Places, and three historic districts in Bristol, Middlebury, and Vergennes are also nationally recognized. More detailed information on these historic resources is available at ACRPC's office and from the Vermont Division for Historic Preservation.

The Vermont State Register of Historic Places is used in the division's legally mandated reviews of projects requiring Act 250 permits and those involving state or federal funds, licenses, or permits. Sites listed in or determined eligible for the Register are considered under criterion 8 of Act 250 for projects that require land use permits. Permits may be denied for projects that have an undue adverse effect on archaeological or historic resources. Properties that are listed in or eligible for the National Register of Historic Places are further protected from adverse impact by projects that are federally funded, licensed, or permitted.

A number of Addison Region communities have active Historical Societies that work to protect these resources, maintain collections, do research, and promote greater awareness of local history and historic resources. Several have also developed walking tours that highlight their historic resources. While most of the Region's historic resources are privately owned and not open to the public, some are public structures still used for a civic purpose, a few are open as museums, and others have been converted to inns and restaurants.

LIBRARIES

A majority (19) of the 31 libraries currently operating in the Addison Region are school libraries. However, most communities in the Region continue to have access to



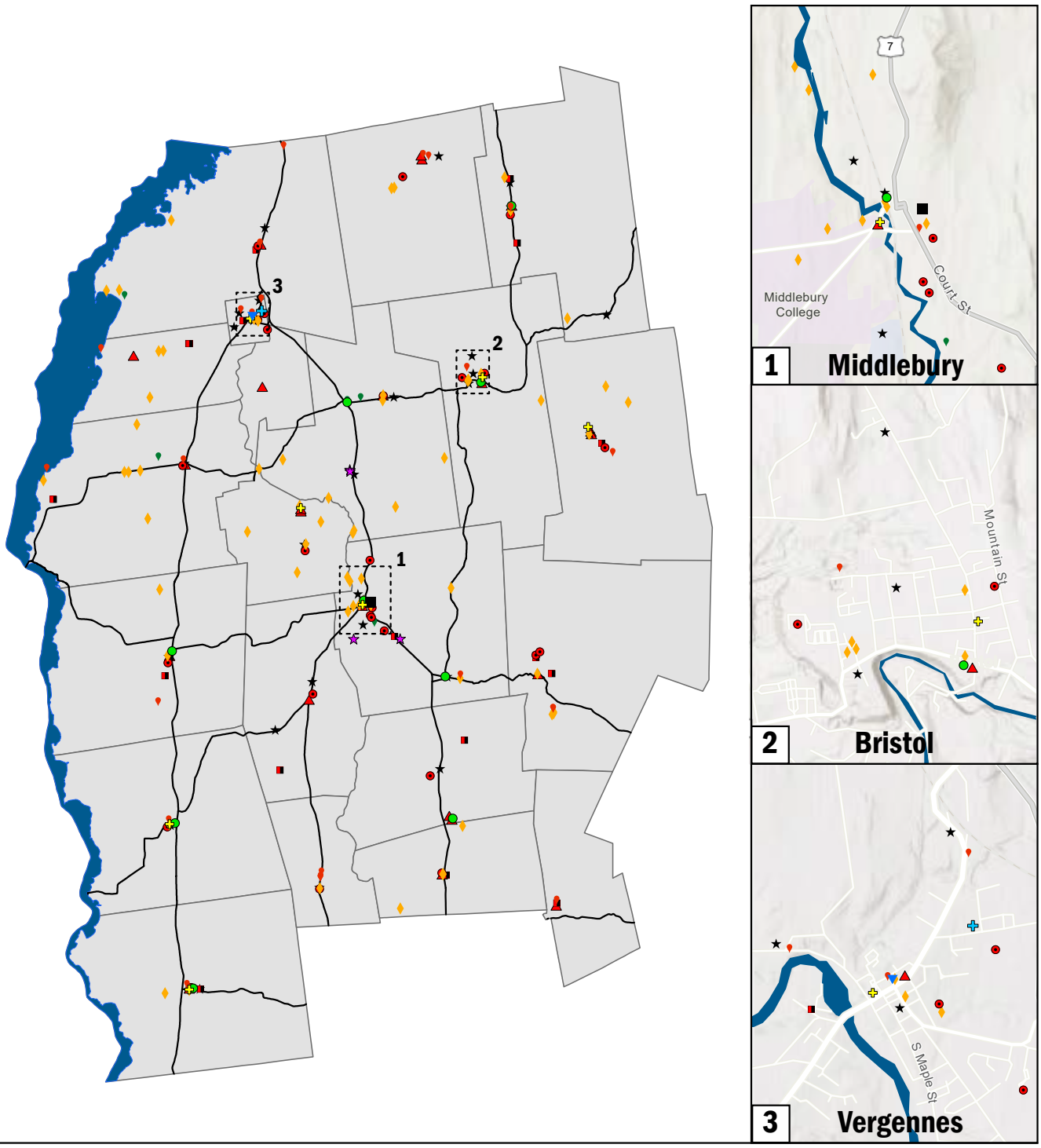
one of the 12 public libraries. These libraries range in size with the larger municipalities—Bristol, Middlebury, and Vergennes—having the largest facilities. However, even in small communities, the local libraries provide a range of services and activities such as children's programs, reading groups, literacy education, use of public computers and internet access, community meeting space, and more. In addition to their own collections, patrons of libraries throughout the Region have access to materials from libraries throughout Vermont via interlibrary loan while digital resources that enable access to books, music, language learning, video content, and more are also offered through the Vermont library system. Additionally, some local libraries provide lending library services that allow residents to share household tools, games and educational activities, bikes, and more for community members to use at home.

ACRPC has recently supported several towns with grant writing and management to upgrade energy and communications infrastructure in municipal libraries, with the largest project being the redevelopment of the Ilsley Library in Middlebury.

CULTURAL RESOURCES

The Addison Region offers diverse cultural resources including more than ten museums ranging from the Lake Champlain Maritime Museum to small local history museums, two state historic sites (Mount Independence and Chimney Point), and several historic house museums such as the Rokeby Museum and Henry Sheldon Museum of Vermont History. The Region is home to nu-

Map 4 - Municipal Buildings



- Court House
- Emergency Services
- Federal Government Facility
- Library
- National Guard Facility
- Post Office
- Public Gathering Space
- School K-12
- State Government Facility
- Town Garage
- Town Office/City Hall
- Visitor Information Center

merous artists and craftspeople who exhibit from their studios, galleries marketing local art, and Middlebury College's Museum of Art with traveling shows and a permanent collection. Performance venues range from informal summer concerts on town greens to professional productions at Middlebury's Town Hall Theater and the Vergennes Opera House, with year-round events including the Bristol Community Band performances, Middlebury's Festival On-the-Green, and the Addison County Fair and Field Days.

CULTURE AND COMMUNITY

The cultural, artistic, and historic resources described above play an important role in the culture and way of life for residents of the Addison Region.

The Region's residents value access to cultural opportunities. Some of these things – such as citizens discussing current events while sitting on a bench at their general store or going to a pancake breakfast at the firehouse are difficult to characterize but they are important, nonetheless. These and many other components of local culture and community character contribute to the quality of life in the Addison Region.

GOVERNMENTAL AND ADMINISTRATIVE FACILITIES

Municipal Offices

Each of the 21 municipalities in the Addison Region has a municipal office and a clerk who, among other duties, maintains the municipal records stored in each office's vault. The municipal offices are the repositories for all land records; vital records like birth, marriage, and death certificates; and voter registration lists. The clerk and municipal office serve as the basic unit of local government in most of the rural towns in the Addison Region. In the smallest towns, the office is essentially the only public building and serves several community and civic functions. In addition to office space, many municipal offices are used as community meeting spaces. (See **Map 4**.)

Several offices in the Region are in historic buildings originally constructed for civic purposes—some as town halls, churches, or schools in the mid-1800s. Many of these buildings, which have served their function as a town office well for a half-century or more, are beginning to encounter difficulties. Several offices in the Region lack adequate vault space for additional records, a problem that has been exacerbated in recent years as the amount of paperwork to be recorded has increased significantly. Others do not have sufficient space for regular board or committee meetings or for office use as the number of employees working for the town has increased. Additionally, a few buildings have issues such as lack of accessibility, insufficient wastewater, or drinking water infrastructure. Even with their issues, the aging Clerk's Office/Town Hall often serves as the hub of the community. Town Clerks are a great source of ultra-local information.

Community Buildings

In addition to the municipal office, most communities have a larger hall-type building that is used for Town Meeting and other community events. Sometimes this is a separate building; other times it and the municipal office are part of the same structure. While a few town halls were constructed for civic use as a meeting hall, many are former schools, churches, granges, or other similar structures.

In recent years, a few communities in the Region have constructed or are planning projects to develop community buildings that can serve multiple functions. Some towns are considering reuse of existing historic structures in their village centers, while others have plans for new construction. A common theme of most of these projects is to revitalize a community center by having a building with space that can serve multiple purposes ranging from town offices, library, meeting rooms, childcare or preschool, medical clinic, and recreation center.

Highway Garages

Most of the municipalities in the Region also have a building for storing highway equipment and materials. Several communities have a shared garage facility with the fire department and a couple share space with state highway maintenance facilities. Many towns are also facing a lack of space for equipment storage as towns have needed to house more and larger equipment. A number of municipalities in the Region have constructed salt sheds to meet changes in federal and state law related to stormwater. Still more towns plan to replace existing structures or to construct new adequate storage for road salt and sand in the near future to meet these requirements.

Cemeteries

There are many historic cemeteries throughout the Addison Region and a smaller number still in use. These cemeteries are administered either by municipalities through a Cemetery Commission with appointed representatives or by private, nonprofit Cemetery Associations. These commissions and associations are responsible for laying out the cemeteries, selling lots, and maintaining the grounds and records.

Finding funds to maintain historic cemeteries that are no longer actively used and without an income stream is an ongoing struggle for the commissions and associations. The Vermont Old Cemetery Association works to encourage the restoration and preservation of neglected and abandoned cemeteries throughout the state and supports the work of local organizations. Volunteer labor, local fundraising, and philanthropic donations are used to maintain and repair cemeteries throughout the Region.

Other Municipal Facilities

Municipalities in the Addison Region also own a variety of other lands and facilities such as tax sale lands, old school lots, town forests, housing facilities like Weathervane West in Lincoln, and old road rights-of-way. Many municipal plans provide a detailed inventory of municipally owned structures, land, and rights-of-way.

ACRPC recently supported more than half of the towns in the Region in accessing planning and implementation funding to improve the energy efficiency and weatherization of municipal buildings. This Plan supports building on this work to further improve existing municipal infrastructure to promote and improve community centers in each of the Region's historic villages to increase the sense of community in each town.

RECREATION RESOURCES AND FACILITIES

The Addison Region, bounded on the west by Lake Champlain and on the east by the Green Mountains, is rich in recreation resources. The Region's year-round recreation opportunities attract visitors and contribute to the quality of life for residents. (See **Map 15** in the Natural Resources Chapter.)

Public Trails

The Addison Region offers many opportunities to use public trails. In addition to the trails on state or federal land, there are trails on municipal and private land for a variety of activities and many are shared among different users.

- The **Trail Around Middlebury** (TAM) is an 18-mile multi-use trail system surrounding downtown Middlebury. The TAM provides access to wooded and open recreation paths, connecting residential areas, the town center, and the Middlebury College campus to each other and to surrounding natural areas. The TAM is funded mainly through grants and private donors, and most of the trail is on private land.
- **Vermont Association of Snow Travelers** (VAST) Trail System of the Addison Region includes six-VAST clubs with hundreds of miles of trails. These trails are maintained by local volunteers, generally located in the more rural parts of the Region and are used primarily by snowmobiles. They also support other activities like cross-country skiing and snowshoeing and offer a source of revenue for tourism-based businesses in the winter months. This existing network of winter trails offers potential for developing into year-round multi-use paths in some locations.
- **The Long Trail** corridor passes through the Addison Region on a combination of public and private lands. Several connecting trails link the Long Trail to other resources in the Region such as Silver Lake and the Moosalamoo area. An especially popular section of the Long Trail runs between Breadloaf and the Appalachian Gap.
- The **Bristol Trail Network** has a number of town-owned parks and has connected those, its downtown, and other nearby natural areas with approximately 2.7 miles of trail.[40]
- The **North Country Trail** is the newest trail to the Region and one of the most ambitious. This trail connects the Appalachian Trail in Vermont to the Lewis and Clark Trail at Lake Sakakawea State Park in North Dakota. It also joins other significant trails like the Superior Hiking Trail and Kekekabic Trail in Minnesota and shares sections with the Trail Around Middlebury (TAM) in Vermont.

- The **Catamount Trail** is a 300-mile backcountry ski route spanning Vermont. It passes directly through Goshen, Ripton, and Lincoln, offering skiers a mix of ungroomed forest routes and quiet wilderness travel through the Moosalamoo region and Green Mountain National Forest.

Some organizations in the Addison Region have begun developing trails or trail systems in their communities, while others are just starting to plan for possible corridors. Vergennes has plans for and is seeking funding to construct trails around the City. Many of the smaller village centers have begun thinking about sidewalks and trails that would provide recreation for residents and a safer way for children to walk and bike to community facilities. Leicester and Whiting have considered the abandoned rail bed running from Leicester Depot west to Lake Champlain as a potential trail corridor. Snake Mountain, located primarily in the towns of Addison and Weybridge, is a popular hiking area in the Region and additional trails there have also been identified as desirable. The cross-country ski trails located at Rikert/ Breadloaf Campus at MIddlebury College are another winter trail resource in the Region.

Trail Use Conflicts

Trail systems in the Region have successfully accommodated diverse users, though conflicts between snowmobilers and cross-country skiers, mountain bikers and horseback riders, and other groups occasionally arise. ATVs present the most pressing challenge, as their growing popularity has pushed use onto private land since they are prohibited on state and federal lands, creating conflicts between ATV enthusiasts, other recreation users, and landowners. ATV riders are beginning to organize similarly to VAST to secure trail access and promote responsible riding practices. Trail riding on horseback is also increasing in popularity as more residents acquire horses. Riders have not yet formed an organized group or secured specialized amenities such as trailer-accessible access points. As these emerging user groups grow, addressing space and resource conflicts will become increasingly important for regional trail management.

Trail Connections

The state and federal lands in the Addison Region offer great recreation resources for trail users. Continuing to connect local trails to the larger trail systems, especially those in the Green Mountains, would benefit all users. The Moosalamoo area, located largely in the Addison Region with its miles of trails and backcountry roads connecting Green Mountain Forest land with surrounding privately owned tracts, provides an excellent example of such a public-private partnership. The Long Trail and its associated connecting trails provide another.

Bicycle Facilities

Bicycling is one of the most popular outdoor recreation activities in the Region. Bicycles also serve as a mode of transportation for residents. The Addison Region offers cycling opportunities for those who want to peddle around the gently rolling terrain of the Champlain Valley, test their endurance biking up one of the mountain gaps, or careen down a wooded trail on a mountain bike. Much of the focus of bicycle tourism in the Region has been in the Champlain Valley. The Lake Champlain Bikeways loops in the Region have been popular while the recent addition of the Triangle Bike Loop between the three large towns of the Region enables the development of improved bike infrastructure to benefit both recreation and commuters. The steeper terrain in the eastern part of the Region, like the Moosalamoo National Recreation area, attracts mountain bikers. See Chaper 1, Natural Resources.

Water-Based Recreation

The Addison Region has miles of shoreline on Lake Champlain, Lake Dunmore, Otter Creek, the Middlebury River, the New Haven River, as well as numerous smaller ponds and streams. These water bodies are used for a range of recreation activities including boating of all types, swimming, year-round fishing, hunting, and wildlife viewing. Summer camps and second homes line some areas of shoreline, bringing seasonal residents and visitors to the Region.

Lake Champlain

The Addison Region has three state parks on Lake Champlain, along with state-owned boat launches and fishing access points in Shoreham, Addison, Panton, and Ferrisburgh, supplemented by private campgrounds and marinas in several towns. Lake Champlain is a largely untapped gem for boating. Additional facilities and connections between the lake and regional commu-

nities should be developed. Most lakeshore towns have identified the need for local beaches. Panton has developed lake access and others like Addison have potential sites. However, development remains challenging due to costs and complications including parking, restrooms, and aquatic nuisance plant management. Ensuring public access to Lake Champlain through State facilities is an important goal of this Plan.

Other Water Bodies

Beyond the "big lake" there are numerous water bodies – such as Lake Dunmore, Fern Lake, Cedar Lake, Sunset Lake, Bristol Pond, Otter Creek, the Middlebury River, and the New Haven River – currently providing recreation opportunities in the Region. The towns in which some of these smaller lakes are located have also identified public access as an important issue. Public access on these lakes is more difficult to secure than on Lake Champlain, since many are ringed by residential development. The issue for public access on streams is similar to that on Lake Champlain. As land is no longer used for agriculture and is developed for other uses, traditional access points can be lost. Campgrounds offer one opportunity for access on or near Lake Champlain. Branbury State Park offers access to Lake Dunmore in Salisbury. See Chapter 1, Natural Resources.

Water Use Conflicts

Water-based recreation users can create conflicts. The use of non-motorized boats in the Addison Region's lakes and streams is increasing. At the same time, the number of motorized boats, especially personal watercraft, is also increasing. Sometimes motorized boats are being used in places that used to be accessible only to non-motorized craft. Additionally, when boat ramps funded by boat registrations get congested, non-motorized boat users can feel unwelcome. Also, as more of the Region's shorelines become developed, conflict can occur because new owners are not aware that public use of the shore is allowed under state law between the water and the mean high waterline, if accessed legally.


Bristol Pond

Wildlife-Based Recreation

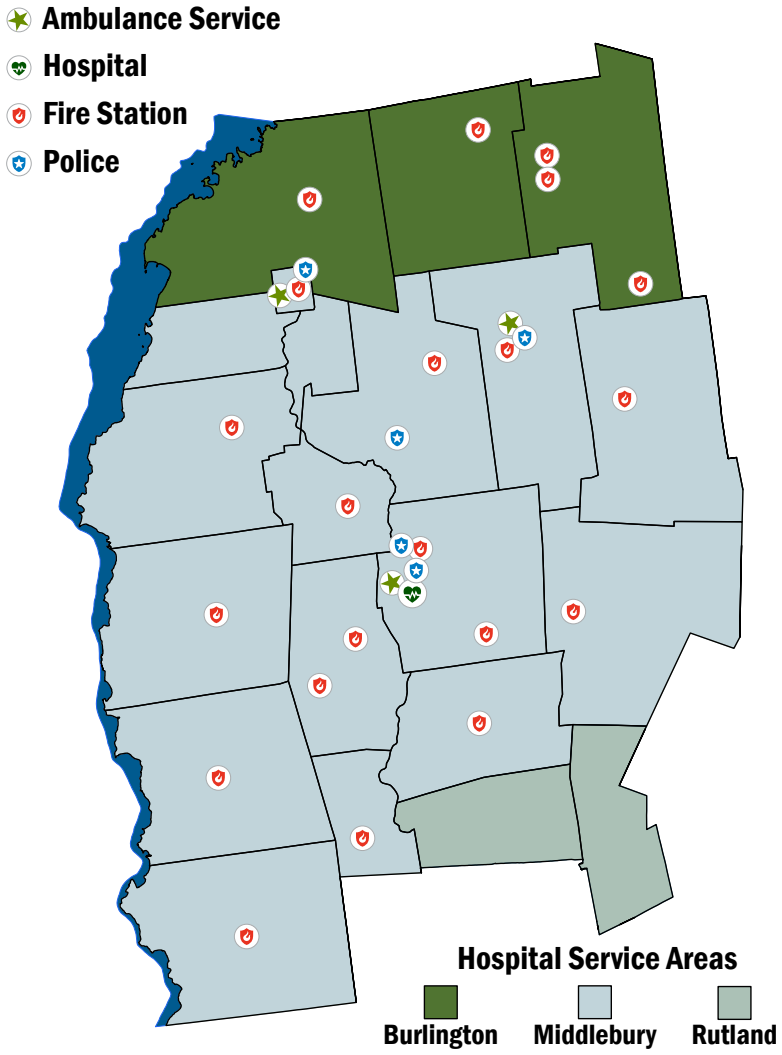
Wildlife-based recreation including hunting, fishing, and bird watching has a long history in the Addison Region, with the sporting community funding much of the current outdoor recreation infrastructure and 11 state-owned Wildlife Management Areas. Hunting on private land is declining as parcels are developed and posted, concentrating hunters on remaining open areas, while shooting ranges have closed due to noise and safety concerns, leaving no public ranges in the area. The Region's fishing resources include native trout and diverse lake species with growing ice fishing popularity. Bird watching resources span diverse habitats from alpine tundra to forests, though both face increasingly limited access due to changing land ownership patterns. The shifting demands for local access to natural spaces has generated growing interest in developing multi-use stewardship plans for new and existing town forests.[41] ACRPC supports communities in the planning, fundraising, and project management efforts to move recreation projects like the recent Monkton Town Forest project forward.


Lake Dunmore Dock

Municipal Recreation and Organized Sports

Many communities in the Addison Region have local greens, parks, and sports fields that vary in size, amenities, and supported activities. The municipalities of Bristol, Cornwall, Middlebury, Monk-

Map 5 - Emergency Services



ton, Ferrisburgh, and Vergennes have active recreation departments or committees, while other communities have groups focused on town greens or ball fields that could evolve into recreation committees. Smaller communities often depend on neighboring towns for recreation facilities while recognizing the importance of more conveniently located local opportunities. These towns also rely on their schools to provide recreation facilities, especially sports fields and playgrounds, with schools and associated fields often forming community recreation centers, supplemented by organized youth and adult sports leagues throughout the Region.

ACRPC has supported the ongoing demand for more recreational opportunities by enabling projects such as the effort to create the Cornwall Outdoor Recreation Area with planning, grant writing, and project management assistance.[42]

Health & Safety

STATE HEALTH PLAN

The Vermont Department of Health's 2025-2030 State Health Improvement Plan (SHIP) lays out a five-year strategic blueprint to ensure that all Vermonters—especially communities experiencing historic inequities (such as Indigenous people, people of color, LGBTQ+ Vermonters, older Vermonters, people with disabilities, and people who are unhoused)—have fair access to the conditions that support good health.

The plan establishes four overarching goals: (1) improve the availability of affordable, accessible, safe housing; (2) improve health and quality of life by addressing the high cost of living; (3) increase access to inclusive, equitable, and affordable health care services; and (4) strengthen the capacity of the mental health and substance use services system.

To achieve these goals, the plan uses a framework of strategies (actions to be taken by communities, agencies, and partners), indicators (population-level health outcomes to track), and performance measures (to monitor how well the strategies are working). Implementation depends on collaboration across sectors (housing, finance, health care, social services, community partners) and prioritizes a "Health in All Policies" approach—recognizing that health is shaped by where people live, work, learn, and play.

HOSPITALS

Porter Medical Center, University of Vermont Health (PMC) is the major institutional provider of healthcare in the Addison Region. PMC, also referred to as Porter Hospital, is a nonprofit healthcare institution located in Middlebury. Founded in 1925, the facility has grown to serve the residents of Addison County and surrounding areas.

The hospital operates as a 25-bed acute care facility under its Critical Access Hospital designation and is part of the UVM Health Network. On the same campus,

it maintains a 98-bed skilled nursing facility (including memory care, short-term rehabilitation, and long-term care units) through the Helen Porter Healthcare and Rehabilitation Center.

Additionally, PMC supports a network of outpatient clinics and medical practices across the region including primary care in Middlebury, Vergennes, and Brandon, as well as specialized services in cardiology, orthopedics, obstetrics/gynecology, ear-nose-throat (ENT), podiatry, and more. The campus includes a modern Birthing Center, surgical suites, a 24-hour physician-staffed emergency department, diagnostic imaging and laboratory services, infusion center, and ExpressCare for urgent outpatient needs.

PMC released a 2024 Community Health Needs Assessment (CHNA) report for Addison County. The report recommended that organizations in Addison County focus on Access to Health Care, Housing, Mental Health and Substance Use, and Social Determinants of Health.

Addison Region residents also have access to hospital services at University of Vermont Medical Center (UVMC) and Rutland Regional Medical Center (RRMC). UVMC, in Burlington, is the largest healthcare facility in the state. It is a 533-bed, Level 1 trauma care center and is a teaching hospital affiliated with the University of Vermont Medical School. RRMC in Rutland is a 145-bed community hospital and is the second largest hospital in Vermont.

PRIMARY HEALTHCARE

Primary healthcare in the Addison Region is provided by a variety of organizations. There are nine medical practices owned and managed by Porter Medical Center located in Middlebury, Vergennes, and Brandon. The PMC practices include five family practices, as well as Porter OB/GYN, Porter Internal Medicine, Porter Ear, Nose and Throat, and Middlebury Pediatric and Adolescent Medicine. PMC also contracts with Green Mountain Urology to provide a clinic in Middlebury.

Between 15 and 20 other physicians maintain independent practices around the Region. Other clinics provide healthcare services locally. The Open Door Clinic is a free clinic for uninsured and under-insured Addison Region residents providing primary care in Middlebury and Bristol. Mountain Community Health, in Bristol, is a Federally Qualified Health Center (FQHC). An FQHC is a primary care clinic that receives federal grants to provide healthcare to underserved communities, often in designated shortage areas. These centers offer a range of comprehensive services and operate on a sliding fee scale based on income.


Porter Medical Center, University of Vermont Health, Middlebury

Residents in the southern part of the Addison Region may seek medical services in Brandon or the Rutland area. To the north, region residents may choose to see practitioners in Chittenden County.

While according to the State's measurements the Addison Region is well supplied with medical providers, the towns of Orwell and Bristol are still designated as Medically Underserved Areas by the federal government. Generally, access to healthcare services is more difficult for those in the outlying towns since most of the providers are in Middlebury. The Shorewell Clinic, which provides primary care from an office in Shoreham, was created as a response to the need for medical care that was more accessible to rural residents. Given the rural nature of the Addison Region, it has traditionally been and continues to be more difficult to attract and retain primary care providers.

HOME HEALTHCARE

As Vermont has the second oldest population in the country and Addison County the oldest county in the State, home healthcare has become a growing component of the healthcare delivery system over the past decade. Homecare services have expanded in scope and intensity as insurers, doctors, and hospitals look

for ways to control healthcare costs by caring for patients in their homes whenever possible. Patients are being discharged from hospitals sooner and need greater care at home. The number of frail elderly people who wish to remain in their homes is growing, thus increasing demand for homecare services.

Addison County Home Health and Hospice, Inc. (ACHHH) provides skilled care services such as nursing, physical therapy, occupational therapy, social work, and nutrition consultation. ACHHH also offers other support services through home health aides who provide personal care and homemakers who assist with basic housework. The agency also provides special services such as hospice care and mother-child health services.

VERMONT DEPARTMENT OF HEALTH

The Vermont Department of Health (VDH) has a district office in Middlebury that serves the Region's municipalities. VDH provides health promotion and disease prevention services in partnership with local healthcare providers, voluntary agencies, schools, businesses, and community organizations. Public health nurses, nutritionists and outreach workers carry out VDH's programs locally. Services available through VDH's office in Middlebury include programs for Dr. Dynasaur-eligible children, the Region's childcare providers, pregnant woman and young children, as well as cancer screening for at-risk populations. The Region's municipal health officers also receive support from VDH's district office.

HEALTHCARE AT EDUCATION FACILITIES

Elementary and secondary schools in the Addison Region vary in the level of healthcare services they provide on site. The Region's larger schools have full-time registered nurses, while the smaller schools have a nurse on site only part time. School nurses are responsible for health screenings, immunizations, and general health issues for students. In some schools, nurses are also involved in classroom teaching, and some have school-based Health Centers.

Middlebury College has its own health center, Parton Health Center (PHC), which serves the basic healthcare needs of its students. PHC has a staff of around 20 full- and part-time employees. PHC has two inpatient beds and one observation bed. The College also provides psychological support through its Center for Counseling and Human Relations.

DENTAL CARE

There are approximately 11 dental practices in the Addison Region, most in Middlebury with one in Bristol and several in Vergennes. There is one orthodontics practice, while the others provide general dentistry. Community health sites like Mountain Community Health in Bristol offer dental care with sliding-scale fees as a Federally Qualified Health Center. Overall, in the Addison Region, there is a lack of available, accessible dental healthcare services, particularly for low-income residents and those without insurance for preventive care. Many clinics report capacity constraints, and many residents go out of the Region for dental services.

MENTAL HEALTH

The Counseling Service of Addison County (CSAC), a local community mental health center located in Middlebury, serves Addison Region residents. CSAC offers a range of professional mental health and developmental services. In addition to providing direct services, CSAC focuses on prevention, early intervention, and outreach services by working collaboratively with other community agencies. It also provides a full-range of support services to people with severe mental illness including a supervised residential setting, an eating disorders program, a sex offender treatment program, and a 24-hour emergency crisis hotline. CSAC's main offices are in Middlebury with satellite offices in Bristol and Vergennes.

Additionally, there are more than 15 private counselors, psychologists, and licensed social workers in the Region with a variety of specialties.

NURSING HOMES AND RESIDENTIAL CARE FACILITIES

As the baby-boom generation ages, there will be an increasing demand for healthcare services in general and long-term care services in particular. In the Addison Region, residents in need of residential care have access to nursing homes and residential care homes both in the Region and in the Burlington and Rutland areas.

The largest nursing home facility in the Region is the Helen Porter Healthcare and Rehabilitation Center (HPHRC), which is part of Porter Medical Center,



Porter Medical Center, University of Vermont Health, Middlebury

in Middlebury. It is licensed for 105 beds—including dedicated neighborhoods for long-term care, post-acute rehabilitation, memory care, and specialized palliative/hospice end-of-life suites. Facilities include a full post-acute rehabilitation program with physical, occupational, and speech therapies aimed at helping residents return home after hospitalization or surgery. The memory care and long-term care wings share a "home-like" environment, and recent renovations have introduced private rooms, upgraded therapy spaces (including a simulated household kitchen and natural light), and modern end-of-life suites developed in partnerhsip with the ACHHH hospice program. The building and grounds also feature well-equipped communal areas, a secure courtyard, landscaped outdoor space, and amenities tailored to resident comfort and dignity.

There are a small number of smaller residental care facilities in the Region as well, including EastView at Middlebury, The Residence at Otter Creek in Middlebury, Vergennes Grand, and Shard Villa in Salisbury, offering various levels of support such as assisted living, memory care, and skilled nursing. Residential care homes are state-licensed, group-living arrangements designed to meet the needs of people who cannot live independently and usually do not require the type of care provided in a nursing home. Increasing residential facilities for seniors in the Region is an important need.

HUMAN SERVICES

There are numerous organizations that provide a broad range of services to the elderly, those with disabilities, parents, children, and other residents of the Addison Region. There are also a few coalitions or councils, which are working together to better meet the needs and improve the quality of life of the Region's residents.

Helping Overcome Poverty's Effects (HOPE), originally formed as the Addison County Community Action Group (ACCAG), has been providing a wide variety of programs to low income people since 1965. HOPE's core facility houses one of the Region's largest food shelves, serving over 3,000 people annually, which offers non-perishable foods, dairy, fresh produce, and baked goods donated from local farms and gleaning initiatives. Beyond the food shelf, HOPE operates a thrift/resale store on Boardman Street, Middlebury, that provides clothing and household goods vouchers to clients. It offers a broad suite of supportive services including emergency rent and utility assistance, help with medical and dental needs, job-related aid (such as tools or uniforms), budget counseling, and assistance to persons experiencing homelessness (including hotel stays, laundry vouchers, and referrals).

Charter House Coalition (CHC) is a nonprofit based at 27 North Pleasant Street, Middlebury, VT, serving adults (and some families) experiencing homelessness or housing instability in Addison County. Founded in 2005 as a volunteer-based outreach providing meals and a "warming shelter," the organization has grown into a year-round emergency shelter with professional staff and multiple support services. In 2024, they provided more than 9,491 bed nights and over 23,000 meals, with outreach and case-management services to hundreds of individuals and households in Addison County. CHC fills a low-barrier shelter role: they accept individuals often excluded in other settings (e.g., due to substance-use, mental-health issues, past incarceration) and focus on humanity, respect, and dignity. They act as a hub and connector; by serving as coordinated entry point, they help integrate the homelessness/housing-services network in Addison County.

John Graham Housing & Services (JGHS) provides affordable, safe housing and emergency shelter in Addison County for low to moderate-income individuals and families and those without a place to live. The John Graham Shelter in Vergennes is the only emergency shelter for families with children in Addison County.

Atria Collective, formerly known as WomenSafe, is a nonprofit serving people across the gender spectrum who experience sexual violence, domestic violence, dating violence, and stalking. With the collaboration of staff, volunteers, community members, and the Atria Collective Board of Directors, they provide services for folks all throughout Addison County and the town of Rochester. Atria is also an active member of the Vermont Network Against Domestic Violence and Sexual Assault, The Addison County Council Against Domestic and Sexual Violence, and the Sexual Assault Response Team of Addison County.

Regarding substance use services, the Addison Region includes **Turning Point of Addison County**, a non-profit center which is one of 12 peer recovery centers in Vermont that focus on support for individuals and their families seeking recovery from substance use disorder and other addictions; **SaVida Health** whose mission is to redefine opioid addiction treatment, by integrating a blend of evidence-based medical treatments with emotional and psychological support; and, **Valley Vista**, a drug and alcohol treatment center.

PUBLIC TRANSPORTATION

The main provider of public transportation in the Addison Region is **Tri-Valley Transit** (TVT), a non-profit public transportation provider serving the central Vermont region, including the counties of Addison, Orange, and northern Windsor with plans to extend into Washington County, starting July 1, 2026. See Chapter 3, Transportation.



HOUSING PROVIDERS

There are a few nonprofit and governmental entities that provide housing and related services in the Addison Region including **Addison Housing Works** (AHW), **Vermont State Housing Authority** (VSHA), **Champlain Valley Office of Economic Opportunity** (CVOEO), and the **Vermont Economic Services Division**. Together, these efforts illustrate a range of housing responses—from higher-performance cohousing and senior rental housing to broader affordable-housing portfolios—working to provide diverse housing options in the Addison Region.

Addison Housing Works (formerly Addison County Community Trust) provides opportunities for affordable homeownership in the Region. AHW owns and operates nine mobile home parks where residents own their homes and the Trust owns the land. AHW also offers the Homeland program that allows residents to own a home and lease land from the Trust. In the Region, AHW manages 340 mobile home lots and 334 rental apartments. The organization also manages about 76 homes in its single-family, shared-equity program.

Other innovative initiatives provide diverse housing options in the County. **Weathervane United** in Lincoln is a project that transformed three buildings in Lincoln's village center into 10 apartments for the area's older population. Over the years, these apartments have housed around 50 residents. The housing project is run by a volunteer board, which helps keep rent affordable for tenants. **Bristol Village Cohousing** is an intentional cohousing community completed in 2017 in the heart of the village area of Bristol. It offers 14 dwelling units plus a central common house and shared green space on two acres.

The **Champlain Valley Office of Economic Opportunity** (CVOEO) is a federally-designated Community Action Agency incorporated in 1965, which serves Franklin, Grand Isle, Chittenden, and Addison counties. Vermont's five Community Action Agencies (CAAs) receive basic funding through annual Community Services Block Grants from the federal Department of Health and Human Services. CVOEO's Housing Assistance Program aids low-income residents, including renters, homeowners, and the homeless with security deposits, back rent or mortgage assistance, housing searches, home buying, repair information, advocacy, landlord/tenant, and fair housing issues. CVOEO also provides

assistance with weatherization and energy bills for income-qualified homeowners in the Region.

Other organizations and agencies provide assistance such as housing vouchers, programs for first-time homebuyers, and funds to keep people from becoming homeless. There are also services aimed at specific populations such as the elderly, disabled, teens, or mentally ill. The **Vermont State Housing Authority (VSHA)** manages 64 units of affordable rental housing for the elderly and disabled in Middlebury and 12 units in Vergennes. The **Counseling Services of Addison County** has some housing for its clients. See Chapter 5, Population and Housing.

SERVICES FOR THE ELDERLY

There are several organizations that provide a range of services to the Region's elderly. **Age Well** is a regional community-based coalition that serves as a clearinghouse, referral service, and service provider. Age Well serves anyone age 60 or older in Addison, Chittenden, Franklin, and Grand Isle counties. Age Well coordinates programs like **Meals on Wheels**, which provides home delivery of hot meals, and Senior Companions, who are older adults who help other seniors live independently. Age Well also offers assistance like health insurance counseling, a help line, and programs that provide caregiver support.

Elderly Services Inc. (ESI), headquartered on Exchange Street, Middlebury, operates a suite of programs designed to support older adults and their families in Addison County. Its flagship initiative is **Project Independence**, a nationally-recognized adult day program that offers medically-oriented daytime care for elders facing chronic illness, memory issues, or social isolation, providing hot meals, nursing oversight, transportation, social activities, and individual support plans. Beyond the adult day center, ESI offers eldercare counseling and consultation for family caregivers, a lifelong-learning program (ESI College) with pay-what-you-can classes, and caregiver support groups and educational seminars. In recent years, ESI has invested significantly in facility upgrades to enhance its capacity, efficiency, and environmental sustainability. In early 2024, the organization secured a $1.785 million state grant to support major repairs and energy-efficiency improvements at the Weinberg Center, including new insulation, solar panel installation, replacement of roofing and siding, and a geothermal heat-pump system.

LAW ENFORCEMENT AND CRIMINAL JUSTICE

State Police

The Vermont State Police (VSP) serves as a primary law enforcement agency in Addison County, particularly for towns without their own full-service municipal police departments. They provide statewide police services including traffic enforcement, criminal investigations, and response to major incidents. In Addison County, their local coverage is anchored by the "New Haven Barracks" field station, which is responsible for patrolling state highways and providing support to local agencies. The VSP also has taken on expanded roles such as embedding mental-health crisis specialists and enhancing training for officers responding to behavioral health-related calls.

The New Haven Barracks located on Route 7 functions as the command point for troopers in the area, includes administrative offices, and vehicle fleet support.

Addison County Sheriff's Department

The Addison County Sheriff's Department (ACSD) has the jurisdiction to provide police services throughout the County. However, it does not have the resources to fully function in that capacity. ACSD provides transport of prisoners and security at the County courthouse. It is the primary agency responsible for civil service process throughout the County and provides other public safety services, such as crowd control, as needed. Towns in the Addison Region without municipal police departments may contract with the ACSD to provide local law enforcement patrols. ACSD also patrols the Green Mountain National Forest's recreation areas within the County on a contractual basis.

ACSD has occupied its location on Court Street in Middlebury for over 150 years. The building was built in 1845 as the sheriff's residence, sheriff's department, and county jail. The jail is no longer in operation.

MUNICIPAL POLICE DEPARTMENTS

In the Addison Region, Bristol, Middlebury, and Vergennes have municipal police departments. In their

coverage areas, these departments are the primary law enforcement entity.

Bristol Police Department

The Bristol Police Department (BPD) was formed in 1903 with one officer who patrolled the two-block business district. Currently, the department employs six full-time officers, including the chief. The Bristol Police Department serves the village of Bristol (approximately a 1-square-mile district) and the broader municipal area in partnership with the Vermont State Police and the Addison County Sheriff's Department, operating as a full-service agency providing 24-hour coverage within its jurisdiction.

In 2013, the department moved into a purpose-designed station at 72 Munsill Avenue, replacing its previous basement facility in Holley Hall; the new ~2,200-square-foot leased facility features enhanced security, prisoner holding capability, and room for future expansion. Recent annual reports highlight the department's growth in staffing, ongoing community partnerships (including local mental-health and addiction-services agencies), and equipment upgrades. Overall, the BPD has focused on modern community-oriented policing, infrastructure suited to current public-safety needs, and proactive collaboration with allied agencies and local organizations.

Middlebury Police Department

The Middlebury Police Department (MPD) serves the town of Middlebury and is responsible for 24-hour law enforcement coverage including patrol, investigations, traffic enforcement, community policing, and emergency dispatch support. The department emphasizes building partnerships with residents and local institutions. MPD also coordinates closely with other agencies such as the Addison County Sheriff's Department, the Vermont State Police, and campus public safety at Middlebury College to handle mutual-aid responses, large events, and specialized investigations.

The MPD occupies a modern repurposed campus on the site of a former wastewater treatment plant off Seymour Street- an adaptive reuse project completed around 2021 which converted old industrial buildings into a police station, vehicle garage, forensics lab, and administrative space. The building includes secure detention capacity (able to securely hold up to six people, with space for additional non-secure holding) and is equipped to serve as an emergency operations center with full backup power, multi-media briefing rooms, and a mobile command post vehicle.



Middlebury Police Station

Middlebury has identified a need to evaluate the dispatch system, which currently uses the VT Department of Public Safety in off-hours and local dispatchers during daytime hours. It will examine the level of service to the public and accessibility of the police for emergency and non-emergency service calls.

Vergennes Police Department

Vergennes established its own police force in 1980. A full-time chief and seven full-time police officers along with trained assistants provide full-service law-enforcement including patrol, traffic enforcement, criminal and juvenile investigations, and ordinance enforcement for the City. Since March 2014 the department has been housed in a modern 4,611 square-foot facility at 8 Main Street, designed with the capacity for up to ten full-time officers and built to support functions such as secure custody processing, evidence storage, a sally port, and training.

Municipal Constables

All the Region's municipalities have, as required by state statute, an elected or appointed town constable. These municipal constables are typically responsible for enforcing local ordinances, which are often not covered by other law enforcement entities.

The level of training, experience, and job description of municipal constables varies greatly among towns. In some municipalities, the constable is the local law

enforcement officer, with all powers of search, seizure, and arrest within the town. In other communities, the constable has limited power and authority. By state statute, a constable's authority is limited to the municipality, while municipal police have statewide jurisdiction.

OTHER LAW ENFORCEMENT ENTITIES

Middlebury College Security

Middlebury College has a Department of Public Safety that provides a uniformed security staff 24 hours a day. The department maintains regular foot and cruiser patrol of campus and responds to emergencies. The department's staff includes 11 full-time officers and 6 full-time telecommunicators. Campus security officers do not have powers of arrest, but work closely with local law enforcement agencies. The Department maintains two fully equipped patrol vehicles. Through the use of these cruisers, foot patrol, and seasonal bike patrol, officers maintain continual patrol through the College's buildings and grounds.

Forest Service

The Forest Service has a public safety role within the boundaries of the Green Mountain National Forest. Forest Service rangers participate in search and rescue operations and enforce regulations within the forest.

Game Wardens

The State Department of Fish and Wildlife has a statewide warden force of around 30 officers who each oversee a district of approximately 300-square miles. Wardens enforce fish and wildlife, boat, snowmobile, ATV (all-terrain vehicle), and general criminal laws. These officers are trained in compass and map skills and are frequently called in to assist other law enforcement agencies in search and rescue operations. Generally, at least one of the state wardens operates out of the Addison Region.

E-911 AND DISPATCH SERVICES

In the early 1990s, Vermont recognized that emergency dispatch radio system used by the State was severely outdated and in need of modernization. The State began to explore a system of consolidated dispatch centers and development of a statewide Enhanced 911 system began. In 1998, emergency dispatch in the Addison Region was consolidated into the newly built Public Safety Answering Point in Williston and the E-911 system became operational statewide. The Williston office dispatches some of the Region's emergency responders directly, including the state police. Some of the Region's fire and rescue organizations continue to have local dispatchers to whom the Williston office transfers the calls.

Enhanced 911 provides everyone in Vermont with 911 service and provides emergency responders with information about the source of the 911 call. Vermont was the first state to use an all-digital, statewide network for public safety emergency response calls. Implementation of E-911 required renaming of some local roads to conform to naming standards. All structures were given new 911 addresses and new structures are addressed following the 911 conventions. The system is also capable of processing calls that originate from cellular service providers. As the technology in the actual phones has improved, the system can now locate where some cell phone calls into the system originate from, which greatly improves the ability to respond to an emergency call from a cell phone.

ADDISON COUNTY COURT

Since 1798 three buildings in Middlebury, all in the same vicinity, have served as the Addison County Courthouse. In 1995 the County Courthouse moved to the Frank Mahady Courthouse, a 39,500-square-foot facility behind the former courthouse. The Addison County Family, District, Superior, and Probate courts are located in the courthouse.



Mahady Courthouse, Middlebury

CORRECTIONAL FACILITIES

There is no state prison or jail in Addison County itself; the Addison County Sheriff's Office once had its own local jail, but it is no longer in operation.

The closest state-run correctional facility is the Marble Valley Regional Correctional Facility in Rutland. Most detainees from the Addison Region who require incarceration are transported either to the Marble Valley Regional Correctional Facility in Rutland or to the Chittenden Regional Correctional Facility (CRCF) in South Burlington. There is no federal prison facility in Vermont.

Vermont's prison population was more than 1,650 in 2025, below the roughly 1,750 seen in 2019 and a peak of more than 2,200 in the late 2000s. State data shows the detainee population—people jailed while awaiting trial—has been rising more rapidly than the sentenced population. At the same time, Vermont's prisons have experienced persistent staffing shortages. This has required the State to send prisoners to other states, currently via contract to Mississippi.

Vermont's policy has traditionally been to incarcerate only violent or repeat offenders and to deal with lesser offenses with probation, community service, and other community-based programs. The vast majority of people in Vermont's corrections system are not incarcerated. The Vermont Department of Corrections has 12 community-based facilities, also called probation and parole offices or field offices, throughout the State, including the Mahady Courthouse in Middlebury.

CRIME RATES

In Addison County, violent crime is very low relative to national figures — recent data show an annual rate of about 31.2 violent crimes per 100,000 residents (for 2019–2023) compared to roughly 106 per 100,000 nationally. Property crime is also low, at approximately 62.3 property crimes per 100,000 residents over the same period, versus about 163 nationally.

Addison County remains a relatively safe area—with crime rates well below national averages—but like Vermont overall, it is not static. Statewide data shows increases in some crime categories (e.g., aggravated assault, homicide) over the past decade.



Bristol Fire Department

FIRE PROTECTION AND RESCUE SERVICES

Volunteer Fire Departments

There are 17 fire departments in the Addison Region. Additionally, the Brandon Fire Department, which is outside the Region, serves the towns of Goshen and Leicester. The Vergennes Department serves the towns of Panton, Waltham, and portions of Ferrisburgh in addition to the City of Vergennes. The remaining municipalities have local departments. Most of the fire departments in the Region are composed entirely of volunteers. Middlebury and Vergennes operate paid-on-call volunteer departments, compensating responders for time spent on calls. Most of the Region's fire departments are nonprofit organizations independent from their municipalities. Funding comes through a combination of appropriated municipal funds, fundraising efforts, grants, and donations.

Several Addison County municipalities have been studying and budgeting for fire station improvements or replacements rather than ongoing repairs, driven by aging buildings and modern operational needs (larger apparatus bays, storage, training space, ADA, and mechanical upgrades). For example, Vergennes has publicly funded station studies and estimated multi-million-dollar upgrade needs to bring an older station up to current standards, and New Haven is pursuing construction of a new fire station. Those capital projects are increasingly showing up in town official discussions and municipal capital plans.

The Addison County Firefighters Association (ACFA) is a regional organization of the local departments. Member departments have a mutual aid agreement to provide

assistance to each other as requested. The association also offers a yearly fire training school and a basic training course for new firefighters as needed. That network is a key resilience factor while individual town departments grapple with staffing and capital stresses. Addison County's fire services remain community-rooted and resilient, but are under growing financial and personnel pressure. Higher apparatus and gear costs, plus aging stations, are forcing capital planning and grant-seeking; meanwhile, volunteer declines are motivating conversations about paid staffing models and regional consolidation to ensure reliable 24/7 coverage. The County's mutual-aid structures and association work by time and capacity, but many towns are actively weighing long-term shifts from an exclusively volunteer model toward hybrid or regional approaches.

Other Fire Responders

Each municipality in the Region has an appointed Forest Fire Warden. The wardens issue burning permits for the purpose of burning natural wood, brush, weeds, or grass in their town. The chief of the local fire department now serves as the town forest fire warden. They have the authority to appoint one or more deputy fire wardens to assist with responsibilities.

Emergency Medical Service (EMS)

There are four emergency transport squads that serve Addison Region residents: the Bristol Area Rescue Squad, the Middlebury Volunteer Ambulance Association, and the Vergennes Area Rescue Squad are located within the Region. The Brandon Rescue Squad, located outside the Region, serves the towns of Goshen and Leicester. The service areas of the squads in the Region do not follow municipal boundaries and there are back-up protocols between the squads to provide coverage when the primary responder is not available. The Emergency Medical Services Division of the Vermont Department of Health licenses these squads and establishes training requirements for rescue personnel. The Region's rescue squads are funded through a mix of billing for service, appropriations from municipalities, fund-raising, and subscriptions or donations.

Additionally, there are five first response teams located in the outlying towns that provide emergency medical services in the Region. First-response teams —often volunteer-based squads affiliated with fire or rescue departments—provide the critical "first on-scene" emergency care before ambulances arrive. As demand for emergency care rises and response expectations grow, these first-response teams represent a crucial but vulnerable piece of the County's public-safety backbone.

The EMS system faces widespread staffing and funding challenges. While call volumes have increased, many services, including those in rural counties like Addison, rely heavily on volunteers. Many face recruitment and retention pressures, and they struggle with reimbursement models that do not fully cover costs. The EMS system will need to navigate several key challenges to maintain and strengthen service. Limited volunteer availability, increasing medical complexity, and the need for career staffing are putting pressure on existing agencies. Funding models are another major issue: Vermont EMS providers report that reimbursement rarely covers the full cost of readiness and response, particularly in incidents that do not result in patient transport.

As the Region continues to respond to an evolving health-care environment, emergency medical services will need to adapt: expanding training, integrating with regional hospital and long-term care networks, enhancing community paramedicine or mobile-integrated-health roles, and ensuring that response capacity is resilient against growing demands, natural disasters, and infrastructure stresses.

EMERGENCY MANAGEMENT

Municipal Emergency Management Directors

Municipalities appoint a Local Emergency Management Director (LEMD) as required by state statute. The responsibilities of the LEMD include identifying a community's vulnerabilities, planning for emergencies, responding to disasters, and conducting recovery operations.

The level of involvement, training, and expertise of the LEMDs in the Addison Region varies. In about half of municipalities, these responsibilities are held by the Select Board Chair. Other municipalities have appointed an LEMD or supporting Emergency Management Coordinator. Some LEMDs have attended Vermont Emergency Management sponsored courses and participate

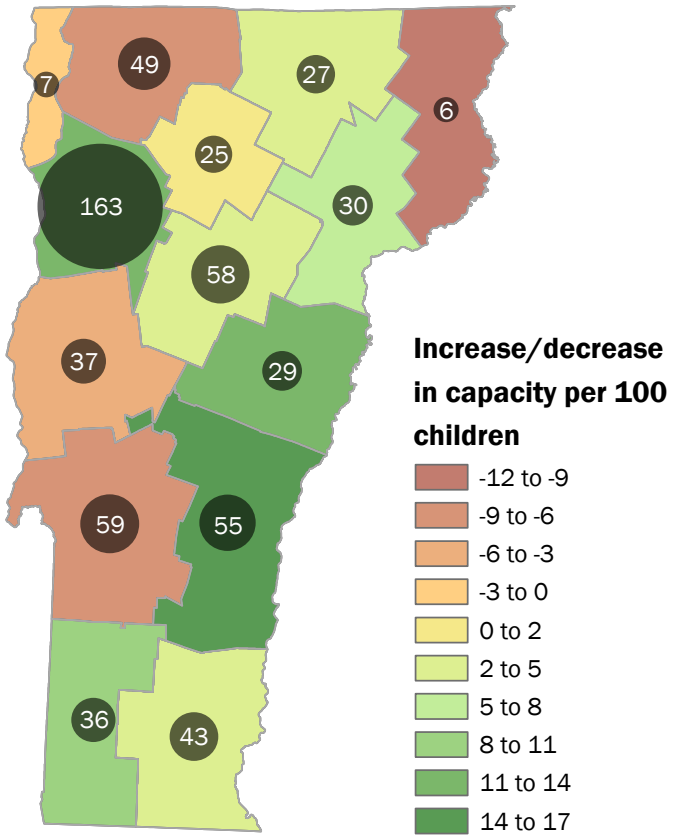
in regional coordination. In some municipalities, LEMDs are preparing to respond to future disasters by purchasing and installing back-up generators for emergency shelters and developing shelter plans. All LEMDs in the region have participated in the development of a Local Emergency Management Plan for their municipality.

Addison County Regional Emergency Management Committee

The Addison County Regional Emergency Management Committee (ACREMC) was formed after the Local Emergency Planning Committee (LEPC #8) for the Addison Region was absorbed into a new statewide LEPC. Voting members of the REMC are made up of Local Emergency Management Directors and Emergency Services Representatives from each municipality in the Region. Representatives from fire departments, emergency medical services, law enforcement, media, transportation, hospitals, the Department of Health district office, organizations serving vulnerable populations, and any other interested public or private individual or organization are invited to attend and participate.

The REMC conducts All-Hazards preparedness planning and coordinates with Vermont Emergency Management (VEM), the State Emergency Response Commission (SERC), and the new Statewide Local Emergency Planning Committee (LEPC). ACRPC provides administrative support, including taking meeting minutes, with funding from VEM.

Map 6 - Changes in Childcare Capacity in Vermont, 2023



***2023 Population in thousands displayed in grey circles**

Other Organizations

In the event of a disaster or emergency, other organizations in the Region would be called into service such as the American Red Cross and the National Guard.

See Chapter 7, Flood Resilience and Emergency Management

Table 2: Childcare Providers and Capacity in the Addison Region

	Number of Providers	Total Licensed Capacity	Infant Licensed Capacity	Toddler Licensed Capacity	Preschool Licensed Capacity	School Age Licensed Capacity
Center Based Child Care & Preschool Programs	28	182	37	31	38	76
Registered Family Child Care Homes	19	40	7	17	13	3
Licensed Family Child Care Homes	3	789	73	117	568	31
Afterschool Child Care Program	13	1007	22	21	0	964

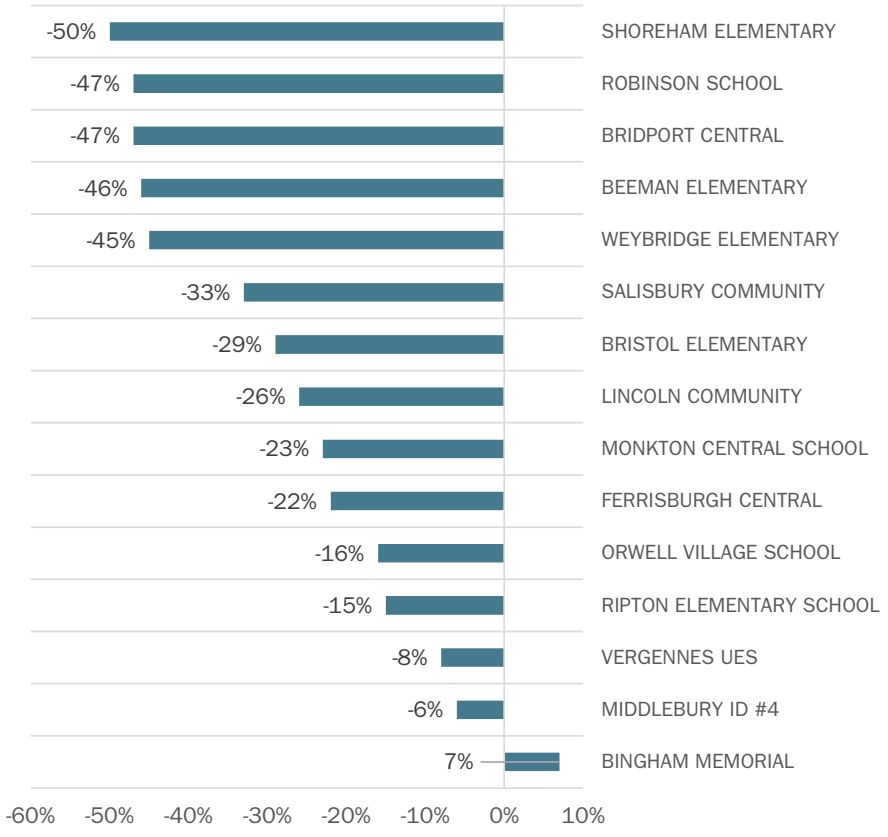
Childcare

Childcare is essential for the Region's children, families, and workforce, driving community economic development. Quality childcare fosters children's social and academic growth, supports families in high-risk environments, and enables parents to work, thereby strengthening the economy and expanding the tax base. However, high costs create barriers, particularly for low-income families, highlighting the need for equitable access to childcare. Affordable childcare is defined as costing no more than 7% of a family's income. Higher-quality childcare typically includes low staff-to-child ratios, licensed facilities, and trained educators.[43]

The State and Region face a childcare crisis. According to the nonprofit organization Let's Grow Kids, Vermont's child care system is stretched thin. Though approximately 21,131 children under the age of five in Vermont are likely to need some form of childcare, only 12,380 full-day, full-year slots exist for infants, toddlers, and preschoolers, and just 8,090 meet the State's high-quality standards. That leaves 61% of infants likely to need care without a quality option. The average two-child household spends around $26,000 a year on childcare, and educators earn a median of $39,315, often without benefits—below a livable wage. As of 2025 there were a total of 153 providers in the Addison Region with a licensed capacity of 2,022 and a vacancy rate of 3.07%.[44]

Act 76, enacted in 2023, invests $130 million annually from the State's general fund and introduced a 0.44% payroll tax. This public subsidy aims to improve affordability and expand access, including for children with special needs who require one-on-one assistance or specialized equipment. Even with these investments, gaps persist, particularly in workforce compensation, rural access, and infant and toddler care availability. Continued monitoring of access, affordability, and workforce conditions will be essential in understanding how well the childcare system is meeting the Region's needs.

Figure 1: Percent Change in K-5th Grade Student Enrollment (2004-2025)

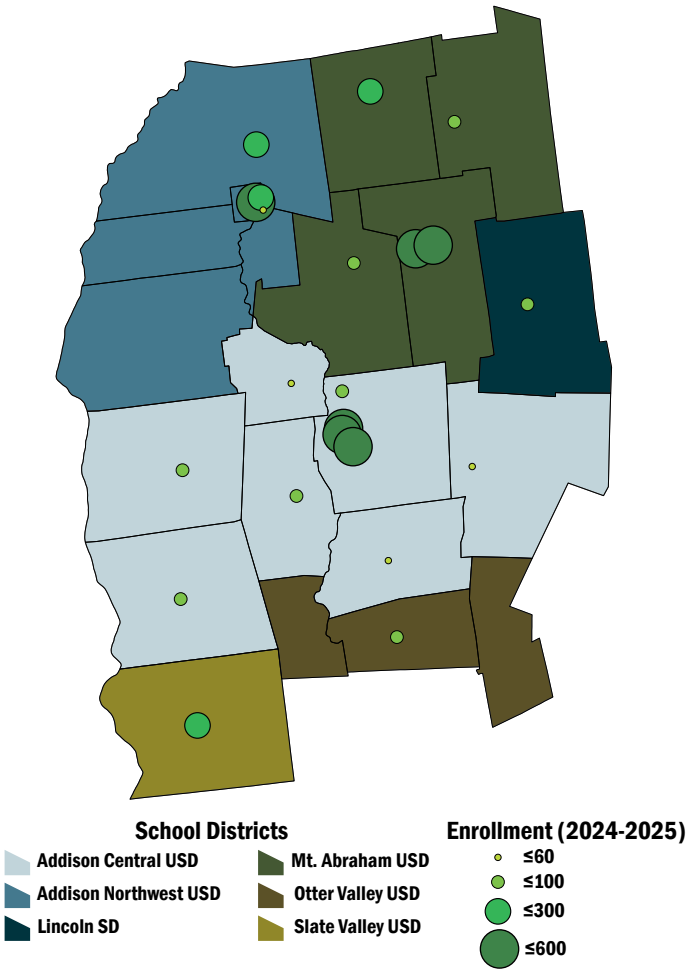


FUTURE TRENDS

The future of childcare in the Addison Region should prioritize affordable, high-quality care to meet the current and future workforce needs. Despite an aging population, the need for childcare is strong, but challenges like low wages for childcare workers and a lack of capacity persist. The need to continue to invest in childcare infrastructure will be essential to support a strong and resilient regional workforce.

To ensure that childcare meets regional workforce demands, additional childcare facilities are needed within and surrounding the Region's growth areas to match facilities with areas of employment. The largest growth should occur in Middlebury, Vergennes, and Bristol. A Let's Grow Kids analysis identifies that to meet demand, the Region would need to add an additional 323 infant slots, 129 toddler slots, and 148 preschool slots, increasing the total licensed capacity to 2,622.[45] As the population increases, more capacity and childcare workers will be needed.

Map 7: Addison Region School Districts and Enrollment



OTTER CREEK CHILDCARE CENTER EXPANSION IN MIDDLEBURY

After approximately seven months of renovation and expansion, the Otter Creek Child Center (OCCC) facility, located at 150 Weybridge Street, reopened its classrooms in December 2025, having added 12,000 square feet to its size.

The renovation allowed two facilities, College Street Children's Center and Otter Creek at Inn on the Green, to merge into a single facility that doubles their combined capacity from 69 to 139 childcare spots. The expanded center will be fully staffed, employing a total of 24 classroom teachers, six "floating" educators, three program directors, and a family and engagement coordinator.

Many organizations and individuals were instrumental in funding the OCCC expansion and advocating for policy changes in order to provide families with the financial support they need to afford quality child and infant care:

- Middlebury College
- Private Donors
- ACRPC-RBMS and Phase 1 Environmental Site Assessment

To meet the increased capacity and to maintain current staff-to-child ratios, an additional 125 childcare workers will be needed. Investments in professional development and competitive wages will be essential for increasing the Region's childcare workforce, reducing staff turnover, and ultimately improving care accessibility and quality. Training the new childcare workforce will require collaboration with local schools, training centers, employers, and childcare centers to meet the current and future demands.

Affordability will continue to be a barrier to accessing childcare. The Child Care Contribution (CCC) payroll tax, implemented under ACT 76, has helped reduce costs for families and expand childcare capacity. However, this investment alone is not expected to fully close the affordability gap. Continued public investments through subsidies from Act 76 will be critical to lowering the barriers for financial assistance by increasing state reimbursements for childcare by 35%. Addressing the childcare crisis in the Region requires policy changes, employer partnerships, and workforce development.

Improving access to affordable childcare, supporting workers' professional growth, and expanding facilities in key employment areas can enhance workforce stability and improve children's development and school readiness.

OTHER SERVICES AND SERVICE PROVIDERS

There are numerous other organizations working to provide a broad range of services to the Addison Region. There are regional associations of religious leaders and congregations that both raise funds for other service providers and directly provide services. The People of Addison County Together (PACT) is another community coalition that seeks grants and other funding for a variety of community projects. The United Way of Addison County is a nonprofit fundraising organization that supports the work of other community organizations and service providers.

Education

SCHOOL DISTRICTS AND SUPERVISORY UNIONS

As of 2025, there are five school districts and one sole supervisory union serving Addison Region municipalities: Addison Central School District (ACSD), Addison Northwest School District (ANWSD), Mount Abraham Unified School District (MAUSD), Lincoln School District, Slate Valley Unified School District, and Rutland Northeast Supervisory Union. The first four are located entirely within the Addison Region and serve only the Region's municipalities. The latter two are located partly in the Addison Region and serve municipalities both in and out of the Region.

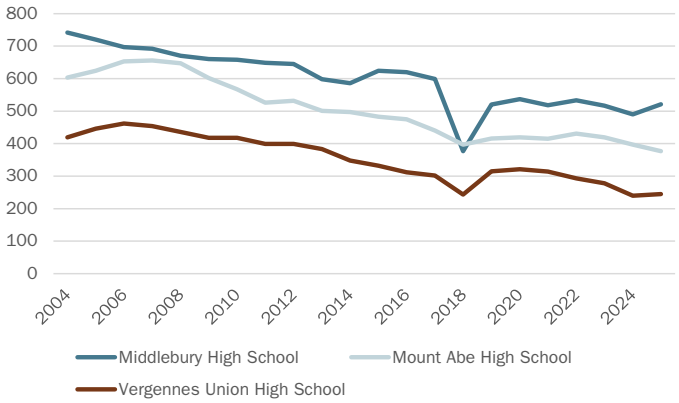
After a suspension of aid for school construction in 2007 led to a backlog of deferred maintenance, the Vermont General Assembly enacted Act 72 in 2021 to conduct a statewide assessment of the state's public-school buildings.[44/45]

Focusing on the four school districts that are entirely within the Region, each owned building received a report card in the fall of 2023 using a Facility Condition Index (FCI) along with itemization of associated repair costs.[46] In short, buildings were reported to need nearly $6.7 million in immediate repairs; if deferred maintenance continues through 2033, that estimated number increases tenfold. Currently, ten buildings are owned by Addison Central (including Ripton Elementary which is now closed and the Patricia A Hannaford Career Center); Addison Northwest owns three buildings; five are owned by Mount Abraham; and Lincoln owns a single building.[47]



Mary Hogan Elementary

Figure 2: Addison Region High School Enrollment



Overall maintenance and the longevity of school buildings will continue to remain in the forefront of community conversations together with decreasing enrollment and their combined relationship to property taxes.

PUBLIC ELEMENTARY SCHOOLS

There are currently 17 public elementary schools in the Addison Region. Addison Central and Addison Northwest schools both offer K-5, each moving sixth grade to middle/high schools in 2021 and 2024, respectively. Mount Abraham, Lincoln, Slate Valley, and Rutland Northeast continue to offer K-6. In addition to specific town-cited elementary schools, Addison, Panton, and Waltham send their students to Vergennes Elementary; Ripton sends its students to Salisbury Elementary; Goshen sends its students to Neshobe Elementary School in Brandon; and, Leicester and Whiting are served by Otter Creek Academy.

Enrollment at most elementary schools increased during the early 1990s, however, by the end of that decade, enrollment in many schools leveled off or decreased. The Region has continued to see a decline

in enrollment over the last 20 years, but to varying degrees. Comparing 2004 to 2025, both the average and median percent change show a decline of 26-27%. Five of our Region's elementary schools show over a 45% decline in enrollment, while only one school, Bingham Elementary in Cornwall, shows an increase of 7%.[46] (See **Figure 1**).

Over the past 8 years, Supervisory Unions/School Districts have had to make tough decisions to close some small elementary schools due to lower enrollment numbers, high operational costs, etc. Addison Central Elementary School closed in 2020 and students now attend Vergennes Elementary School. Leicester Central Elementary School and Whiting Village Elementary School combined to form Otter Creek Academy at Leicester, Sudbury (not in Region), and Whiting. As of the 2025-2026 school year, Ripton Elementary closed, and students are now attending Salisbury Elementary. Building expenses and repurposing these structures continue to be an evolving topic of discussion in local communities.

Given the Region's current demographic and housing trends (see Chapter 5), school enrollments will likely not return to the peak figures of the early 1990s in the near future. Many people are waiting longer to have children, if they choose to at all, due to a multitude of factors: career, financial security, lack of housing options, cost of insurance, lack of childcare opportunities, school loan debt, etc. Ideally, as housing inventory increases, it will boost school enrollment as well, however, this can prove to be a sluggish and prolonged progression.

PUBLIC MIDDLE AND SECONDARY SCHOOLS

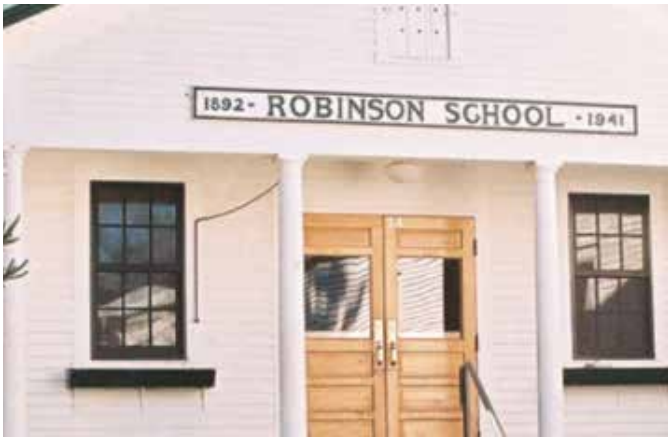
Regarding public middle schools, sixth to eighth graders from Bridport, Cornwall, Middlebury, Ripton, Salisbury, Shoreham, and Weybridge attend the Middlebury Union Middle School; sixth to eighth graders from Addison, Ferrisburgh, Panton, Vergennes, and Waltham attend Vergennes Union Middle School; seventh and eighth graders from Starksboro, Monkton, Bristol, and New Haven attend Mount Abraham Middle School; Goshen, Leicester, and Whiting students attend Otter Valley Middle School; and, Orwell students attend Fair Haven Middle School. Lincoln students in grades 7-12 participate in the school choice/tuition program for middle and high school.



Mt. Abraham Middle and High School, Bristol

There are five public high schools that serve students from the Addison Region: Middlebury Union High School, Mount Abraham High School, Vergennes Union High School, Otter Valley Union High School, and Fair Haven Union High School. The first three are in the Region, and the last two are outside of the Region.

The peak numbers of elementary students seen in the early 1990s began moving through the Region's middle and high schools in the mid to late 2000s. Once those large classes graduated, high school enrollments declined. Issues related to enrollment and building capacity in the Region's high schools are similar to those at the elementary level. Since the Region's high schools serve union districts with larger combined student populations, they were often seen as better insulated against sudden shifts in enrollments than the smaller elementary schools.



Robinson Elementary School (original 1892 schoolhouse entrance) Starksboro

However, district consolidation continues to be a crucial subject for residents of the Addison Region. In 2022, Addison Northwest and Mount Abraham school districts proposed a ballot measure to combine the districts, but the voters emphatically rejected that proposal. With the increasing costs of school budgets, particularly due to health care expenses and the State's inability to initiate a substantial change to education funding, this conversation may arise again.

VOCATIONAL AND TECHNICAL SCHOOLS

The Region's high school students, as well as adults seeking continuing education, can attend the Patricia A. Hannaford Career Center (PAHCC) in Middlebury. Founded in 1971 and later renamed after a well-loved faculty member in her honor, PAHCC provides a wide range of programs for high school and adult students across Addison County. In 2004, voters in the Region's three main supervisory districts approved a separate regional technical school district with its own board of directors to run the center and set curriculum and budgets. The Patricia A. Hannaford Career Center Regional Technical School District (PAHRTSD) Board includes representatives from each school district and the Workforce Investment Board. PAHCC is one of Vermont's 17 Career Technical Education (CTE) Centers. In February 2018, the Agency of Education launched a planning initiative to develop and articulate a strategic direction for career technical education in the state. Vocational-technical schools faced perception challenges even though many of these career paths are widely demanded throughout Vermont.



Hannaford Career Center, North Campus, Middlebury

PAHCC has a main campus located in the Middlebury High School complex and a north campus located off Exchange Street in Middlebury. The career center provides students challenging, practical, and classroom-based instruction, along with strong community collaborations and hands-on learning experiences. These opportunities help students develop solid work ethics, cutting-edge technical skills, and a strong sense of inclusion and purpose. PAHCC prepares students for college and careers in a wide range of fields including, but not limited to agriculture and natural resources, video technology, building trades, information technology, pre-engineering, accounting, law enforcement, and automotive technology.

PAHCC offers 13 technical programs and 4 foundational "pre-technical" programs. Most technical programs are geared toward 11th and 12th graders, with select options available to 10th graders. These programs aim to equip students with the skills needed for high-wage, high-skill, and in-demand careers—either right after graduation or following college. Pre-technical programs are available to 9th and 10th graders, helping them explore a variety of future career pathways. The majority of the high school students come from Middlebury Union, Mount Abraham, and Vergennes Union, though students from private schools, other regional high schools, and homeschooled students are also welcome. Adults, throughout Vermont and adjacent states, often enroll in personal and career growth evening and weekend classes. Additionally, adults and students in the Addison Region can enroll in programs at other vocational-technical schools throughout the state.[47]

SPECIAL EDUCATION

The Vermont Agency of Education (AOE) is responsible for ensuring that both federal and Vermont state regulations are followed so that students with disabilities receive a Free and Appropriate Public Education (FAPE). To achieve this, the Agency is dedicated to supporting families and Vermont schools that serve students with disabilities.

In September 2025, the Vermont AOE distributed a report "Current State of Special Education Delivery" in response to Act 73 of 2025, marking the first step in

developing a three-year special education strategic plan as part of the state's broader education reform effort, which also involves redrawing school district boundaries and implementing a new education funding formula.[48] A key finding is that although overall student enrollment is decreasing, the number of students with disabilities is increasing, and in turn, education costs can be difficult to manage.[49]

Special education costs are highly variable based on the number and needs of qualifying students in a given school year, so the impact on the budgets of the Region's small schools can be significant. Specific to data within the Addison Region from 2015–2022, Mount Abraham School District (formerly Addison Northeast) saw an increase of 34% for K-12 Special Education Cost/Child Count to $26,997, although a 9% decrease in students; Addison Northwest School District had a 15% increase to $29,546 although a 22% decrease in students; conversely, Addison Central experienced a 1% decrease to $19,909, while having an 8% increase in students.[50]

PRIVATE SCHOOLS AND HOMESCHOOLING

There are a number of private schools providing Pre-K, elementary, or secondary education in the Addison Region. Those include the Bridge School (K-6), the Champlain Valley Christian School (K-8), the North Branch School (7-9), and the Red Cedar School (K-8). The Willowell Foundation provides options for outdoor education including The New Roots Project (ages 7-11), Pond Brook (ages 12-15), The Walden Year (ages 16-19). See the Childcare subsection on page 32 for more information on Pre-K.

For the 2025-26 school year, 293 students in Addison County attended private school, equating to about 6% of all K-12 students, compared to the state average of 15%.[51] In addition, homeschooling throughout Vermont has become increasingly popular as the pandemic fueled this growing trend. During the 2020–2021 school year, 5,500 students were homeschooled—an increase of more than 100% compared to 2018–2019. The figure has since decreased, with approximately 3,500 students receiving home instruction in 2022. Unfortunately, regional home study data is not currently available.[52]



Northlands Campus, Vergennes

OTHER EDUCATION FACILITIES

Northlands Job Corps Center in Vergennes opened in 1979 and provides vocational education and training for individuals aged 16 to 24 whose educational needs are not fully met within the public school system. Operated under contract with the U.S. Department of Labor, the center attracts students from across northeastern United States, the majority from Vermont and neighboring New York, and provides housing, meals, and medical care at no cost to students or their families. Located on a 65-acre, state-owned campus, Northlands typically serves approximately 150 students on average and is currently managed by Education and Training Resources, a Kentucky-based organization that operates several Job Corps centers nationwide.

In May 2025, U.S. Department of Labor (DOL) suspended operations at all contractor-run Job Corps centers, which was then halted in July when a federal court issued preliminary injunctions preventing the Department of Labor from closing Job Corps centers, ruling that the administration did not meet legal requirements when it attempted to close rather than terminate the program. Although the centers are currently required to stay open, the program's long-term future remains uncertain as legal and political proceedings continue. As of late May 2025, more than 100 young people were enrolled at Northlands and it employed 110 people.[53]

Vermont Adult Learning, in conjunction with the Hannaford Career Center, serves as a key partner in advancing regional workforce development. The organi-

zation offers foundational adult education, high school completion programs, English language instruction, and work readiness training. Collectively, the Hannaford Career Center and Vermont Adult Learning deliver comprehensive educational opportunities for young adults and adults, emphasizing workforce development and technical skill advancement across the region. The Middlebury Center is a United Way of Addison County Funded Agency.

EDUCATION FUNDING

Providing and paying for public education has become a central consideration for many Addison Region residents when planning for the future of their communities. The implications of growth and development on school budgets have continued to be a primary topic when public hearings or votes are held on local plans, zoning regulations, and development applications. The State has worked through various formulas over the decades, and at the end of June 2025, Governor Phil Scott signed a sweeping education reform bill into law, Act 73 of 2025, setting the stage for a historic overhaul of Vermont's public school system.

Act 73 establishes a three-year timeline for transforming the education system. After the General Assembly approves new school district boundaries in 2026, the restructured districts will begin operating in the 2028–2029 school year.[54] At that time, the statewide tax rate and weighted student funding formula will also take effect.[55] Other provisions of Act 73—such as statewide graduation requirements and minimum class sizes—will be implemented in the years leading up to the launch of the new districts.

Public perception in the Region is that education costs are continuing to rise at rates exceeding what taxpayers can afford. Over recent years, per pupil costs in the Region's schools have increased beyond the rate of inflation, but by varying amounts. The factors influencing these rising costs are numerous and vary between the schools, although heath care cost increases tend to be the largest factor. Given that local schools are the largest single expense to taxpayers throughout the Addison Region, education funding will continue to be central to debate and decisions regarding the future community growth and development.



Middlebury College Graduation

POST-SECONDARY EDUCATIONAL FACILITIES

Middlebury College

Middlebury College provides undergraduate and graduate level education to approximately 2,800 students from around the world. The college is a private, co-educational, residential, four-year, liberal arts institution. Middlebury College offers around 40 undergraduate programs, as well as four summer programs. The college has a 500-acre main campus in Middlebury, a large summer campus in Ripton, and owns a significant amount of property in Middlebury and other Addison Region communities. In 2024 and 2025, Middlebury College worked with ACRPC to create a Master Plan for the 3,000 acres of land it owns in the Champlain Valley, that is used both privately and by the general public for a variety of purposes, including agriculture, recreation, forest products, and nature conservation.

Addison Region residents have access to a variety of cultural, educational, and recreational activities at Middlebury College. Most scheduled on-campus activities such as lectures, performances, and movies

are open to the public. Area high school students may enroll in certain classes, provided that there is space, at no charge. Local residents make extensive use of the college's athletic facilities and are also able to use the college's library. The college provides housing for nearly all its students and restricts off-campus housing to 125 or fewer. The Town of Middlebury sees the acquisition of houses and the expansion of the campus into the residential neighborhoods that surrounds the college campus as undesirable. If student enrollment were to be significantly increased, a new agreement regarding student housing, traffic, and parking would need to be reached between the town and the college.

Community College of Vermont

The Community College of Vermont (CCV) in Middlebury is located on Court Street, where it serves around 250 students per semester at this site, as part of CCV's statewide network. CCV offers a flexible mix of associate degree and certificate programs across its 12-location system, with classes available days, evenings, weekends, and online to accommodate working adults and part-time students. At the Middlebury location, students can access advising, financial aid support, and local class offerings while benefiting from CCV's broader online and statewide curriculum, making it a convenient gateway for post-secondary education and workforce training in the Region.





Goals, Objectives, and Actions

GOAL 1: Ensure all residents have access to affordable, high-quality healthcare, education, childcare, and human services that support well-being and opportunity.

Objective 1:

Attract and retain healthcare, human service, and childcare providers to meet regional needs.

a. Provide data, technical assistance, and grant support to healthcare, human service, and childcare providers.

Objective 2:

Integrate childcare and education services into municipal and regional planning processes.

a. Encourage inclusion of childcare and education facilities in land use and capital planning.
b. Assist towns in identifying sites and navigating permitting for childcare centers.

Objective 3:

Ensure services are accessible, affordable, and responsive to community needs.

a. Coordinate data and partnerships to identify childcare needs and support providers.

Objective 4:

Expand lifelong learning and vocational training opportunities through regional partnerships.

a. Partner with schools, libraries, and nonprofits to build a regional lifelong learning network.
b. Support towns and school districts in developing joint-use and capital improvement plans.

GOAL 2: Provide coordinated, effective, and equitable public safety and emergency services that protect residents and property while preparing for future risks.

Objective 1:

Strengthen coordination among law enforcement, fire, rescue, and emergency management agencies.

a. Facilitate regional coordination through the Emergency Management Committee (REMC).
b. Promote cooperation between emergency service providers.

Objective 2:

Promote hazard-informed land use and infrastructure planning.

a. Assist municipalities in developing and updating emergency plans and hazard mitigation strategies.
b. Support the development of all-hazards building codes and emergency access standards.
c. Provide information to municipalities and homeowners on building in hazard-prone areas.

Objective 3:

Improve the resilience and accessibility of emergency services.

a. Map vulnerable areas and hazardous materials, and support the E911 system.
b. Seek funding for watershed geomorphic assessments.

Objective 4:

Increase local capacity for emergency preparedness and hazard mitigation.

a. Organize training and outreach on emergency preparedness and hazard mitigation.

GOAL 3: Preserve and enhance the Region's cultural, recreational, and civic assets to strengthen community identity, livability, and long-term sustainability.

Objective 1:

Promote the preservation and adaptive reuse of historic and cultural resources.

a. Assist municipalities in developing regulations and plans for historic preservation and adaptive reuse.
b. Support initiatives that highlight the Region's historic and cultural assets.
c. Provide planning, grant writing, and project management support for civic and cultural projects.

Objective 2:

Support the development of accessible, affordable municipal facilities in village centers.

a. Assist municipalities with capital budgeting and mutual aid coordination.

Objective 3:

Expand and protect access to recreational resources and trail systems.

a. Develop GIS maps and data for historic and recreational resources.
b. Support the development and linking of trail systems and public access to water bodies.
c. Encourage municipalities to retain control over unused rights-of-way for future recreation use.

GOAL 4: Ensure all residents, businesses, and institutions have access to affordable, reliable, and future-ready broadband and communications systems.

Objective 1:

Achieve universal fiber-optic broadband coverage with high-speed symmetrical service.

a. Support Maple Broadband and member towns in completing fiber deployment.

Objective 2:

Ensure broadband affordability and digital equity for all income levels.

a. Promote digital literacy, affordability programs, and device access for low-income households.

Objective 3:

Build resilient communications infrastructure that withstands climate and disaster risks.

a. Provide data and support for E911 and public safety communications.
a. Support efforts to enhance resilience of communications infrastructure against natural disasters.

Objective 4:

Minimize the environmental and visual impacts of communications infrastructure.

a. Assist municipalities in developing telecom-friendly plans and regulations.
b. Encourage use of existing structures for antennas and minimize visual disruption of new towers.

Objective 5:

Leverage communications technology to support economic development, education, and healthcare.

a. Coordinate with economic development and emergency services to ensure infrastructure supports business growth and public safety.
b. Support local news and public media through outreach and engagement.

GOAL 5: Protect and enhance water quality and ensure access to cost-effective, environmentally sound water, wastewater, stormwater, and solid waste systems.

Objective 1:

Prevent contamination and depletion of water resources.

a. Develop and implement a regional water strategy for quality, availability, and infrastructure resilience.

Objective 2:

Ensure infrastructure meets current and future residential, commercial, and industrial needs.

a. Support infrastructure upgrades and replacement of failing systems.
b. Support the planning, development, financing, and construction of new municipal water and wastewater systems to encourage development in village centers, villages, downtowns, and planned growth areas.

Objective 3:

Promote sustainable development through integrated water and wastewater planning.

a. Create a region-wide wastewater and stormwater management strategy.
b. Guide sustainable development through water-related planning and investment.

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Population & Housing

Our Region's Population

To plan for the appropriate allocation of resources, infrastructure, education, and services, ACRPC first considers the demographic make-up of a community, its settlement patterns, and rates of growth. Understanding the Region's population and housing profile provides a foundation from which all other elements of this Regional Plan take shape. Age distribution, household size, housing stock, and income are all factors that determine a region's housing needs and inform future planning. Understanding population characteristics and housing trends ensures that public investments and policies are thoughtfully and appropriately allocated to our communities.

According to the 2020 U.S. Decennial Census,[1] the Addison Region had a total population of 36,703 in 21 municipalities ranging in size from 172 individuals in Goshen to 9,152 in Middlebury.[2] The Region's four most populated municipalities – Middlebury, Bristol, Ferrisburgh, and Vergennes – account for approximately 48% of the total population. Each of these communities is connected to a thriving downtown or village center that has supported its population over time. Middlebury, the county seat, is a commercial, institutional, and cultural hub of the Region, with a population twice that of the next largest town, Bristol (3,782). Approximately half of the population of Bristol lives in its village center—a compact, mixed-use grid of walkable streets, and the rest in the surrounding countryside (see **Figure 1**).

Ferrisburgh's 21 miles of Lake Champlain shoreline and its proximity to Chittenden County and Burlington contribute to its population total (2,646), which is similar to Vergennes' total (2,553). Vergennes, which is only 2.5 square miles, was carved out of Ferrisburgh, Panton, and New Haven in 1788 to form a city, the oldest and smallest in Vermont. Vergennes serves as a regional commercial and employment base for surrounding towns. The eastern mountain towns and small central farming areas have the lowest populations in the Region. Western farming towns are more populated due to vacation and second homes on Lake Champlain.

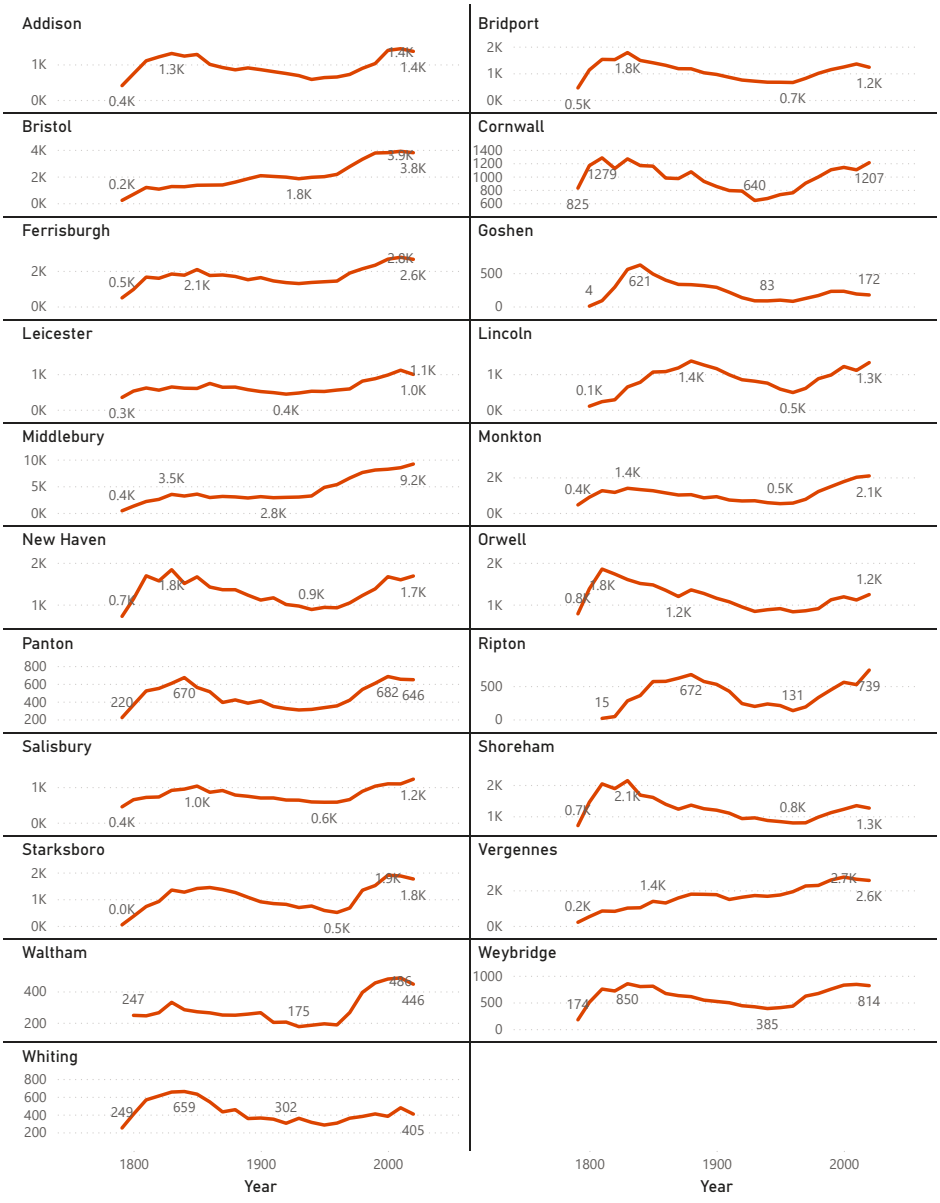


Figure 1: Population in the Addison County Region, 2020

SETTLEMENT HISTORY

Otter Creek, flowing north through the Addison Region from Leicester to Lake Champlain in Ferrisburgh, is Vermont's longest river and integral to swamps and marshes throughout its basin. Human habitation along Otter Creek can be dated to between 10,000 and 11,000 years ago. Abenaki and Iroquois hunted, fished, gathered herbs and fruits, grew crops, and settled in this valley.[3] Fertile soils, abundant fish and game, and a network of tributaries serving as trade and travel routes supported these early populations. In the early 17th century, French traders, explorers, and settlers migrated to and through the Otter Creek valley, drawn to the promise of productive farmlands and navigable waters. New agricultural and farming practices as well as settlement patterns introduced by the emigrants would forever transform the landscape and cultures of this Region.

Figure 2: Change in Population by Town, 2023



In 1791, the first year of the federal census, there were 7,081 people living in the Addison Region. The most populous towns, ranging from 701-825 residents, were the early agricultural settlements located in the Lake Champlain Valley of **Cornwall, New Haven, Orwell, and Shoreham**. The Region's population doubled in the next decade to 14,401, with all communities growing at a steady rate, and continued to increase until the middle of the century. In the early 1800s, Merino sheep were introduced to the area setting off a farming boom that lasted for decades. By 1830, a total of **25,630** people were living in the Addison Region. During this period, Middlebury's population grew to **3,468**, making it the most populous town. Due to its central location and proximity to the Middlebury Falls, the town developed into an industrial hub for the Region. Manufacturing mills for cotton, grain, paper, lumber, and marble were constructed in great numbers along the river, powered by the falls. In 1800, Middlebury College was established, further diversifying the economic base of the community and providing employment and industry beyond agriculture. Hydro-powered mills and factories on the Otter Creek in Vergennes, and along the New Haven River in Bristol, expanded local economies and supported the development of these communities. By 1840, the population growth of local rural communities began to level off. The towns of Cornwall, Shoreham, New Haven, Bridport, Orwell, Whiting, Weybridge, and Goshen had reached their peak populations to date.

During the mid-to-late 1800s, rural areas throughout the northeast began to see people migrate to the Midwest for better farming and economic opportunities. The population in Addison County and Vermont also saw a decline as families left for a promise of rich soils and proverbial greener pastures, leaving the "hardscrabble" farming life of New England behind.

Successful Merino sheep farmers, wanting to expand their flocks and pastureland, bought up their neighbor's farms resulting in increased land prices. This change added to the struggle of farming in Addison County. Between 1850 and 1860, the Region lost almost 3,000 residents. Farming communities whose

growth had peaked in the early 1800s lost families at the greatest rates. Between 1830 and 1860, Shoreham and Bridport saw 35% and 26%, respectively, of their population leave Addison County.[4]

The towns of Bristol and Vergennes, however, experienced population growth due to a diversity of economic opportunities in these larger mill towns. Vergennes grew at a rate of 28% during this period.

The Region's overall rapid population drop subsided by 1870, but a slow decline in growth continued, in most communities, until the 1950s. Significant global events of the period, such as World War I and II, the Great Depression, and the 1918 Spanish flu, contributed to the pattern of economic stagnation and negative population growth in the Region.

Recent Patterns

Around 1960, the nation saw a dramatic population shift occur as people began to migrate into rural areas from suburban and urban centers. For the first time in 150 years, rural America grew faster than the nation's cities. From the 1960s to 1990s, Vermont's population grew by 56%, faster than most states amid booming interest in rural life and the trend to get back to the land.[5] By 1980, the population in the Addison Region had exceeded its previous peak of 25,630, seen in 1830, and reached 28,784 people. In 2000, the population reached 35,289, an increase of 81% since 1960.[6]

Throughout the 2000s, population growth slowed again to a rate of 3.5%. Between 2010 and 2020, the growth rate has basically leveled, fluctuating about 0.3%, a pattern similar to the 1940s.[7] Eight towns in the Addison Region saw population growth at that time, with the most significant being +42% in Ripton and +20% in Lincoln.

WHY POPULATIONS CHANGE

Just as changes in population have shaped the demands on natural and built resources throughout the history of Addison Region, so too will existing resources be asked to meet the needs of a changing population in the future. Population change is typically attributed to two factors:

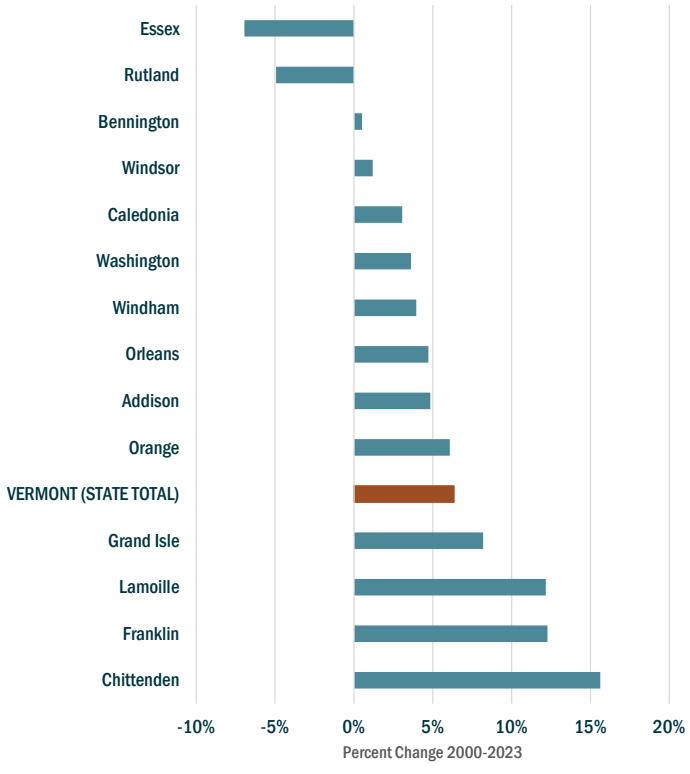
- **net natural increase or decrease** (the difference between births and deaths) and
- **net migration** (the difference between in-migration and out-migration)

In the decades from 1970 to 2000, nearly all towns in the Region experienced a net natural increase with more births than deaths. Over the same period, most towns saw more people moving into town than moving out, an example of net in-migration.[8]

In the 1970s, growth occurred due to in-migration and in the 1980s, it was a high level of births that drove the population's natural increase. During the 1990s, the two forces were evenly paced, resulting in a steady population increase of 9.2%. Starting in the 2000s, however, as the populace began to age out of childbearing years, the birth rate began to decline, and population growth began to stagnate. The stagnation of population growth is not unique to the Addison Region. In each year between 2016 and 2023, the State has recorded more deaths than births, resulting in a negative "natural rate of increase." This could be the first time this has occurred in the history of the Addison Region and Vermont.[9]

The last time Vermont's population dropped between two decennial censuses was in 1940, with 400 fewer residents than in 1930. Of course, the Great Depres-

Figure 3: Population Change By County vs. State

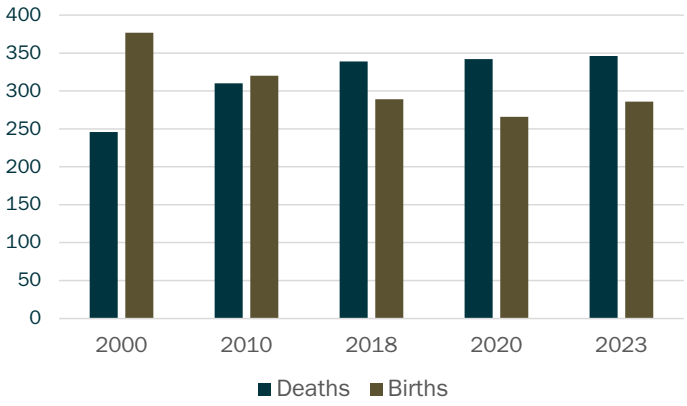


sion of the 1930s caused massive economic dislocation across the country, and Vermont was not immune from its effects. Many Vermonters left the state to find work elsewhere and escape the grinding poverty of the time. Before that, only the 1910s witnessed a similar population decline caused by the 1918 Spanish flu. This pandemic killed between 50 and 100 million people worldwide (more than died in World War I). More than 1/2 million died in the U.S., and 2,000 Vermonters died in one year.

Birth and Death Rates

Birth and death rates are calculated in the same manner; the number of births or deaths multiplied by 1000, then divided by the total population of a region or the total number of birth or deaths out of 1000 people of a region. This value is also referred to as the 'crude' birth or death rate. The general fertility rate (GFR) indicates the births per 1,000 women in the region, aged 15-44.[10] Births in Vermont have declined significantly since the 1980s. From approximately 8,000 births per year in the 1980s, the number of babies born to Vermont women dropped to approximately 6,500 in the late 1990s, declining further to 6,000 by 2006. After some fluctuations in the late 2000s, the number of births remained around 6,000 into the first half of the 2010s.[11] In 2023, there were 5,063 babies born in Vermont, a 166-year low and well below the national average.[12] In comparison, there were 6,771 resident deaths in 2023, 201 more than in 2022.

Figure 4: Trends in Births and Deaths in the Addison Region



Many factors—social, environmental, economic, and cultural—influence a region's fertility, birth, and death rates. Often, higher levels of education will correlate with lower fertility rates. Research has shown that families will postpone having children during economic downturns, such as the Great Recession of the late 2000s. People live longer due to advances in medicine, the promotion of healthy lifestyles, and improved health care. The death rate in Vermont steadily declined from 11.2 in 1960 to 8.2 in 1990. From 2004 to 2023, however, the death rate rose to 10. This increase is not a result of poor health care but a reflection of shifting demographics as Vermont's baby boom population ages. In 2023, 79% of the deaths in Vermont were people 65+ years of age with cancer and heart disease as the primary causes of death.[13]

COVID-19 PANDEMIC BOX 1

Impacts on Public Health

Death data can "provide a broader picture of what the impact of COVID-19 has been." There were obvious causes: those who died of COVID and COVID infections that went undetected. But deaths can not be indirectly attributed to COVID: "There were the people who are afraid to go to the hospital or situation on the ground that people can't get emergency care because the hospitals were filled to capacity." *(See figure refences, Box 1)*

Historically, Addison County's population growth rate mirrors that of Vermont as a whole (see **Figure 3**). Women born in 1980, the year Addison County recorded its highest birth rate, turned 40 in 2020, near the end of child-bearing years. The decline in the number of babies born between 1980 and 1990 indicates that there will continue to be fewer women giving birth in the next 10 years. Recent trends, such as smaller families, the choice to have children later in life or not to have children at all, and more women pursuing full time careers, continue to reinforce this pattern.

In **2023**, there were **290 births** in the Addison Region; a 7.7% birth rate and 42.7% general fertility rate (GFR), while in the same year **352 deaths** occurred with a death rate of 9.3%. There were 34 deaths from Covid-19 in Addison County from 2019-2023.

Migration

Between 2010 and 2019, more people moved out of Vermont to other areas than moved into the state. In 2018, about 700 more people left the state than arrived; in 2015, net out-migration sometimes exceeded 2,000 each year. Outward migration was particularly high among 45- to 64-year-olds earning $25,000 to $75,000.[14] A 2014 University of Vermont survey asked current and former Vermonters why they wanted to stay or leave. Responses from former Vermonters ranged widely from jobs and income to diversity and the desire to live in an urban area. Some moved because of the weather. There was a clear consensus among current Vermonters, however, about why they stayed. More than two-thirds cited their attachment to Vermont's natural landscape, and more than half cited the state's culture, community, and family ties.[15]

During the post-pandemic era, the State's migration trend shifted significantly. In 2023, Vermont had the highest per capita net migration in New England and the third-highest per capita net migration of any U.S. state.[16] From 2020-2023, net migration to Vermont has already significantly exceeded the net migration of the previous decade (+25,121 for 2021-23 vs. +16,067 for 2010-19).[17]

As extreme weather, wildfires, earthquakes, and other events (generally attributed to climate change) have become increasingly common in recent years, Vermont's relatively low level of exposure to such events makes it an attractive refuge for people looking to leave high risk areas of the country. Every major catastrophe brings more "refugees" into our area, attracted to Vermont's inland location, availability of water resources, and a higher and dryer landscape.[18] Unfortunately, Vermont is not invulnerable to natural disasters as evidenced by the widespread flooding during the summers of 2023 and 2024, due to unrelenting rainfall.

When asked why they stayed or moved to Vermont, most people say for the quality of life it affords, the flexibility of remote work, and the state's social cohesion of community and cooperation.[19] Many individuals and families relocate to Vermont solely for employment opportunities. The Addison Region is home to the largest population of migrant farm workers in the state, approximately 500-750 people.[20] The Region's dairy and produce farmers depend on this segment of the population to successfully operate. Due to documentation and immigration concerns, this migrant population may be under counted and underserved.

Population Projections

The current population of the Addison Region is significantly lower than previously projected. In 2000, the Addison Region's population was 35,289, with an expectation that it would increase to 42,564 by 2020. However, according to the 2023 American Community Survey, the population has increased by only 2,208 people to 37,497.[21] Population projections assume that conditions that occurred in the past will continue, such as mortality, birth, and migration rates. Using 5-year, age cohort census data (i.e., 35-39 or 40-44-year-olds), projections can be calculated by factoring known mortality and migration rates.

Certain assumptions are made regarding these projections, such as advances in healthcare resulting in lower death rates. Some changes, however, cannot be predicted, such as the following:

- Changes in the birth rate from social change are different than what has occurred,
- Changes in healthcare practices or epidemics that could affect the mortality rates,
- Changing economic conditions that result in shifts in national (internal) migration,
- Changes in national immigration policies, and/or
- Changes resulting from in-migration of refugees from elsewhere in the country.

Interestingly, as of 2020-21, some of the above 'changes' are occurring and affecting the ability to calculate population projections for the Addison Region.

DEMOGRAPHICS

Current Population Profile

Gender and racial demographic composition of Addison County mirror that of the entire state. In 2023, 49.9%

COVID-19 PANDEMIC BOX 2

Vermont's Changing Demographics

During the Pandemic, Vermont's relative stability and low infection rate drove an increase in migration to the state, as those in nearby cities sought safer residence. The long-term implications of this shift remain to be seen. According to preliminary survey responses, 64% of recent arrivals fit into a demographic that the State, in its own efforts to attract residents, has been targeting: people who are still in the workforce.

Data from 222 responses showed that 40% of the new Covid-era arrivals were under 35, 24% were ages 35-50, and 35% were 51 and older. About half of the new remote workers completed college, and another 42% have a degree beyond college. Nearly half said their employer would allow them to stay. And, a full 70% described their location as "rural" or "very rural." *(See figure references, Box 2)*

of the region's population were female and 50.1% were male. In the same year, 50.4% of the state's population were female while 49.6% were male. The largest segment of the population by race in Addison County identifies as 'White' at 93.6%. The next largest population share identifies as 'Two or more races' at 2.19%.

The Aging Population

In 2000, about 20.1% of the population were children under 15 years of age, while about 11.3% were over 65. In 2010, the school age population dropped to 16.5% and over 65 rose to 13%.[22] By 2023, the population of children was 12.8% and the over 65 population was 23.5%. The population of the Addison Region is aging as the median age continues to rise.

Table 1: Change in Addison County Median Age

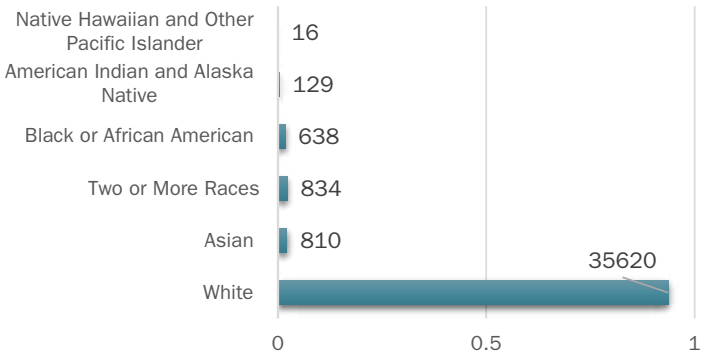
Year	Addison County Median Age (Years)
2000	36.1
2010	40.4
2020	43.7
2023	44

The median is one measure of the statistical center of the data. In this case, we can say that half of the population is younger than the **median age** and half of the population is older.

The population of working age Vermonters (25-64) decreased by 5% between 2010 and 2018. That population is expected to decrease by another 9% between 2018-2030.[23] According to the 2025 Vermont Housing Needs Assessment, 34% of Addison County households are led by someone aged 65 or older, with an additional 22% of households led by someone between 55 and 65 years.[24]

The aging of the Region's population will increase the demand for supportive services needed by these members of our community, such as transportation, healthcare, personal companionship, and assistance with everyday activities. As this segment of population downsizes or transitions to supportive care, a significant increase in small scale homes and apartments, as well as senior and assisted living facilities, will be needed to accommodate this housing shift.

Figure 5: Addison Region Total Population Estimates by Race/Ethnicity



Housing

Housing is a key element of any sustainable community. The stock should be adequate to house those who live and work in the community and have the potential to expand at a rate that can accommodate future population increases and economic growth. In addition, housing should support the Region's growing elderly population and attract new families with school-age children. Available housing needs to be safe, energy efficient, sustainable, affordable, and accessible for the community's aging and vulnerable populations. Although the Addison Region has experienced minimal population growth over the last decade, demand for housing has increased due to smaller households and an acute shortage of suitable and affordable housing. To fully understand this issue and succeed in providing sufficient housing for the population, communities must assess the current composition of households and the characteristics of the existing housing stock in their towns and the Region.

HOUSEHOLD CHARACTERISTICS

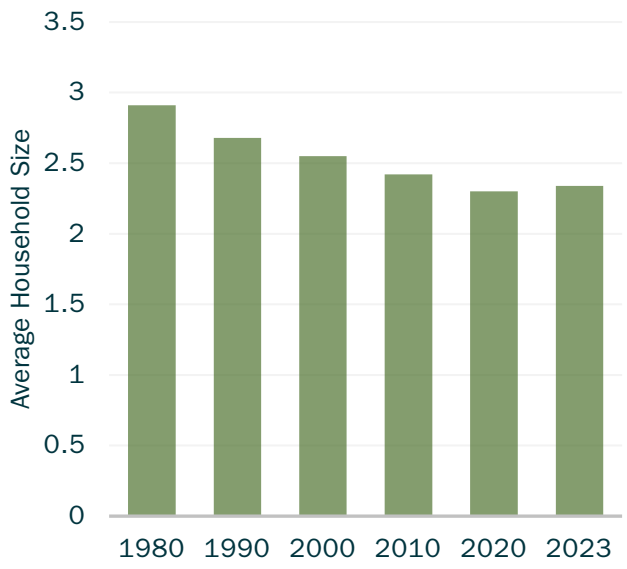
Most of the Region's population live in households. A household is composed of one or more people who occupy a housing unit, but not all households contain families. Under the U.S. Census Bureau definition, family households consist of two or more individuals who are related by birth, marriage, or adoption, although they also may include other unrelated people. Non-family households consist of people who live alone or who share their residence with unrelated individuals.[25] In 2023, there were a total of 14,638 family and non-family households in the 21 towns that make up the Addison Region.

Small Households

Changes in household composition have occurred in recent decades. An increase in small households can be seen throughout the State and the Addison Region. The portion of Vermont households comprised of 1-2 people reached 70% in 2022, and the average household size fell to 2.3 from 2.6 in 1990. In 2022, only 16% of Vermont households have four or more people, according to Census Bureau estimates.[26]

The greatest concentration of smaller households is seen in the Region's more densely populated communities, Middlebury Village and Vergennes, where there are more options for smaller homes, such as duplexes and multi-family housing units. Household size reflects not only the demographic of the Region's population but social and economic changes as well. An economic downturn may prolong the time adult children live at home; a rise in the divorce rate may increase the number of single-person households; and longer lifespans increase the percentage of seniors living alone. Additionally, trending attitudes regarding marriage may boost the number of single parents and unmarried couples. The declining birth rate, as seen in the State and Region, also contributes to a pattern of smaller household size.

Figure 6: Household Size in the Addison Region



Between 2000 and 2020, the Region's population increased at a rate of 3.9%, from 35,974 to 37,363. Concurrently, the number of households increased at a rate of 14.1%, from 13,068 to 14,906. The increase in total households along with the shrinking of household size, has created the need for additional, smaller scale housing units to support the current population.

Group Quarters

The U.S. Census Bureau classifies all people not living in housing units as living in group quarters. As defined by the Census Bureau, a housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. In sepa-

rate living quarters, occupants live and eat separately from any other person in the building, and have direct access from the outside of the building or through a common hall. Group quarters house multiple, unrelated people in a group living arrangement that is owned or managed by an entity or organization providing services for residents. These services may include custodial or medical care, as well as other types of assistance, and residency is commonly restricted to those receiving these services. Group quarters also may have controlled access to enter or leave.[27]

There are two types of group quarters:

Institutional, such as correctional facilities, nursing homes, or mental health hospitals.

Non-Institutional, such as college residence halls, military barracks, group homes, missions, or shelters.[28]

Middlebury has the largest concentration of people living in group quarters, primarily Middlebury College students (2,760 in 2024). Northlands Job Corps Training Center houses 150 students on its campus in Vergennes. Both Middlebury and Vergennes have several residential and care facilities for elders and individuals with disabilities, as well as temporary and emergency shelters. Most communities in the Region have few or no group quarter facilities. The Region's aging population requires the number of group quarters serving seniors to increase. As of 2025, the shortage of senior apartment options continues and wait times can be a year or more for subsidized units.[29]



Senior Housing, Elder Care Facilities, and Disabled Housing

Depending on the level of care and services available, senior facilities may comprise housing units or group quarters and, in many cases, a combination of both.

The following list outlines the levels of care for facility type.

- **Nursing Home/Rehab Center, Level I, II:** Nursing, medical, rehabilitation, or other special care services.
- **Residential Care Home, Level III:** 24-hour supervision and assistance for people who are dependent.
- **Residential Care Assisted Living, Level III:** Supportive services to assist resident independence.
- **Senior Apartments, Level IV:** Independent living, seniors only or mixed age.
- **Retirement Community Apartments/Cottages, Level III, IV:** A congregate living facility providing varied levels of independent and assisted living care, excluding nursing care.
- **Adult Family Care Homes, Level III, IV:** Private residential homes caring for one to two elderly people.

Many seniors choose to age in place, staying in their homes as long as possible, or downsizing to a smaller housing unit. Moving in with family or 'home sharing' is an option for seniors who do not want to live alone. **HomeShare VT**, a program where two or more people share a home for mutual benefit, can provide companionship and help with daily chores and activities.[30] **Support and Services at Home (SASH)** is a federally funded program that staffs a wellness nurse and service coordinator to check on seniors who live in senior housing, live independently, or reside with a family member. SASH staff members refer residents to services such as medical appointments, transit services, and Meals on Wheels. SASH services are available in Middlebury, Bristol, Vergennes, and Shoreham.[31]

Table 2: Senior Housing and Elder Care Facilities

Town	Facility	Type/Level of Care	Capacity
Bristol	*Living Well Residential Care Home	Residential Care Home	15 residents
Bristol	*Pleasant Hills Senior Housing	Senior Apartments	16 units
Middlebury	**Eastview at Middlebury and Meadowsweet at East View	Residential Care Assisted Living, Retirement Community, Memory Care	62 units
Middlebury	*Helen Porter Healthcare & Rehabilitation center	Nursing Home, Memory Care, Rehab Center	105 residents
Middlebury	**The Otter Creek Retirement Community	Residential Care Assisted Living, Retirement Community, Memory Care	44 residents 67 units
Middlebury	*Middlebury Commons	Senior Apartments, Disabled Housing	64 units
Middlebury	*The Meadows	Senior Apartments	40 units
Salisbury	*Shard Villa Residential Care Home	Residential Care Home	17 residents
Vergennes	*Armory Lane Senior Housing	Senior Apartments	25 households
Vergennes	*Vergennes Grand Senior Living	Residential Care Assisted Living, Retirement Community, Memory Care	88 residents
Vergennes	*Valley View Apartments	Senior Apartments	12 households

*Government funding subsidy payment options. ** Market Rate

CURRENT HOUSING STOCK

Housing stock consists of the total housing units (HU), whether a single-family structure, apartment, condominium, mobile home, boarding house room, seasonal, tiny house, accessory dwelling unit, or vacant in an identified area. In **2023**, the Addison Region's total stock of year-round and seasonal homes was 17,521 units.[32] Households occupy the non-seasonal housing stock, equaling **14,250** units in the Region, 11,425 owner-occupied, and 2,825 rentals. According to the Census Bureau, seasonal homes are intended to be used in certain seasons or for occasional use throughout the year, or if its occupant has a primary residence elsewhere. In 2023, there were **1,890** seasonal or seasonally vacant homes in the Addison Region.[33] The rest of the housing, 869 units, are considered vacant and may occasionally be used for migrant workers. Nationally, Vermont is currently ranked second for number of vacation or seasonal homes per capita.[34]

Doing the math, in 2023 about 8,000 seniors live in the Addison Region. As **Table 2** shows above, there are about 500 living units specifically for seniors. Assuming most seniors live alone or have smaller households, and demographic trends continue, there is and will be a significant need for senior housing units.

Figure 7: Addison County Housing Units by Type (2023)

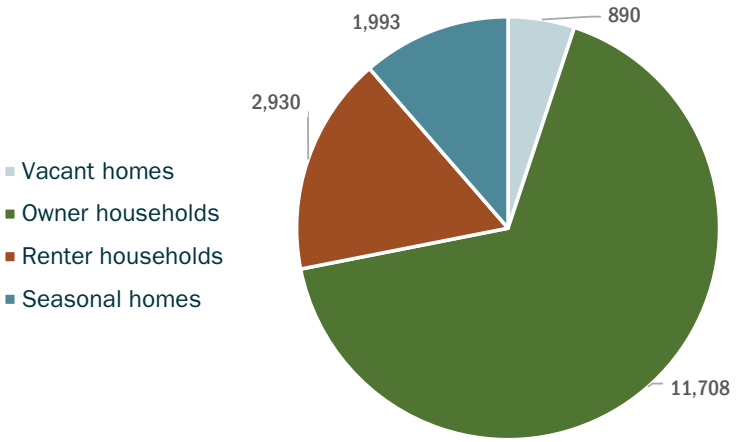
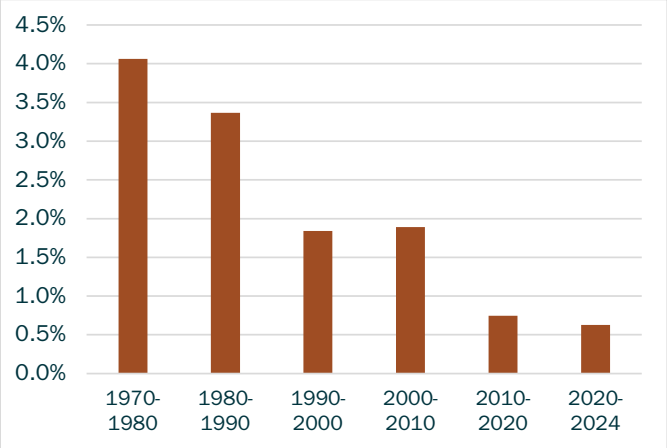


Figure 8: Percent Change in New Housing Construction



The Addison Region and Vermont have seen a steady decrease in residential construction in the past 40 years.[35] Since 1980, the average annual growth rate of housing units has decreased by 1.38%, dropping to 0.78% during the 2000-2010 period. Since 2010, Addison County's total non-seasonal housing stock has increased at an annual pace of less than 1% (0.88%).[36]

The increase in housing stock has varied widely amongst towns in the Region with several municipalities seeing a moderate increase in their housing stock. From 2010-2020 Monkton, Panton, and Vergennes saw the highest percentage of new homes, from 1.1–1.4% annual change per town.[37] Seven of the 21 towns in the Region saw a decrease in homes due to natural disaster or disrepair. Overtime, a slowdown in the creation of new housing units reduces the housing options for moderate and lower-income households by increasing the competition for existing stock. Currently, new single-family homes are often unaffordable for many households due to high construction costs.

An increase in stock will, however, allow for some households to move to a larger or more expensive home, freeing up smaller, moderately priced housing units. Smaller scale housing growth, such as the creation of accessory apartments or duplexes from existing single-family homes, can provide options for a wider range of homeowner and renter incomes.

HOUSING OCCUPANCY

Total housing occupancy is defined by the vacancy rate: the number of homes for rent or purchase compared to the total number of homes used or intended for renters or homeowners. According to the 2025-2029 VT Housing Needs Assessment, the homeowner vacancy rate for the Addison Region was 1.0% in 2022. This rate is lower than the healthy market range and the Vermont statewide vacancy rate. The rental vacancy rate for the same period was 4.3%, higher than the 3.2% statewide rate. These rates have a considerable margin of error due to a small sample size and the potential inclusion of substandard housing units.[37]

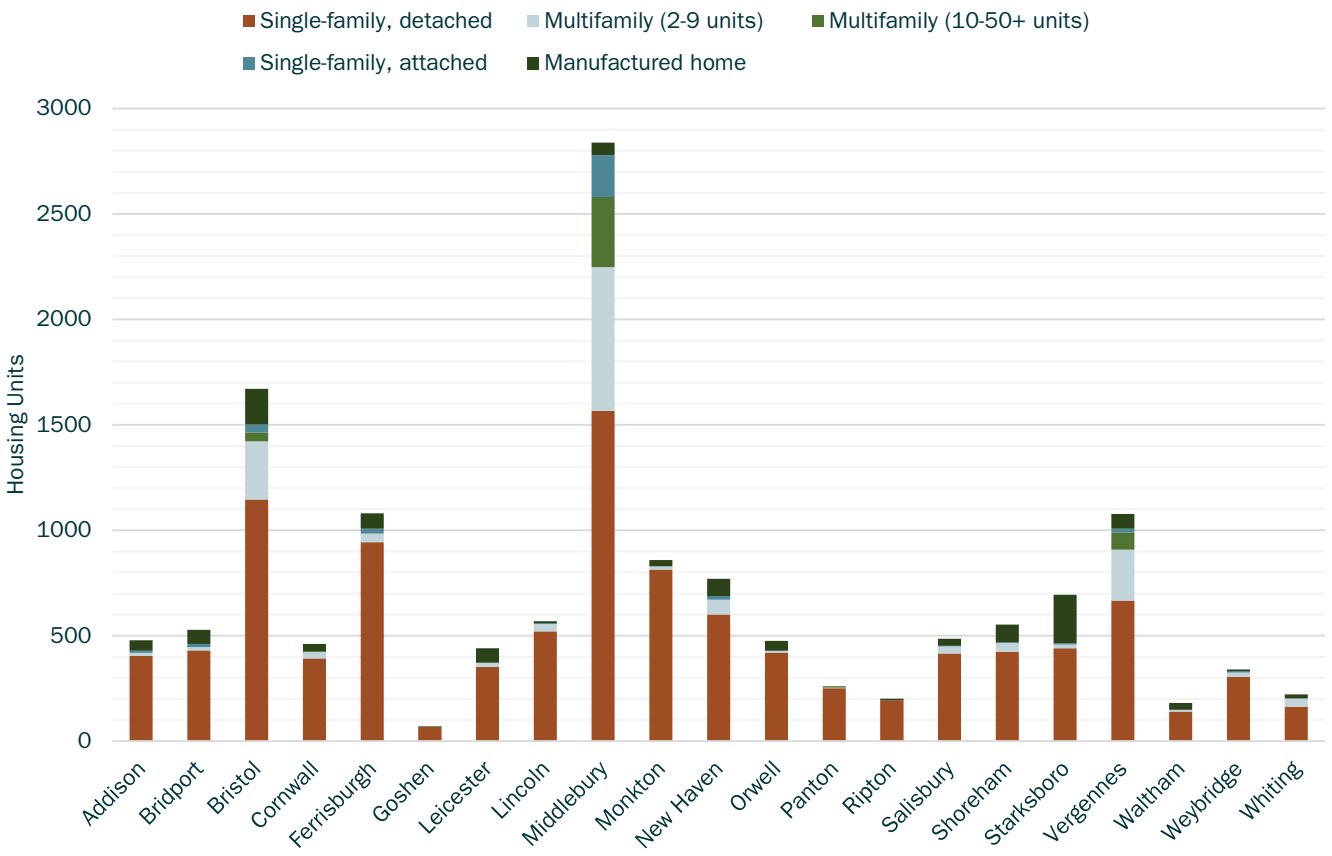
In the decade between 2010-2020, vacancy rates for rentals have come down significantly. In 2010, the Addison Region had a 6.6% rental vacancy rate compared to 2.3% in 2020. Low rates make it difficult for renters and homeowners to find affordable housing and creates upward pressure on prices.

TYPES OF HOMES

The type and location of housing developed in a community has a direct effect on the pattern of the built environment and the cost of municipal services. Historically, housing in the Region was primarily single-family homes (SFH), located in compact village centers, where people lived, worked, and could walk to services. Homes outside village and town centers were typically farms and other agricultural industries, often including housing for workers. Residential construction that occurred from the mid-1900s to the present, however, is scattered throughout the landscape. An increase in personal transportation (the automobile) made it possible to live beyond the development centers. In 2023, single-family homes were still the most prevalent type of housing (77%) followed by small multifamily buildings of 2-9 units (11%), and manufactured homes (8%). Larger multifamily units, 9-50 units (3%), are typically located in the denser population centers of Middlebury, Vergennes, and Bristol, communities that have accessible services and degrees of public infrastructure.

Infill construction of small or multifamily homes in rural villages and towns is often deterred or prohibited by outdated zoning and infrastructure constraints such as water and wastewater. Over the last four years, sever-

Figure 9: Housing Units by Town and Type for Addison Region Towns, 2023



al Addison Region municipalities have utilized Department of Housing and Community Development (DHCD) funds through a Bylaws Modernization Grant to update their Bylaws. Bristol, Lincoln, Salisbury, and Shoreham revised their codes in part to allow a smaller minimum lot size and reduced setbacks in their villages, following the town's historic pattern of development and in turn creating more options for new housing units.

Figure 10: Lindale Mobile Home Park, Middlebury



Manufactured homes exist in every town representing the third-largest share of housing units in the Region. Manufactured homes are a significant portion of the Region's housing and offer affordable options for many households. But the age and poor energy efficiency of many mobile homes substantially increases household housing costs. In 2023, there were 1,174 manufactured homes in the Region. Roughly a quarter of these homes are in the Region's 15 mobile home parks.[39] Manufactured home parks, many built more than 50 years ago or more, face a range of challenges; financial, operational, infrastructure, and market conditions put their sustainability at risk. Critical concerns facing parks in the Addison Region include parks located in 100-year flood plains, parks at risk due to poor quality and vacant units, infrastructure issues including water and wastewater systems, and large-scale capital improvement needs.[40] **Addison Housing Works (AHW)**, a non-profit housing developer, owns and maintains 9 of the 15 parks totaling 340 lots. As part of AHW's mission, they are committed to addressing these critical issues so that the parks can continue to serve as viable housing community alternatives in the Region.

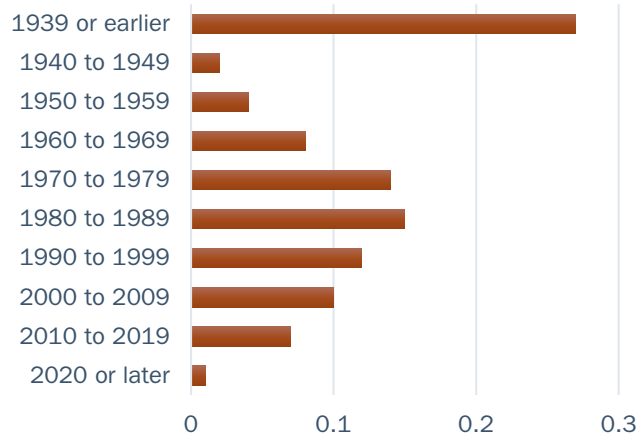
Housing Age and Size

Older homes are an important part of the character and historical record of the villages and towns in the Addison Region. Just over 27% of the current housing stock was built prior to 1939.

After 1939, however, the Region and State saw 20 years of slow growth, a 2-4% rate of housing construction, until the building boom in the 1960s and 70s (**Figure 11**). Many of the mobile home parks in the Region were constructed during this time.

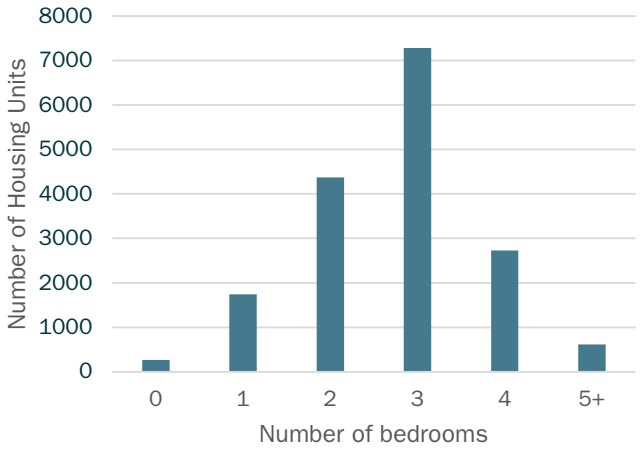
The median age home in the Addison Region was built in 1976.[41] In Bristol, 50% of the houses were built prior to 1939, while in Vergennes, 36.5% fell into that category. Despite their charm, older homes are not the best fit for many households today. High energy and property maintenance costs can be financially burdensome. Accessibility issues for older and disabled persons may exist if homes have not been maintained, updated, or retrofitted.

Figure 11: Estimated Age of Housing as Proportion of Total



Older village homes can be large, constructed at a time when the average family size was larger than it is today. Historic farmhouses were designed to house extended families and workers with numerous bedrooms and living areas. Similarly, single-family homes built for the 'nuclear family' (two parents and their children) do not match the needs of the growing number of smaller households. Counterintuitively, home size has increased 50% since the 1960s.[52] In 2023, most existing housing units in the Addison Region were single-family,

Figure 12: Housing Units by Bedroom Count, 2023



owner-occupied, three-or-more-bedroom homes, often on large village or rural lots. In 2023, 28% of households were one-person, but only 12% of the housing stock was a studio or one-bedroom unit. During the same period, 28% of households were composed of three or more people, but 63% of the housing stock had three or more bedrooms. Our current housing stock does not match the current needs of the Region.

Since new construction is significantly more expensive (per square foot) to purchase than the existing housing stock, repurposing our existing housing stock is one of the best ways to meet our housing needs.[53]

Accessory Dwelling Units

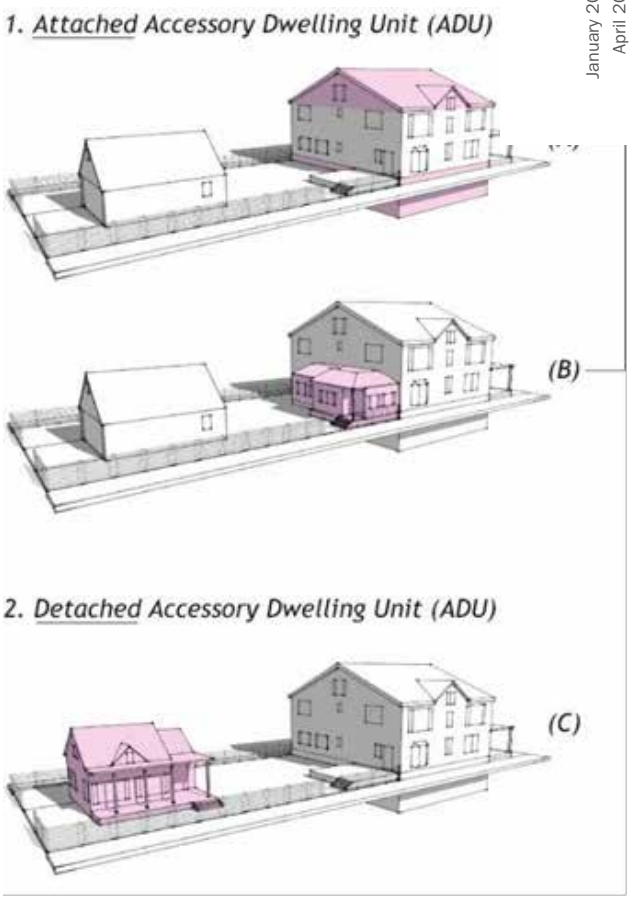
This traditional home type is reemerging as a popular housing option compatible with the growing number of smaller households. There is no region-wide data of accessory dwelling units (ADUs), but the existing stock of large older homes, with barns or carriage houses, lends to this housing type. ADUs, historically known as Granny Flats, are often efficiencies or one-bedroom apartments, subordinate to the primary structure, and located within an owner-occupied home or detached on the same lot. Vermont law allows ADUs in any zoning district that permits SFH. ADUs are typically 30% of the square footage (SF) of the primary home, must obtain water/wastewater permits, and, if detached, meet the required dimensional standards of the zoning district. Many municipalities have increased the allowed size of ADUs in their development regulations due to increased interest, enabling larger units to accommodate families.

Renovating larger, older homes to create ADUs adds to the existing housing stock of an area and benefits homeowners by providing rental income or flexible living arrangements to meet the needs of multigenerational families.

Due to their decentralized nature, ADUs can create additional housing units without the overhead of larger developments. The benefits of ADUs are well known around the country as a practical means to increase housing options. Financing of ADUs can be difficult for many homeowners due to borrowing limits based on their primary home mortgages. Several state and local programs are available to homeowners who want to construct ADUs.

The Brattleboro Area Affordable Housing (BAAH) offers an innovative program that provides both technical support and small grants for design and construction to support the creation of ADUs, which in turn will deliver affordable units and additional income for the homeowner.[54]

Figure 13: Attached Versus Detached ADUs

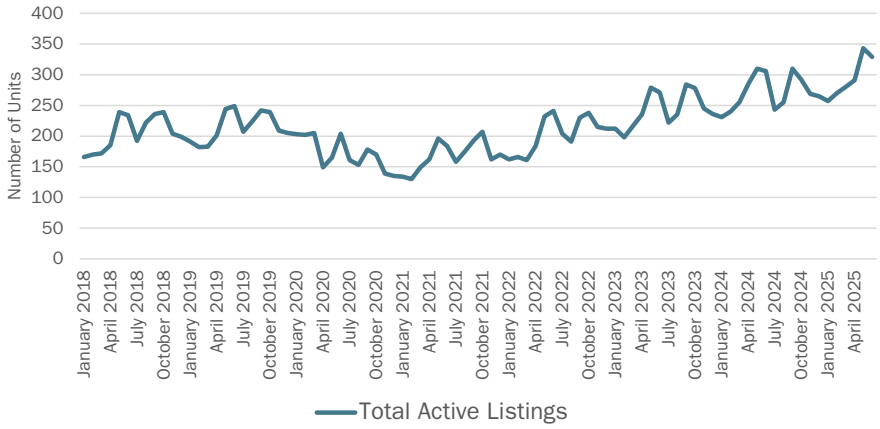


ACRPC created a guide to help homeowners develop ADUs, which is available on our website. The Vermont Housing Improvement Program (VHIP 2.0) provides construction grants and forgivable loans for new and renovated ADU construction resulting in affordable housing.

Short-Term Rentals

Short-term rentals (STRs) are housing units that are rented typically as vacation rentals. Compared to the rest of Vermont, the Addison Region has a small percentage of STRs, about 3% of the state total. In June of 2025, 343 homes were listed as STRs in Addison County, an increase of approximately 100 units since 2019.

Figure 14: Change in Total Short-Term Rental Active Listings



If a short-term rental is a second housing unit on an owner-occupied property, this can benefit the local economy and provide the homeowner with additional income. If a home is primarily used as a short-term rental, however, that housing unit is eliminated from the year-round housing stock, lowering the region's vacancy rate and increasing competition in the housing market.

Homes purchased for use as permanent short-term rentals can drive up regional housing costs, impacting "affordability" and availability of long-term rental housing.[55] A high percentage of short-term rentals can have a detrimental effect on neighborhoods as well, replacing year-round families with transitory occupants and/or vacant homes. In the Addison Region, it is estimated that most of the short-term rentals fall into the category of seasonal homes, uninsulated camps, and cottages that are not suited for year-round use.[57] Although, they do not currently pose a threat to the market, there are

an increasing number of year-round STRs in neighborhoods in and around Middlebury that cater to families and alumni of the College. Not surprisingly, the regions in Vermont with the highest numbers of short-term rentals are home to large ski resorts and other significant recreational amenities that draw visitors year-round.

Housing Affordability

Housing values have been rising steadily in the Addison Region over the past 20 years, mirroring the pattern of the State. This trend, combined with two decades of low home construction rates (driven in part by high construction costs), an increase in total households, and a reduction of household size has resulted in a critical shortage of adequate housing for a growing percentage of the Region's population.

Adequate housing can be defined as:

- Homes that are affordable to community members.
- Homes for single person households and first-time homeowners.
- Homes that are desirable for new families to move to the area, enroll their children in our schools, and fill jobs that support our economy.
- Homes that are appropriate for our elderly population to age in place in their community with their families and friends.
- Homes that are close to employment centers and/or public transportation.
- Homes that are safe and energy efficient.
- Homes that are appropriate for vulnerable populations.

HOME OWNERSHIP COSTS

After the financial crisis of 2008, housing prices stagnated, fluctuating up and down slightly until 2016 when prices began to rise again (**Figure 15**).[58] From 2000 to 2023 the median housing price in the region rose, from **$122,000** to **$350,000**.

It is important to note that the median price value is the middle price, of all types of homes in the Region or municipality, when listed from lowest to highest.

Figure 15: Addison County Median Home Price

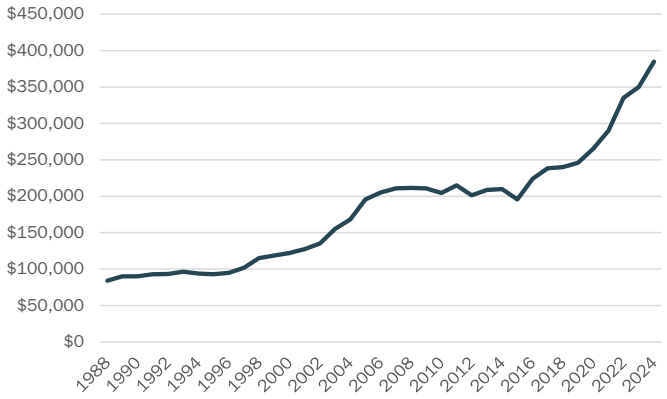
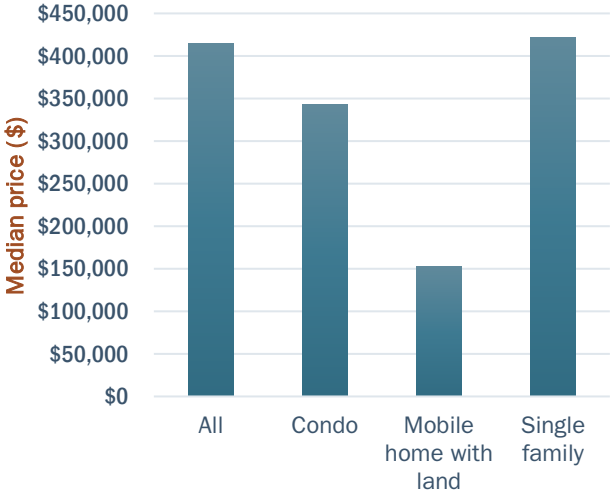


Figure 16 shows the 2024 median price for several types of housing in the Addison Region including mobile homes with land, condominiums, and single-family homes, along with the overall median price when all the homes are combined.[59]

Fluctuations in housing prices across towns can be attributed to many factors. A high demand for large single-family homes in one community can drive up the cost of housing throughout the town, reducing affordable options. In other towns with lower median home prices, housing may have hidden costs, such as access to services, transportation, or property maintenance issues. The costs of building materials and construction wages, zoning and permitting for site development, second home construction, and short-term rental conversions all affect the market price of housing.

Zoning bylaws that require large minimum lot sizes, two acres and higher, increase the cost of housing and dis-

Figure 16: Addison County Median Home Price by Type (2024) - Includes Secondary Home Data



courage developers from building smaller, less expensive units on these lots. Over time, one factor may have a greater impact than another depending on the current social, environmental, or economic climate. High demand for housing in Chittenden County creates pressure for nearby Franklin, Lamoille, Addison, and Grand Isle Counties. These counties have the highest median home sale prices and rents in the state, next to Chittenden County.

RENTAL COSTS

Rental housing costs are, in turn, impacted by the current price and availability of owner-occupied homes. The pool of available housing in the rental market shrinks as potential buyers choose to rent due to a lack of ownership options. In 2023, approximately 20% of households in the Region rented their homes. Gross median monthly rental rates for a one-bedroom have increased **112%,** from $565 in 2000 to $1,201 in 2023. The median gross rent equals the contract rent and all monthly utility and fuel costs. Addison County rent prices are the third highest in the State after Chittenden and Grand Isle counties. In 2020, Vermont saw an influx of new residents due to the pandemic resulting in increased demand for housing and the increase of the median price of available properties.

HOUSEHOLD INCOME

Household income is the combined gross income of all members of a household who are 15 years or older regardless of relationship status. Family income is defined as income generated by people in the same household who are related by marriage or civil union and file their taxes jointly. This Plan looks at household income. According to the 2000 and 2023 U.S. Decennial Census, the median income of the Region's households was $43,177 and $88,978, respectively. (**Figure 18**). **The median household income is the**

Figure 17: Addison County Median Gross Rent

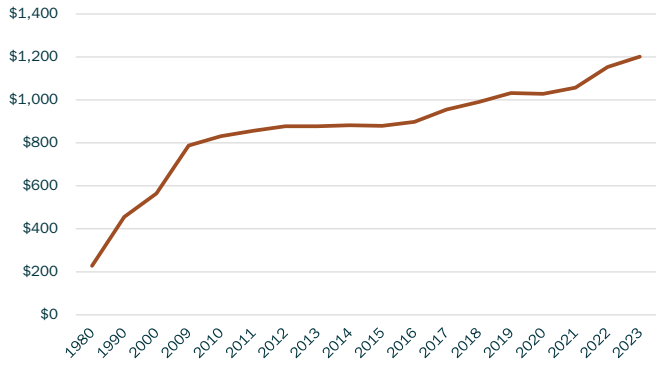
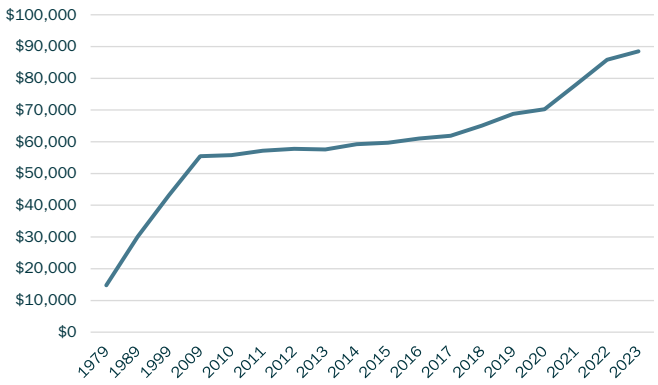


Figure 18: Addison County Median Household Income



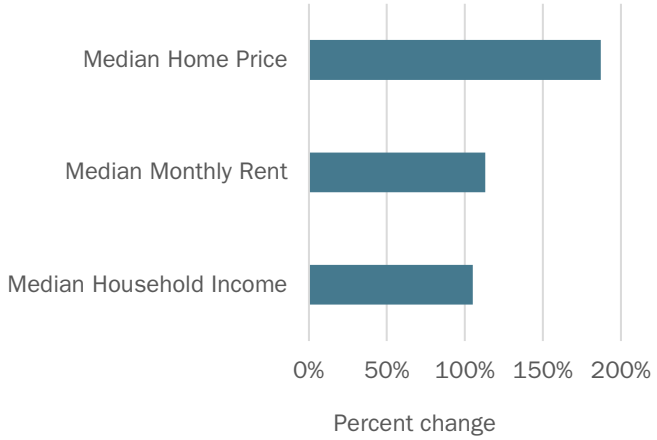
COVID-19 PANDEMIC BOX 3

The Tightening Housing Market

Throughout Vermont, home prices rose sharply during the summer of 2020 as people migrated to the state due to the COVID-19 pandemic, exacerbating an already tight housing market. Heightened interest from out-of-state buyers, a low vacancy rate, and favorable interest rates all contributed to increased housing prices. Most real estate transactions involved higher priced homes of $500,000 and up. Even so, the increased demand for housing has impacted the market at all levels, further limiting affordable options for local and first-time buyers. According to the Northwest Vermont Real Estate Market Report, the median price of single-family homes in Addison County rose to $275,000 during the second quarter of 2020, April to June. A recent report states that there was an increase of more than 1,000 residential property sales to out-of-state buyers in 2020 compared to in 2019, an increase of 38%, and the amount of money those buyers spent was up by 79%. *(See figure references - Box 3)*

income amount that divides a region's households into two equal groups: half earn more, and half earn less. As seen in **Figures 17**, **18**, and **19**, the cost of housing in the Addison Region has increased at a greater rate than household income. Between 2000-2023, the percent increase for median home prices was 187%, and 112% for median monthly rents. In contrast, the percentage increase in median household incomes for the same period was 105%.

Figure 19: Change in Housing Costs & Household Income, 2000-2023



Income Groups

Household income groups are categorized by a percentage of the **Area Median Income** (AMI) earned by households. **AMI, determined by the U.S. Department of Housing and Urban Development (HUD) and adjusted for household size, is used to calculate income eligibility for affordable housing programs.** Using the 2022 AMI of $85,871, from the Addison County 2025 Housing Needs Assessment, **Table 3** illustrates the income range in each income group in the county.[51]

Table 3: Household Income Range, 2022

Income Group	Household Income Range
≤30% of AMI: extremely low-income	$25,761 or less
>30% to ≤ 50%: very low-income	$25,761 - $42,935
>50% to ≤ 80%: low-income	$42,935 - $68,697
>80% to ≤ 100%: moderate income	$68,697 - $85,871
>100%	> $85,871

A region's ***workforce*** are the people in occupations who provide goods and services essential to their community and local economy. The household incomes of the Region's workforce generally range between 60-120% of the AMI, $51,523 - $103,045 for 2022. ***Workforce housing*** is defined as housing affordable for this population group.[52]

Housing Affordability Gap

Affordable housing is generally defined as housing where the occupants are paying 30% or less of their household income on housing costs. Housing costs include, but are not limited to: rent, mortgage, taxes, insurance, utility, and heating costs. When households need to spend more than 30% of their income on housing, it often becomes difficult to pay for basic living expenses, such as food, transportation, healthcare, and childcare.

In 2023, 17% of Addison County households paid 30-49% of their income towards housing costs, 11% of households paid 50% or more.[53] The *affordability gap* between what a household earns and can afford and the income necessary to own or rent a home continues to widen in the Addison Region increasing the potential for more households to become burdened by housing costs.

Housing Wage

The housing wage indicates whether wages are keeping pace with housing costs in a region. A housing wage is the combined wage a household must earn, working 40 hours a week, to afford a rental housing unit at HUD's Fair Market Rent (FMR), without paying more than

Table 4: Housing Wage, Addison County, 2024

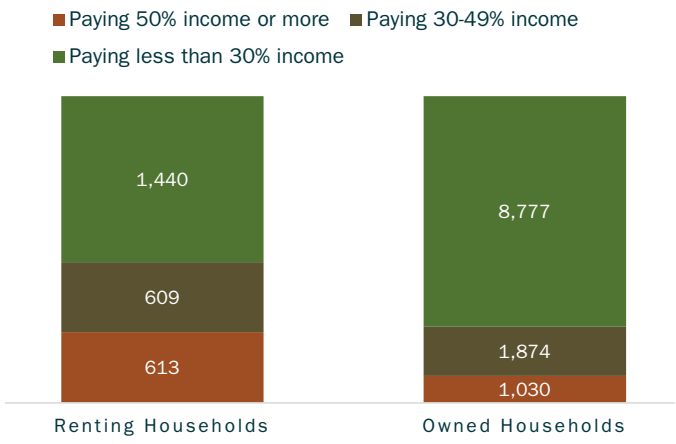
	Fair Market Rent (monthly)	Hourly Housing Wage	Annual Income Needed to Afford
0 studio	$1,017	$19.56	$40,680
1 bedroom	$1,062	$20.42	$42,480
2 bedrooms	$1,332	$25.62	$53,280
3 bedrooms	$1,741	$33.48	$69,640
4 bedrooms	$1,774	$34.12	$70,960

*The annual income assumes not more than 30% of wages going towards household costs.

30% of its income towards housing costs. Fair Market Rents (FMRs) are the 40th percentile of gross rents for typical, non-substandard rental units in a regional housing market.[54] In Addison County, as of 2024, the FMR for a 1-bedroom apartment was $1,062, a 2-bedroom apartment was $1,332, and a 3-bedroom apartment was $1,741.[55] To afford a 2-bedroom apartment, a single renter would need to earn an hourly wage of **$25.62** and an annual income of $53,280. Currently, the average or mean renter wage for Addison County households is **$16.22**, leaving a rental wage gap of **$9.40**.[56] This gap especially impacts single people living alone, in particular single parents with children.

A household earning $51,186, the County median renter income, can afford to rent a two-bedroom apartment but nothing larger. The price for most rental units in the Region is above what the average working individual can afford.

Figure 20: Housing Cost Burden, Addison County, 2023



The 2024 median priced home in the county was $385,000. To afford this house a buyer would need an annual income of at least $107,222 and an estimated $36,125 available for closing costs: 5% down payment, interest, taxes, and insurance. A household earning the 2024 area median income of $88,480 would be able to afford a home price of $317,690 with closing costs estimated at $29,975. Both scenarios assume that buyers would not spend more than 30% of their income on monthly housing costs and had the additional income for closing fees.

Figure 20 shows the number of households paying more than 30% of their monthly income for housing expenses which is the federal standard of housing affordability.[57]

In Addison County, more renter households proportionately are burdened by housing costs than owners at both the over 30% and over 50% levels of income spending. Households spending more than 50% a month are considered severely cost-burdened.

Renters: 609 households were cost burdened; 613 households were severely cost burdened in 2023.

Owners: 1,874 households were cost burdened; 1030 households were severely cost burdened in 2023.

Substandard Housing

The lack of adequate and affordable housing available for lower-income households can create multiple housing problems and potential health and safety issues. The housing stock that is affordable to many low-income renters is often older and of poor quality. Substandard housing problems, in addition to a cost-burdened household, can include an incomplete kitchen or bathroom, coal heat or no heat, and overcrowding. A household is considered as having housing problems if any of these exist. Mobile homes built before 1976, or single-family homes with a property value of less than $75,000, also qualify as “substandard”.[58]

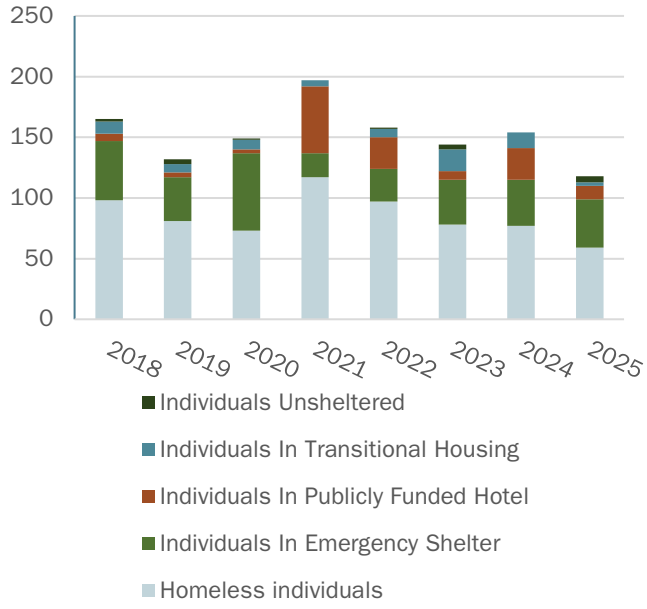
Maintenance issues tend to be more frequent with older structures, leading to additional costs and burdens. Older rental stock often lacks proper weatherization, resulting in higher heating costs and inefficiencies. For homeowners who are already cost burdened, paying for

necessary home maintenance may be extremely difficult. When maintenance and property issues are not addressed, however, this can result in an overall deterioration of housing quality and potential health and safety concerns.[59]

Most rental homes in Vermont are not regularly inspected for health and safety conditions. Therefore, we remain uncertain about the potential scope of problems within this significant portion of Vermont's housing stock. All Vermont rental housing must comply with the Rental Housing Health and Safety Code. Prior to 2022, this code was administered by municipal health officers but has since been transferred to Vermont's Division of Fire and Safety for management. The program is a complaint-based system designed to ensure rental housing is maintained in a safe and healthy manner. Situations exist where tenants continue to live in substandard housing without the ability to move and potentially fearful of complaining.[60]

Increased competition for housing, due to the shortage of appropriate, accessible, and affordable homes, adds to the ongoing struggle to house vulnerable populations, such as low income, elderly, disabled, and homeless households. During the 2025 Annual Point in Time (PIT) count, which takes place each January throughout one night, 59 Addison County residents were identified as experiencing homelessness. This total represents individuals in shelters, transitional housing, publicly funded hotel rooms, and individuals living outside. **Figure 21** looks at some characteristics of this population

Figure 21: Homeless Population in Addison Region



from 2018 to 2025.[61] The PIT count, however, does not include those who are at risk of homelessness or living temporarily with friends or family, inevitably underrepresenting this population.[62] Most of the homeless population in the Region is being served by the following organizations:

Charter House Coalition and Warming Shelter, a non-profit, volunteer-based organization dedicated to providing basic food and housing in and around Middlebury and the surrounding area.

COVID-19 PANDEMIC BOX 4

Emergency Housing Relief

In the summer of 2020, at the request of the Vermont Legislature, the Vermont Housing and Conservation Board (VHCB) managed the federal Coronavirus Aide, Relief, and Economic Security (CARES) Act funding to address long standing needs of increased and improved housing options for a rapidly growing numer of individuals and households struggling with homelessness. Relief funds were used to secure and rehabilitate permanent housing for homeless households and make improvements to shelters around the state. At the outset of the pandemic, many shared housing facilities, such as homeless shelters, were unable to meet CDC health and safety protocols. At that time, most shelters closed and transitioned many of the 2,000 homeless individuals in motel rooms across the state. *(See figure references - Box 4)*

John Graham Housing & Services (JGHS), providing transitional and emergency shelter for homeless individuals and families in Vergennes. These facilities provide services that are not available in publicly funded hotels or transitional housing and work towards minimizing shelter stays and the goal of permanent housing for families and individuals. In 2022, JGHS worked with 383 people.

Coordinated Entry (CE) is a partnership of local agencies that aids individuals and families experiencing a housing crisis by quickly identifying, assessing, referring, and connecting them to housing assistance based on their strengths and needs. In 2022, 85 households were in the CE system, waiting for households to become available. Of these households, 16 included children.

The following advocacy organizations also work to support homeless people in the Region:

Housing and Homelessness Alliance of Vermont **(HHAV)**

Helping Overcome Poverty's Effects (**HOPE**)

Housing Support Partners

Many households in the Addison Region need support to acquire and maintain safe, appropriate, affordable and permanent housing in their communities. The following federal, state, and regional agencies, organizations, and programs all play a role in this effort through advocacy, land use planning policy, financing, and development to achieve the goal of housing for all.

FEDERAL AND STATE PARTNERS

The **U.S. Department of Housing and Urban Development (HUD)** provides funding for housing in the following ways:

- **Project-based assistance:** Where the subsidy is assigned to a specific housing unit built, developed, and/or managed for the purpose of accepting low-income tenants.
- **Tenant-based assistance:** Where the recipient receives financial assistance, usually in the form of a Housing Choice Voucher (HCV) to help cover the cost of any qualified housing unit.[63] Unfortunately, due to the tight housing market, 4.0% rental vacancy rate in 2023, there has been an underutilization of vouchers. Vouchers are time sensitive and recipients lose a percentage of this time waiting for appropriate housing. Much of the housing that is available is above the voucher payment standard, and, therefore, out of reach for voucher holders.

Federal Low Income Housing Tax Credits (LIHTC) and **Vermont Affordable Housing Tax Credits** enable funding for rental housing development and affordable home ownership opportunities. These tax credits are awarded by the **Vermont Housing Finance Agency (VHFA)** to local housing developers. The credits are then sold to investors to raise the start-up capital needed for housing development.[64]

Vermont Housing Finance Agency also offers a range of home buyer programs and assistance, for income qualified buyers, to promote affordable housing throughout the state, such as:





COVID-19 PANDEMIC BOX 5

The CARES Act

CARES Act funding, released to the State during the pandemic, enabled the Region's housing partners to execute the following projects:

- ☑ 3 new energy efficient homes in the Mobile Home Park KTP in Bristol including rental assistance to house homeless families.
- ☑ The acquisition of 4 apartments on Weybridge Street in Middlebury, including rental assistance, to house homeless families–part of a 36-unit property preserved as naturally occuring affordable housing.
- ☑ Funding for landlords, earmarked for the rehab of substandard rental units for homeless families. This program evolved into Vermont Housing Improvement Program (VHIP). *(See figure references - Box 5)*

- Low down payments
- Down payment and closing cost assistance
- Vermont Property Transfer Tax reductions
- Reduce federal tax liability
- Lower mortgage insurance premiums = lower monthly payment

Vermont Housing and Conservation Board (VHCB) creates affordable housing and protects land. VHCB has assisted in creating more than 13,420 affordable homes, conserving nearly 437,079 acres of agricultural and recreational lands and natural areas, and restoring 74 historic community buildings since 1987.[65]

Vermont Department of Housing and Community Development (DHCD) supports resilient communities and provides assistance and grant opportunities to enhance community development programs. DHCD coordinates and oversees the implementation of the state's housing policy, facilitates collaboration among state housing agencies, and serves as a resource to housing providers. Additionally, the Vermont Community Development Program (VCDP) within the DHCD allocates Community Development Block Grants (CDBG) for housing development to communities statewide outside of Burlington, which has its own CDBG program.

Evernorth—a merger of Housing Vermont (**HV**) and Northern New England Housing Investment Fund (**NNEHIF**) to create a single nonprofit organization—serves low- and moderate-income people of Maine, New Hampshire, and Vermont with affordable housing and community investments. Evernorth also works closely with local nonprofit and for-profit developers to help assess, underwrite, and manage a wide range of projects, including apartments for seniors, workforce housing, assisted living, and projects which rehabilitate and preserve scarce housing resources.[66] In the Addison Region, Evernorth is a key partner in the development and rehab of these scarce housing resources through the LIHTC program, providing critical development capacity and offtakes for the tax credits.

REGIONAL PARTNERS

Cornerstone Housing Partners (formerly Neighborworks of Western Vermont), a nonprofit community development organization located in Rutland, supports mortgage and down payment assistance and facilitates repair and renovation of affordable housing to address energy efficiency, health, and safety issues. Priority projects include accessibility, weatherization, heating, electrical, roofs, and helping seniors age in place.[67]

Addison Housing Works (AHW), a non-profit housing trust serving the Addison Region since 1989, is dedicated to creating and managing highly energy efficient and permanently affordable homes with related services. As of 2025, AHW owns and manages 353 rental apartments and 9 mobile home parks with 340 owner-occupied home sites, as well as stewards permanent shared equity grants for 77 single family homes. In addition to property management, AHW also provides residential services through the SASH program for up to 200 county seniors ensuring they can age safely at home, and through the Family Sup-



Bristol Cohousing

port Program to vulnerable residents who need wrap-around services to successfully maintain their housing.

In 2024, AHW completed a new community wastewater system serving 67 homes at Lindale in Middlebury ensuring the park's sustainability as affordable workforce and low-income housing.

Addressing Regional Housing Needs

The current housing crisis in Addison County and the State is a complex issue. The age and size of existing stock, the cost of construction, materials and land, a lack of infrastructure in rural villages, incompatible zoning regulations, and expensive regulatory processes inhibit the ability to create needed housing. Modest homes are unaffordable for young families or seniors wanting to downsize and age in place. A lack of workforce housing can result in long and expensive commutes when employees can't afford to live near their place of work. Despite an active network of housing support organizations and funding opportunities, many households in the Region still do not have access to the housing they need, in many cases because it doesn't exist. As a result, the lack of appropriate and affordable housing in the Addison Region affects our communities in the following ways:

- Population reduction as people can't afford homes in the Region
- Decrease in K-12 school enrollment
- Impacts the health of the local economy
- An increase in housing insecurity for vulnerable populations
- Reduced workforce; hard to find employees
- Increased difficulty for seniors to downsize and remain in their communities

EDUCATION AND COLLABORATION

In addition to the complexity of the housing issue, there are fears or misconceptions that affordable or subsidized housing will have a negative effect on a community. It is essential that all residents, municipal representatives, and leaders understand and acknowledge the housing needs of their neighbors. The current housing crisis is regional, but the strategies and solutions used to address this crisis are local and need to be specific



Brookside Mobile Home Park, Starksboro

to each community. There are no one-size fits all solutions. Challenges and opportunities faced in the City of Vergennes, for example, will differ from those faced in Shoreham. Equally important, the issues faced within a town's village center may be quite different from those in its rural areas. Because the issues are distinct, the solutions will be as well. It is the community's responsibility with the technical support of ACRPC to promote the development of housing that meets the needs and desires of residents and in a manner that enhances the goals and objectives of the town's plan. Local housing plans and projects created through a process of public involvement and education, community input, and stakeholder collaboration will produce the most successful outcomes.

FAIR SHARE HOUSING AND FAIR HOUSING

The federal Fair Housing Act prohibits discrimination based on race, color, religion, gender, family status, or disability in matters of housing access. Vermont's Fair Housing statute includes age, marital status, sexual orientation, and the reception of public assistance to this list of prohibitions.

Vermont's Planning and Zoning Act, 24 V.S.A., Chapter 117, identifies the responsibilities and requirements of municipalities and regional commissions to promote and protect affordable housing options for its residents. For example:

- Single- and two-family homes cannot be subjected to site plan review.
- It is illegal to prohibit mobile homes or mobile home parks from a municipality.
- Municipalities must designate appropriate districts for multi-unit and multi-family dwellings.

- Accessory dwelling units subordinate to a single-family dwelling must be considered a permitted use.
- Duly adopted municipal plans must include recommendations for addressing the housing needs of low- and moderate-income individuals and should account for accessory dwelling units as a form of affordable housing.

HOUSING COMMISSIONS

The first step towards overcoming housing barriers is for communities and municipal leaders to fully understand the housing issues that exist within their own town. State law allows for the creation of municipal housing task forces, or commissions (24 VSA §4433(5). These bodies can work independent of local Planning Commissions in areas outside of planning and regulation towards solving the dilemma of providing homes that people need and can afford. Through public outreach, surveys, and events, housing commissions can connect with housing advocates, developers, realtors, state legislators, and residents to develop a **housing action plan**.

Strategies and Tools

Strategies that address current housing barriers can be **regulatory or non-regulatory** in nature. Regulatory solutions can be the revision of a municipality's plan, bylaws, and/or subdivision documents, specifically dimensional standards, permitted uses, and process requirements. Non-regulatory solutions may be derived from state and community development programs and grants, financial incentives for development, collaboration with social services, and partnerships with public and private organizations and individuals. No solution or tool proposed in this Plan will address all the Region's housing needs, nor will they be appropriate for all communities. Strategies may promote incremental increases in density, implementing a process of **gentle infill** in an existing neighborhood or the creation of a new affordable workforce housing development that fills the need of a rural community.

RECENT STATE LEGISLATION

As a result of the housing crisis now gripping most of the state, the Vermont legislature has passed two major bills that support increasing the supply and reducing the cost of new housing. In 2023, the passage of the HOME Act required local zoning reform, especially in areas with water and wastewater services. The Home Act also required increased density, promoted accessory dwelling units and duplexes, and limited parking requirements to try to promote additional infill development. In 2024, the legislature passed Act 181, which mandated that all regional planning commissions draft new future land use maps.

ACRPC worked with each town and city in the Region to determine the best sites for future housing and mixed-use development, and where to prioritize other land uses such as recreation and agriculture. The Addison Region's future land use map (FLU) identifies Planned Growth Areas, Village Areas, Downtowns, and Village Centers that can qualify for state incentives (reduced Act 250 jurisdiction, Community Investment Designations) making it easier to build much-needed homes.

See Chapter 8, page 7, for a discussion of Tiers.

HOUSING TARGETS

In conjunction with the future land use mapping process, ACRPC has disaggregated regional housing targets for each municipality in the Region. These targets, required by The HOME Act of 2023, were developed to address the acute shortage of needed housing and enable the state to stabilize prices, normalize vacancy rates, and help expand its current workforce.

For all regions, the Vermont Housing Finance Agency (VHFA) created a methodology to calculate the range of housing units needed by 2030 and 2050. ACRPC adopted the median number in each range, 1,637 and 6,096 units respectively, due to Addison's historically average population counts among all regions.

When disaggregating the regional targets to determine municipal targets, ACRPC utilizes the same population-based methodology. Included in the Act 181 legislation, regional planning commissions were charged with allocating a substantial majority of new growth to Downtowns, Village Centers, Planned Growth Areas, and

Village Areas. ACRPC meets this requirement by directing 60% of its housing targets to these designated areas. The remaining 40% is allocated to more rural areas to reflect the Addison Region's largely dispersed development pattern and limited infrastructure outside of the City of Vergennes. Therefore, while this Plan emphasizes and encourages development within its growth areas, it also recognizes the need to continue to plan for growth outside of those areas.

The housing targets allocated for the Region should address the current needs of the population in regard to cost, type, and size of housing units. In 2023, 24% of homeowner households and 44% of renter households (4,126 total households) were cost burdened or severely cost burdened (**Figure 20**). Currently, households earning the median income cannot afford a median priced home or median rent. To increase the workforce and reduce household cost burden, more affordable housing needs to be built.

Based on the data and analysis presented in this Chapter, ACRPC proposes the following breakdown of the 2050 housing targets by tenure, affordability, type, and size. (**See Table 5**)

Table 5: Percentage of Housing Target Types for 2050

20%	**Other Owner-Occupied Housing** Single family homes
35%	**Affordable Owner-Occupied Housing: 80-120% AMI** Manufactured Homes, Cottage Homes, Duplexes
10%	**Other Rental Units** ADUs, Duplex
20%	**Affordable Rental Units: 60-120% AMI** ADUs, Duplexes, Large Multi-family 5+, Small Multi-Unit 2-4
15%	**Affordable Rental Units: <60% AMI** ADUs, Duplex, Large Multi-Unit 5+



Figure 22:
Addison County Municipalities Housing Targets 2030

2025 – 2030

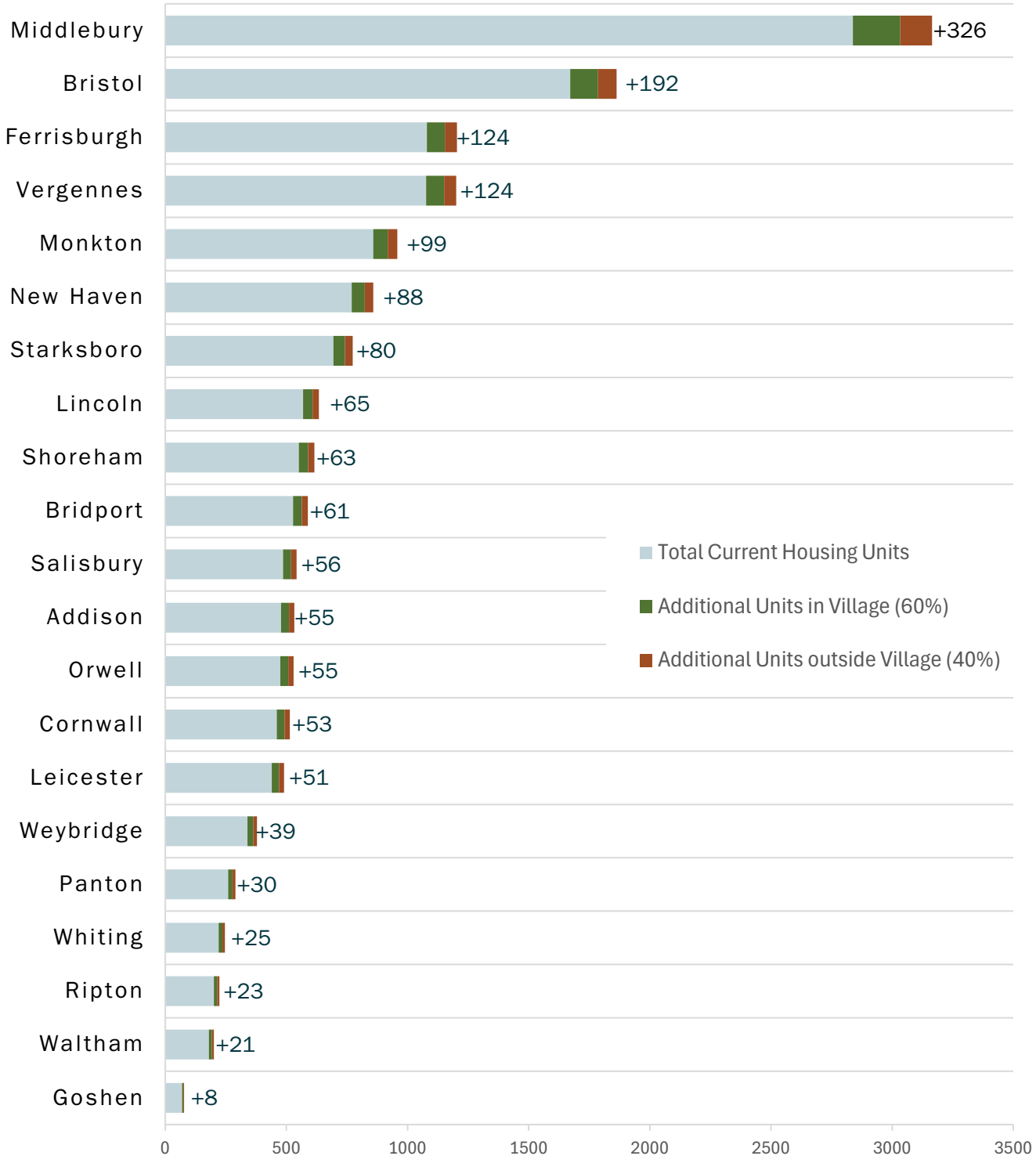
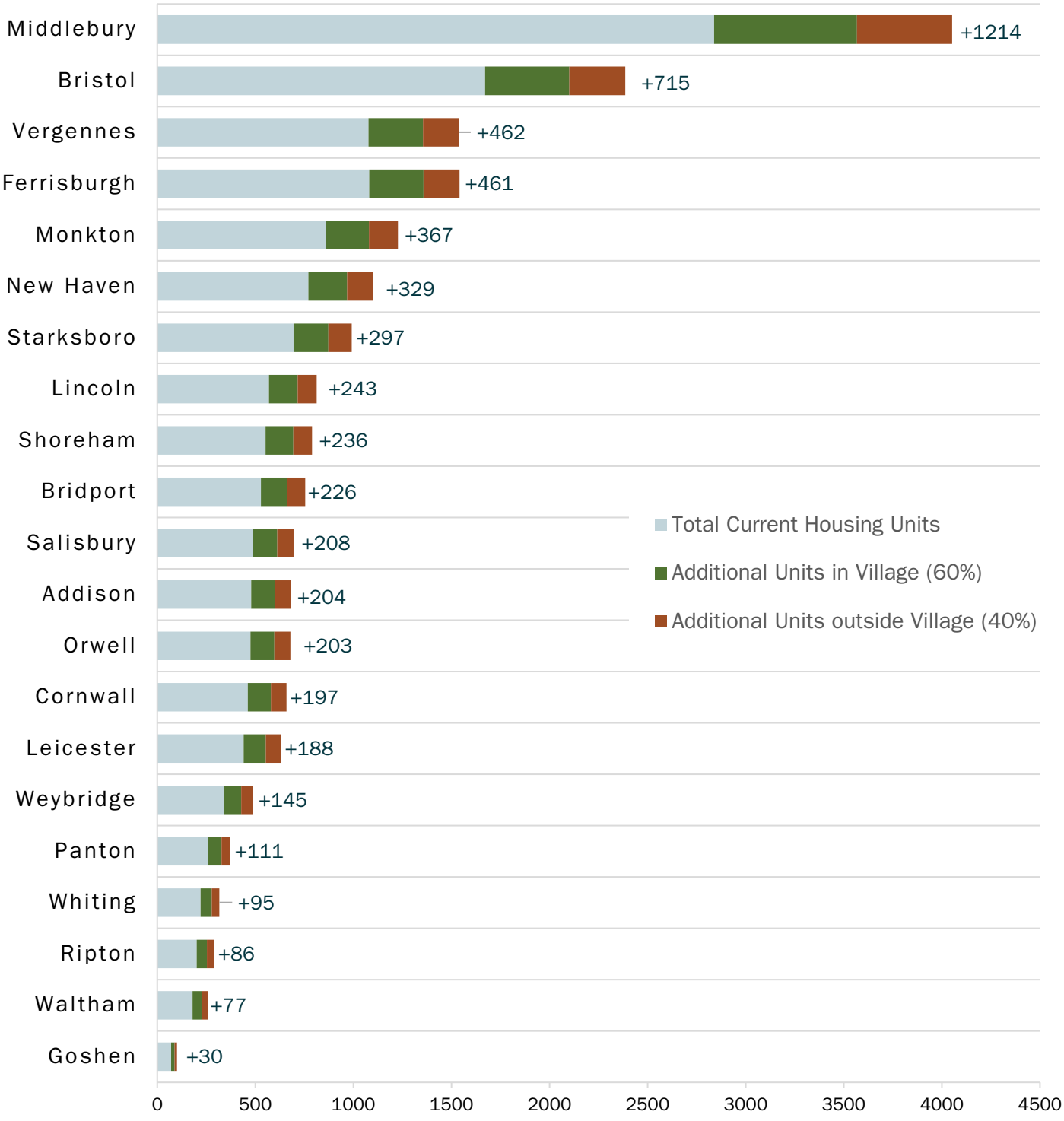


Figure 23:
Addison County Municipalities Housing Targets 2050

2025 – 2050



REGULATORY STRATEGIES

Municipal Plan Goals and Bylaws

A town's municipal plan sets forth the overall goals for land use and development in the community. Planning goals that promote housing and include smart growth concepts, such as **compact and walkable centers, clustered development, density bonuses, transit-accessible communities, and a variety of housing types and affordability**, enable proposed regulations aimed at addressing housing issues. Below are examples of zoning concepts and strategies that can be integrated into municipal bylaws:

Rework density and dimensional requirements

- ☑ Make the built pattern of historic village centers, such as road frontage, building setbacks, and lot coverage, the basis of dimensional standards for new development in these zones. Measure existing conditions and create dimensional standards that mirror these conditions, reinforcing the character of the area.
- ☑ Reduce minimum lot size or minimum unit size requirements. Bylaws that require a large minimum lot size (2 acres/dwelling unit) discourage the development of smaller and affordable housing, due to the higher purchase price of the land. Even when a lack of town water and sewer limits density, municipalities should allow small lots and encourage creative solutions to solve the infrastructure issues.

Figure 25: Example of Duplex Housing



- ☑ Separate density from lot size. Create a zoning bylaw that permits a dwelling unit/acre density pattern that is consistent with the existing character of the village neighborhood and not determined by lot size. A ¼ acre lot could allow a duplex plus an accessory dwelling unit. The minimum lot size could remain ¼ acre. Defining density separately from lot size allows for a variety of housing types and affordability.

Allow for a variety of housing types

- ☑ Allow duplexes and multifamily units in all residential zones. Duplexes and small multi-family structures can be allowed on similar sized lots as single-family homes (**Figure 24**).
- ☑ Allow residential mixed-use and in-home business in residentially zoned areas.

Figure 24: Residential Density for Accessory Dwelling Units



Promote accessory dwelling units (ADUs)

Although allowed by right (24 VSA §4412(E)), barriers to ADU development still exist. Municipalities can work to reduce these barriers through policy change and supporting programs that help with technical and design assistance.[68]

- ☑ Simplify or reform application requirements for small scale development within existing structures.
- ☑ Waive or reduce permitting fees.
- ☑ Consider increasing the allowable size of accessory dwelling units based on the size, proportions, and character of the primary structure and parcel.
- ☑ Provide design, technical, and financial materials and resources to homeowners interested in creating ADUs.

Figure 26: ADU Examples - Detached (left) and Attached (right)





Adaptive reuse of buildings

- ☑ Allow the conversion of pre-existing larger buildings, like barns, schools, or commercial structures, into multifamily units, where appropriate, through conditional use review.
- ☑ Renovate pre-existing historic homes into energy efficient, accessible, duplex or multi-family homes.

Flexible parking regulations

- ☑ Reduce on-site parking requirements when projects are near public transit, services, and/or have available on-street parking.
- ☑ Waive parking requirements for mixed-use developments when commercial and residential demand peak at different times of day.
- ☑ Allow stacked driveway spaces.

Clustered development and planned unit developments (PUDs)

These zoning tools allow greater flexibility in the configuration of buildings on a site, encouraging smaller structures and a more creative, efficient use of that site. This process can result in lower infrastructure costs due to coordination of construction and shared utility systems. Municipalities should develop specific standards for PUD review that conform to their town plan goals and objectives.[69] PUDs can:

Figure 27: Bristol Cohousing



- ☑ Support development density to be determined for an entire area (instead of a lot-by-lot basis).
- ☑ Encourage small lot, clustered development with minimal side yard setbacks in village and rural settings.
- ☑ Require affordable housing and/or density bonuses.
- ☑ Allow for innovative design and energy efficiency through shared resources and walkable communities.
- ☑ Preserve open space for communal use and the protection of natural resources.

Promote Affordability

- ☑ Allow permitting fee reductions, waivers, or deferments for affordable housing development projects.
- ☑ Broaden types of housing that are allowed "by right" thus simplifying and reducing the cost of the permitting process and avoiding appeals.
- ☑ Simplify regulations by aligning with state permitting, if no specific reason for "extra protection" of resources is evident.

NON-REGULATORY STRATEGIES

Collaboration with Private, Public and Non-Profit Partners

- ☑ Municipalities and developers share the costs of sewer, water, sidewalks, and other infrastructure.
- ☑ Investigate opportunities to build private housing developments on donated town land.
- ☑ Grant monies awarded to municipalities are invested into public-private partnerships to create affordable housing.

Figure 29: Stoney Hill Development, Bristol



A mixed-use development, located within walking distance to schools and Bristol's downtown. The Town and Stoney Hill Properties, LLC, initially partnered on a Community Developoment Block Grant (CDBG) to develop design and feasibility studies for this project. The town further invested by paying 50% of the infrastructure costs (sidewalks, water, and power) with a grant from the Northern Border Regional Commission (NBRC). Addison Housing Works partnered in constructing 20 units of affordable homes.

Figure 28: Weathervane United, Lincoln



Beginning with a Community Block Grant to purchase one home in the center of Lincoln Village is now 10 units in 3 homes, providing affordable housing for seniors. Sidewalks connect the community to the library, general store, and town offices. Infrastructure is provided by the Town.

Figure 30: Armory Lane, Vergennes



The Medicare-funded program, Services and Support at Home (SASH), aimed at keeping seniors housed rather than in a hospital or nursing home, helps Armory Lane (right) offer quality care to its residents. The building has a full-time service coordinator and an on-site team, including a home health specialist, mental health specialist, and a nurse who is on site 10 hours each week. This helps foster a sense of community, as it keeps residents healthy and turnover low.[71]

- ☑ Create partnerships between senior housing facilities, healthcare, and elder services to develop independent housing options for vulnerable populations.
- ☑ Encourage community members to participate in HomeShare Vermont. Housing committees and/or local advocates should promote the concept of home sharing through education and outreach.[70]
- ☑ Support the work of non-profit housing organizations to maintain and improve existing affordable housing options in your communities, including mobile home communities.

Home Construction Efficiency and Weatherization Programs

- ☑ Support state weatherization efforts at municipal levels. Encourage contractors, homeowners, and landlords to invest in weatherization projects for existing affordable housing.[72]
- ☑ Support net zero-ready manufactured home replacement projects in local mobile home communities.
- ☑ The Homes for All initiative is a series of education and tools that support small-scale developers with the knowledge and incentive to build workforce housing through on-site and off-site construction. This effort targets underutilized land, especially in town centers and established neighborhoods with existing infrastructure and proximity to jobs, services, and transit.

Develop Wastewater Solutions

The State of Vermont has formed an interagency Village Wastewater Initiative Committee (VWIC) led by the Department of Environmental Conservation (DEC). The committee works to develop tools and resources for developing rural wastewater systems and coordinates between funders and service providers.[73]

- ☑ Create a local wastewater committee and determine needs for your community.
- ☑ Coordinate with ACRPC, DEC, and other funding sources.

Promote Safe and Accessible Housing

- ☑ Rental registries encourage safe and healthy living conditions through a process of regular inspections of code compliance. Vermont does not have a statewide registry but municipalities can enact local ordinances.
- ☑ Universal design is an approach that works to ensure products and buildings can be used by virtually everyone, regardless of their level of ability or disability. The universal design concept increases the supply of usable housing by including universal features in as many houses as possible, allowing people to remain in their homes longer. VHFA's Universal Design Policy [74] requires that all funded projects and units meet the Vermont Access Rules for being "adaptable" and "visitable." This predominantly affects residential buildings with 1-3 units and some historic buildings looking for waivers from the Vermont Access Rules.

Community Investment Designations

State financial incentives, regulatory relief, and technical assistance exist for Downtown Centers, Village Centers, Planned Growth Areas, and Village Areas. These programs help communities with economic development, historic preservation, and a variety of revitalization projects in the Centers. This program encourages smart growth policies and principles of development in the implementation of future projects.

Grant Programs

An array of federal and state planning, development and construction grants are available to communities working to address their housing issues. The **Vermont Department of Housing and Community Development (DHCD)** has a comprehensive website and



is a great resource for understanding funding options. ACRPC assists municipalities and community members navigate grant writing and project implementation processes.

Other grant programs include:

Municipal Planning Grants (MPGs) are small scale planning grants that can fund studies exploring future housing solutions in a community.

Community Housing Investment Program (CHIP), a project-based tax increment financing tool, provides monies for municipalities to build the infrastructure needed to support housing, such as water, wastewater, stormwater, broadband, and site development.

Vermont Housing Investment Program 2.0 (VHIP) offers grants up to $50,000 per unit for repairs needed to bring vacant rental units up to Vermont Rental Housing Health Code guidelines, add new units to an existing building, or create an accessory dwelling unit on an owner-occupied property.



COVID-19 PANDEMIC BOX 6

The Region's Housing Crisis

The COVID-19 pandemic exacerbated the Region's housing crisis, affecting households across income levels. A low vacancy rate and rising home prices were driven by several factors: an influx of people relocating away from urban areas and paying above market value; and homeowners who previously considered relocating postponed putting housing on the market. For many households, the loss of employement and an increased cost burden led to a loss of housing. Emergency shelters and congregate housing facilities closed due to social distancing concerns to protect health.

A hopeful outcome of the pandemic has been a greater community awareness of housing issues in our Region and State and how they can be addressed. CARES Act funding supported the renovation/restoration of substandard housing units into adequate and affordable housing. Monies from the American Recovery Plan Act (ARPA) were targeted for housing and supportive infrastructure such as water and wastewater systems. Municipalities also received ARPA funding for local needs due to COVID-19 impacts. *(See figure references - Box 6)*

Goals, Objectives, and Actions

GOAL 1: To increase the supply of safe and affordable housing to accomodate a substantial majority of the Region's housing targets for 2029 and 2050, as put forth in the 2024 Vermont Statewide Housing Needs Assessment.

Objective 1:

Explore and promote changes to municipal regulations and policies that support housing and mixed-use development in Village Centers, Downtowns, and areas planned for growth, as per Act 181.

a. Develop model bylaw language adoptable by member municipalities that will support affordable, accessible, and small-scale housing.
b. Work with towns to reform existing bylaws to allow multi-family and manufactured housing in any area where single-family housing is allowed.
c. Provide technical assistance to municipalities, if needed, to help with development review of new housing projects in Act 181 areas planned for growth.

Objective 2:

Encourage an adequate supply of code-compliant housing in rural areas as necessary to meet the housing targets of Act 181.

a. Provide technical assistance to municipalities to develop specific standards and review processes for Planned Unit Developments (PUDs) that employ conservation design principles such as preservation of agricultural land, protection of natural resources, and clustered development for density bonuses, enabling housing developments, including mobile or modular homes, with shared infrastructure in rural sites.
b. Encourage and support the construction of ADUs for long-term rentals and promote educational and technical resources such as ACRPC's ADU Guide.
c. Encourage towns to adopt regulations that include density bonuses for PUDs in rural areas that conserve land or provide opportunities for affordable and workforce housing.
d. Encourage towns to adopt regulations that allow farms to create safe and affordable housing for the farm workforce.

Objective 3:

Help municipalities support the maintenance and sustainability of existing affordable housing in their communities.

a. Promote the Vermont Housing Improvement Program (VHIP).
b. Develop model rental codes that municipalities can adopt and enact, to help promote safe and healthy living conditions.

Objective 4:

Expand water and wastewater infrastructure capacity in rural villages to support housing development.

a. Assist rural communities in planning for water and sewer infrastructure needed for future housing development.
b. Research regional septic solutions including cooperative operation of a pump out facility.
c. Work with communities to apply for the Community Housing Infrastructure Program (CHIP), if needed, to support infrastructure needs for new housing projects.

Objective 5:

Work with each member municipality to understand the housing needs in their community and identify growth opportunities to increase their housing stock.

a. Encourage and assist municipalities to apply for Tier 1A or opt-in to Tier 1B areas to qualify for Act 250 permit exemptions.
b. Help each municipality develop a comprehensive housing element in its municipal plan that addresses the community's housing needs and future allocation of housing targets, in terms of price, size, type, and location.
c. Facilitate the establishment of municipal housing committees throughout the Region.

GOAL 2: Collaborate with public and private organizations to develop solutions to current housing challenges facing our communities.

Objective 1:

Ensure that the Region's housing stock provides for all segments of the community.

a. Support the incorporation of 'universal design' in all funded housing, meeting Vermont Access Rules for being "adaptable" and "visitable".
b. Encourage new and renovated housing projects that support adults with disabilities, aging in place, and supportive housing programs, such as **Support and Services at Home** (SASH).
c. Support and collaborate with Addison Housing Works and other non-profit, private development and financial organizations help to create new housing and maintain existing units in the Region.

Objective 2:

Encourage developers and communities to create shared utility infrastructure (e.g., community septic and water systems) when appropriate.

a. Encourage rural communities to create sustainable funding sources that would support community-owned systems for new development in existing villages and downtown areas.
b. Encourage state agencies that review permitting systems to eliminate duplicate fees on community systems and amend rules that increase the costs to operate or maintain small-scale community water and wastewater systems.

Objective 3:

Promote public awareness of and support educational and outreach efforts regarding housing challenges.

a. Coordinate and deliver ongoing housing education and outreach through regional forums, workshops, and training sessions for municipalities, housing professionals, and the public.
b. Highlight successful local case studies and share information on current and future housing opportunities to foster informed dialogue and collaborative solutions.
c. Encourage municipalities to amend their land use regulations to allow alternative housing arrangements in mulitple zoning districts to accommodate group housing facilities for populations needing human services support.

GOAL 3: Promote innovative and sustainable planning and design of homes in order to reduce housing costs and minimize environmental impacts, where households spend no more than 30% of their income on housing and not more than 15% on transportation.

Objective 1:

Encourage housing developers to locate projects in existing village centers, on vacant "infill" lots, close to jobs, public transportation, and services.

a. Support incremental, new, and renovated small housing units; ADUs, duplexes, and multi-household buildings, that are within walkable distance to retail, municipal services, educational and recreational facilities, and public transportation.
b. Promote the Homes for All initiative, an educational "community of practice" for emerging developers with the goal of creating workforce housing.

Objective 2:

Encourage the construction of new homes in areas planned for growth as identified on the Future Land Use Map, avoiding fragmentation of productive or ecologically important farm and forest lands.

a. Work with the state to develop a Tax Increment Financing (TIF) district or other tax incentive programs that encourage development of affordable rental properties.
b. Promote the development of sustainable manufactured and modular home communities.

Objective 3:

Encourage municipalities to use public assets such as buildings, land, infrastructure, and revolving loan funds to help reduce the cost of new housing projects.

a. Support municipalities and regional partners in applying for grants focused on housing opportunities.
b. Advocate for restoration and development of vacant or underused municipal buildings to create new housing through adaptive reuse.

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Economic Development

Existing Conditions

The Addison County Regional Planning Commission created the Economic Development Chapter jointly within its partner agency, Addison County Economic Development (ACEDC) to coordinate our planning and economic development goals. Much of the data and structure of this chapter and supporting appendix is intended to mirror the work developed within the West Central Vermont Comprehensive Economic Development Strategy.

DEMOGRAPHICS AND WORKFORCE

The demographics of the Addison Region population has shifted significantly. In just the decade between 2013 and 2023, the largest age group switched from 45- to 54-year-olds to 55- to 64-year-olds, with the average age increasing from 42.3 to 44, an upward trend that has persisted for decades and is likely to continue.[1] This shift is resulting in a shrinking workforce as fewer young people are available to enter the workforce and a growing number are either retired or will retire soon (Figure 2).

The racial make-up of the Region has also shifted in recent years. While the majority group has remained "white monoracial," this population has actually decreased by 3.41% since 2013. All other racial groups increased during this period leading to a doubling of the People of Color (POC) community. Now, POC make up 12.02% of the population compared to 6.25% in 2013.[2] While racial diversity has increased substantially, the Addison Region's racial demographics remain significantly more homogenous than the nation as a whole (**Figure 2**).

EDUCATION

Educational attainment in Addison County, and Vermont generally, exceed the rest of the country, especially

Figure 1: Addison County Population by Age (1975 and 2022)

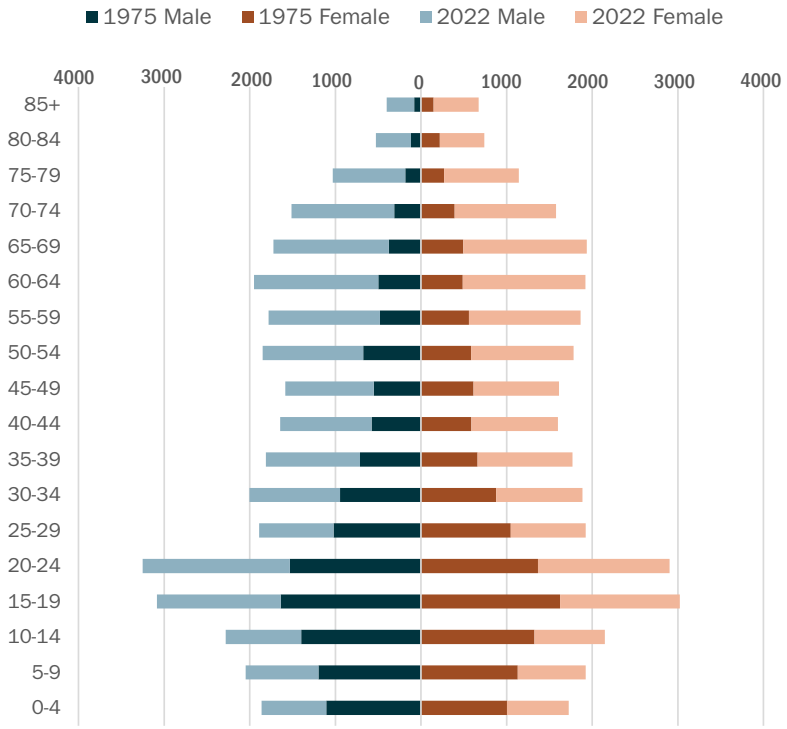
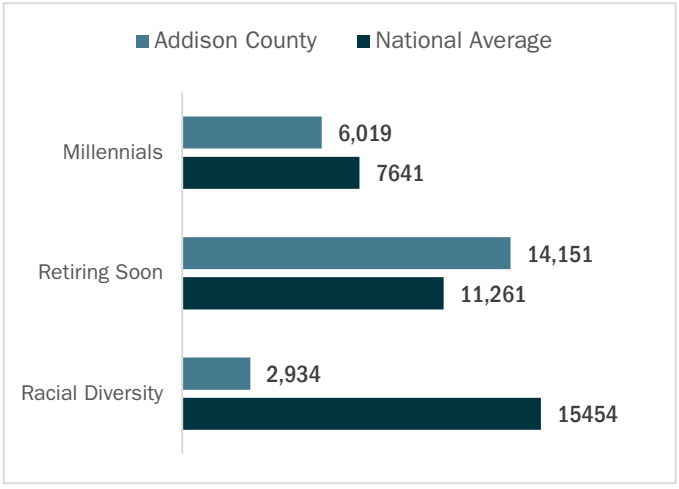


Figure 2: Targeted Demographics, October 2025



when comparing high school graduation rates for the adult population over 25, which stands at 89.8% in the US, 94.5% in Vermont, and 95.1% in Addison County.[3] The County tends to perform at similar rates to the rest of Vermont in higher education attainment with 24.3% of adults in both Addison County and statewide holding bachelor's degrees and 17.5% of Addison County adults holding master's degrees compared to 17.4% in Vermont.[4]

As Vermont's population stagnates, K-12 class sizes have shrunk, leading several elementary schools to shut down completely. This has been exacerbated by rising education costs. In Addison County, Addison Central School closed in 2022 followed more recently by Ripton Elementary School in 2025. Closure of Ferrisburgh Central School was also considered, but voters ultimately decided to keep it running in 2019. These retired school buildings are now being repurposed into community centers as planning efforts commence to evaluate their highest and best uses for the future. These large facilities present considerable challenges to the communities who take ownership of them and become responsible for their maintenance, repair, future use, and potential redevelopment. However, they also provide opportunities to strengthen an area's economic development and community cohesion. With an aging population and lowering birth rates, Vermont and our Region will continue to grapple with this issue in the coming years.

See Chapter 4: Community Infrastructure, pages 34-39.



INCOME

The median household income (MHI) of Addison County was $88,478 in 2023 which was $7,267 higher than the Vermont MHI and $10,759 higher than the US MHI. However, mean income in Addison County was $107,877, only $1,946 higher than Vermont and $1,283 less than the US mean.[5] Since higher mean income, as compared to median income, is generally driven by a few very high earning individuals, the fact that Addison County's median and mean incomes are relatively close, speaks favorably on the distribution of wage rates in the Region.

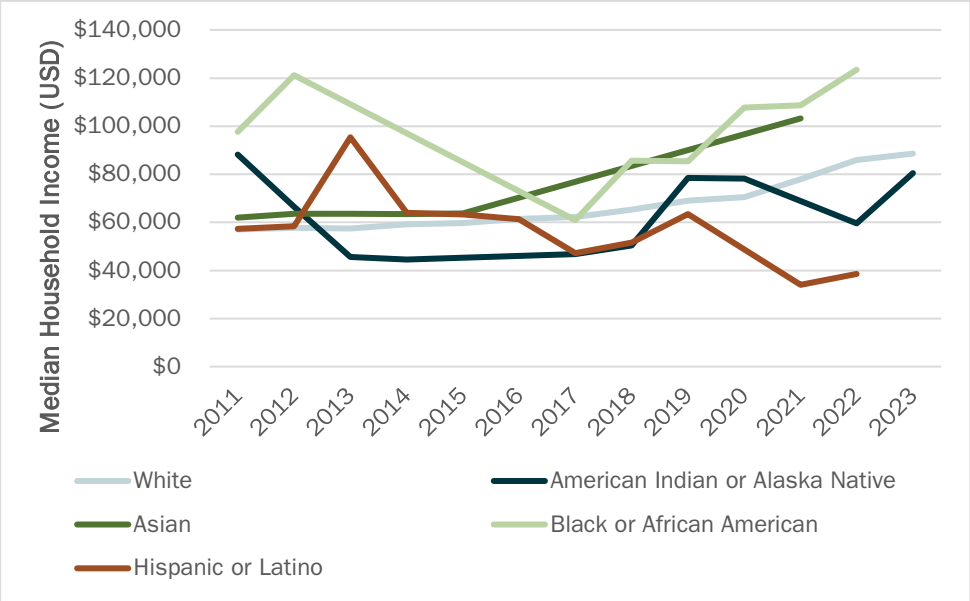
This analysis is consistent with the Gini Index, a widely used measurement of inequality. A Gini index value represents how equitable wealth distribution is on a scale from 0 (perfect equality) to 1 (perfect inequality). As of 2022, Vermont had a score of 0.45 while the United States had a score of 0.486. The slight difference is rather significant on the Gini Index. The United Nation's defines 0.4-0.5 as relative inequality, and anything above 0.5 severe inequality. However, both Vermont and the US had a rise in scores by about .03 since 2006 when the data was first collected at the State level.[6] This indicates an overall trend towards income inequality.

PAY GAPS

In Addison County, the "female median income" was 20.40% less than the "male median income" in the 2023 Census. Although substantial, this difference changed drastically from 2013's 33.49% gap. On the other hand, Vermont's gender pay gap went from 24.55% in 2013 to 16.38% in 2023 – a smaller improvement, but a better outcome. The country's gender pay gap has been far more stubborn: 28.98% in 2013 to 27.52% in 2023. Addison County has ample room for improvement compared to the rest of the State in overcoming gender income inequality, though the County has performed well relative to the nation.[7]

The gender pay gap has many complicating factors. The difference in pay can be attributed to general prejudice, as well as cultural differences. The types of occupations women tend to pursue, and the likelihood of women to demand higher pay or promotion, both affect this gap. It is also important to acknowledge the unpaid labor traditionally performed by women

Figure 3: Median Household Income (MHI) by Race in Addison County



such as housework and childcare are not accounted for in the pay gap.

Due to the historically low rates of racial diversity in Addison County, the data presented in **Figure 3** is likely to be skewed and should be viewed critically. Small sample sizes can experience great changes that do not necessarily reflect the reality of the population. The conclusion that racial pay discrimination does not exist for certain groups should not be drawn from this data. A reliable source of racial pay disparity data is not likely to exist at the county level.

POVERTY

The Region maintains relatively low rates of poverty. At 7.4%, Addison County's poverty rate falls below the statewide rate of 9.7% and the national rate of 12.5%. Census data for racial disparity in poverty is more stable than that of income. While the White, non-Hispanic population has a poverty rate slightly below the average at 7%, other racial groups are in the double digits: 18.8% Black or African American, 10.6% Two or More Races, and 25.4% Hispanic or Latino.[8]

Similarly, Addison County performs well when comparing the proportion of earners making up to 300% of the poverty rate wage threshold: 34.81% in Addison County, 37.54% in Vermont, and 44.21% in the US.[9] This is a measurement widely used to demonstrate financial insecurity and often determines eligibility for federal aid programs. which explains the correlation with federal Supplemental Nutrition Assistance Program (SNAP) recipient data: 8.6% of Addison County households receive SNAP benefits compared to 10% in Vermont and 12.2% in the United States.[10]

Vermont has a minimum wage comparable to that of other states at $14.01. This rate has had a notable increase of 53% in the past decade.[11] This is well above $7.73, the poverty wage for two working adults with two children in Addison County, as well as $7.52, the poverty wage for one working adult with no children in Addison County. However, the living wage for the former group is $34.75 and $24.51 for the latter.[12] This is a similar case for the State as a whole. Vermont's cost of living has increased substantially in recent years with per capita Personal Consumption Expenditures – the average total expenses per Vermonter – increasing 34% from 2020 to 2024. This is nearly equivalent to the 2004 to 2020 rate of increase, representing an acceleration in rising costs.[13] Though wages have also increased greatly, they have not kept pace with the cost of living, leaving many families behind.



DISENFRANCHISEMENT

Those who do not participate in the workforce are important potential economic contributors as well as societal indicators. While 64.2% of Addison County residents participate in the workforce, a relatively high percentage compared to national averages, that leaves 35.8% that do not. Different people cannot or choose not to work for a myriad of reasons. Children remain in school, the elderly have retired, and many others face permanent or temporary challenges that keep them from working. Poverty, homelessness, addiction, disability, and health can all disenfranchise people from the workforce. Creating paths to enfranchise and enable these populations to join the workforce benefits a community and its economy.

Homelessness

Vermont has the 5th highest rate of homelessness per capita in the country. In Addison County, 78 people in 59 households were experiencing homelessness during the 2023 Point-In-Time count. While this number is below the 2021 peak of 117, it represents a consistently elevated rate of housing insecurity in the area. Several groups such as sexual and domestic violence survivors, people of color, veterans, and those struggling with mental illness are more likely to be unhoused, posing further detriments to marginalized populations.[14]

The unhoused population has largely been supported by the State's hotel-motel voucher program, however, this COVID-era program was discontinued for the majority of participants due to concerns about high costs and ineffectiveness in combatting the root of homelessness. There are several alternative temporary housing shelters in the region: John Graham Shelter in Vergennes has 16 family beds and 16 adult-only beds; Charter House Coalition in Middlebury has 26 beds; Counseling Service of Addison County in Middlebury has nine beds including one family.[15] However, waitlists are often extensive for these facilities.

For more information regarding the housing crisis and the rising unhoused population, see pages 7-8 (Infrastructure/Housing) and Chapter 5: Population and Housing.



Substance Misuse

Substance misuse is both a contributor and a symptom of homelessness. This issue worsened significantly during the COVID pandemic. This not only affects the social well-being of a community, but also the productivity through "turnover and absenteeism, poor school performance, and increased costs related to public assistance and criminal justice."[16]

Homelessness and substance misuse are just two symptoms of a broad barrier to social and economic vitality of a community. Along with other societal ills – addiction, domestic abuse, discrimination, targeted hate – homelessness and substance misuse sideline potential consumers, cause departures from the workforce, and contribute to a decline in worker health.

DISABILITY

15.5% of Addison County residents self-identify as having a disability according to the 2023 American Community Survey (ACS) performed by the US Census Bureau.[17] This exceeds both the state level, by 1.2%, and the country's level, by 1.9%. This number increased by nearly 3% during the period 2013 to 2023.[18] This correlates to the increase in average age of the Region's population, which potentially explains the changes.

Definitions of disability range broadly and drastically affect the data. The self-selection of a disability characteristic, as done in the ACS, obscures data comparison and disability standards. However, self-identification more closely aligns with the social model of disability, rather than the medical model, which better reflects the reality of disability: "a complex interaction between a person and [their] environment."[19]

Using the same Census Bureau data, those with a disability are less likely to be in the labor force with a 47.5% labor force participation rate, and less likely to be employed with 4.6% unemployment rate.[20] These higher rates represent untapped workforce potential during a labor shortage. It also indicates a possible misalignment between employers and the disabled population in terms of worker needs, further demonstrating the complex perception of disability.

HEALTH

Health and healthcare significantly impact economic development, as workforce health and healthcare costs shape local economies. In Addison County, health outcomes and factors—measured by the County Health Rankings—are slightly better than Vermont's average and above the national level.[21] Nonetheless, challenges remain: 10% of adults recently reported poor physical health for two weeks or more, 15% cited poor mental health, and 33% experience loneliness at least sometimes. Chronic diseases like diabetes, COPD, and cancer are on the rise.[22] Issues such as costly childcare, housing shortages, income disparities, and long commutes further affect community health.

Figures 4 and 5 demonstrate the impact health and health-related jobs have on the Region's economy. Nursing is one of the most sought after skills and rapidly growing needs of the Region.

Healthcare access is mixed; while Porter Medical Center offers strong services through its affiliation with a larger network, residents face difficulties due to short-

Figure 4: Addison County Active Job Advertising in 2024 and 2025

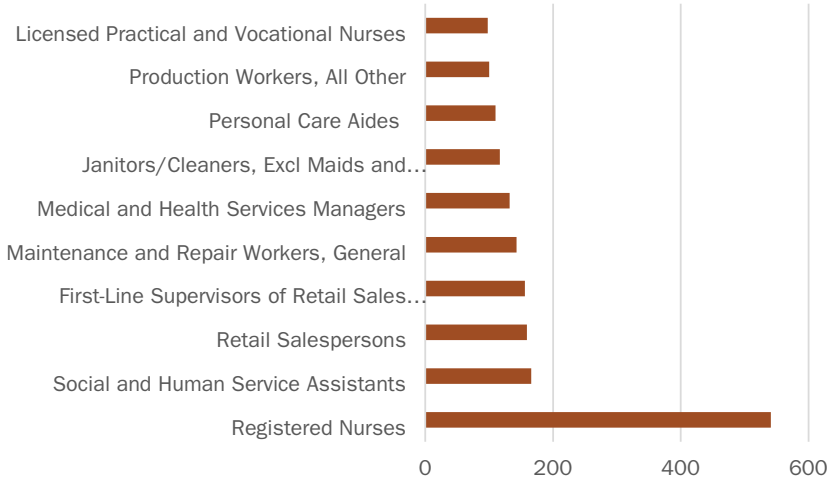


Figure 5: Job Posting Analytics for Top In-Demand Skills in Addison County

Skills	Postings	% of Total Postings	Profiles	% of Total Profiles	Projected Skill Growth	Skill Growth Relative to Market
Merchandising	1052	0.07	111	1%	15.0%	Growing
Nursing	789	0.05	74	1%	20.1%	Rapidly Growing
Cash Register	620	0.04	38	0%	21.4%	Rapidly Growing
Auditing	606	0.04	135	2%	21.8%	Rapidly Growing
Housekeeping	548	0.04	17	0%	13.3%	Growing
Food Safety And Sanitation	526	0.04	29	0%	11.7%	Growing
Inventory Management	476	0.03	151	2%	12.6%	Growing
Finance	467	0.03	190	2%	27.3%	Rapidly Growing
Food Services	465	0.03	61	1%	16.4%	Growing
Effective Communication	431	0.03	15	0%	0.0%	Neutral

ages in primary care and psychiatry, long waitlists, and high insurance costs, which strain employers, businesses, and families.

The same is true for aging facilities. The recent opening of the Vergennes Grand Senior Living facility marked a huge improvement in housing and healthcare, with a total of 88 beds becoming available. Elder care services are becoming increasingly in demand as the population ages. While many people receiving these services are retired, the families that take care of them are of working age. By freeing up their time, and freeing up housing for new Vermonters, the workforce can grow.

Economy

Addison County's Gross Domestic Production (GDP) was $2,156,287,000 as of 2023, making up 5.04% of Vermont's total GDP.[23] While GDP is a helpful measure in many regards (e.g. economic activity, comparative growth), it has many limitations. Factors like environmental externalities, population health, and home labor are not accounted for within the measurement. There are a number of more recently developed economic growth measures, however, these are typically designed on an international scale.

The Region's unemployment rate is among the lowest in the State at 2.2% as of June 2025.[24] The labor force participation rate was 64.2%, 2% higher than the country, but 0.7% lower than the state average.[25] The size of the labor force was 20,649 in 2023 which is an increase from 2011 by just 6 people, demonstrating the stagnant condition of Addison County's population.[26]

To further demonstrate the conditions of Addison County's economy, this section will contain the following subsections: Employment by Supersector, Commuting Patterns, Tax Receipts, and Opportunity Zones.

EMPLOYMENT BY SUPERSECTOR

By far, the human services industry, including educational services, health care, and social assistance, employs the most people in Addison County. At 4,375, this supersector makes up 28.44% of the Region's jobs, reflecting three of the four largest employers of the County: Middlebury College, Porter Medical Center, and Counseling Services of Addison County.[27] The largest employer, Collins Aerospace, represents the second largest supersector, manufacturing. Following close behind are retail trade and construction industries.

This has been the trend for the past few decades, with a larger trend up in Health Care and Social Assistance as well as Educational Services. There has also been a slight uptick in the Agriculture, Forestry, Fishing, and Hunting Industry, however, the number of farms has started to dip. There was a peak in 2012 of 814 farms in the County which, as of 2022, has shrunk to 751.[28] The area seems to be facing an overall trend of farm consolidation partially due to the lack of succession plans and youth interest in farming. However, specialty agriculture like cider, wine, and cheese, for which Vermont is known, remains a strong economic and employment driver.

Job trends seem to align with growing industries. According to one measure of 2024-25 job listings, medical professions are largely in demand, followed by retail workers. See **Figure 4**. This is largely corroborated by another measure from 2020-2025 that indicates similar skill demand growth. See **Figure 5**.

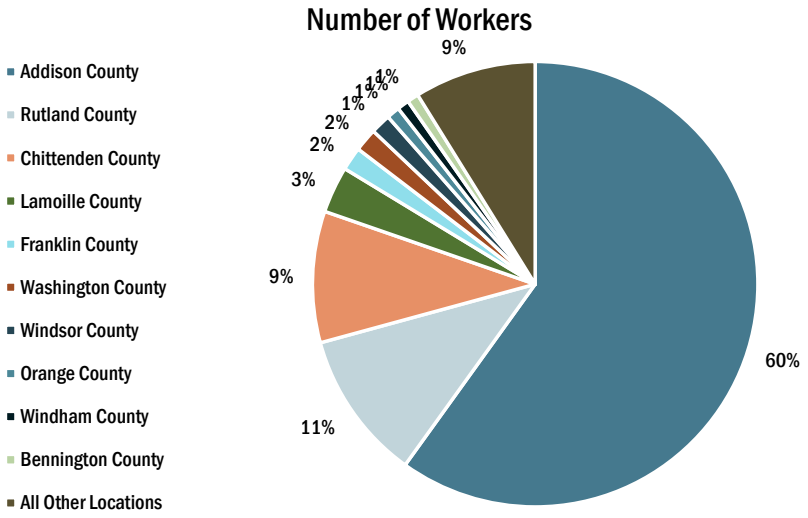
COMMUTING PATTERNS

About half of Addison County's 16,564 working residents commute outside of the County, while 5,540 workers travel into the region, bringing Addison County's workforce to 13,824.[29] Of these incoming commuters, most come from Rutland County and Chittenden County then Essex County, New York. While this high rate of county cross pollination boasts the interconnectivity of Vermont, it can be harmful to workers and employers and draws capital from the region. Long commutes



are linked with worse physical and mental health, including higher rates of obesity, stress, and depression.[30] Employers also suffer from high turnover and employee dissatisfaction, and the public is affected by more air pollution, congestion, and climate change. Commute times are exacerbated by the lack of local, affordable housing, as discussed in the Housing chapter. (See **Figure 6**)

Figure 6: Percentage of Workers in Addison County by County of Residence



GROSS COMMERCIAL SALES AND TAX RECEIPTS

Between 2010 and 2020, annual gross sales receipts in Addison County grew from $667,905,908 to $896,859,096, representing a 13% increase when adjusted for inflation. During this time, annual sales tax receipts grew by 10% when adjusted for inflation, though annual use tax receipts declined by nearly 50%.

Between 2020 and 2023, annual gross sales receipts continued to grow substantially reaching $1,422,136,821 in 2023, representing a 35% increase even after adjusting for inflation. This increase in annual gross sales has helped drive countywide annual sales tax revenue of more than $200,000,000 every year since 2021.[31]

OPPORTUNITY ZONES

Opportunity Zone designation indicates a municipality is a center of regional employment and contains infrastructure that enables future economic growth (e.g., water, sewer, broadband). This designation offers tax benefits to investors who temporarily defer tax on capital gains if they invest those gain amounts in a Qualified Opportunity Fund.[32] The window for capturing these benefits has passed, and the initial Opportunity Zone designation is no longer relevant.

As of 2025, Addison County was home to only one Opportunity Zone, located in Vergennes, that received limited investment during the program's initial iteration. Whereas the original Opportunity Zone program required qualified investments to be made within a specific period of time to qualify for federal tax benefits, the recently approved Opportunity Zones 2.0 program eliminates the time restriction for eligible investments and makes access to the program's federal tax benefits permanent. Designations for new zones are yet to be made by the Governor's office.

Infrastructure

Infrastructure is a broad category of economic inputs that can aid or inhabit economic development, from water and wastewater systems to housing and childcare. Vermont has some of the oldest infrastructure in the country, and the Addison Region is no exception. Many systems are in need of replacement, creating a time of urgent necessity for change, and costly investment. This section references many forms of infrastructure that impact Economic Development: Housing, Childcare, Broadband and Telecommunications, Transportation, Trails and Walking Paths, Municipal Water and Wastewater Treatment, Energy, Working Lands, Brownfields, Climate Resilience.

See Chapter 5: Housing; Chapter 4: Community Infrastructure (childcare, broadband and telecommunications, education, municipal water and wastewater); Chapter 3: Transportation; Chapter 2: Energy; Chapter 1: Natural Resources (Working Lands); and Chapter 7: Flood Resiliency for more information on these topics.

HOUSING

Vermont is currently facing a housing crisis. This is especially true in Addison County, where the crisis has accelerated post-COVID. For reference, the median sale price for a home in Addison County largely remained stable at about $200,000 between 2005 and 2015 before rising to approximately $250,000 in 2019. By 2023, the median sales price for a home in Addison County had reached $350,000, representing a roughly 40% increase in just four years. The high price of new homes and scarcity of existing houses has driven up the cost of housing significantly. The Vermont Department of Housing and Community Development (DHCD) estimates an additional 41,184 homes are needed in Vermont by 2030, of which 1,978 are needed in Addison County, to stabilize the housing market and alleviate persistent homelessness. Currently, the county is only on track to build 544.[33]

Housing development has been at the forefront of the legislature with funding and incentives directed towards affordable and market rate building. An example of this is Project-Based Tax Increment Financing (TIF) which passed as part of bill S.127 in the 2025 session. However, this is an uphill battle due to the high cost of development. In 2023, a single apartment in a multifamily building had an average construction cost of $500,000. In fact, construction costs have increased by 30% every year from 2020-23.[34]

Another concern beyond housing development is the preservation of existing housing. Despite increased flooding and unpredictable weather conditions, the Addison Region homes have been fairly resilient. Even manufactured homes, the most vulnerable, have undergone minimal damage. However, houses in the Region are slightly older than the State average, leading to higher maintenance and energy costs. On top of this, the Vermont Housing Needs Assessment estimates that over 4,000 households are cost burdened in the Region.[35] To be cost burdened means that over 30% of the household income goes to housing costs.

A tight housing market has a strong effect on the local economy, from straining the cost of living for residents, to limiting workforce expansion for business. These effects are partially responsible for the rise in homelessness discussed above under Demographics and Workforce. See Chapter 5: Population and Housing for additional information.

CHILDCARE

Access to childcare is a top concern of regional workers. Currently, there is a need for 578 additional childcare slots needed to meet demand. This can be broken down to 295 infants, 138 toddlers, and 145 preschoolers.[36] The Otter Creek Child Center is currently expanding to provide an additional 77 spots, however the problem persists. This issue greatly affects the economy, especially in times of low unemployment, because parents cannot re-enter the workforce with childcare restrictions. See Chapter 4: Community Infrastructure, page 31.

BROADBAND AND TELECOMMUNICATIONS

Historically, Addison County and Vermont have been behind in internet access. Vermont, ranking 48th in internet speed in 2020, and Addison County having the slowest internet in the West-Central Region.[37] However, great strides have been made bringing 84.73% of residents to the level of fast connection (100/100 Mbps). 14.96% of residents have poor to moderate internet speed (25/3 Mbps or 100/20 Mbps) and just 0.32% are underserved (4/1 Mbps).[38] Connectivity is becoming increasingly important as remote work is a post-COVID norm, consistent with a general trend in the global economy towards high technology dependence. See Chapter 4: Community Infrastructure, pages 12-14.

TRANSPORTATION

The Addison Region is generally served by adequate local roads and state highways, but lacks access to the



interstate highway system, constraining its businesses' ability to access markets. It has a north south rail corridor that provides some access to freight, but lack of local sidings and other infrastructure in addition to supply line delivery demands limit its use.

Route 7 and Route 22A are the most significant driving routes connecting the region to the North and South of Vermont. Route 125 and Route 17 are important East to West connections that reach Central Vermont and New York where many Addison County workers live. Intercounty transportation is vital to a region with an abundance of commuters.

Tri-Valley Transit (**TVT**) is the largest public transportation provider in the area and provides immense support to the county's workforce through commuter routes. Their shuttle buses are ADA accessible public transit for the general public, fare-free. They cover the largest ground North to South of Addison County including: Middlebury, Bristol, New Haven, Vergennes, Salisbury, Leicester, Brandon, Pittsford, Rutland, Starksboro, Hinesburg, Burlington, Shelburne, and Ripton (Middlebury Snow Bowl). Their microtransit services include ADA accessible small vans providing door-to-door rides for the general public, fare-free throughout Middlebury. For vulnerable riders who can't self transport or access the bus system, they run Dial-a-Ride programs. This program is available free, throughout the county, thanks to volunteer drivers. They have several other specialty services (O&D, Medicaid NEMT, Rides to Recovery, and Job Access) for older and disabled riders, as well as those seeking jobs or addiction support services.

Tri-Valley Transit serves Park and Ride facilities in Ferrisburgh (Vergennes border), Hinesburg, Leicester, New Haven, Salisbury, Starksboro and limited service to Bridport, Cornwall, and Monkton. This makes a vital connection between modes of transportation that can reduce individual vehicle use and increase transportation access.

Tri-Valley Transit is a partner of the State's **Go Vermont** network. Go Vermont provides a website and ridesharing database to help commuters and travelers get around. They offer free carpool matching and vanpool services, and statewide bus routes, as well as free Go Vermont resources. The Guaranteed Ride Home Program gives commuters security.



The Region added an AmTrak stop in Middlebury and Vergennes, both in 2022. These extensions provide additional labor transit as well as support for the tourism economy. There is one ferry crossing that connects Shoreham, VT to Ticonderoga, NY. There are a number of small airports in the region. One State airport in Middlebury and three private airstrips in Cornwall, Ferrisburgh, and Vergennes. See Chapter 3, Transportation.

TRAILS AND WALKING PATHS

Interconnected systems of non-motorized trails that link conserved areas to commercial centers provide many economic and health benefits. While access to nature boosts mental and physical health, it is also a draw for tourism and economic activity. Especially when connected to housing, trails can stimulate population and economic growth.

The Middlebury Area Land Trust (MALT) mostly maintains and expands the County's largest trail network through its stewardship of 3,500 acres of conserved lands and management of the 19-mile Trail Around Middlebury (TAM). The TAM demonstrates how conservation and recreation can coexist to support quality of life, attract tourism, and sustain the local economy. The trails enhance accessibility and provide direct economic benefit to downtown Middlebury businesses, local accommodations, and outdoor recreation outfitters.

The Green Mountain Club's Long Trail, the Moosalamoo National Recreation Area, and other trail networks within the Green Mountain National Forest provide hiking,

mountain biking, and backcountry experiences that support local tourism. In addition, several partner organizations have developed and maintained an expanding system of multi-use trails that connect communities, support local events, and strengthen Addison County's reputation as an outdoor recreation hub.

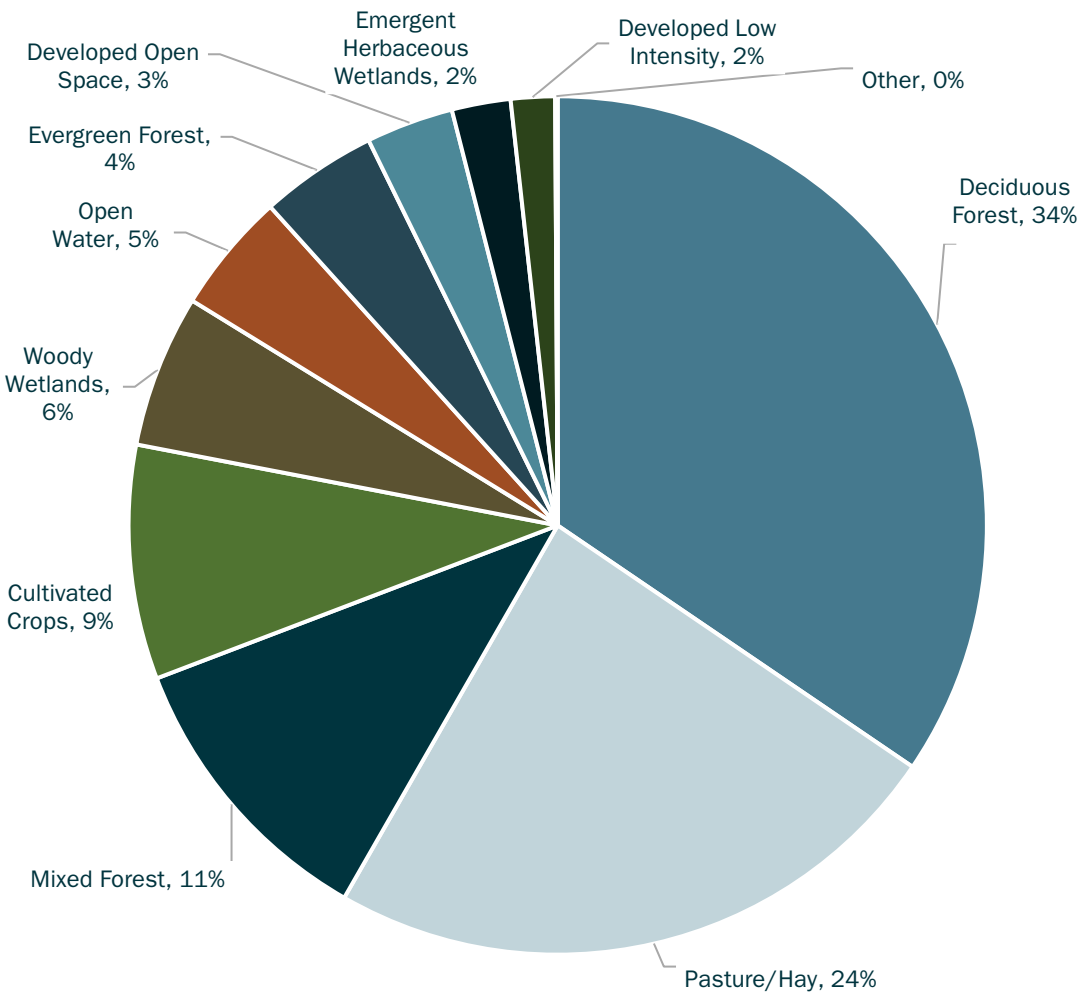
Other areas of the County have a growing emphasis on outdoor recreation. In the village of Bristol, the Bristol Trail Network (BTN) has established roughly 2.7 miles of hiking and multipurpose trail segments in and around downtown. The recent trail advance in Bristol demonstrates how smaller communities can leverage trails for sustainable growth. See Chapter 2: Transportation.

MUNICIPAL WATER AND WASTEWATER TREATMENT

The age of Vermont's infrastructure is reflected in the condition of water and wastewater systems. Currently, Vergennes and Middlebury have wastewater capacity and are in process of improving their wastewater treatment plants. On the other hand, Bristol has no additional municipal capacity. Shoreham, Orwell, and Addison also have small systems with some capacity. Virtually every other community in the Region lacks municipal wastewater systems.

Water systems are more widespread, but many have issues with the ability to provide new services. See Chapter 4: Community Infrastructure. Insufficient water and wastewater systems can stifle economic development. New businesses may choose another community if their needs cannot be met, and expanding businesses may need to relocate. Even more pressing, it will be nearly impossible to add housing in the densities needed to reach our targets without expanded municipal systems.

Figure 7 - Land Cover Types in the Addison Region



Ensuring long-term access to clean water is imperative for a functioning and healthy community. Lake Champlain supplies a few municipal water systems in the county, making its protection essential to the Region. See Chapter 4: Community Infrastructure.

ENERGY

Energy is vital to the economic health of a region. High costs or low access can severely limit growth. Chapter 2: Energy, provides data and insight into Addison County's energy use.

On average, Addison County households spend about 10% of their income on energy costs, which equates to about $7,300 annually. Of the total household energy costs in Addison County, transportation accounts for 45%, heating 33%, and electricity 22%. Nationally, an energy burden greater than 6% is considered high and is correlated with a "greater risk for respiratory diseases, increased stress and economic hardship, and difficulty in moving out of poverty".

Energy burdens affect the workers and the consumers. Lower disposable income means less economic activity. It is not only individuals who suffer from high energy costs, but the business community as well. Every business relies on energy in some form, adding to their operating costs substantially.

There is rising interest in geothermal energy as an alternative to traditional fossil fuels. One community-based version of this is Thermal Energy Networks (TENs). TENs are highly efficient heating and cooling systems that use a network of pipes to interconnect thermal energy resources between multiple buildings. TENs are similar to water and sewer systems in that they support dense, mixed-use development patterns. TENs can be used as an economic development tool in intentional growth centers by providing stable, local energy, and incentivizing relocation. See Chapter 2: Energy.

WORKING LANDS

Land is an important production factor for many industries and has a complex relationship with economic development. While land use for commercial development can often conflict with conservation, Vermont has implemented cross-sector goals that merge interests. Most notably, downtown development is incentivized through tax credits and other funding opportunities while less populated areas are protected. Preservation efforts are elaborated in Chapter 1, Natural Resources. The Addison Region particularly exemplifies this cohesion by maintaining a strong cultural connection to the land through working land enterprises.

The most significant economic tie is agriculture. Addison County is considered the top agricultural county in the State by some measures. Approximately 34% of the land in Addison County is used for agriculture. The region also has the most farms (751) in the State.[39] However, the number of farm operations in Addison declined (-7.7%) between 2012 and 2022 according to the US Agricultural Census as discussed, the Employment by Supersector section.[40] Still, agriculture remains an essential aspect of the County's economy, with the total net cash farm income at $89.8 million.[41]

Economic development can create pressure for land use change. One way that Vermont has resisted undesirable change is the Use Value Assessment (UVA) Program commonly referred to as Current Use. As a mechanism for fair taxation, Current Use enables eligible private landowners who practice long-term forestry or agriculture to have their land appraised based on the property's value of production of wood or food rather than its residential or commercial development value. As of 2023, 42% of land in Addison County was enrolled in Current Use (25% for agriculture and 17% for forestry).[42]

Addison County's working landscape is balanced with the State's desire to permanently conserve portions of land from development. State law, Act 59, which passed in 2023, has a goal of conserving 30% of land by 2030 and 50% by 2050.[43] See Chapter 8: Future Land Use.

BROWNFIELDS

Brownfields are properties whose expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The remediation of contaminated sites has positive environmental and human health impacts while promoting smart land-use practices. Repurposing historically productive properties support infill development and promotes community and economic growth by increasing the tax base and revitalizing blighted areas.

ACRPC operates a Brownfields program using grant funds obtained from the US Environmental Protection Agency (EPA) and the VT Agency of Commerce and Community Development. This funding is primarily for assessment-related work, meaning any work related to identifying recognized environmental conditions (RECs) on-site, which can include Regulated Building Materials surveys, Environmental Site Assessments (ESA), supplementary testing, and Corrective Action Plans. Funds for remediation of RECs are currently available from State and Federal sources but not directly from subregional sources.

More than a dozen brownfield properties have been cleaned up in Addison County, mostly in Middlebury and Vergennes, with others dispersed in smaller communities. Locally, these sites are most commonly found in properties with underground storage tanks, like former gas stations, as well as a small number of industrial facilities and dry-cleaning operations. Utilizing recent Community Wide Assessment funding from EPA, ACRPC identified several properties with potential contamination and worked with a consultant to implement assessment work.

ACRPC-funded contractors also conducted Regulated Building Materials testing for Asbestos, Lead, and PCBs for several municipal buildings receiving Municipal Energy Resilience Program (MERP) grants for building improvements. Two property enrollments in the State Brownfields Reuse Environmental Liability Limitation Program (BRELLA) were funded in order to limit future liability for cleanup.

An Area-Wide Plan was initiated for areas along the Vermont Rail corridor of Ferrisburgh, Vergennes, and Middlebury. This incorporated tax parcels and environmental database factors with historical resources (fire insurance maps) and field observations into a single database that identifies likely brownfields and priorities for additional work.

Consistent funding is critical to continue facilitation of Brownfields property cleanup and redevelopment. This funding has made the initial assessment process accessible and appealing to property owners. In Addison County, many assessments have gone toward public facilities including a community center, library, and opera house. Municipalities would not have the funds otherwise to remediate these essential buildings.

CLIMATE RESILIENCE

There have been 12 FEMA Disaster Declarations in Vermont since COVID in 2020. Of those, six involved Addison County. Most extreme weather in the past decade, including these declarations, have been flood related.[44] The Region has experienced increasingly adverse levels of rainfall throughout the seasons. This has had a negative effect on the County's economy. In the event of harsh weather, people are less likely to shop or go downtown. Businesses are often not equipped to handle extreme weather. While some State and Federal resources are available for physical damages, few funds are available to offset the financial damage of closing for repairs or storm-related customer decline.

In the Addison Region, our roads, culverts, bridges, and electrical systems constitute the infrastructure most impacted by disaster. The Addison County Regional Plan supports mitigation efforts including increasing spans of culverts and bridges (as applicable), strategically moving roads, or undergrounding electrical systems where it proves cost-effective to reduce damages and improve function and safety.

Climate resilience requires broad cross-sector collaboration. The Vermont State Climatologist Lesley-Ann Dupigny-Giroux suggests a multi-jurisdictional approach, "ensuring that ALL peoples are at the table from the beginning." Changes in high heat specifically lead to workforce health impacts. Dupigny-Giroux encourages communal multi-use spaces in existing and planned communities to provide ease of access; connectivity of our biking networks for ease of access and safety; and improvements to existing mass transit systems to combat the largest effects of climate change on the economy.[45] See Chapter 7: Flood Resilience.



Goals, Objectives, and Actions

The Economic Development Chapter of the ACRPC Plan was developed in collaboration with ACEDC. The following list highlights the specific actions for which ACRPC holds primary responsibility. A complete list of all agreed-upon actions can be found in the Chapter 6 Appendix.

GOAL 1: Addison County has a robust and expanding labor force that allows employers in all sectors to hire locally and equitably for positions at every level.

Objective 1:

Addison County's housing stock offers sufficient supply to meet the needs of workers at every income level.

a. Ensure Act 181 future land use mapping maximizes opportunities for developing dense, mixed-income housing in close proximity to jobs and established commercial centers.

b. Launch a project-based tax-increment financing (TIF) program that provides critical financing for infrastructure that supports new housing development.

c. Coordinate with Addison Region municipalities to identify appropriate, shovel-ready development sites that can be actively marketed to housing developers.

d. Support Addison Region municipalities in drafting applications for municipal planning grants to support updates to land use plans and zoning codes that support increased housing development.

e. Assist property owners in securing State Downtown and Village Center tax credits and grants to support small-scale, adaptive reuse infill housing development.

Objective 2:

Ensure local residents have access to responsive, high-quality workforce training aligned with employer needs, through strong partnerships with regional training providers.

a. Collaborate with workforce development partners to support employer-informed training initiatives; facilitate connections through existing networks like Addison County Workforce Alliance (ACWA).

b. Advocate for sustained investment in vocational and technical education infrastructure.

Objective 3:

Increase workforce participation among historically underrepresented groups by connecting them with meaningful employment opportunities in key local sectors.

a. Partner with workforce agencies to implement targeted employment initiatives for youth, adults without diplomas, people with disabilities, and New Americans—ensuring long-term impact through sustained planning and support.

GOAL 2: Addison Region consistently experiences positive annual net growth in the number of small businesses operating in the County and corresponding growth in inflation-adjusted gross sales and sales tax receipts.

Objective 1:

Entrepreneurs experience low barriers to launching a business and receive easy access to technical assistance and financing.

a. Support ACEDC's efforts to assist entrepreneurs in launching and growing businesses by advocating for streamlined administrative processes, improving access to capital, coordinating regional outreach, and connecting entrepreneurs with planning resources, technical assistance, and professional networks.

GOAL 3: Businesses in the Addison Region benefit from robust and resilient conventional infrastructure as well as accessible operational infrastructure.

Objective 1:

The Addison Region offers adequate industrial and commercial facilities to support new and expanding businesses.

a. Support ACEDC in advancing strategic commercial and industrial development across Addison County by collaborating on projects such as the Middlebury Industrial Park Phases II and III, the Firehouse Industrial Park in Bristol, redevelopment along Vergennes' North Main Street corridor, and the exploration of a business incubator focused on agricultural and value-added manufacturing.

b. Pursue the recommendations of the Vergennes Planning and Environmental Linkages Study to improve truck traffic and business conditions in downtown Vergennes.

c. Identify and assess Brownfield sites while pursuing further funding for environmental remediation.

d. Support Maple Broadband and other fiber providers to build an affordable and resilient telecommunications network throughout the Region for individuals and businesses.

Objective 2:

Affordable, sustainable energy sources are accessible for all businesses.

a. Encourage the development of cost-effective, community-scale thermal systems, such as geothermal, Thermal Energy Networks (TEN), and waste heat recovery.

b. Encourage Green Mountain Power (GMP) to make distribution upgrades to support continued renewable generation.

c. Leverage the municipal and energy infrastructure at the Middlebury Industrial Park to attract new and expanding businesses.

d. Develop farm and municipal digesters that produce clean energy, promote the circular economy, and improve water quality.

e. Leverage energy incentives available from energy efficiency utilities and distribution utilities.

Objective 3:

Support the growth and resilience of the Addison Region's producers, manufacturers, and artisans by ensuring they have access to the facilities and distribution systems needed to succeed.

a. Support ACEDC's efforts to retain and strengthen key sectors—such as dairy, forestry, and value-added food production—by expanding access to processing, storage, and shared-use facilities, and by improving distribution networks through shared logistics and enhanced delivery services.

Objective 4:

Expand critical water and wastewater infrastructure in existing villages to support development. Businesses in the Region play an active role in planning and, when appropriate, financing the expansion.

a. Engage manufacturers and large industrial and commercial users in discussions on future infrastructure needs.

b. Advocate for zoning and land use planning that promotes mixed-use development, allowing for commercial and industrial users to absorb the cost for upgraded and expanded infrastructure.



Sunrise Cider Press

GOAL 4: High quality of life is regularly cited as the number one reason talent and industry choose to locate and remain in the Addison Region.

Objective 1:

A commitment to equity among businesses, municipalities, and civic organizations ensures Addison County's high quality of life is enjoyed by all residents. This includes strides towards equitable pay regardless of gender.

a. Support ACEDC in refining and expanding its programs to better serve minority and women entrepreneurs by helping establish measurable benchmarks, improve access to capital, and strengthen partnerships with organizations like VPOC and CWE Vermont—ensuring underrepresented populations receive tailored support in business development, market access, and growth opportunities.

b. Support Maple Broadband and other fiber providers to build an affordable and resilient telecommunications network to support continued renewable generation.

Objective 2:

The Addison Region's businesses, municipalities, and civic organizations work together to preserve and expand access to recreational and cultural amenities.

a. Draft a countywide master plan for municipal forests that includes an economic development chapter supporting the Moosalamoo National Recreational Area Master Plan.

b. Investment in trail infrastructure, signage, and maintenance to improve accessibility.

c. Develop a completely interconnected trail network that supports active transportation, recreation, and health while also driving sustainable tourism and business growth.

Objective 3:

A thriving business sector offers residents access to essential goods and services.

a. Support ACEDC in identifying and addressing gaps in Addison County's retail and service sectors by leveraging market data, conducting consumer research, assisting with business recruitment, and promoting coordinated succession planning to ensure continued access to essential goods and services.

Objective 4:

Addison County maintains high ratings for health factors and health outcomes.

a. Advocate for the vital role that health factors play in sustaining a vibrant and effective local workforce.

b. Work with partners in health and health care, through initiatives like Community Health Needs Assessments (CHNA) and Community Health Improvement Plans (CHIP), to assess and design actions that improve economic mobility for our workforce and economic development for our County, while helping control rising healthcare costs.

c. Explore the feasibility of health-based bond programs such as social impact bonds and development impact bonds to drive local investments in health and wellness.

d. Develop promotional campaigns and marketing initiatives that recognize local employers who invest in the health and wellness of employees.

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Exchange Street, Middlebury


Excavation equipment


Sunrise Orchard apple pallets

Flood Resilience and Emergency Management

The Addison Region has done significant work to increase Flood Resilience over the past decades and is now more resilient than many other areas. However, like most of Vermont, portions of the Addison Region are increasingly vulnerable to flood-related hazards as precipitation patterns shift across the Region. Average annual precipitation in Vermont has risen by nearly seven inches over the past 50 years, and climate models project wetter winters and springs, with heavier and more frequent rainfall events under high greenhouse gas emission scenarios. These changes are expected to alter hydrology and increase the likelihood of inundation flooding, flash flooding, riverine erosion, and landslides especially in mountainous towns. The resulting risks threaten public safety, property, infrastructure, and natural resources.

In recent years, Addison County has endured substantial flooding impacts, most notably during the record-rain events of the summer of 2023 and again in July 2024. Heavy rains in 2023 caused swollen rivers such as the Middlebury River and Otter Creek to surge, inundating homes and basements in low-lying areas, two triggering mudslides (for example along Route 125 in East Middlebury), and collapsing portions of Route 116 in Middlebury. In July 2024, a renewed wave of extreme rainfall dropped three to six inches across the Region, tearing up roads in Ferrisburgh, Monkton, New Haven, and Starksboro, closing multiple routes and prompting a federal disaster declaration for the County. Tropical Storm Irene in 2011 caused severe flooding across Addison County washing out roads and bridges, damaging homes and farmland, and isolating mountain towns like Ripton and Lincoln. Together these events strained local infrastructure, interrupted lives, damaged property and farms, and highlighted the Addison Region's vulnerability to intense rainfall and flash-flooding. (See **Table 1**)

NEW AND FUTURE DEVELOPMENT

Future development in Vermont should be carefully planned to avoid flood hazard areas and river corridors, where the natural movement of rivers and periodic flooding maintain ecological balance, reducing downstream damage. Building in these areas disrupts the natural flow of water, accelerates erosion and sedimentation, and exposes people and property to repeated flood risks. Instead, this Plan directs development toward stable upland areas, where infrastructure can be safely maintained without the burden of costly flood recovery efforts. By preserving floodplains and allowing rivers to overflow and dissipate naturally, Vermont can protect ecosystems and enhance the resilience of communities.



Ripton storm damage, 2024

In the Addison Region, the river corridors of the Otter Creek, New Haven River, Lewis Creek, and their smaller tributaries are particularly important to keep free from encroachment. These waterways naturally shift and expand during storm events. Development too close to their banks can worsen flooding. Preserving open space, agricultural land, and vegetative buffers along these corridors helps slow runoff, stabilize streambanks, and improve water quality. Local zoning and


East Shoreham Railroad Covered Bridge

Table 1: Major Incidents in the Addison Region with FEMA Declarations

Year	Incident Date	Description	Declaration #
2024	July 9 - 11, 2024	Severe Storms, Flooding, Landslides, and Mudslides	DR4810
2023	August 3 - 5, 2023	Severe Storms and Flooding	DR4744
2023	Jul 7- 21, 2023	Severe Storms, Flooding, Landslides, and Mudslides	DR4720
2022	Dec 22 - 24, 2022	Severe Storms and Flooding	DR4695
2021	July 29 - July 30, 2021	Severe Storms and Flooding	DR4621
2020	Jan 20, 2020 - May 11, 2023	COVID-19 Pandemic	DR4532
2019	April 15, 2019	Severe Storms and Flooding	DR4445
2019	Oct 31- Nov 1, 2019	Severe Storms and Flooding	DR4474
2017	Oct 29 - Oct 30, 2017	Severe Storms and Flooding	DR4356
2017	June 29 - Jul 1, 2017	Severe Storms and Flooding	DR4330
2015	June 9, 2015	Severe Storms and Flooding	DR4232
2015	December 9 - 12, 2014	Severe Winter Storms	DR4207
2012	May 29, 2012	Severe Storm, Tornado and Flooding	DR4066
2011	Aug 26 - Sept 2, 2011	Hurricane Irene	EM3338
2011	Aug 27 - Sept 2, 2011	Tropical Storm Irene	DR4022
2011	April 23- May 9, 2011	Severe Storms and Flooding	DR1995
2008	June 14 - 17, 2008	Severe Storms and Flooding	DR1778
2008	July 21 - Aug 12, 2008	Severe Storms and Flooding	DR1790
2004	Aug 12 - Sept 12, 2004	Severe Storms and Flooding	DR1559
2001	March 5-7, 2001	Snowstorm	EM3167
2000	July 14 - 18, 2000	Severe Storms and Flooding	DR1336
1998	Jan 6 - 16, 1998	Ice Storms	DR1201
1998	July 17 - Aug 17, 1998	Severe Storms and Flooding	DR1228
1996	Jan 19 - Feb 2, 1996	Storms and Flooding	DR1101
1993	April 24 - May 26, 1993	Flooding, Heavy Rain, and Snowfall	DR990
1989	Aug 4 - 5, 1989	Severe Storms and Flooding	DR840
1977	Sept 6, 1977	Drought	EM3053
1976	Aug 5, 1976	Severe Storms, High Winds, and Flooding	DR518
1973	July 6, 1973	Severe Storms, Flooding, and Landslides	DR397



Middlebury, 2024



Salisbury, Upper Plains, 2024



Starksboro (Hillsboro), Route 116, 2024

state river corridor protection standards will guide land use to prevent new structures in these sensitive areas while promoting flood-resilient development elsewhere.

The Region's resilience depends on proactive land use planning that integrates floodplain protection with community goals. By steering growth away from flood hazard zones and strengthening natural water storage systems, towns can reduce both financial and environmental costs of future disasters. Avoiding development in these vulnerable areas protects environmental functions and safeguards people, infrastructure, and the long-term vitality of the Addison Region's communities.

PROTECTION AND RESTORATION OF FLOODPLAINS, WETLANDS, AND FORESTED AREAS

ACRPC's flood resilience strategy emphasizes the protection and restoration of natural features that play a critical role in reducing flood hazards and maintaining water quality. Key areas for protection maintaining vegetated buffers along larger rivers and the many small tributaries feeding them, help stabilize streambanks, filter runoff, and provide space for natural channel adjustment during high water events.

Wetlands further contribute to flood resilience by storing excess water, trapping sediment, and slowly releasing flows to downstream areas, thereby lessening flood peaks and erosion. The large Otter Creek wetland complex in Cornwall, Salisbury, and Leicester provides immense flood-mitigation benefits for downstream communities, especially Middlebury. Smaller significant wetlands also play a crucial role in storing floodwaters, filtering pollutants, and providing significant wildlife habitat within the Region's Watersheds.

Floodplain forests, which have declined more than any other natural community since Vermont's colonization, reduce flood risk in the Addison Region by slowing and storing high water during storm events. Their deep-rooted vegetation stabilizes soils, absorbs excess runoff, and buffers nearby towns and farmland from erosion and flood damage along rivers like the New Haven and Otter Creek.

Upland forests in the Region are also critical for managing stormwater and mitigating flood damage. Healthy forests, with intact canopy cover, root networks, and coarse woody debris, slow rainfall runoff, promote infiltration, and help regulate the timing and volume of streamflow during storm events. These upland areas, along with low-lying wetlands and riparian corridors, form an interconnected natural system that works together to reduce flood impacts on infrastructure, roads, and developed properties.

There are several tools for protecting natural ecosystems that are important for reducing flood risk. River corridor easements are a voluntary conservation tool that can mitigate floods by allowing rivers to move naturally within a protected corridor, reducing conflict and damage to property. This is achieved by purchasing a landowner's development and river management rights, which prevents new structures from being built, and requires a buffer of native vegetation along the river. These easements restore the river's natural processes, which attenuates flood flows, stores sediment, and restores aquatic habitats. Many headwater streams are located within the Green Mountain National Forest and managed as Wilderness and Remote Backcountry areas. Other forested areas are maintained by the Vermont Family Forest Foundation and as town forests. This landscape-based approach supports both ecological integrity and community safety, ensuring that the Region remains resilient to increasingly frequent and intense precipitation events.

ACRPC recognizes that beaver activity and natural wetlands play an important role in enhancing local flood



Starksboro, Lewis Creek watershed looking south

resilience. Beaver dams and wetland systems slow the movement of water across the landscape, reducing downstream peak flows, stabilizing streambanks, and increasing groundwater recharge during storm events. In mountainous communities, where steep slopes and narrow valleys heighten the risk of flash flooding, riverine erosion, and sediment deposition, these natural water retention features act as valuable buffers that moderate flood impacts. Supporting coexistence strategies with beaver populations, protecting and restoring wetland areas, and allowing floodplains to function naturally are cost-effective, nature-based mitigation measures that can complement engineered infrastructure and strengthen the Addison Region's long-term resilience to flooding.

Emergency Preparedness and Flood Response Planning

Municipalities can take specific actions to become more flood resilient. In the event of a federally declared disaster, municipalities can make a claim for funds to assist in post-disaster relief. The Emergency Relief and Assistance Fund (ERAF) provides state funding to match federal public assistance after such disasters. A municipality's eligible public costs are reimbursed by the federal government at a rate of 75%. For disasters after October 23, 2014, Vermont contributes an additional 7.5% toward reimbursing the town's costs for a combined total of 82.5% reimbursement. For communities that take specific steps to reduce flood damage, Vermont will contribute either a total of 12.5% or 17.5% of the total cost.

Table 2: ERAF

Steps for Municipalities to Recieve Additional Emergency Relief Funds through ERAF

Municipalities normally recieve 82.5% with 75% Federal and 7.5% State contributions

LEVEL 1 Town Recieves 87.5%

12.5% State Contribution

LEVEL 2 Town Recieves 92.5%

17.5% State Contribution

1. National Flood Insurance Program (NFIP)- participate in NFIP
2. Vermont Road and Bridge Standards - adopt 2013 standards
3. Local Emergency Operations Plan (LEOP) - update annually before May 1
4. Local Hazard Mitigation Plan - adopt or have a draft submitted to FEMA
5. River Corridor Protection Regulations: Adopt no new development in a River Corridor -OR- Participate in the NFIP Community Rating Syster and adopt no new development in Special Flood Hazard Areas

As of May 2026, only two municipalities in Addison County qualify for the maximum 17.5% State contributions through the Emergency Relief and Assistance Fund, 19 municipalities participate in the National Flood Insurance Program, 20 comply with Vermont Road and Bridge Standards, and 21 have an annually updated Local Emergency Management Plan. Twelve municipalities have a current approved Local Hazard Mitigation Plan, while six have Hazard Mitigation plans in progress. River Corridor protection regulations constitute the main reason most of the Region's municipalities do not maximize ERAF funds. Most towns consider the river corridor requirements overly burdensome, and not related to flood safety, especially on a small stream. They have only been adopted in four municipalities (Ripton, Lincoln, Orwell, Shoreham), and all but one are currently considered "interim" by the State of Vermont.[1] Two communities (Lincoln and Ripton) currently qualify for the highest ERAF level.

NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION AND SPECIAL FLOOD HAZARD AREA ADOPTION

The National Flood Insurance Program (NFIP), administered through the Federal Emergency Management Agency (FEMA), provides flood insurance for buildings in communities that choose to participate. Nearly 90% of Vermont communities are enrolled in NFIP, making flood insurance available for buildings and their contents throughout participating communities. Without access to NFIP, flood insurance may be unavailable or unaffordable through private insurers.

To participate in NFIP, a community must regulate all new development in high-risk Special Flood Hazard Areas (SFHA) to ensure that new development is safe from flood damage.

In the Addison Region, nearly all municipalities have been members of NFIP since the 1980s. As a result, they have adopted zoning bylaws that designate Flood

Hazard Areas and include specific regulations for development in them. Much of the mapped floodplain overlaps with extensive wetlands along major rivers. The regularity of flood events and the lack of availability of alternate sites combined with the challenges of wastewater disposal and the cost of complying with floodplain regulations has generally discouraged development along these low-lying areas.

FEMA first created Flood Insurance Rate Maps (FIRMs) in the 1980s to identify SFHAs—commonly referred to as the base flood or "100-year floodplain" or areas with a 1% chance of flooding each year. These are the areas of greatest concern for inundation flooding. NFIP floodplain management regulations must be enforced in these areas, and the mandatory purchase of flood insurance applies. Nearly all municipalities have adopted these maps as the basis for the SFHAs within their boundaries.

FEMA, in conjunction with the US Geological Survey, is updating the Flood Insurance Rate Maps and SFHA boundaries with new maps expected by 2027. There are likely to be differences in the Special Flood Hazard Areas on the updated maps. Preliminary drafts of these maps increase the SFHA in many locations. However, as the SFHAs are mapped in greater detail, some former floodplain areas may shrink as boundaries are refined.

The Special Flood Hazard Area (or floodplain) includes the stream channel plus adjacent land inundated by river discharge during a "base flood". The base flood is

- **19 municipalities in NFIP**
- **20 comply with Road/Bridge Standards**
- **Only 2 qualify for maximum ERAF funding**
- **Only 4 have River Corridor protections**



sometimes referred to as the "100-year flood", which may give the false impression that a base flood can only occur once every 100 years. A more accurate way of describing the base flood is to say that in any given year, there is a 1% chance that a flood of this size will occur. However, climate change has increased the risk percentage and is expected to continue to do so in future years. Some areas have already experienced more than one "100-year flood" within a decade.

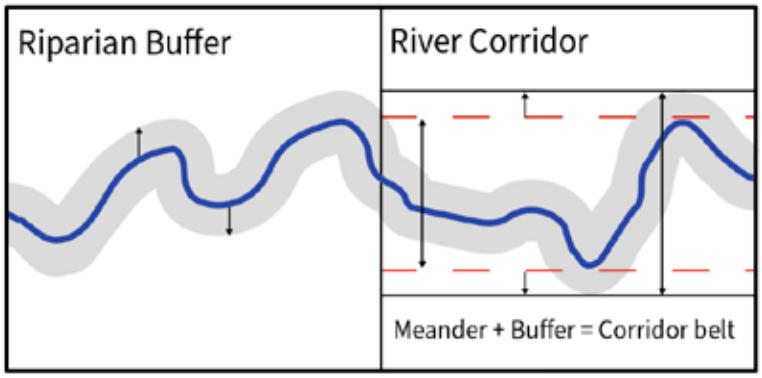
Map 2 shows the topographically-defined floodplain areas created by researchers at the University of Vermont with flood severity zones representing how water that spreads out from riverbanks might look for eight storm sizes, from 50% annual chance (2-year) to 0.2% annual chance (500-year) flood probabilities.

Map 3 shows digitized FEMA Special Flood Hazard Areas from Flood Insurance Rate Maps created and adopted by municipalities in the 1980s.

FEMA and USGS are currently updating Special Flood Hazard Areas based on digital mapping, but those maps are not available for public distribution at this time.

ACRPC will evaluate these updates and work with municipalities to adopt and enforce the updated Special Flood Hazard Areas in order to remain enrolled in the National Flood Insurance Program.

Figure 1: Riparian Buffer and Corridor



Comparing a buffer setback to a river corridor. Adapted from Ohio DNR, Rainwater and Land development manual, 2006 Ed., Ch 2. Post Construction Stormwater Management Practices, p.21.

TOWN ROAD AND BRIDGE STANDARDS

Nearly all municipalities have adopted and meet the Vermont Agency of Transportation Town Road and Bridge Standards. This includes the "hydrologically connected" local roads covered by Municipal Roads General (stormwater) Permit (MRGP) standards, as well as town highways.

LOCAL EMERGENCY MANAGEMENT PLANS

The annual Local Emergency Management Plan (LEMP, formerly Local Emergency Operations Plan) establishes lines of responsibility during a disaster and identify vulnerable (high risk) populations, hazard sites, procedures, and resources. The LEMP should be updated every year after Town Meeting. All municipalities in the Region updated their Local Emergency Management Plans in 2025 and should continue to do so annually.

LOCAL HAZARD MITIGATION PLANS

The Local Hazard Mitigation Plan (LHMP) helps communities identify important local hazard issues, prioritize future mitigation actions, and provide access to funding through the FEMA Hazard Mitigation Assistance Program. The LHMP is also one of the mitigation actions needed to qualify for additional post-disaster funding through the Emergency Relief and Assistance Fund (ERAF). They are approved by the FEMA and valid for five years. Fluvial erosion and flash flooding are the hazards ranked as creating the greatest vulnerability for the Addison Region's municipalities. Lesser threats include ice storms, high winds, and highway accidents. This Plan encourages municipalities to integrate the goals and actions of their hazard mitigation plan into all other municipal planning mechanisms, including the annual Local Emergency Management Plan, municipal budget, Municipal Plan, and zoning or unified development regulations.

RIVER CORRIDOR PROTECTION REGULATIONS

River Corridor areas identify the space that a stream or river needs to maintain fluvial geomorphic equilibrium, that is, the space in which streams and rivers will move. River Corridors include the width of the meander belt of a river and an additional 50-foot buffer to allow for a stable wooded bank when the river is at its equilibrium or least erosive slope. The Vermont Rivers Program has developed the Statewide River Corridor, using map-based data on watershed catchments, stream gradient, reference channel width, meander belt widths, valley walls, and major transportation features, to identify corridors of all rivers and streams with watersheds over two square miles across the state. For small streams, with watersheds less than two square miles but more than 0.5 square mile, the state has set a default width measured on the ground as 50 feet from the top of both sides of the stream bank as the corridor.

River Corridor maps themselves do not indicate any required action on the part of municipalities. They were developed to facilitate ANR's responsibilities in Act 250 to protect public safety from fluvial erosion hazards and

to regulate activities exempt from municipal regulation under the Flood Hazard Area and River Corridor Rules. Regulations that reference river corridors include:

- State regulation of berms as described in the Stream Alteration Rule;
- Act 250 regulated land use in floodways;
- ANR floodway determinations; and,
- State regulation of developments that are exempt from municipal regulation (generally energy generation or transmission projects).

A municipality may regulate land uses within River Corridors by adopting those areas as part of its zoning regulations. Communities may conduct their own geomorphic assessment, a field-based study of the physical condition of local rivers and major tributary streams, to determine River Corridors more accurately.

In order to achieve full River Corridor adoption, municipalities have to adopt the 2019-identified State River Corridor for larger rivers and streams as well as buffers on all small streams. Additionally, for small streams with watersheds less than two square miles, a default width measured on the ground as 50 feet from the top of the stream bank is required as the corridor. By updating or adopting a River Corridor Overlay area within its zoning bylaws, municipalities become eligible for increased funding in the event of a federally declared disaster. However, many towns that have considered adoption find these requirements overly restrictive and too broad, especially for small streams where the size of the setbacks dwarfs the stream itself.

Only one municipality in the Addison Region has adopted full River Corridor protections in their zoning. Several towns have adopted partial River Corridor protections in their zoning bylaws that have smaller buffer areas or do not include small stream buffers, and are presently labeled by the State of Vermont as “interim.”

At some point soon, municipalities will be required to update zoning bylaws to adopt a new River Corridor map and regulations. Until that time, those interim adopters of River Corridors and the associated regulations provide them with the highest rating the State awards under its Emergency Relief and Assistance Fund.



Lewis Creek erosion along Ireland Road, Bristol-Starksboro



Middlebury River Flood Mitigation Project, East Middlebury



Middlebury, South Street Extension

Flood Risk Mitigation

ACRPC can play a leading role in fostering flood resilience by guiding towns to limit new development in flood and erosion hazard areas, such as floodplains and River Corridors. Through regional planning, technical assistance, and coordination with state agencies, ACRPC can help municipalities update zoning bylaws, River Corridor maps, and hazard mitigation plans to direct growth away from vulnerable areas. Encouraging compact, upland development patterns reduces the risk to people and infrastructure while preserving the natural flood storage capacity of the Region's waterways. Educational outreach and data-sharing can also help local officials and residents understand the long-term costs of floodplain encroachment and the benefits of flood-safe land use.

ACRPC supports mitigating flood risks to historic structures by combining flood proofing, elevation, and strategic relocation with nature-based mitigation actions such as floodplain restoration. In addition to preventing high-risk development, ACRPC strengthens community resilience by promoting the protection and restoration of floodplains, wetlands, and upland forested areas that absorb and slow floodwaters. ACRPC supports conservation projects, riparian buffer plantings, and land use policies that enhance natural flood mitigation functions while improving water quality and habitat connectivity. Integrating emergency preparedness and response planning, such as local hazard mitigation plans, evacuation routes, and infrastructure assessments, ensures that communities are better equipped for extreme weather events. By combining proactive land use management with ecological restoration and coordinated emergency planning, ACRPC helps Addison Region communities adapt to increasing flood risks and safeguards public safety, property, and natural resources.



Weybridge



Farm fields and roads



Salisbury

Goals, Objectives, and Actions

GOAL: To encourage flood resilient communities.

Objective 1:

Avoid new development in identified flood hazard and River Corridor protection areas and ensure that new reasonable development does not exacerbate flooding and fluvial erosion.

a. Guide municipalities in updating zoning and flood hazard bylaws using current FEMA maps, DEC River Corridor data, and best practices for resilient land use.

Objective 2:

Encourage and support the protection and restoration of floodplains and upland forested areas that attenuate and moderate flooding and fluvial erosion.

a. Support projects including wetland and floodplain restoration and establishment of riparian buffers to reduce downstream flood impacts.

Objective 3:

Maintain flood emergency preparedness and response planning and enact measures when necessary.

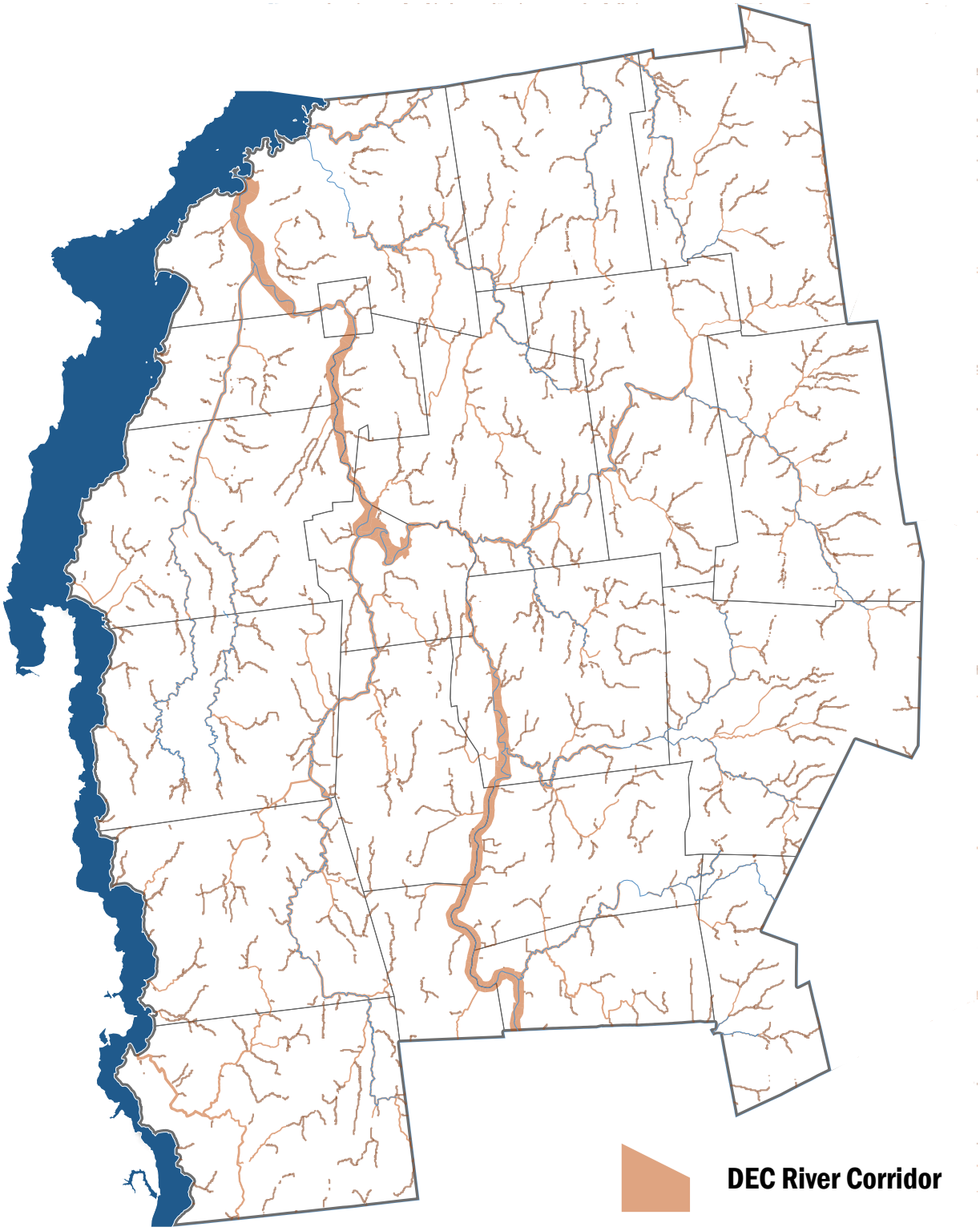
a. Help towns update Local Hazard Mitigation Plans, identify critical infrastructure at risk, and coordinate regional response and recovery strategies.



ENDNOTES

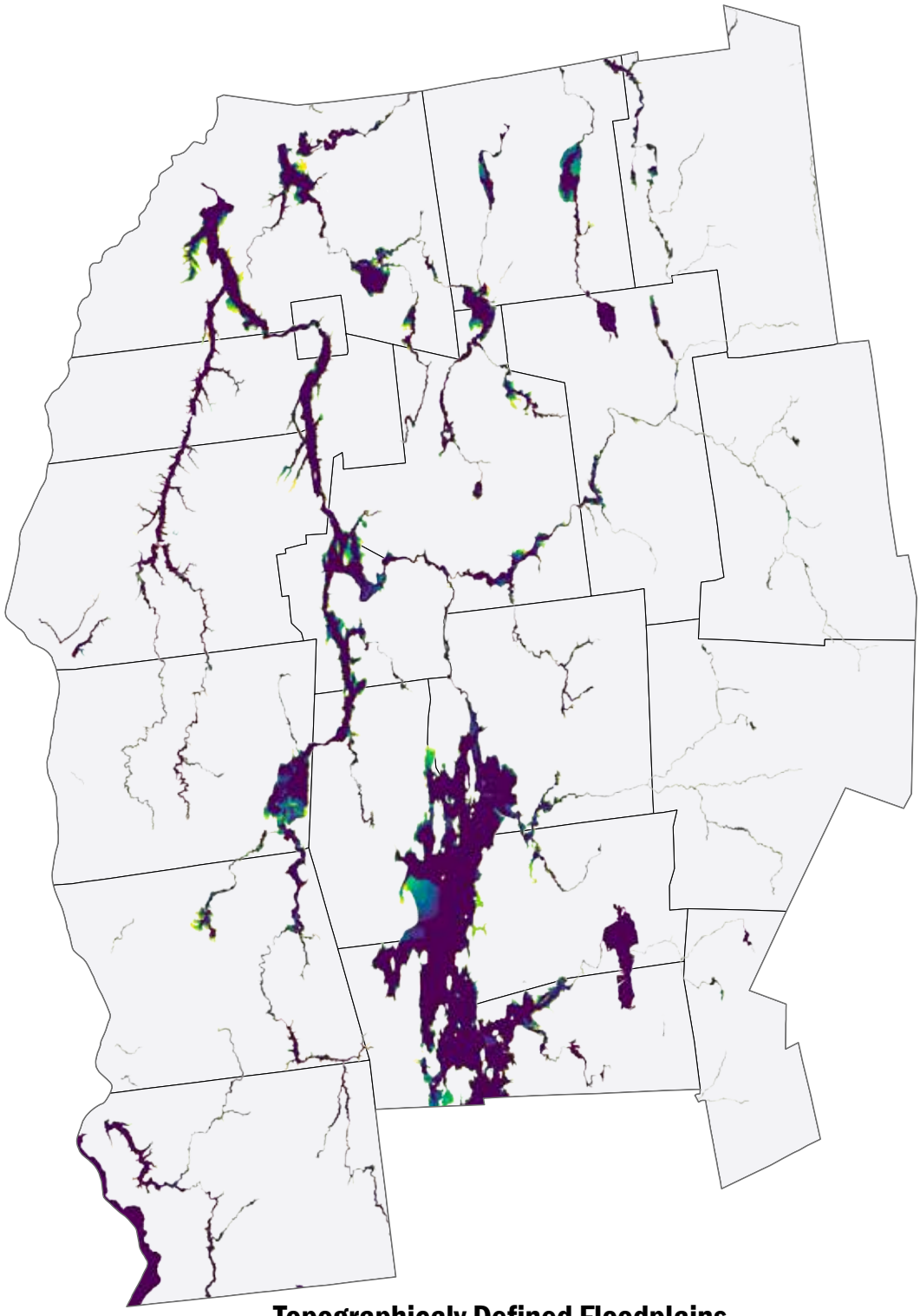
[1] Vermont Agency of Natural Resources. (n.d.). Expanded community report [Interactive database]. Department of Environmental Conservation. Retrieved December 10, 2025, from https://anrweb.vt.gov/DEC/FoFReports/SSRSReportViewer.aspx?RepName=ExpandedCommunityReport

Map 1: Addison Region River Corridors



River Corridors are delineated by the Department of Environmental Conservation as described in the Flood Hazard Area & River Corridor Protection Procedure.

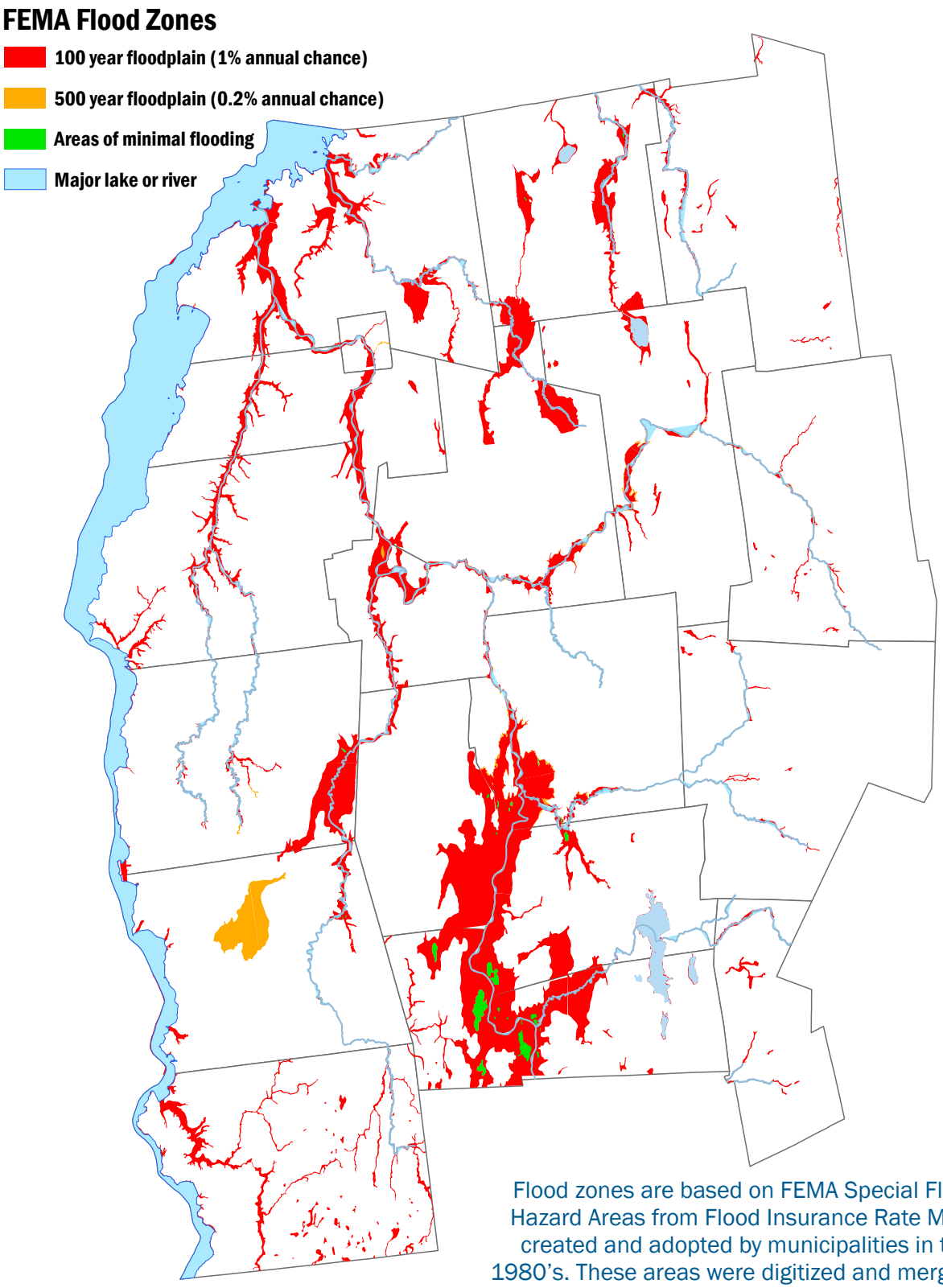
Map 2: Addison Region Floodplains



Topographicaly Defined Floodplains

- 50% annual chance (2 year)
- 20% annual chance (5 year)
- 10% annual chance (10 year)
- 4% annual chance (25 year)
- 2% annual chance (50 year)
- 1% annual chance (100 year)
- 0.5% annual chance (200 year)
- 0.2% annual chance (500 year)

Map 3: Addison Region FEMA Flood Hazard Areas



Flood zones are based on FEMA Special Flood Hazard Areas from Flood Insurance Rate Maps created and adopted by municipalities in the 1980's. These areas were digitized and merged by ACRPC and are not official FEMA products

Future Land Use

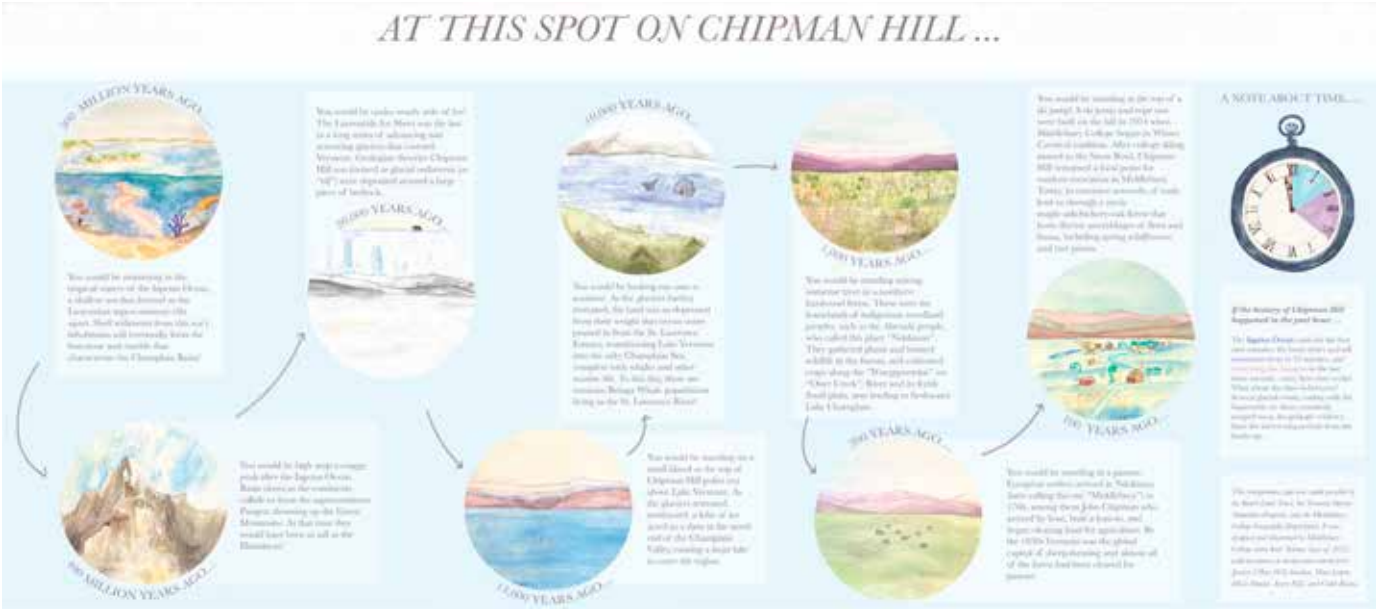


Figure 1: "At This Spot on Chipman Hill" by Kate Talano

A Brief History of the Addison Region

At the summit of Chipman Hill in Middlebury, along the Trail Around Middlebury, stands an educational signboard erected by the Battell Trust. Positioned at the former launch site of an old ski jump, it offers a panoramic view westward over the Champlain Valley and presents the evolution of the surrounding landscape across eight distinct historical periods.

The first panel begins 500 million years ago, when the area was submerged beneath the Iapetus Ocean. By 400 million years ago, the region had risen to form part of a towering mountain range. Approximately 20,000 years ago, it lay beneath a glacier nearly a mile thick. As the ice sheets retreated, glacial meltwater formed Lake Vermont, followed by the incursion of the Champlain Sea through the Saint Lawrence River. These geological transformations shaped the region's limestone formations, now quarried, and the clay plains that transitioned from forest to farmland.

Human presence in the region dates back roughly 12,000 years. At that time, Paleo-Indian ancestors of Native American tribes began to inhabit the valley, drawn by its broad waterways and abundant resources. Over millennia, Native American communities established settlements and alliances. Due to the perishable nature of the materials they used—wood, hide, cloth, and stone—only stone artifacts remain in significant numbers. Farmers in Addison County frequently uncover arrowheads, a testament to the area's long history of human habitation. The most recent Indigenous group in this lineage is the Abenaki, who refer to themselves as the "Alnobak."

The Abenaki were once a large confederation of tribes spread across what is now Vermont, Quebec, and New England. The explorer Samuel de Champlain, for whom Lake Champlain is named, did not encounter the Abenaki directly. Unfortunately their civilization was already in decline by the time of his 1609 expedition—primarily due to the devastating impact of European diseases such as smallpox. The exact pre-contact population of Native Americans in North America remains debated. In Vermont, Abenaki populations are estimated to have been between 4,000 and 4,200.

What is clear is that European diseases decimated Native American populations at catastrophic rates. Early settlers, including the Pilgrims of Plymouth, documented the toll these illnesses took on the Abenaki of the "Dawnland"—coastal New England. These diseases likely spread inland to Vermont even before direct European contact occurred.

Weakened by disease and seeking protection from hostile tribes such as the Mohawk, the Abenaki allied with the French shortly after their arrival. They continued that alliance during the French and Indian War. As the conflict engulfed Vermont, many Indigenous and European inhabitants fled. Following the British and colonial victory, many Abenaki relocated to Quebec alongside their French allies. Today, the Odanak and Wôlinak First Nations—descendants of these communities—reside in the Trois-Rivières region of Quebec.

The State of Vermont acknowledges that smaller bands of Abenaki either remained in or returned to the region. In 2011 and 2012, Vermont formally recognized four Abenaki tribes: the Elnu Abenaki Tribe, the Nulhegan Band of the Coosuk Abenaki Nation, the Koasek Abenaki Nation, and the Abenaki Nation at Missisquoi.

This Plan recognizes the deep historical presence of Native American civilizations in the region. It supports the ability of the Abenaki to preserve and practice their traditions and encourages mutual learning and respect for how we care for this land.

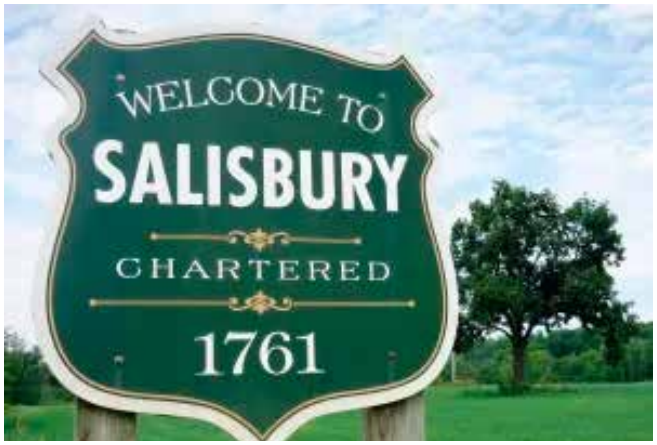
See Chapter 4, Community Infrastructure, pages 17-18 regarding archeological and historic sites.

EUROPEAN SETTLEMENT AND AGRICULTURAL DEVELOPMENT

Although some European settlement occurred in the Addison Region prior to the French and Indian War, significant colonization began after the war's conclusion. Many towns in the Region were founded during the 1760s. The current layout of towns largely reflects the era's original land grants and settlement planning.

Town boundaries were influenced by the transportation limitations of the time—primarily horse and buggy. Many settlers arrived as farmers, seeking fertile land as arable plots became scarce in southern New England. Forests were cleared for lumber and potash, and the land was converted to farmland. Each town typically developed a central village with a church, school, and store, surrounded by satellite farms. Towns such as Bridport, Shoreham, Orwell, and Addison exemplify this early planning model.

Figure 2: Salisbury Welcome Sign



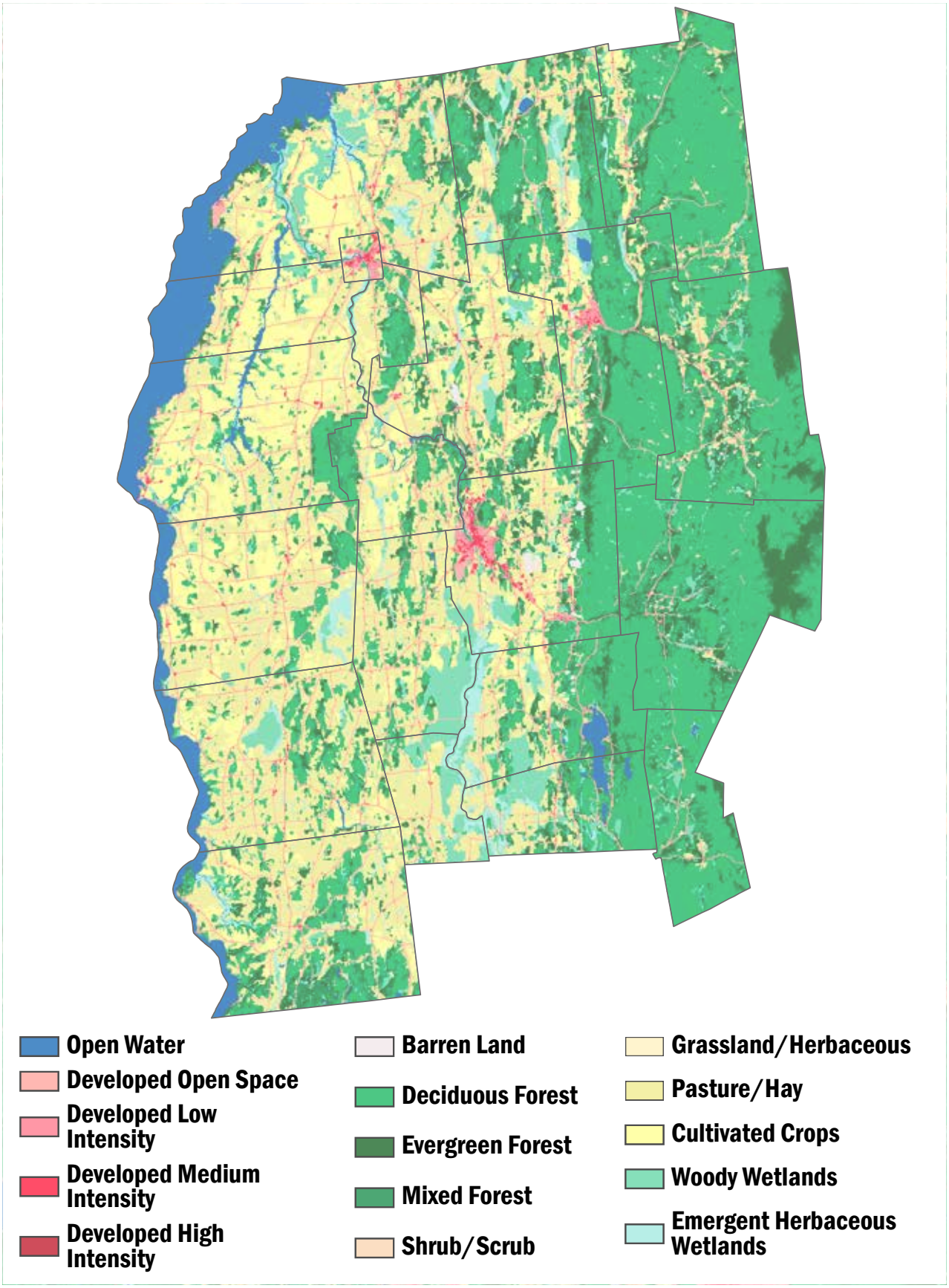
Towns like Middlebury and Vergennes developed around waterfalls on Otter Creek, which powered mills processing wool, grain, timber, and marble. At the foot of the Green Mountains, the town of Pocock (now Bristol) emerged as a manufacturing hub, particularly for lumber and wood products.

For a detailed account of settlement history and population trends from European colonization through the present day, see Chapter 5, Population and Housing.

Figure 3: Map of Addison County, Vermont, 1857



Map 1: Addison Region Land Cover, 2025



INDUSTRIALIZATION AND MIGRATION

The Civil War marked a turning point for Vermont. While Vermonters served the Union across the country, many were exposed to the vast, fertile lands of the American Midwest. After the war, railroads that once transported Vermont's goods to market also facilitated migration westward. Vermont's population declined as residents sought new opportunities. Those who remained continued to farm—shifting from sheep to cattle and dairy—or worked in industries that refined local resources.

Although the Addison Region industrialized after the Civil War, it did so at a slower pace. Industrial centers in Middlebury, Bristol, and Vergennes expanded and diversified.

Smaller, agriculture-based villages continued to support surrounding farms.

CONTEMPORARY TRENDS AND CHALLENGES

The "back-to-the-land" movement of the 1970s through the 1990s spurred housing growth, particularly in northern towns that became bedroom communities for Chittenden County. However, after 2000, housing development slowed significantly—mirroring trends across Vermont. This slowdown, combined with decreasing household sizes, has led to a persistent and severe housing shortage.

This housing crisis forms the backdrop for the present Plan.

Figure 4: Vergennes Industrial Facility



Figure 5: Holley Hall, Bristol





Weybridge Fields

PRESENT CONDITIONS

The early settlement patterns noted above still guide our structure and settlement goals today. Planning for villages surrounded by rural countryside constitutes the first of the State of Vermont's planning goals outlined in statute. 24 V.S.A. §4302(1). A modern political map of the Region resembles the 1840s era map noted above.

The Addison Region remains a predominately rural place. The Land Use/Land Cover map (**Map 1**) depicted on page 3 shows that only a very small portion, 4.53% of the Region currently falls into one of three "developed" categories. ACRPC's proposed Future Land Use map includes approximately 3.3% of the Areas land within its proposed growth areas, in line with its current development patterns. Forests predominate in the mountains of the east of the Region, having returned after many of the small sheep farms closed and bolstered especially by the federal government's purchase of the first 32,000 acres to form the Green Mountain National Forest in 1932.[1] That early conservation project in the State aimed to reforest the land to prevent erosion caused by logging and farming steep slopes. To the west, farm fields still predominate. Farms and acreage farmed have fluctuated, but stayed relatively steady for the past 20 years. Agriculture still constitutes the primary use of the land, especially on the flat fertile clay plains in the Region's western area.

See the Chapter 1, Natural Resources, Agriculture and Forestry subsections



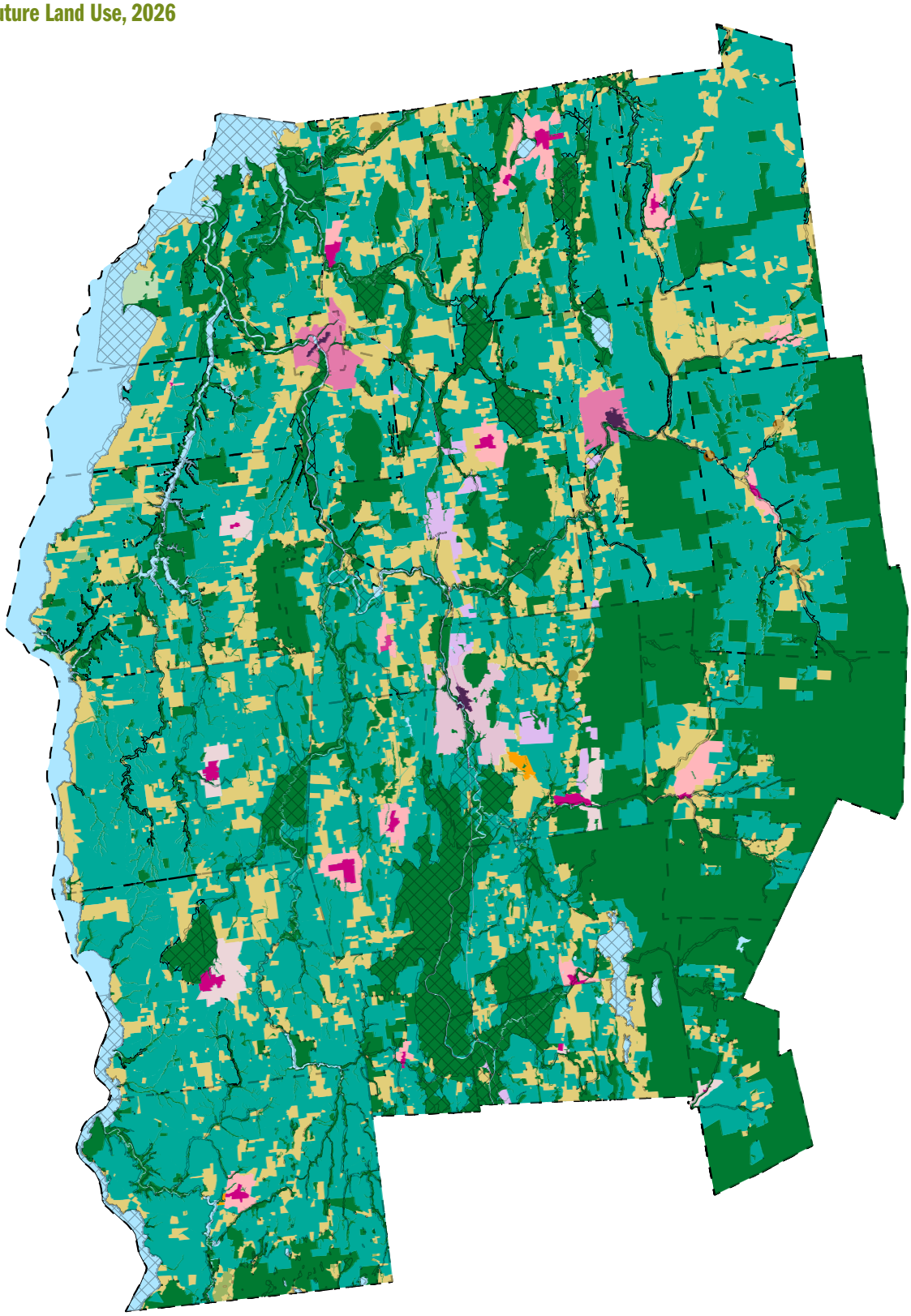
FUTURE LAND USE AREAS

Downtown Center
Village Center
Planned Growth Area
Village Area
Transition or Infill Areas
Resources-based Recreation
Enterprise
Rural Agriculture & Forestry
Rural Conservation
Rural General
Special Land Use Area

The small villages first established by the European settlers also remain. A significant portion of the municipal buildings that mark their core stem from the mid-nineteenth century. Most are surrounded by other civic buildings, small businesses, and clusters of housing.

Lastly, the Region's three commercial centers–Middlebury, Bristol, and Vergennes–continue to evolve. While the manufacturing that created them still constitutes an important economic sector, they also host numerous service and retail businesses along their main streets, surrounded by established housing development. This Plan seeks to build on and reinforce those portions of our current settlement patterns ACRPC described above and provide goals and actions to transition away from less desirable development patterns.

Map 2: Future Land Use, 2026









From left to right: Middlebury, Bristol, Vergennes

The Future Land Use Plan

The Addison County Regional Planning Commission (ACRPC) created a **Future Land Use map** depicting the types of land use areas described in the Addison County Regional Plan and recently adopted by all Vermont's regional planning commissions under Act 181 of 2024 to provide consistency in definitions of types of planning areas. All regions mapped eleven types of future land use areas and are listed on **Map 2**. ACRPC's Future Land Use Chapter and Map are presented to be compatible with the Region's municipal plans and to work in concert with the municipal plans to guide growth and development in accordance with smart growth principles and into appropriate places within the Region.

For a full list of smart growth principles, please see the Chapter 8 Appendix.

TIERS OF JURISDICTION FOR ACT 250

Act 181 also created tiers of jurisdiction for Act 250. In fact, the greatest benefit to developing housing stems from exemption from Act 250 for housing in Tier 1 areas. **All of the ten different types of future land use areas fall into one of two Act 250 juridictional areas:** Tier 1 (A and B) and the remainder in which jurisdictional triggers remain largely the same.

- **Tier 1** constitutes existing and potential growth areas including 60% of Housing Targets

In the Addison Region, nearly all towns will have the option to accept the regional map and opt-in for Tier 1B status, exempting residential projects (under 50 units/

Table 1: Village Center Designations and Changes

	Previous Designations	Centers with Act 181 Changes
Addison	Village Center	Village Center
Bridport		Village Center
Bristol	**Downtown**	**Downtown, Planned Growth Area**
Cornwall	Village Center	Village Center
Ferrisburgh	Village Center	Village Center, Planned Growth Area
Goshen		Village Center
Lincoln		Village Center
Leicester		Village Center
New Haven	Village Center	Village Center
Middlebury	**Downtown, Neighborhood Development Area**	**Downtown, Village Center**
Monkton	Village Center	Village Center
Orwell	Village Center	Village Center
Ripton		Village Center
Panton		Village Center
Salisbury	Village Center	Village Center
Shoreham	Village Center	Village Center
Starksboro	2 Village Centers	2 Village Centers
Vergennes	**Downtown; Neighborhood Development Area**	**Downtown, Planned Growth Area**
Waltham		Planned Growth Area
Weybridge		Village Center
Whiting	Village Center	Village Center

10 acres) from Act 250 review in their Village or Downtown Center, Planned Growth Area, and/or Village Area. While it is possible that Middlebury or Vergennes could choose to apply for Tier 1A jurisdiction, which would exempt all development within its designated downtown and Planned Growth Areas from Act 250 jurisdiction, this plan anticipates those municipalities opting-in to Tier 1B, at least at the start of this process. The Department of Housing and Community Development has created a "step program" to transition existing benefits to the new areas defined by Act 181.

For now, all other Future Land Use Planning Areas constitute status quo areas for the purposes of Act 250

OVERVIEW OF LEGACY VILLAGE DESIGNATION TRANSITION TO ACT 181 DESIGNATION PROGRAMS

For nearly 30 years, the State of Vermont's "designation" programs – Downtowns, Villages, Growth Centers, New Town Centers, and Neighborhood Development Areas – have supported economic revitalization, community vitality, and smart growth. These programs work together to provide incentives, align policies, and give communities the technical assistance needed to encourage new development and redevelopment in our vibrant and compact designated areas. The program's incentives are for both the public and private sector within the designated area, including tax credits for historic building rehabilitations and code improvements, permitting benefits for new housing, funding for transportation-related public improvements, and priority consideration for other State grant programs. One major element of Act 181 is that it shifts the designation process to a new regional plan approval process, which expands access to the designation programs and transfers all legacy designations into the new framework.

The New Designations for Community Investment

The new designation framework simplifies the State's five legacy designations, including designated villages, into two categories: Centers surrounded by Neighborhoods. The Center designation will continue to recognize the legacy Downtown, New Town, and Village Center designations throughout the state, and the Neighborhood designation will continue to recognize the legacy Neighborhood Development Area and Growth Center designations.

The two new designations (Centers and Neighborhoods) are designed to support coordinated investments in compact places planned for efficient growth. Legacy Village designations will become designated as new designated Centers upon approval of the Regional Plan Future Land Use Map.

Centers are organized into three "steps" based on the characteristics of the community, local capacity, planning initiatives within the community, and their legacy designation. Through these three steps, Centers will gain access to varying levels of incentives, similar to the legacy designation structure. Communities will have the ability to advance move up "steps" and access greater levels of incentives and support through an application process that asks communities to demonstrate their alignment with goals of the designation program. The transition of Legacy Villages to Step 2 Centers Legacy Villages will be mapped in the regional planning commissions' Regional Plan Future Land Use (FLU) Map as downtown and village centers for approval by the State's new Land Use Review Board (LURB). Legacy Villages will enter the new program as Step 2 Centers upon approval of the regional plan by the LURB. All legacy designated Downtowns have a direct path to recognition in the new regional plan maps and future designation categories, and they will lose no benefits upon transition. Municipalities with legacy Village designations will remain designated until the regional maps are adopted. Municipalities may apply directly to Department staff to "step up" to Step 3. Applications and guidelines will be made available after State approval of the first regional plan by the LURB.

jurisdiction. This simply means that Act 250's jurisdictional thresholds remain unchanged. If a project triggered Act 250's jurisdictional thresholds prior to Act 181, they will continue to trigger Act 250 jurisdiction. See 10 V.S.A. §6001(3)(A) for the definition of "development" triggering jurisdiction.

ACRPC's Future Land Use Planning areas as depicted on its Future Land Use map include the following:

DOWNTOWN AND VILLAGE CENTERS

These areas constitute the areas designated as a "Designated Downtown" and designated "Village Center" by the Agency of Commerce and Community Development under Chapter 76A and are eligible for benefits through the Community Investment Program under §5804 of this title. These areas are the mixed-use centers bringing together community economic activity and civic assets of the region. The Addison Region did not have any new town centers designated under that program, nor does it seek to add any.

Figure 6: Vergennes-Ferrisburgh Transit-Oriented Development Master Plan (TOD)



Downtowns

The Addison Region has three Designated Downtowns: Middlebury, Vergennes, and Bristol.

Each formerly Designated Downtown retains its status, and as in previous plans, with the growth areas that surround them, remain the cultural centers of the Region. All constitute the areas best suited for most commercial growth and able to accommodate residential growth within the Region because of their community water and wastewater infrastructure, or in the case of Bristol, excellent soils to accommodate individual and small community wastewater systems.

Like the Designated Downtowns noted above, the Addison Region hosted 11 Village Centers that had received a "Village Center Designation" from the Agency of Commerce and Community Development, entitling businesses located within the designated area to access tax credits for façade improvements and other benefits when applying for various State of Vermont grants.

In addition to the legacy Village Centers discussed above, in its future land use mapping process for Act 181, ACRPC followed the methodology and, after discussion with each municipality in question, created several new village centers within the Region.

Village Centers

These areas aim to serve as the central business and civic center of each village. The Region wants to see commercial and civic activity within its villages grow. The Preservation Trust of Vermont notes that healthy villages should include the following civic infrastructure components: general store; post office; library; school;



town offices; restaurant; places of worship; community hall; traffic calming; wastewater capacity; public businesses; bank; housing for all income groups; visitor lodging; fire department; monuments; town green; arts and cultural activities or museum; places for kids; and recreational opportunities.[2] Accordingly, this Future Land Use Plan calls for expanding small-scale, mixed use, and commercial and civic activity within the Village Centers as depicted on its Future Land Use Map to include the uses listed above and other similar uses.

PLANNED GROWTH AREAS

In the Addison Region, its planned growth areas extend from or will extend from and surround its historic Designated Downtowns in Middlebury, Vergennes, and Bristol. In both Middlebury and Vergennes, they include or will include areas already designated as Neighborhood Development Areas, places where each municipality noted they wanted to achieve extra housing growth. They also include or will include extensively developed areas outside the Downtown Centers, which could include residential neighborhoods and mixed-use areas. Interestingly, in both Vergennes and to a lesser extent Middlebury, they ignore or will ignore municipal boundaries and extend into neighboring communities. Vergennes' growth area stems largely from the way in which the city was developed. The City of Vergennes was carved from landholdings of Ferrisburgh, Panton, and New Haven to create a manufacturing City at the site of the Vergennes Falls on Otter Creek. As a more urban place surrounded by agricultural neighbors, Vergennes has always served as a sub-regional center for its neighbors and continues to house many of the cultural and service venues for each of its neighboring communities. Historically, some of its growth has spilled into its neighbors as a natural extension of the city. Other neighbors, like Waltham, have recognized Vergennes as their de facto town center and structured their planning and zoning to match densities in the area near Vergennes to resemble Vergennes.

Vergennes possesses both water and wastewater that has also sometimes spilled beyond its boundaries, or in the case of the Vergennes Panton Water system, was created to serve a sub-regional area. In the North of Vergennes and in adjacent Ferrisburgh, the City and Town have been working together planning for transit-oriented development around the train station that lies in Ferrisburgh, receives utilities from Vergennes, and serves them both. The Transit-Oriented Development Plan recognizes and assumes that to achieve the densities both municipalities desire for the area, water and sewer will need to serve Vergennes and Ferrisburgh. It calls for more housing in Ferrisburgh, in part to support its school, and more mixed-use and commercial development in Vergennes to complement and reinforce its existing vibrant downtown and retail establishments. Similarly, in Middlebury, the residential development, supported by existing water and wastewater, will extend into the southeastern section of Weybridge.

VILLAGE AREAS

The Village Areas surround the region's historic Village Centers, whether previously designated or not. Village Areas include a significant portion of the Region's existing mix of residential, civic, religious, commercial, and mixed-use buildings. The core area generally contains the existing denser settlements of the Region's villages plus some additional area selected to support additional housing units. These additional areas have been added or identified for future addition through careful and inclusive outreach to the municipalities involved and their citizens through a number of public meetings. They are informed by municipal plans and zoning ordinances supplemented by local knowledge of terrain, land use, and ownership patterns of the local planning commissions, citizens, and selectboards/city councils.

The Village Areas expand or will expand around the historic center to create additional opportunities for all types of housing development. In the housing targets recently released by ACRPC, the median housing target for 2030 for the Region includes new housing units to be built over a five-year period (2025-29). Sixty percent of those housing units are targeted to be built within the growth areas of the municipalities comprising the Addison Region. Accordingly, for the Region to reach this target it will need its municipalities to support and authorize construction producing approximately 1,000 new housing units within the Village Centers and Village Areas (approximately 600 fall within Downtown Centers and Planned Growth Areas) depicted on ACRPC's Land Use Map within the next five years, an average of 200 housing units per year.

See Chapter 5, page 23, for charts of the Region's housing targets.

Many communities in the Region consider that number of building permits per year daunting. Anecdotally, in many, it roughly doubles the amount of housing that has been permitted and constructed in the entire town, on average, over the last 10 years. The primary reason behind this skepticism stems from the lack of water and/or wastewater infrastructure in most of the Region's communities. Given the area's lack of existing municipal water or sewer systems, this target will be difficult to achieve. However, this Plan has expanded the Village Areas to provide the physical acreage needed to achieve the target. This Plan also predicts that the new housing proposed within easy walking distance of the facilities, services, community spaces, and businesses in the Addison Region's existing small villages will help to revitalize them as centers of the community and enrich the rural community experience that many in the Addison Region desire to preserve and enjoy.

TRANSITIONAL AREAS

Transitional Areas constitute existing, largely highway-oriented development that is also served by water and/or wastewater service. In its current condition it often constitutes retail businesses drawn to the highway corridor by the traffic that travels along it every day in the hopes of securing customers. While many support the local economy, they offer little in the way of amenities that connect them to or support the local villages or growth areas.

This Plan envisions using existing infrastructure in these areas to expand housing development. Walkable infrastructure will help transform these Transitional Areas into active community centers that support nearby villages or downtowns. The Plan envisions towns adopting zoning changes to promote dense housing development with pedestrian-friendly infrastructure. The newly adopted Community and Housing Infrastructure Program (CHIP) can help fund this infrastructure by using the increased property tax revenue generated over time to support the growth.

Transitional Areas in the Addison Region exist in Middlebury along Route 7 and Orwell in a small area along Route 22A. Middlebury has already engaged in planning to develop housing nodes within the Transitional Area. The area in Orwell is much smaller and less developed. This Plan encourages both Middlebury and Orwell to revise their plan and development regulations to intentionally create mixed-use development within these Transitional Areas that will link and incorporate them into their growth area and village area, respectively.

Table 2: Addison Region Designations

	Total ACRPC Area	Existing Designations	Interim Act 250	Proposed Eligible Tier 1B
Acres	459,627	1,549	8,020	14,776
% of Total ACRPC Area	-	0.3%	1.7%	3.06%

ENTERPRISE AREAS

The Addison Region's Enterprise Areas include locations of high economic activity and employment. Enterprise Areas include existing industrial operations



Waterworks, Bristol

(Middlebury Industrial Park and Phoenix Feeds in New Haven Junction); areas of natural resource extraction (Pike Quarry in New Haven, the Omya Quarry in Middlebury, and other quarries or sand and gravel extraction operations along Route 116 and the foothills of the Green Mountains); and, other commercial uses that involve larger land areas.

Enterprise Areas are generally not adjacent to the Region's Villages. Instead, the Addison Region's Enterprise Areas tend to form around the natural resources they extract (quarries) or congregate along the Green Mountain Railroad corridor and/or the Route 7 corridor, the major freight transportation and electrical networks within the Addison Region. The Middlebury Airport is also included as an Enterprise Area to support its operation.

The Region's Enterprise Areas are generally zoned to support mixed commercial and industrial uses. They are less likely to include areas for new housing because of their proximity to a major truck route (Route 7) and the existing Commercial/Industrial uses. Retail uses shall be discouraged and limited in the Enterprise Areas.

HAMLETS

The Addison Region boasts several Hamlets, areas of historic housing development, often located at an important crossroads, but generally lacking the commercial, retail, or civic structures that benefit villages. This Future Land Use map recognizes these historic centers as points and places appropriate for rural housing development or small commercial activities.

Town	Hamlet Name
Ferrisburgh	North Ferrisburgh
Lincoln	Downingsville
Lincoln	South Lincoln
Lincoln	West Lincoln
Middlebury	Lindale-Mead Neighborhood



OMYA Quarry, Middlebury

RESOURCE-BASED RECREATION AREAS

The Addison Region also recognizes and supports several areas that have been developed as recreational areas, mainly because of their proximity to a natural feature like Lake Champlain. Like much of Vermont, the Addison Region's clean air, water, open spaces, summer and winter activities, fall foliage, and mountain views have made it a haven for visitors. Tourism is an important part of the economy. These Resource-Based Recreation Areas offer food, lodging, and recreational amenities close to the resources that nurture them. Properly planned, they constitute appropriate places to further develop infrastructure and amenities that attract visitors and support residents drawn by the recreational opportunities and quality of life they provide.

RURAL GENERAL AREAS

A significant portion of the land in the Addison Region falls into the Rural General Area. This Area consists largely of rural residential housing, often along road networks, on generally larger residential lots that are too small for significant commercial, agricultural, or forestry activity. Not all of us were meant to or desire to live in a village. In its housing targets, the Addison Region recognized this reality. While 60% of the targeted housing development is planned for the Growth Areas and Village Areas, those areas only encompass 3.3% of the land in the region. The Rural General Area encompasses 12.82% of the Regions' land and by default will accommodate a significant portion of the remaining 40% of the Region's proposed housing growth. This area allows for low-density residential development, home occupations, and some other limited commercial development that is compatible with productive

lands and natural areas. It also allows well-regulated recreational or natural resource dependent businesses, including extraction operations as allowed by local development regulations. As an example, the Town of Middlebury specifically allows natural resource extraction in its rural areas and has a number of small gravel pits and even the very large OMYA quarry as allowed uses.

RURAL AGRICULTURE AND FORESTED AREAS

This area includes significant, active farmland or forest blocks, generally in larger parcels greater than 25 acres and generally lacking access to public water or wastewater infrastructure. It is the majority of land in the Addison Region and encompasses the "working landscape" that a significant portion of the economic activity in the Region derives from. Most of the land in the Region enrolled in the State of Vermont Current Use Program falls within this category of land use. Land conserved by the Vermont Land Trust or other organizations specifically for or allowing farming and forestry activity are also included in this category since the intent of these easements is to preserve agricultural soils and/or promote farming or forestry.

In the agricultural towns in the western plains of the Addison Region, more than 20% of the land is encumbered by conservation easements for farming. The area includes the homesteads of the farmers and foresters that work the land. It also includes some protected natural resources which should be field verified during any development review process. The area provides critical wildlife habitat, outdoor recreation opportunities, flood storage, aquifer recharge, and scenic beauty, and contributes significantly to the Region's economic well-being and quality of life. Development in this area shall be carefully managed to provide rural housing opportunities, promote the working landscape and rural economy, and protect the agricultural and forest resource value.

RURAL CONSERVATION AREAS

The Rural Conservation Area, includes areas of significant natural resources based upon existing Agency of Natural Resources mapping for wetland protection and for the maintenance of forest blocks, wildlife habitat, and habitat connectors and other conservation purposes. Specifically, it includes parcels owned or controlled through easements by the following types of entities for the specific purpose of preservation or conservation:


Fishing on the Otter Creek


Demers Park, New Haven


Bristol Pond

- **The Federal government**, like the large swath of Green Mountain National Forest that spans portions of most of the mountain towns on the east side of the Addison Region.
- **The State of Vermont** and managed for conservation or wildlife, like the Lewis Creek and Fred Johnson Wildlife Management Areas in Starksboro or the Dead Creek Wildlife Management Area in Addison, Panton, and Bridport.
- **Local governments and municipalities**, like town forests that lie outside of a village or growth area.
- **Non-profit groups**, like the Nature Conservancy or the Middlebury Area Land Trust. Rural agriculture and forest uses and recreational uses are allowed in this area but should be sited to mitigate or avoid impacts on the resources noted above.

In addition to land controlled by the types of entities listed, wetlands greater than 5 acres are mapped into this area to depict the areas protected and to highlight the significant wetlands and floodplains of the Region, especially in the southern communities along the Otter Creek.

The areas noted significantly restrict or regulate both housing and commercial development to preserve natural resources. However, they do allow some low impact recreational infrastructure and uses. The State of Vermont Wildlife Management Areas encourage trails and hunting. The Moosalamoo National Recreation Area, within the Green Mountain National Forest, encourages a myriad of recreational uses, including the construction of limited infrastructure necessary to support those uses. Additionally, some towns, particularly Lincoln, chose to include significant blocks of private property in this Land Use Area to depict forest blocks on the Land Use Map. On private property within this area, low density housing, forestry and farming, and low impact recreational uses are allowed pursuant to the municipal plan and regulations implementing those plans.

SPECIAL USE AREAS

The Region's last future land use area is the Special Use Area. Special Use Areas include areas planned to be Future Village Areas or Future Planned Growth Areas in municipalities that have expressed a desire to support these areas, have the proximity and infrastructure necessary to support them, but do not currently have an adopted and regionally approved municipal plan.



Canoeing on Bristol Pond

Goals, Objectives, and Actions

GOAL 1: To plan development to maintain the historic settlement pattern of compact villages and urban centers separated by rural countryside.

Objective 1:

Concentrate residential and commercial development in downtown centers, village centers, and growth areas in accordance with smart growth principles.

a. Work with the Region's municipalities to structure their plans' land use areas and corresponding development regulations, which implement those plans to clearly define, and articulate village areas surrounded by rural areas.

b. Encourage towns to plan for and amend the supporting development regulations to promote housing development to reach the targets contained in this plan, with a focus on concentrating most of the residential development within Planned Growth Areas and Village Areas.

c. Collaborate with Addison County Economic Development Corporation (ACEDC) to advance business development within Planned Growth Areas and Village Areas.

Objective 2:

Invest in public infrastructure that reinforces and supports compact settlement patterns in growth areas and villages.

a. Work with the Addison County Economic Development Corporation to incentivize municipalities to embrace the CHIP Program, using future tax revenue to invest in local infrastructure that supports development, housing, and a stronger tax base.

b. Promote, plan for, and construct public infrastructure like water and wastewater systems, sidewalks, bike lanes, stormwater, energy, and communication systems that support and promote locating in a growth area or village area.

Objective 3:

Strengthen the economic connection between growth centers and the Region's working landscape.

a. Support value added agricultural/wood products manufacturing in growth areas and villages to provide jobs and markets for products from the working landscape.

Objective 4:

Protect and conserve rural agricultural lands, forestlands, and natural areas.

a. Support the Vermont Land Trust's efforts to permanently conserve appropriately located agricultural and forestry lands.

b. Support the delineation boundary of the Green Mountain National Forest.

c. Work with the Region's municipalities to structure land use area categories and implement corresponding regulations that clearly define and maintain protections for rural and conservation areas.

Objective 5:

Support agricultural and forestry operations through policies that maintain the economic viability and integrity of working lands.

a. Promote Freedom to Farm policies within this Plan and municipal plans in the Region.

b. Support taxation and other state policies that provide incentives to preserve working blocks of agricultural and forest land.

c. Work with ACEDC to encourage the production of value-added farm and forest products in close proximity to the source areas.

Substantial Regional Impact

In addition to the planning component, the regional plan serves as a regulatory document. Where planning documents can be suggestive or visionary and permissive, regulatory documents must unambiguously direct the intent of the regional plan and involve mandatory language. This duality of purpose often creates conflicts within the plan itself. This chapter of ACRPC's Plan defines those things that constitute substantial regional impact within the Addison Region and indicates when and how both ACRPC itself and quasi-judicial bodies should apply the policies of the Regional Plan.

Two state regulatory proceedings that specifically require the reviewing authority to review regional plans include:

- Chapter 151 of Title 10 of the Vermont Statutes Annotated, entitled, "State Land Use and Development Plans", commonly known as "Act 250", which includes compliance with local and regional plans as one of the 10 criteria district commissions use to evaluate land development large enough to trigger jurisdiction; See 10 V.S.A. §8086(10).
- Section 248 of Title 30 of the Vermont Statutes Annotated, which regulates utilities and large-scale energy generation and transmission, also includes a subsection that requires the Public Service Board include compliance with local and regional plans in its review of a project's compliance with the "orderly development of a region". See 30 V.S.A. §248(b)(1).

APPLICATION

There are two specific situations in which these guidelines will be used:

- First, ACRPC's uses the "substantial regional impact" criteria to determine its course of action if a conflict exists with a local plan on a project determined to have a substantial regional impact; and
- Second, the "Substantial Regional Impact" section directs the Quasi-Judicial body reviewing an application and project parties how ACRPC's Plan should be read in cases of conflict or potential conflict with a municipal plan.

If ACRPC's plan indicates the project impacts resources or infrastructure deemed regionally significant, this Section instructs the quasi-judicial body reviewing an application to give the Regional Plan effect over the local plan. This chapter also intends to limit the primacy of the Regional Plan only to those aspects of the development that affect substantial regional interests; otherwise, the local plan should be given effect. In other words, if a project is deemed to have a substantial regional impact because it significantly impacts the carrying capacity of a significant regional highway, only those aspects of the regional plan relating to traffic impacts on the highway will supersede the local plan, otherwise the local plan will control.

DEFINITION

Projects that trigger one or more of the following criteria will be considered to be projects with "substantial regional impact."

1. A project or development which would substantially impact on the traffic-carrying capacity of state highways or Class I and Class II roads. Substantial impacts include changes warranting new signals or roundabouts, requiring capital improvements to the roadway, or decreasing the Level of Service of an adjacent or ancillary intersection on the Roadway to LOS D or below.
2. A project or development which will generate new employment equal to or greater than 1% of the Region's existing employment level.
3. A project or development which will generate residential construction where the total proposed housing units exceeds five percent of the total housing count of the host town.
4. A project or development which would substantially change the service area or capacity of inter-municipal facilities, including, but not limited to, union high school districts, or public water or sewer systems serving more than one municipality.
5. A project or development locating or expanding regional public and quasi-public facilities such as solid waste facilities, union district schools, the County courthouse, Porter Hospital and expansions or reductions in air/rail services on the Green Mountain Railway line or at Middlebury State Airport.
6. Projects which will have significant impacts on or benefits to "Regionally Significant Resources" as identified by the Regional Plan, Maps 8-2A and B, and listed in Table 1;
7. A project or development which includes the construction of power generation or energy transmission facilities that requires Public Utility Commission review under 30 V.S.A. §248 and at least one of the following applies:
   a. It impacts identified significant regional resources in more than one municipality;
   b. A generation facility that requires transmission, substation or distribution upgrades in more than one community.
8. A project or development which includes the construction of a telecommunications facility that requires Public Utility Commission review under 30 V.S.A. §248a and either impacts or benefits more than one municipality.

Any one or combination of the criteria listed above shall characterize a development with substantial regional impact.

Title 24 of the Vermont Statutes Annotated (V.S.A.), §§4345a(17), requires that all regional plans: "define substantial regional impact as that term maybe used with respect to its region." 24 V.S.A. §4345A(17).

It then states that, "This definition shall be given due consideration, where relevant in State regulatory proceedings." Id.

ENDNOTES

[1] NPShistory.com; "The Land We Care for", Chapter VI

[2] Preservation Trust of Vermont newsletter (July 2006) archive. ptvermont.org



Middlebury College Lands Planning Meeting with ACRPC

Figure 1	Image of educational signboard "At This Spot on Chipman Hill" erected by the Battell Trust. Artwork by Kate Tolano.
Figure 2	Image of sign stating "Welcome to Salisbury, Chartered 1761"
Figure 3	Map of Addison County, Vermont 1857 - Print of wall map. (n.d.). https://www.old-maps.com/vermont/vt_CoAdd_0paperwallmap.htm
Figure 4	Image of Vergennes Waterfalls - Industrial facility - Adobe #374233126
Figure 5	Preservation Trust of Vermont. (2012, June 15). Holley Hall, Bristol, VT: 2012 PTV Award Winner. https://ptvermont.org/holley-hall-bristol/
Figure 6	Vergennes-Ferrisburgh Transit-Oriented Design (TOD) Master Plan



View of New Haven Village

Compatibility

Introduction

As required by 24 V.S.A. §4348a (8), this chapter of the Plan explains how it aligns with development trends and community needs expressed within the plans of neighboring municipalities and Region. Since Act 181 required all regional planning commissions to use consistent language to describe similar land uses, this task will become significantly easier upon the adoption of each Region's new plan. However, at this point in time, the new Future Land Use Plans for each region have been drafted, but none have been adopted. To address this, ACRPC compares both the existing and proposed Future Land Use plans with those of its neighboring regions. By comparing ACRPC's plan with those of adjacent communities, we can recognize opportunities for collaboration and identify areas where plans may conflict. This review coordinates growth and sustainable land use across town and regional boundaries.

The Addison Region shares borders with four Regional Planning Commissions (RPCs):

- Chittenden County Regional Planning Commission (CCRPC) to the north
- Two Rivers–Ottauquechee Regional Commission (TRORC) and the Central Vermont Regional Planning Commission (CVRPC) to the east
- Rutland Regional Planning Commission (RRPC) to the south

ACRPC also borders a number of municipalities outside our Region, (see Figure 1).

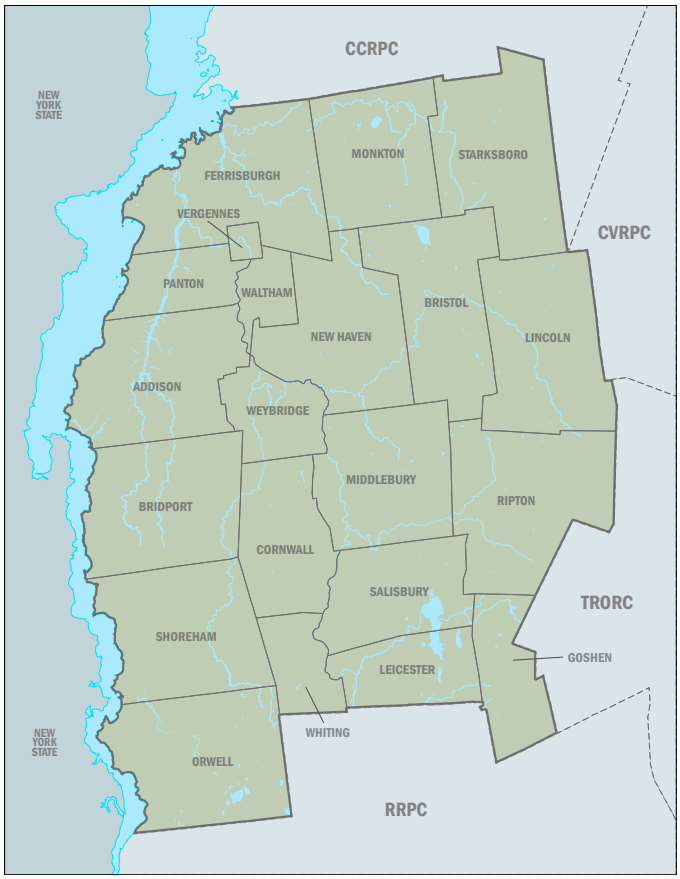
- North: Charlotte, Hinesburg, Huntington, and Buels Gore
- East: Fayston, Warren, Granville, Hancock, and Rochester
- South: Chittenden, Brandon, Sudbury, and Benson

The analysis below summarizes how the Addison County Regional Plan aligns with the plans of these adjacent municipalities and regions. It highlights areas of compatibility and cooperation and potential points of divergence that may require further coordination.

OUR NORTHERN BOUNDARY: CCRPC AND MEMBER MUNICIPALITIES

Overall, CCRPC and ACRPC current and future regional plans are compatible with one another. In their current plan from 2018, CCRPC designated the majority of lands on the southern border that they share with the ACRPC as "Rural" with the exception of one "Enterprise" area in Hinesburg and a "Village" designation in Huntington. ACRPC's current Regional Plan, adopted in 2018 and amended in 2022, designates the lands on its northern border with CCRPC primarily as "Rural and Agriculture" and "Forestland and Conservation/Floodplain" with the exception of a relatively small "Residential" designation in northern Monkton. In their proposed Future Land Use maps, both Regions have retained similar land uses and have primarily designated the areas along their shared

Figure 1: ACRPC Region and Towns



border as a mix of Rural General, Rural Agriculture or Forestry, or Rural Conservation. These land use categories emphasize the protection of rural character, support for agricultural viability, and long-term land conservation. There is one notable difference in future land use between the two regions —the designation of an Enterprise area in the Town of Hinesburg—however this land use is not inherently incompatible. Monitoring of traffic and ecosystem impacts on nearby, rurally designated lands in the Town of Starksboro should be sufficient for maintaining cohesive and orderly development. The two regions also share several key transportation and environmental planning priorities—particularly along U.S. Route 7, within the Lewis Creek watershed, and across the mountain headwaters of the LaPlatte and Huntington Rivers. Finally, inter-regional traffic patterns are also likely to change somewhat as housing growth in the Addison Region attracts workers from the Chittenden Region. This will likely be the case for all regions that border the Chittenden Region. As such, housing growth in the Addison Region communities and the commuter habits that they influence should be studied further, but that growth is unlikely to create unique or new problems for the Region.

Charlotte

The Town of Charlotte borders the Towns of Ferrisburgh and Monkton to the north. All communities share a strong commitment to preserving their rural character and working landscapes. In its current Municipal Plan, Charlotte classifies all of its abutting land area as a "Rural Planning Area," indicative of their commitment to preserve traditional land use in the area. On the ACRPC side of the border, the future land use sections of Ferrisburgh and Monkton support land conservation, active agriculture, and clustered residential development except on the Route 7 corridor in Ferrisburgh. Ferrisburgh permits limited mixed-use development along U.S. Route 7, classified as "North Industrial" and "North Business" in its plan, and has a nearby "Historic District." The designation of nearby lands in the Monkton Town Plan as a "Rural Residential Planning Region" is likewise compatible with nearby land uses. Ongoing collaboration—such as corridor planning through VTrans and watershed initiatives led by the Lewis Creek Association—support shared goals and foster mutual benefits between the two towns.



Hinesburg

The Town of Hinesburg shares a border with the Towns of Monkton and Starksboro, and all three towns have embraced planning strategies that support compact village centers surrounded by rural and forested landscapes. On its border with Monkton, Hinesburg's Town Plan categorizes its nearby lands as "Rural Agricultural," which is generally compatible with Monkton's "Rural Residential Planning Region" across the border. To the east of Monkton, Hinesburg abuts the Town of Starksboro. Starksboro's "Lewis Creek Valley Planning Area," "Rural Planning Area," and, importantly, its "Upland Forest Planning" area border Hinesburg, and its "Rural Agricultural" and "Rural Forest" land uses are generally similar to Starksboro's. There is one notable difference in this area. Hinesburg's current Future Land Use plan notes an "Industrial" area, located on its southern boundary. Proposed to be defined as an Enterprise Land Use area by CCRPC, this difference in land use near forest and watershed designated areas in Starksboro highlights the need for ongoing coordination to ensure land use remains compatible. As development continues, particularly new housing in Monkton and Hinesburg, both regions will need to monitor that development and manage transportation impacts along their shared corridor as needed.

Huntington and Buels Gore

Huntington and Buels Gore border the mountainous eastern portions of Starksboro. These areas are defined by high elevations, limited access, and extensive forest resources. All towns in the area call for future land uses that restrict the types of development that can occur in these upland areas, prioritizing conservation, sustainable forestry, and habitat connectivity. Classified as "Rural Residential" areas in Huntington's Plan and "Forestry/Conservation One," "Forestry/Conservation Two," and a small, rural aesthetic "Design District" in Buels Gore's Plan, these nearby land uses are compatible with Starksboro's own "Upland Forest Planning Area." There are no known plan conflicts in these areas, and there are strong opportunities for cross-boundary coordination on forest management, wildlife corridors, and climate resilience planning.

OUR EASTERN BOUNDARY: CVRPC, TRORC, AND MEMBER MUNICIPALITIES

CVRPC

CVRPC and ACRPC define lands on their border similarly to one another. Their current Future Land Use plans define their border areas as "Resource" lands (CVRPC) and as "Rural and Agricultural" and "Forestland and Conservation / Floodplain," (ACRPC) respectively. CVRPC's current plan defines "Resource" lands as "lands requiring special protection or consideration due to their uniqueness, irreplaceable or fragile nature, or important ecological function." ACRPC's proposed Future Land Use plan delineates its border lands, in the Town of Lincoln, almost exclusively as Rural Conservation land. This is done to discourage development on steep slopes and heavily forested areas. CVRPC's proposed Future Land Use plan designates its border lands similarly, classifying most as "Rural Conservation" and the remainder as "Resource-based Recreation." Limited rural residential use is allowable in these areas, but new commercial, roads, and utilities development is discouraged without demonstration that such development is vital and cannot take place elsewhere. CVRPC and ACRPC plans are compatible and mutually reinforce conservation and low-impact land use goals in their shared border region. The Regions' physical geography limits development conflicts. It's characteristics also suggest a joint responsibility: stewardship of shared, trans-boundary ecosystems.

Fayston and Warren

The Towns of Fayston and Warren border Lincoln along the northeastern edge of Addison County. The area is predominantly mountainous and forested, has little development pressure, with the exception of the Sugarbush ski area within the Green Mountain National Forest. The Town of Lincoln designates the land that borders Fayston and Warren as a "Special Protection" area that encompasses its share of the Green Mountain National Forest in its current plan. This is comparable to Fayston's designation, "Forest, Headwater, and Fragmentation Protection," and Warren's "Forest and Conservation" designation for their abutting lands in their current plans. Given the geographic isolation and steep terrain, cross-boundary impacts are minimal. The principal opportunities for cooperation involve forest management, watershed protection, and climate adaptation planning.

TRORC

TRORC currently designates the lands in their region that border ACRPC almost exclusively as "Forest Based Resource" lands. They have also designated a small "Rural" land area nearby in the Town of Hancock. These nearby land use categories are compatible with ACRPC's own current land use categories in the area: "Rural and Agricultural" and "Forestland and Conservation / Floodplain." TRORC and ACRPC's proposed Future Land Use maps are also compatible: both RPCs define the area along their shared border primarily as "Rural Conservation" lands. A relatively smaller portion of land that abuts ACRPC in this area is classified as "Rural General"; however, these are similar land uses to those in neighboring Towns in the Addison Region. This is primarily due to the biotic and abiotic characteristics of the shared border: forested, steep mountain slopes. There is one slight, but notable proposed land use change in the TRORC plan: a Resource-based Recreation area that partially abuts the border with Ripton. Serving the "Snow Bowl" and owned by Middlebury College, this designation is not a new development and better represents an area of inter-regional cooperation than an area of poten-

tial conflict. There are no significant conflicts between TRORC and ACRPC along their shared boundary. Both regions prioritize conservation and compatible recreation, and both support the long-term preservation of forest blocks and wildlife corridors in the area. Coordination between the regions occurs primarily through basin planning and recreation initiatives such as trail network management within the Green Mountain National Forest.

Granville, Hancock, and Rochester

The eastern boundary of Addison County follows the crest of the Green Mountains, separating the towns of Granville and Hancock (Addison County) from Rochester (Windsor County). All three towns share steep terrain, limited road access, and substantial forest cover. Both the ACRPC and TRORC plans recognize these upland areas as critical for habitat connectivity, headwater protection, and recreation. Development potential is limited by slope, elevation, and ecological sensitivity. The Town Plan designations of these lands follow this pattern. Granville, which borders Lincoln and Ripton, designates their bordering lands as "Public Lands," indicating the shared importance of the Green Mountain National Forest to the area. The Town of Hancock, which borders Ripton and Goshen, has designated their shared border areas similarly as a "Contiguous Forest Overlay Area" in their current plan. Open for recreation, conservation, and forestry, Hancock describes its share of the Green Mountain National Forest as having "international significance." Finally, Rochester, which borders the Town of Goshen, has designated its bordering area simply as Conservation. These all align with Lincoln, Ripton, and Goshen's nearby lands designations in their plans: a "Special Protection Area," a "Conservation District," and a "Conservation District," respectively.

OUR SOUTHERN BOUNDARY: RRPC AND MEMBER MUNICIIPALITIES

RRPC and ACRPC maintain highly compatible land-use and natural-resource objectives. Shared planning priorities include watershed protection, agricultural land conservation, low-density, clustered development, and forestland connectivity. The Otter Creek Basin Plan provides an ongoing vehicle for inter-regional coordination on land use planning. To that end, ACRPC's current Future Land Use plans categorize the areas on its southern border as predominantly "Rural and Agricultural" and "Forestland and Conservation / Floodplain," lands, but it also lists several border-area lands as "Residential" and "Village Residential and Commerce." RRPC's current plan defines its northern border lands similarly: the vast majority of lands are either "Development Constrained" conservation or "Low Density Development" areas. A few nearby "Medium Density Development" and one somewhat close "High Density Development" area are worth noting but are not unknown to ACRPC. Generally compatible land use designations are also present in RRPC and ACRPC's proposed Future Land Use maps. Both designate their shared border lands as "Rural General," "Rural Agriculture or Forestry," or "Rural Conservation." The greatest deviations from that trend in the proposed plans are in the Leicester/Brandon border area, with a small border abutting "Enterprise" land area and a nearby "Planned Growth" area respectively. Future development in these areas will be worth monitoring to ensure that unreasonable, transboundary impacts do not emerge; however, these different uses—due to their size, location, and similar historical uses—are not viewed to be a conflict at this time.

Chittenden and Brandon

These Rutland County towns border Goshen and Leicester, respectively. The mountainous terrain of Chittenden and Goshen supports predominantly forest and conservation uses. Goshen's two designated, forest-oriented "Conservation Districts" are well aligned with Chittenden's "Conservation/Protected" areas. Its nearby "Rural Residential" area is also generally compatible with the areas' land use categories. On the other hand, Leicester and Brandon maintain strong agricultural and rural land use patterns in their borderlands. Much of Leicester's "Residential Agricultural District" and its "Conservation Districts" align with Brandon's "Rural Residential District" and its "Aquifer Protection Area." Further, Leicester's "Residential, Agricultural, Commercial District" along US Route 7 are similar to Brandon's "High Density, Mixed Use" district along the same route. As mentioned in the previous section, Leicester does have an "Industrial District" on its border with Brandon; however, it is comparatively small, self-contained former quarry

area and disconnected, for example, from Brandon's "Aquifer Protection Area." All four of these towns maintain shared rural land values and concentrated development practices, which create opportunities for collaboration on area growth and conservation.

Sudbury and Benson

The final two towns that border the Addison Region are Sudbury and Benson, which border the towns of Whiting and Orwell. These four municipalities have categorized their bordering land—and significant shares of their land area more broadly—as rural for development purposes. While the Town of Sudbury did not designate specific land uses in their town plan, their zoning districts make clear that the preferred land uses along its border with Whiting and Orwell are "Rural Residential, "Conservation," and "Agricultural Conservation." These land uses are compatible with Whiting's "Conservation" and "Low Density Residential" districts to the north and Orwell's "Rural" and "Conservation" planning areas to the West. One notable difference in land use category is the Town of Whiting's "Medium Density Residential" district on its border with Sudbury. While somewhat different from the "Rural Residential" land use to its south, the Region does not view these two uses as inherently incompatible with one another. It proposes monitoring the conditions along, in particular, RT 30 to ensure that this remains the case. The Towns of Whiting and Benson have near mirror image land uses described in their current town plans: "Rural" and "Agricultural and Rural Residential," respectively, in the majority of areas; lake shore designations around Sunrise Lake and Lake Champlain. As is evident, collaboration on watershed management is a key role for inter-regional cooperation in this area, as is transportation planning on Routes 22A and 30.



INTER-REGIONAL COMPATIBILITY STATEMENT

Across all four regional boundaries, the Addison County Regional Plan is broadly compatible with the development trends, community needs, and policy goals of neighboring municipalities and regions. The most significant opportunities for inter-regional collaboration include:

- Watershed management partnerships, particularly the Otter Creek and Lake Champlain basins
- Transportation coordination along U.S. Route 7, Vermont Route 30, Vermont Route 22A, and the Route 116 corridor
- Shared climate resilience and forest conservation initiatives across the Green Mountain spine
- Agricultural land protection efforts that sustain rural character and support regional economies

While potential areas of tension are limited, one area of focus is managing growth at the margins of the Burlington metropolitan area—especially in Ferrisburgh, Monkton, and Starksboro. These communities may face increasing residential development pressure from Chittenden County, which could strain infrastructure and alter long-standing economic, social, and ecological relationships. Continued collaboration between ACRPC, CCRPC, and affected municipalities will be essential to balancing growth with long-term land-use and sustainability goals.

CONCLUSION

The Addison County Regional Plan is generally well-aligned with the plans of neighboring regions. It supports a coordinated, cross-boundary approach to land use, natural resource management, and sustainable development across west-central Vermont. Through ongoing partnerships and shared planning efforts, ACRPC remains committed to the cohesive and effective implementation of this vision.



Equity, Benefits, and Burdens

Priority Populations

Advancing equity in the planning context requires us to identify populations that may face disproportionate benefits and burdens that can be exacerbated or rectified by our planning work. In Vermont, this identification is informed by State law, which provides a standardized definition for populations warranting focused consideration in planning and decision-making.

Vermont Act 154 of 2022 defines Environmental Justice Focus Populations (EJFP): any census block group in which:

- The annual median household income is not more than 80% of the State median household income;
- Persons of Color and Indigenous Peoples comprise at least 6% or more of the population; or,
- at least 1% or more of households have limited English proficiency. Limited English proficiency means that a household does not have a member 14 years or older who speaks English "very well" as defined by the U.S. Census Bureau.

DATA ANALYSIS

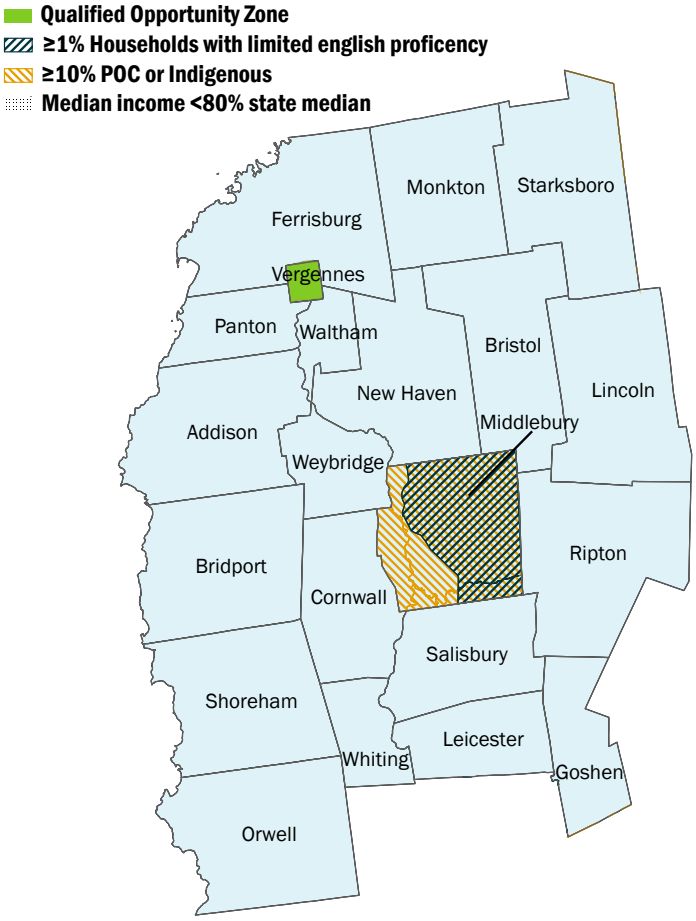
Mapping

ACRPC mapped the environmental focus group populations as defined in 3 V.S.A. §6002(4) and made two adjustments to better identify disproportionate impacts in the Region. The first adjustment expanded the threshold for identifying BIPOC populations. Using the definition of environmental justice focus populations found in 3 V.S.A §6002(4)(B) resulted in all but five census blocks in the region being considered focus populations. ACRPC adjusted this definition to identify areas where more than 10% of residents are BIPOC.

The second adjustment expanded the methods for identifying economically distressed populations. ACRPC adjusted the median household income requirement in 3 V.S.A §6002(4)(A) by including current Federal Opportunity Zones. Opportunity Zones are an economic development tool that allows people to invest in distressed areas in the United States. In the 2024 American Community Survey (ACS), no census blocks in the Region had a median income less than 80% of the State median household income. However, Opportunity Zones were created using 2018 ACS data identifying census blocks with a median income less than 80% of the State median household income. ACRPC used Opportunity Zones to identify census blocks that recently had a median income less than 80% of the State median household income and are still identified as economically distressed areas by the Internal Revenue Service and the U.S. Department of Housing and Urban Development.

The map below demonstrates the distribution of the EJFP populations throughout the Region.

The Vermont Environmental Justice Law (Act 154), passed in 2022, defines environmental justice and requires state agencies to implement environmental justice policies. 24 V.S.A §4348 and 24 V.S.A. §4345a



requires the regional planning commissions to assess the distribution of environmental benefits and burdens as defined under the Environmental Justice Law (V.S.A. Title 3 Chapter 72). The law directs particular focus on mitigating disproportionate impacts on environmental justice focus populations.

ENVIRONMENTAL JUSTICE KEY DEFINITIONS (3 V.S.A. § 6002)

- **Environmental benefits:** the assets and services that enhance the capability of communities and individuals to function and flourish in society. Examples of environmental benefits include access to a healthy environment and clean natural resources, including air, water, land, green spaces, constructed playgrounds, and other outdoor recreational facilities and venues; affordable clean renewable energy sources; public transportation; fulfilling and dignified green jobs; healthy homes and buildings; health care; nutritious food; Indigenous food and cultural resources; environmental enforcement; and training and funding disbursed or administered by governmental agencies.
- **Environmental burdens:** any significant impact to clean air, water, and land, including any destruction, damage, or impairment of natural resources resulting from intentional or reasonably foreseeable causes. Examples of environmental burdens include climate change impacts; air and water pollution; improper sewage disposal; improper handling of solid wastes and other noxious substances; excessive noise; activities that limit access to green spaces, nutritious food, Indigenous food or cultural resources, or constructed outdoor playgrounds and other recreational facilities and venues; inadequate remediation of pollution; reduction of groundwater levels; increased flooding or stormwater flows; home and building health hazards, including lead paint, lead plumbing, asbestos, and mold; and damage to inland waterways and waterbodies, wetlands, forests, green spaces, or constructed playgrounds or other outdoor recreational facilities and venues from private, industrial, commercial, and government operations or other activities that contaminate or alter the quality of the environment and pose a risk to public health.
- **Environmental justice:** all individuals are afforded equitable access to and distribution of environmental benefits; equitable distribution of environmental burdens; and fair and equitable treatment and meaningful participation in decision-making processes, including the development, implementation, and enforcement of environmental laws, regulations, and policies. Environmental justice recognizes the particular needs of individuals of every race, color, income, class, ability status, gender identity, sexual orientation, national origin, ethnicity or ancestry, religious belief, or English language proficiency level. Environmental justice redresses structural and institutional racism, colonialism, and other systems of oppression that result in the marginalization, degradation, disinvestment, and neglect of Black, Indigenous, and Persons of Color. Environmental justice requires providing a proportional amount of resources for community revitalization, ecological restoration, resilience planning, and a just recovery to communities most affected by environmental burdens and natural disasters.

When considering equity in our planning work, ACRPC focuses on the populations listed above while recognizing that the rural nature of the region can result in inequitable distribution of benefits and burdens as well. Although a source of pride and community vitality, rural areas often isolate those most in need of cultural, physical, financial, and other resources or support. While spatial data may not be sufficiently granular to capture impacts on these individuals, ACRPC remains deeply aware of the challenges faced by residents in rural areas and especially those who are low income.



Plan Benefits and Burdens Assessment

This Plan adapts the methodology used by Chittenden County Regional Planning Commission (CCRPC) and Northwest Regional Planning Commission (NRPC) for this section. In particular, in an effort to ensure compatibility across regional plans, this section utilizes the definitions for each chosen issue area from the CCRPC example, and the disproportionate impact analysis strategy created by NRPC.

Vermont Statute defines 36 examples of environmental benefits or burdens (24 V.S.A. §4345a). ACRPC grouped similar benefits and burdens into a list of 18 that could be impacted by the Regional Plan, which are described below. Where possible, data indicators are utilized to determine if priority populations receive disproportionate impacts when compared to the Region as a whole. To ensure this Plan considers potential disproportionate impacts on any portion of the community beyond EJFP, major differences between municipalities and the region as a whole are also noted.

ACCESS TO HEALTHY AIR / AIR POLLUTION

Definition: Access to healthy air means breathing air that is clean and free from harmful levels of pollutants, supporting overall health and well-being. Exposure to air pollution occurs when people regularly breathe air containing harmful substances like fine particulate matter, ozone, and nitrogen dioxide.

Relevance to Plan

This Plan and following municipal planning influences where and how transportation and building infrastructure is updated. These are critical sources of harmful pollutants. Additionally, this plan informs the development of public green spaces that provide opportunities for all community members to access clean air.

Disproportionate Impact Assessment

Measure: % of population with >80th percentile PM2.5 concentration in their census tract. (Source: EPA EJ Screen Tool)

- **Regional Value:** 15% of the Region has a PM2.5 concentration greater than 80th percentile.
- **EJFP impact:** None, EJFP communities experience similar levels of particulate matter pollution to the Region as a whole. Vergennes ranks in the 60th percentile while Middlebury reports between 72nd and 56th percentile with the higher values reported in the census blocks in the downtown area.
- **Other communities impacted:** Whiting, Cornwall, Bridport, Orwell, and Shoreham all report in the 90th percentile on PM2.5 concentration.

ACRPC Policies Addressing this Issue

- Natural Resources: Goal 7, Obj 1 A-D
- Energy: Goal 4, Obj 1 A-B
- Energy: Goal 5, Obj 1 A-B
- Transportation: Goal 2, Obj 3A
- Transportation: Goal 3, Obj 1C,
- Transportation: Goal 3, Obj 2A

Benefits and Burdens Discussion

Air quality data is not available at a level to identify specific areas within the Region impacted by air quality issues. However, this Plan does consider that community members living near high-traffic areas, in homes with particulate-producing energy systems, or in older buildings often experience disproportionate air quality burdens. Proper weatherization can address indoor air quality issues such as mold while improving energy efficiency. Given Vermont's current energy mix, communities outside Vermont frequently bear the environmental costs of energy generation while the Addison Region enjoys reliable power. This Plan addresses these inequities by promoting cleaner transportation, heating and electric energy, expanding active and public transportation options, supporting energy efficiency upgrades and local renewable energy development, and ensuring all residents have access to green outdoor spaces and the clean air they provide.

ACCESS TO GREEN SPACES AND RESOURCES

Definition: Access to green spaces such as public recreation sites, trails, and conserved lands create potential opportunities for people to use and benefit from land. Land access means having the opportunity to use, manage, or benefit from land for housing, agriculture, recreation, cultural practices, or conservation. When access is limited by high costs, restrictive zoning, environmental degradation, or legal and historical barriers, it can lead to displacement, loss of livelihoods, reduced food sovereignty, and fewer opportunities for cultural and community activities.

Relevance to Plan

This Plan provides guidance on where future conservation, recreation, and development projects may occur. Therefore, consideration of the existing distribution of these resources is necessary to identify high priority projects in the future.

Disproportionate Impact Assessment

Measure: Number of public recreational sites per 1,000 population (VT Outdoor Recreation Sites Inventory)

- **Regional Value:** The Region hosts approximately 5.2 recreational sites per 1000 population.
- **EJFP impact:** Burden - Middlebury and Vergennes host 2.73 recreational sites per 1000 population.
- **Other communities impact:** 11 of the 21 towns have fewer sites per population than the Region as a whole. In contrast, Goshen (40.7 sites/1000 population), and Ripton (18.9 sites/1000 population), have significantly more. Waltham has no recreation sites listed.

ACRPC Policies Addressing this Issue

- Natural Resources: Goal 9, Obj 1-4, all actions
- Transportation: Goal 3, Obj 2A
- Community Infrastructure: Goal 3, Obj 3A-C
- Housing: Goal 3, Obj 1A
- Economic Development: Goal 4, Obj 2A-C
- Land Use: Goal 1, Obj 4A-C

Benefits and Burdens Discussion

The Addison Region offers residents many opportunities to access green spaces. Much of the eastern border of the Region hosts nation and state-owned lands open to the public, while the western border of the Region is along Lake Champlain. Throughout the Region there are many town forests, parks, and other green spaces. However, this Plan recognizes that not all communities feel able to utilize these resources due to differences in wealth, culture, or ability. For example, most of Lake Champlain shoreline is owned privately, with a limited number (13) of free public access points. Additionally, these major green spaces are a significant distance from the two EJFP areas in Vergennes and Middlebury.

However, what Vergennes and Middlebury lack in number of amenities, may be overcome by the amenities they are able to offer. Both have municipal recreation departments supporting a number of programs. Middlebury also benefits from the Trail Around Middlebury (TAM), which provides access to a 17-mile trail network that surrounds Middlebury's village, putting walking trails within walking distance of anyone that desires to use them. This Plan also recognizes that unsustainable development of recreational or working lands reduces the environmental benefits for future residents. Therefore, relevant policies from this Plan on this issue involve ensuring resources are sustainably developed and managed, distributed throughout the Region, and new green spaces are made available to a broad range of ages, abilities, incomes, and backgrounds.

ACCESS TO TRANSPORTATION

Definition: Access to transportation refers to the ability to reach essential destinations (such as jobs, schools, healthcare, and grocery stores) safely, affordably, and efficiently by a variety of modes, including walking, biking, public transit, and driving.

Relevance to Plan

This Plan identifies areas in need of improvement to ensure transportation infrastructure is able to meet the needs of the future.

Disproportionate Impact Assessment

Measure: % of population with transit stop in municipality (Tri-Valley Transit)

- **Regional Value:** 66% of the Region's population has a transit stop withing their municipality.
- **EJFP impact:** Benefit – 100% of EJFP have a transit stop in their municipality.
- **Other communities impacted:** only 9 towns have transit stops, leaving the smaller more rural communities unserved.

ACRPC Policies Addressing this Issue

- Transportation: Goal 2, Obj 5A-B
- Transportation: Goal 3, Obj 1A-C
- Transportation: Goal 3, Obj 2A
- Transportation: Goal 4, Obj 1
- Transportation: Goal 4, Obj 2A-C
- Land Use: Goal 1, Obj 2B

Benefits and Burdens Discussion

Transportation options are deeply connected to equity and opportunity. The Addison Region is a rural area where transportation has traditionally been dominated by personal vehicles. People with lower incomes may lack access to personal vehicles and face limited or no public transit options, particularly in rural areas. Elderly individuals, people with disabilities, or those with visual impairments may not be able to drive and are vulnerable to poor or nonexistent sidewalk infrastructure and transportation options that aren't designed for their mobility needs. Limited public transit schedules and unreliable transportation options mean people without vehicles must make difficult choices between accessing jobs with non-traditional hours, arriving late to work and risking job loss, or missing medical appointments and other essential activities. The cost of vehicle ownership, maintenance, insurance, and fuel consumes a larger percentage of income for low-wage workers, while geographic isolation in rural communities means longer distances to essential services with fewer transportation alternatives. Therefore, this Plan promotes further development of accessible public transportation, better active transportation infrastructure, complete streets design, improved connectivity between rural and urban areas, and directing new development to village centers to limit the distances people need to travel for work and other amenities.

HEALTHY ECOSYSTEMS / DAMAGE TO FORESTS

Definition: Healthy ecosystems are natural environments that support biodiversity, clean air and water, climate resilience, and human well-being. Access to these ecosystems provides health, recreational, cultural, and spiritual benefits, while also providing ecosystem services like flood control and carbon storage.

Relevance to Plan

This Plan identifies areas of significant ecological value, promotes activities to protect or improve natural resources, and identifies opportunities for infrastructure to improve accessibility to these resources.

Disproportionate Impact Assessment

Measure: % change in forestland cover between 2016 and 2022 (VCGI - Vermont Land Cover Change)

- **Regional Value:** The region lost about 0.2% of forestland cover
- **EJFP impact:** Benefit - EJFP areas lost 0.1% of forestland cover.
- **Other communities impacted:** There is a negligible change in forestland cover across the Region.

ACRPC Policies Addressing this Issue

- Natural Resource: Goal 4, Obj 1-3, all actions
- Natural Resource: Goal 5, Obj 1A-I
- Natural Resource: Goal 5, Obj 2A
- Land Use: Goal 1, Obj 4A-C
- Flood Resilience: Goal 1, Obj 2A

Benefits and Burdens Discussion

The Addison Region's diverse ecosystems—including forests, wetlands, rivers, and agricultural lands—provide essential benefits to residents and communities and easy access to healthy ecosystems. However, access to these benefits is not equally distributed across all populations. Lack of transportation or proximity to parks, forests, and natural areas means some communities cannot access the recreational and mental health benefits of nature. Development and environmental degradation disproportionately occur in areas inhabited by low-income communities, reducing their access to ecosystem services like flood control and clean water. Elderly individuals and people with disabilities may face physical barriers to accessing natural areas that lack accessible trails, facilities, or transportation options, while wealthier communities often have better-maintained green spaces and tree canopy coverage, providing more cooling, air filtration, and recreational opportunities. Therefore, this Plan promotes accessible recreation infrastructure during development, protects and improves ecosystem vitality throughout the Region, and directs development away from sensitive ecosystems to ensure all residents can benefit from healthy natural areas.

ACCESS TO HEALTHCARE

Definition: Access to healthcare means having timely, affordable, and geographically accessible medical services. Limited access can result in delayed care, worsened health outcomes, and increased health disparities.

Relevance to Plan

This Plan identifies preferred locations for future development of housing and other infrastructure. The proximity of new housing to healthcare services or to reasonable transportation to access those services should be considered during the planning process.

Disproportionate Impact Assessment

Measure: % of population with federally qualified healthcare center in municipality (VT Department of Health Public Health Reference Map)

- **Regional Value:** 35.2% of the Region's population has a qualified healthcare center in their municipality.
- **EJFP impact:** Benefit - 78.2% of EJFP have a qualified healthcare center in their municipality.
- **Other communities impacted:** Only two municipalities (Bristol and Middlebury) in Addison Region have a qualified healthcare center.

ACRPC Policies Addressing this Issue

- Economic Development: Goal 4, Obj 4A-D
- Community Infrastructure: Goal 1, Obj 1A

Benefits and Burdens Discussion

Access to healthcare services in the Addison Region is shaped by geographic and economic barriers that disproportionately affect vulnerable populations. Rural communities often lack nearby hospitals, specialists, and emergency services, requiring long travel times that can be life-threatening in emergencies. People without health insurance or with high-deductible plans may delay or forgo necessary care due to cost, while limited public transportation and lack of personal vehicles create barriers to reaching medical appointments, particularly for elderly individuals and people with disabilities. Therefore, this Plan supports directing new development closer to healthcare amenities and advocating for greater public transportation and active transportation infrastructure to improve access to healthcare services for all residents.



CLIMATE CHANGE IMPACTS

Definition: Climate impacts refer to the increasing frequency and severity of hazards such as flooding, heatwaves, storms, and droughts driven by climate change.

Relevance to Plan

The severity of climate change impacts felt by individual residents often depend on the local landscape and infrastructure. This Plan identifies qualities of climate resilient communities and supports development of effective adaptation efforts.

Disproportionate Impact Assessment

Measure: % of population that's in an area >75th percentile nationwide for building loss

- **Regional Value:** 0% of the Regional population
- **EJFP impact:** 0% of the EJFP population
- **Other communities impacted:** N/A

ACRPC Policies Addressing this Issue

- Transportation: Goal 5, Obj 1A
- Community Infrastructure: Goal 2, Obj 3A-B
- Community Infrastructure: Goal 4, Obj 3A-B
- Flood Resilience: Goal 1, Obj 1A
- Flood Resilience: Goal 1, Obj 2A
- Flood Resilience: Goal 1, Obj 3A

Benefits and Burdens Discussion

Addison County is an agricultural region bordered to the east by the Green Mountains. The communities located in the mountains and along the mountain escarpment are prone to fluvial erosion due to flooding, while the agricultural producers in lower, valley communities are more likely to suffer climate impacts related to extreme heat and drought. Residents and business owners who cannot afford to relocate away from hazardous flood zones or invest in sufficient cooling technology are more likely to suffer the consequences of climate change impacts. This Plan works to ensure new development is located away from streams, and that all developed areas are built with resilient infrastructure, such as sufficient greenspace capable of minimizing extreme heat and efficient storm water systems, to manage the most likely effects of climate change in this Region.

ACCESS TO CLEAN WATER / WATER POLLUTION

Definition: Access to clean water means having safe, reliable, and affordable water for drinking, cooking, sanitation, and recreation. Water pollution occurs when harmful substances contaminate water sources, making them unsafe for human use or ecological health.

Relevance to Plan

As the Clean Water Service Provider for the Otter Creek Basin, ACRPC is responsible for identifying opportunities for investment in water quality improvement projects.

Disproportionate Impact Assessment

Measure: % of dwellings located within an impaired watershed (VT ANR Priority Waters List)

Regional Value: Otter Creek is the primary watershed of the Addison Region and is considered impaired under the Lake Champlain TMDL. Therefore, 86% of the Region's dwellings are located in an impaired watershed.

EJFP impact: 100% of the EJFP dwellings are located in an impaired watershed.

ACRPC Policies Addressing this Issue

- Natural Resources: Goal 1, Obj 1, All actions
- Natural Resources: Goal 2, Obj 1A-C, 2A-C
- Natural Resources Goal 3, Obj 3B
- Natural Resources: Goal 4, Obj 3F
- Transportation: Goal 6, Obj 1A
- Community Infrastructure: Goal 5 Obj 1-3, All actions
- Housing: Goal 1, Obj 4A-C
- Housing: Goal 2, Obj 2A-B
- Economic Development: Goal 3, Obj 4A-B
- Land Use: Goal 1, Obj 2B

Benefits and Burdens Discussion

The Addison Region must plan for and support the development of effective wastewater management and provision of clean water. Much of the Region lacks access to municipally managed wastewater or drinking water systems, leaving many residents reliant on private septic systems and wells. Leaky septic tanks are expensive to maintain or replace, creating a significant financial burden for lower-income residents, while those without proper water filtration systems may not have access to water that meets acceptable quality standards. Therefore, this Plan supports ongoing water quality monitoring and education on safe places to recreate, assistance with septic system improvements and maintenance, and the development of municipal wastewater and drinking water infrastructure within the Region's villages. It also supports the continued implementation of Clean Water Service Provider projects to further improve water quality and protect ecological functions.

INCREASED FLOODING AND EROSION

Definition: Increased flooding and erosion risk refers to the compounded vulnerability of land, property, and infrastructure to damage from intense storms, inadequate stormwater management, and accelerated soil loss. These risks create a cascading cycle where flooding washes away soil and vegetation, reducing the land's ability to absorb water and causing more severe flooding. Flooding can be exacerbated by development in vulnerable areas, deforestation, and poor land management. The consequences include property damage, infrastructure failure, ecosystem degradation, sedimentation in waterways, and threats to both human communities and natural environments.

Relevance to Plan

This Plan identifies strategies to support resilient infrastructure, agriculture, and ecosystems that reduce erosion and identifies areas at risk of future increased flooding. Erosion is also relevant to the work of ACRPC in its role as the Clean Water Service Provider.

Disproportionate Impact Assessment

Measure: % of dwellings in 100-year to 500-year floodplain (FEMA FIRM Maps).

- **Regional Value:** 3% of the Region's dwellings are in a 100 to 500-year floodplain.
- **EJFP impact:** Benefit – 1.15% of the EJFP dwellings are in a 100 to 500-year floodplain.

ACRPC Policies Addressing this Issue

- Flood Resilience: Goal 1, Obj 1A-3A
- Transportation: Goal 5, Obj 1A
- Natural Resources: Goal 1, Obj 3A
- Natural Resources: Goal 9, Obj 2B

Benefits and Burdens Discussion

The Addison Region recognizes that flooding and erosion impacts are not distributed equally across all communities. Most flooding events have impacted roads, culverts, and bridges. Housing damage is relatively rare but generally affects people with lower incomes who live in flood-prone areas, lack insurance coverage, and have less financial resilience during recovery. Further, property owners with limited resources cannot afford erosion control measures or repairs, small-scale farmers lose productive land, and culturally significant sites face destruction. Renters and mobile home residents are particularly vulnerable. People experiencing homelessness face immediate dangers, such as mobility limitations, language barriers, sensory impairments, and mental health disabilities create challenges with evacuation and access to emergency information. Therefore, this Plan supports equitable emergency preparedness and response systems, flood-resilient infrastructure and mitigation, better stormwater management, hardened infrastructure against erosion, support for at-risk community members in implementing erosion control measures, and agricultural practices that increase erosion resilience to protect all residents regardless of income, ability, or background.

INADEQUATE REMEDIATION OF POLLUTION

Definition: Inadequate remediation of pollution refers to insufficient cleanup or management of contaminated sites, such as brownfields, hazardous waste sites, or areas with soil or water contamination. This can prolong exposure to harmful substances and limit safe use of affected land.

Relevance to Plan

This Plan identifies potential sources of contamination and opportunities for redevelopment of remediated land.

Disproportionate Impact Assessment

Measure: % of dwellings within 0.5 miles of an unremediated brownfield location (VT ANR Brownfield Sites)

- **Regional Value:** 0% of Regional dwellings.
- **EJFP impact:** 0% of EJFP dwellings.
- **Other communities impacted:** As of January 2026, there are no reported unremediated brownfield locations in the Region.

ACRPC Policies Addressing this Issue

- Natural Resources: Goal 1, Obj 1A, H
- Natural Resources: Goal 2, Obj 2A-C
- Economic Development: Goal 3, Obj 1C

Benefits and Burdens Discussion

The Addison Region has a limited number of contaminated sites due to limited industrial history and previous cleanup efforts. Brownfields and contaminated resources tend to reduce property values, making it more likely for low-income individuals to live nearby and receive a disproportionate negative impact. To address these concerns, the Plan supports the remediation and redevelopment of brownfield sites while also protecting water resources and addressing contamination through comprehensive water quality policies.

HEALTHY HOMES: HOME AND BUILDING HEALTH HAZARDS

Definition: Healthy buildings and homes especially are safe, stable, and well-maintained living environments that protect residents from environmental hazards such as mold, lead paint, asbestos, poor ventilation, or inadequate heating and cooling. When homes are affordable and readily available, they support long-term physical and mental well-being by reducing housing stress and ensuring that all residents have access to safe and healthy shelter.

Relevance to Plan

This Plan identifies strategies for constructing new homes and renovating existing structures with safer building materials, implementing flood resilient development practices, reducing environmental hazards, and expanding the Region's housing stock.

Disproportionate Impact Assessment

Measure: % of population with a housing burden greater than 50% of income. Households are considered housing cost burdened if they spend more than 30% of income on housing (2020 U.S. Census)

- **Regional Value:** 11% of Regional households spend more than 50% of their income on housing.
- **EJFP impact:** Benefit – 10% of Vergennes EJFP are severely housing cost burdened. Burden – 14% of Middlebury EJFP are severely cost burdened.
- **Other communities impacted:** More than 20% of households in Goshen (27%) and Whiting (22%) spend 50% or more of their income on housing.

ACRPC Policies Addressing this Issue

- Energy: Goal 2, Obj 2A
- Energy: Goal 2, Obj 3A-D
- Housing: Goal 1, Obj 3A-B
- Housing Goal 2, Obj 1A-C
- Land Use: Goal 1, Obj 1B
- Flood Resilience: Goal 1, Obj 1A

Benefits and Burdens Discussion

Income plays an important role in accessing healthy housing in the Addison Region. Due to current housing stock limitations, there are very few options for lower-income residents to seek better housing when their current situation is unhealthy or inadequate. Low-income renters and mobile home residents are more likely to live in older, poorly maintained buildings with mold, lead paint, asbestos, and inadequate heating or cooling systems, and often cannot afford necessary repairs or improvements. Renters may lack power to demand repairs or improvements from landlords, forcing

them to live in unhealthy conditions or risk eviction for complaints. Children in homes with lead paint, mold, or poor air quality face heightened risks of developmental issues, asthma, and other health problems, while elderly individuals and people with respiratory conditions or weakened immune systems are particularly vulnerable to these conditions. Without sufficient housing alternatives, residents may be forced to remain in substandard conditions that compromise their health and well-being. Therefore, this Plan supports healthy housing by facilitating public education and access to home improvement resources and clean energy options, supporting weatherization and home repair programs to improve existing housing stock, and encouraging the development of diverse housing at various price points to ensure all residents have the ability to access alternative housing if their current situation is not suitable.

ACCESS / LIMIT TO NUTRITIOUS FOOD

Definition: Access to nutritious food means having reliable availability of affordable, healthy, culturally appropriate food within a reasonable distance. Limited access, also known as food insecurity or living in a 'food desert,' can lead to poor nutrition, diet-related diseases, and reduced quality of life.

Relevance to Plan

This Plan directs development and future land use, while also encouraging the agriculture and local economic activity.

Disproportionate Impact Assessment

Measure: Grocery store or general store within 5 miles of residences (VT E911 Site locations).

- **Regional Value:** 75.3% of the Region's residents are within 5 miles of a general or grocery store.
- **EJFP impact:** Benefit - 100% of EJFP areas are within 5 miles of a general or grocery store.
- **Other communities impacted:** Goshen (84%) and Whiting (100%) have higher than average percent of residences that are more than 5 miles from a grocery store or general store.

ACRPC Policies Addressing this Issue

- Natural Resources: Goal 3, Obj 4A-B
- Natural Resources: Goal 3, Obj 5A-C
- Economic Development: Goal 3, Obj 3A
- Land Use: Goal 1, Obj 5A-C

Benefits and Burdens Discussion

The Addison Region has traditionally been an agricultural hub of the state and continues to produce nutritious local produce available to residents who can access it. Low-income and rural communities lack access to local, affordable grocery stores with fresh produce and healthy options. People without personal vehicles or adequate public transportation may face difficulty traveling to supermarkets, particularly in rural areas with greater distances. Therefore, this Plan supports mixed-use development in compact village centers to enable easier access to resources like food, protects local food production by advocating for farmers' needs and promotes food assistance programs that distribute local produce to those in need.

EXCESSIVE NOISE

Definition: Excessive noise refers to prolonged or intense sound levels that disrupt daily life, harm health, or reduce quality of life. Common sources include traffic, airports, industrial facilities, and construction. Noise pollution can lead to stress, sleep disturbance, hearing loss, and cardiovascular issues.

Relevance to Plan

This Plan directs transportation infrastructure upgrades and encourages the use of quieter modes of transportation.

Disproportionate Impact Assessment

Measure: % of population with >50th percentile traffic proximity in their municipality. (EPA EJ Screen Tool)

- **Regional Value:** 27% of the Region's population lives in a municipality reporting more than 50th percentile in traffic proximity.
- **EJFP impact:** Burden – Middlebury EJFP ranks in the 50-80th percentile for traffic proximity. Vergennes EJFP is below the 50th percentile.
- **Other communities impacted:** Weybridge also falls into the 50-80th percentile.

ACRPC Policies Addressing this Issue

- Transportation: Goal 2, Obj 4A
- Transportation: Goal 3, Obj 1A-C
- Transportation: Goal 3, Obj 1-2, All actions

Benefits and Burdens Discussion

The rural nature of the Addison Region ensures that a majority of the Region is relatively quiet, but it is important to consider where noise pollution might impact components of the community differently. In the Addison Region, low-income communities may be more likely to live near highways and rail lines that generate intermittent high noise levels. Renters and those unable to afford soundproofing or home improvements may experience greater health impacts from noise pollution. Children in noisy environments may experience learning difficulties and reduced concentration, while elderly individuals and people with certain health conditions may face heightened risks of cardiovascular problems and cognitive decline from prolonged noise exposure. Wealthier neighborhoods typically have lower noise levels due to zoning protections, green spaces, and distance from noise sources. Therefore, this Plan promotes electric vehicles and active transportation alternatives that produce less noise, encourages improved freight transport located away from downtowns and residential areas, (e.g. the recently completed Planning and Environmental Linkage Study for the City of Vergennes addressing truck traffic in its downtown), and ensures access to green spaces that can provide respite from noise pollution.

FULFILLING AND DIGNIFIED JOBS

Definition: Access to fulfilling and dignified jobs means having employment opportunities that provide fair wages, safe working conditions, respect, and opportunities for growth and advancement. Limited access can result in economic insecurity, reduced well-being, and lack of career mobility.

Relevance to Plan

This Plan supports future economic development and advocates for workforce training efforts.

Disproportionate Impact Assessment

Measure: The average 2024 % unemployment rate reported by Bureau of Labor Statistics.

- **Regional Value:** The Regional average unemployment rate in 2024 was 2.1%.
- **EJFP impact:** Burden – EJFP areas have unemployment rates higher than that of the Region with 2.2% in Middlebury and 3.3% in Vergennes. Please note that Vergennes does not have a record in BLS data sets as a small city and unemployment was estimated from American Community Survey data.
- **Other communities impacted:** Leicester, Orwell, Panton, Ripton, Shoreham, and Starksboro all had higher unemployment rates in 2024 than the Regional average.

ACRPC Policies Addressing this Issue

- Economic Development: Goal 1, Obj 2A-B
- Economic Development: Goal 1, Obj 3A
- Economic Development: Goal 4, Obj 1A-B

Benefits and Burdens Discussion

Access to quality employment may be unevenly distributed across the Addison Region. People with lower educational attainment or those unable to afford higher education may face limited access to higher-paying jobs with benefits and advancement opportunities. Geographic isolation in rural areas means fewer local job opportunities, requiring long commutes or relocation that may not be financially feasible. People with disabilities may face workplace discrimination, lack of accommodations, and limited hiring opportunities despite qualifications. Immigrants and non-English speakers may be relegated to low-wage jobs regardless of previous education or experience due to language barriers and credential recognition issues. Lack of affordable childcare forces parents, particularly single mothers, to choose lower-quality jobs with flexible hours over higher-paying opportunities with rigid schedules. Therefore, this Plan supports locating housing close to employment centers to reduce commute burdens, promoting childcare infrastructure to enable workforce participation, and supporting workforce development programs that expand access to quality employment opportunities for all residents.

ACCESS TO/DAMAGE TO INLAND WATERWAYS, WATERBODIES, AND WETLANDS

Definition: Damage to inland waterways, waterbodies, and wetlands refers to degradation caused by pollution, development, alteration of natural flow, or destruction of habitat. These ecosystems are critical for water quality, flood control, biodiversity, and recreation.

Relevance to Plan

This Plan identifies areas of significant ecological value and impaired waters and promotes activities to protect or improve these resources.

Disproportionate Impact Assessment

Measure: % change in impervious land cover 2016-2022 (VCGI - Vermont Land Cover Change)

- **Regional Value:** The Region experienced 15.3% in impervious land cover change.
- **EJFP impact:** Benefit – EJFP communities experienced 8.1% in impervious land cover change.
- **Other communities impacted:** The following towns had % change in impervious land cover that was greater than the regional average: Bristol (18.7%), Cornwall (16.5%), Goshen (68.4%), Leicester (29.4%), Lincoln (37.4%), Monkton (19.1%), Ripton (57.1%), Salisbury (30%), and Starksboro (33.2%).

ACRPC Policies Addressing this Issue

- Natural Resources: Goal 1, Obj 1-4, All Actions
- Natural Resources: Goal 3, Obj 3B
- Natural Resources: Goal 4, Obj 3F
- Transportation: Goal 5, Obj 1A
- Community Infrastructure: Goal 5, Obj 1-3, All actions

Benefits and Burdens Discussion

The Addison Region's waterways and significant wetlands provide essential ecological, economic, and cultural benefits. Degraded water quality and habitat loss can eliminate recreational fishing, swimming, and boating opportunities that low-income communities rely on for affordable recreation and affect agricultural communities who depend on healthy waterways for irrigation and livestock. Loss of significant wetlands and alteration of waterways reduces natural flood control, disproportionately impacting communities in flood-prone areas who cannot afford flood mitigation infrastructure. Therefore, this Plan supports outreach and education on clean places to recreate, assistance with septic system improvements and maintenance to protect water quality, development of municipal wastewater and drinking water infrastructure in villages, and continued implementation of Clean Water State Revolving Fund projects to further improve water quality and protect ecological functions that benefit all residents.

AFFORDABLE & CLEAN RENEWABLE ENERGY SOURCES

Definition: Access to affordable and clean renewable energy means having access to energy sources such as solar, wind, hydroelectric, or geothermal power that are environmentally sustainable, reduce greenhouse gas emissions, and are economically accessible to all residents.

Relevance to Plan

This Plan sets targets on energy efficiency, fuel switching, and new generation in the Region.

Disproportionate Impact Assessment

Measure: Number of Efficiency Vermont recorded efficiency and weatherization projects per 1000 population between 2022 and 2024.

- **Regional Value:** About 115 efficiency and weatherization projects were completed per 1000 population in the Region.
- **EJFP impact:** Burden – Middlebury EJFP only saw about 63 efficiency and weatherization projects completed per 1000 population. Vergennes had about 125 projects per 1000 population.
- **Other communities impacted:** Monkton and Shoreham are the only other towns that have a reported number of projects per 1000 population below the regional value.

ACRPC Policies Addressing this Issue

- Energy: Goal 2, Obj 2A-B
- Energy: Goal 2, Obj 3A-D
- Energy: Goal 3, Obj 2A-G
- Energy: Goal 6, Obj 1A, Obj 2A-D

Benefits and Burdens Discussion

A detailed analysis of the burdens and benefits of the recommended Goals, Objectives, and Actions of the Energy Chapter can be found in Chapter 2 Appendix. Low-income households may be unable to afford upfront costs of solar panels, heat pumps, or energy efficiency improvements despite long-term savings. Renters and multi-unit housing residents have no control over installing renewable energy systems and often cannot benefit from energy efficiency upgrades or renewable energy sources that building owners choose not to implement. People may struggle to navigate complex incentive programs, financing options, or find contractors to complete installations. Vermont's reliance on energy produced outside the State means communities elsewhere bear the burdens of emissions and pollution from energy generation, while renewable energy development within Vermont may burden communities who lack access to decision-making processes about project siting and development. Therefore, this Plan supports education and outreach on energy and weatherization programs, advocates for energy efficiency and weatherization solutions appropriate for renters and multifamily buildings, and promotes community-owned energy systems that are accessible to residents across income levels.

ACCESS / LACK OF ACCESS TO CULTURAL RESOURCES

Definition: Access to cultural resources means having the ability to engage with and benefit from places, practices, and traditions of cultural, historical, or spiritual significance. This includes historic sites, community gathering spaces, traditional lands, and cultural institutions. Lack of access can result from physical barriers, cost, discrimination, or loss of culturally important sites.

Relevance to Plan

This Plan directs future development and advocates for protection and improvement of cultural resources.

Disproportionate Impact Assessment

Measure: Number of historic districts and buildings and archeological sites per 1000 people (VT Department of Housing and Community Development)

- **Regional Value:** The Region hosts about 2.88 historic sites per 1000 people.
- **EJFP impact:** Benefit – EJFP communities host 3.24 historic sites per 1000 people.
- **Other communities impacted:** Goshen, Leicester, and Whiting have no historic districts, projects, sites, or markers.

ACRPC Policies Addressing this Issue

- Natural Resources: Goal 3, Obj 1A
- Natural Resources: Goal 9, Obj 1-2, All actions
- Community Facilities: Goal 3, Obj 1-3, All actions

Benefits and Burdens Discussion

Cultural heritage and access to cultural resources are important components of community well-being in the Addison Region. The Region contains several known significant indigenous archeological sites and Revolutionary War sites. Accessible paths, facilities, and accommodations at historic sites and cultural venues enable people with disabilities to fully participate in cultural experiences. Communities of color seek cultural institutions that reflect their histories and cultural perspectives in welcoming environments. Rural and geographically isolated communities have fewer nearby cultural institutions and must travel longer distances to access museums, theaters, and historic sites, while elderly individuals without transportation need support to reach cultural sites and community gathering spaces that hold personal or generational significance. Therefore, this Plan supports development that is sensitive to cultural resources, preservation of historic sites throughout the Region, and promotion of cultural events and resources that are available and accessible to the entire community.

IMPROPER SEWAGE DISPOSAL OR SOLID WASTE HANDLING

Definition: Improper sewage disposal or solid waste handling occurs when wastewater or trash is not managed according to health and environmental standards, leading to contamination of soil, water, and air. This can result from failing septic systems, illegal dumping, inadequate waste collection, or poorly maintained landfills.

Relevance to Plan

This Plan supports the work of the Addison County Solid Waste Management District and promotes the development of wastewater treatment infrastructure.

Disproportionate Impact Assessment

Measure: Combined Sewer Overflows and Untreated Discharges Reported in 2025 per 1000 people (VT DEC Wastewater Management Program)

- **Regional Value:** The Region had 0.84 reported untreated discharges per 1000 people in 2025.
- **EJFP impact:** Burden – EJFP communities had 2.65 reported untreated discharges per 1000 people in 2025.
- **Other communities impacted:** There were no reported discharges outside of the Region's two EJFP communities, Middlebury, and Vergennes.

ACRPC Policies Addressing this Issue

- Housing: Goal 1, Obj 4A-C
- Community Infrastructure: Goal 5, Obj 1-3, All actions

Benefits and Burdens Discussion

Waste management and sanitation infrastructure may create potential health and environmental burdens for some residents of the Addison Region. Low-income households may be unable to afford septic system repairs or replacements, leading to contamination of nearby wells and water bodies. Rural and geographically isolated communities often lack municipal waste collection services, requiring residents to transport trash long distances or risk illegal dumping. Renters living in properties with failing septic systems may face health risks while lacking authority to compel landlords to make necessary repairs. People without vehicles or physical ability to haul waste face challenges accessing transfer stations or disposal sites, particularly in areas without curbside pickup. Therefore, this Plan supports improved wastewater management infrastructure and education on proper septic system maintenance and waste disposal practices to protect public health and the environment.



Natural Resources

Figure 3: Rare (S-2) Natural Communities Present in the Addison Region

BLACK SPRUCE SWAMP

Black Spruce Swamps occur in the coldest regions of Vermont, commonly in topographic depressions that receive cold air drainage. This community is closely related to both Black Spruce Woodland Bog and Spruce-Fir-Tamarack Swamp, and it may occur in association with either or both of these communities. Black spruce dominates the canopy, which varies substantially in the degree of closure from swamp to swamp.In the Northeastern Highlands, Black Spruce Swamps provide breeding habitat for many species of boreal birds.



BLACK SPRUCE WOODLAND BOG

Spindly and scattered black spruce with tufted "lollipop" tops, dense heath shrubs, and spongy sphagnum mounds characterize these acidic, nutrient and mineral-poor peatlands. In Vermont, Black Spruce Woodland Bogs are transitional between Dwarf Shrub Bogs and Black Spruce Swamps and often occur in association with one or both of these communities.



CLAYPLAIN FOREST (SAND-OVER-CLAY, MESIC, & WET)

The clayplain forest ecosystem covered nearly 220,000 acres of the post-glacial lake and marine plain of the Champlain Valley prior to European settlement. The predominately clay soils of these forests formed from sediments deposited in the Champlain Valley during and following the Pleistocene glaciation, both when the valley was flooded by a large freshwater lake, and later when salt water invaded the basin from the north. These deep, fertile, stone-free soils have been prized for agriculture, and the majority of the clayplain forest has been cleared since the time of European settlement. The most well-drained areas of the clayplain were preferentially cleared for agriculture and the clayplain forests remnants that are left are generally on the moister sites, although they typically contain a mosaic of wet and mesic areas.

The Addison Region contains two types of clayplain forest: **mesic** and **wet**. Mesic clayplain forest is the most widespread of the clayplain forest types. It typically occurs on slightly elevated or sloping parts of the clayplain and has moderately well drained to somewhat poorly drained soil. Mesic clayplain forest is considered the matrix forest of the Champlain Valley, even though it no longer functions as a matrix forest as a result of conversion and fragmentation. Wet clayplain forests most commonly occur as small wetland patches within surrounding, larger areas of mesic clayplain forest. Wet clayplain forests have the most diverse assemblages of tree species of any swamp or wet forest in Vermont. Sand-Over-Clay Forests occur in the Champlain Valley, where they form large patches along and near the mouths of several rivers, including Otter and Little Otter Creeks. Unlike mesic and wet clayplain forest types, sand-over-clay forest always has a sand layer of sufficient depth to allow an upland forest community to develop, even though some of these soils are classified as poorly or very poorly drained.



DRY CHESTNUT OAK WOODLAND

Dry Chestnut Oak Woodlands, with their widely spaced trees and grassy lawns, evoke distant savannahs and seem far removed from the typical Vermont woods. They occur on south-facing upper hillslopes in southwestern Vermont. Soils are acidic, excessively drained, and often very rocky. The overstory oaks are short in stature, and the crowns frequently appear gnarled, with abundant low, spreading branches. The trees are farther apart than in typical forests, and the canopy is more open. Midstory or understory trees and shrubs are widely scattered.



DWARF SHRUB BOG

Dwarf Shrub Bogs are open peatlands with acidic water (pH of 3.5 to 5.0) that is very low in dissolved minerals and nutrients. Dwarf Shrub Bogs have well-developed microtopography, with tall hummocks and moist hollows. The dominant vegetation of bogs is sphagnum moss, which forms a continuous carpet over hummocks and hollows, and provides a substrate for other plants. In many cases, trees and tall shrubs are sparse or nearly absent.



HEMLOCK-SPHAGNUM BASIN SWAMP

Hemlock-Sphagnum Basin Swamps usually occur at elevations under 1,500 feet and are found in the warmer regions of Vermont. Hemlock-Sphagnum Basin Swamps have dense hemlock canopies, deep peat, sphagnum-dominated hummocks and hollows, and little surface water. The dense evergreen canopy of Hemlock-Sphagnum Basin Swamps provides winter cover for white-tailed deer. The hemlock canopy also provides nesting habitat for several species of birds, including northern waterthrush, Canada warbler, northern parula, and northern saw-whet owl.



INTERMEDIATE FEN

Intermediate Fens are recognizable from a distance by their tall and swaying fine-leaved sedges. They may look like inviting grassy lawns, but a step into one of these fens quickly reveals the quaking and unstable peat surface. Intermediate Fens typically have deep peat deposits that range from three feet to over 13 feet.



LAKESIDE BUTTONBUSH SWAMP

Lakeside Buttonbush Swamps are Vermont's wettest shrub swamps. They occur adjacent to larger lakes and ponds or are associated with lake-influenced oxbow ponds and backwater depressions in the floodplains of and near the mouths of our larger rivers. Because of its remarkable tolerance for flooding, buttonbush is often the only woody plant occurring in these swamps. Buttonbush seeds can be an important source of food for waterfowl and shorebirds, and buttonbush flowers provide nectar for many species of bees.



LIMESTONE BLUFF CEDAR-PINE FOREST

The twisted and upswept northern white cedars that hug the clifftops along Lake Champlain make Limestone Bluff Cedar-Pine Forests one of Vermont's most distinctive natural communities.This community occurs on bluffs or outcrops of limestone, shale, or dolostone. It usually occupies a narrow band along the top of the bluff, although it may extend several hundred feet inland. Limestone Bluff Cedar-Pine Forests are one of the few predominantly coniferous forest habitats along the shore of Lake Champlain, so they provide unusual wildlife habitat. White-tailed deer use these forests for cover and they also browse on cedar during the winter months.



OPEN TALUS

Open Talus is the accumulation of rockfall below cliffs, such as at Bristol Cliffs. Soil is often sparse in open talus communities and as a result few vascular plants grow in these areas. Often, the only visible vegetation in the talus may be lichens and mosses growing on the surface of the rocks. Open talus provides important winter hibernation habitat for many species, especially snakes.



POOR FEN

Poor Fens are closely related to Dwarf Shrub Bogs, but Poor Fens are wetter and typically have water levels at or near the surface of the hollows for much of the growing season. These open peatlands are dominated by sphagnum mosses, sedges, and heath shrubs. Poor Fen waters are acidic, but unlike bogs, they are slightly enriched by ground or surface water, which delivers a low concentration of dissolved minerals to the fen surface. Although small in total area, Poor Fens support an astonishing assortment of animals. A combination of factors, including openness, saturated moss, and standing water in hollows or associated small peatland ponds, makes these wetlands especially important wildlife habitat.



RED PINE FOREST

Red Pine Forests are uncommon in Vermont and almost always occur as very small patches in the landscape. They are most common on dry rocky ridgetops or lake bluffs where competition from other species is minimal because of fire, shallow soils, acidity, and drought. Red Pine Forests have open to closed canopies dominated by red pine. Blueberries, huckleberries, wintergreen, and trailing arbutus are all commonly found in the understory and herbaceous layers.



SUGAR MAPLE FLOODPLAIN FOREST

Sugar Maple Floodplain Forests are associated with our higher energy, higher gradient rivers, or less commonly, floodplain terraces above lower gradient rivers and streams. Soils are well-drained to moderately well-drained fine sandy loams. Sugar maple is the dominant tree in the relatively closed canopy, but white ash is abundant at some sites. Basswood usually occurs in relatively low abundance, but it is characteristic of these forests. The herbaceous layer is diverse, and includes many species not found in other floodplains.



The Community Resilience and Biodiversity Protection Act (Act 59)

Stakeholders across Vermont celebrated the passage of the Community Resilience and Biodiversity Protection Act (Act 59) in June 2023. The Act establishes a statewide vision for maintaining an ecologically functional landscape that sustains biodiversity, supports working farms and forests, strengthens community resilience, and preserves Vermont's historic pattern of compact villages surrounded by rural lands and natural areas. **To advance this vision, Act 59 sets ambitious conservation goals—protecting 30 percent of Vermont's landscape by 2030 and 50 percent by 2050**—and directs the Vermont Housing & Conservation Board (VHCB), in coordination with the Agency of Natural Resources (ANR), to prepare the Vermont Conservation Plan (available at https://vermontconservationplan.com/).

The Vermont Conservation Plan is organized around three key objectives:

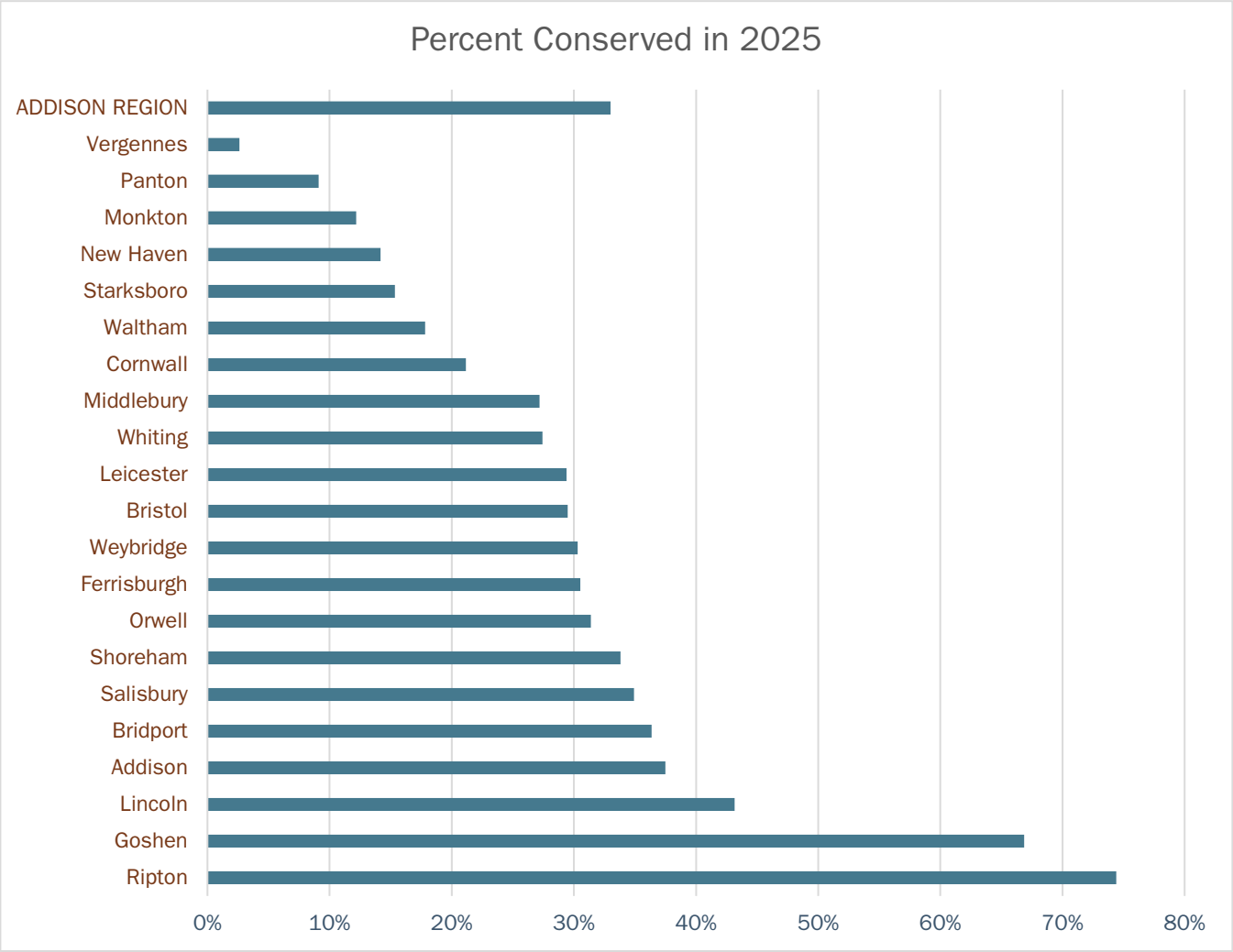
1. Support communities in conservation. This objective focuses on strengthening connections between people, communities, and the land, and advancing conservation in ways that benefit Vermonters while protecting natural and working lands.
2. Center Vermont Conservation Design (VCD). This objective emphasizes protecting, restoring, and maintaining an ecologically functional and connected landscape across natural and working lands.
3. Strengthen conservation capacity. This objective seeks to expand the conservation community's ability to sustainably protect and steward land over the long term.

THE ADDISON REGIONAL PLAN AND ACT 59

As of 2025, approximately 33% of the Addison Region's total land area is already conserved under some form of protection. Conservation levels vary widely by municipality. Mountain towns have the highest percentages of conserved land, largely due to the presence of the Green Mountain National Forest (Ripton at 74.4% and Goshen at 66.9%). In contrast, smaller municipalities in the Champlain Valley have lower conservation percentages, such as Panton (9.1%) and Vergennes (2.6%).

The policies, actions, and future land use areas in this Regional Plan support the intent of Act 59 by outlining strategies to achieve the statewide goals of 30% conservation by 2030 and 50% by 2050. These strategies closely align with the three objectives of the Vermont Conservation Plan.

First, the Regional Plan supports community-based conservation by encouraging conservation by willing landowners in ways that sustain an ecologically functional and connected landscape, support sustainable working lands, and expand recreational opportunities. Second, the Plan centers Vermont Conservation Design as a primary tool for identifying priority conservation areas. As described earlier in this chapter, the Plan recommends prioritizing conservation of VCD-identified forest blocks, connectivity blocks, and ecological reserve areas to protect high-value natural communities and maintain or restore prime habitat. Finally, the Plan strengthens conservation capacity in the Region by outlining the ways in which ACRPC can support land protection and stewardship, including through regional future land use planning that minimizes habitat fragmentation, municipal consultation and technical assistance, and its role as the Basin 3 Clean Water Service Provider.


Percent Conserved in 2025
ADDISON REGION
Vergennes
Panton
Monkton
New Haven
Starksboro
Waltham
Cornwall
Middlebury
Whiting
Leicester
Bristol
Weybridge
Ferrisburgh
Orwell
Shoreham
Salisbury
Bridport
Addison
Lincoln
Goshen
Ripton
0%
10%
20%
30%
40%
50%
60%
70%
80%



Energy

Appendix A: Plan Goals, Objectives, Actions, and Impact

Appendix A provides the complete list of recommended Goals, Objectives, and Actions to support the energy needs of the Region. It does not intend to serve as an exhaustive or exclusive list of proposals for facilitating the Region's energy goals. However, it is indicative of the types of proposals that ACRPC supports, adoption of which the RPC would welcome. Following each of the proposed actions is a brief assessment of how their implementation may impact the three primary energy goals of this plan: the energy justice, climate change resilience, and energy security of the Region.

EJ: Environmental Justice
CCR: Climate Change Resilience
ES: Energy Security

GOAL 1: Build regional capacity for energy planning and public engagement to support the transition to renewable energy and improved energy efficiency.

Objective 1:

Educate consumers regarding efficiency and energy conservation.

a. Regularly host a regional energy fair. **EJ:** Accessible programming for all income levels | **CCR:** Promotes low-carbon technologies | **ES:** Highlights local energy generation options

Objective 2:

Expand targeted ACRPC energy services for municipalities.

a. Expand the regional staff position to focus on developing municipal energy projects and advising municipalities on regulations and enforcement. **EJ:** Reduces planning burden on under-resourced municipalities | **CCR:** Advances low-GHG projects | **ES:** Supports domestic energy development

b. Work with municipalities to learn what types of energy projects are needed in each town. **EJ:** Planning capacity less dependent on local taxbase | **ES:** Planning support of domestic energy projects

GOAL 2:

Increase the Region's thermal energy efficiency through municipal leadership and support for residential and commercial heating improvements to meet local and State targets of 90% renewable energy by 2050.

Objective 1:

Promote energy efficiency in municipal buildings.

a. Work with towns to develop and implement MERP energy assessment recommendations, including facilitating access to grant or bond funding and group purchasing programs to reduce costs. **EJ:** Reduces municipal costs and taxpayer burden | **CCR:** Reduces GHG emissions and improves infrastructure | **ES:** Reduces imported fuel dependence

b. Advocate for a state-wide, municipal utility tracking software to support ongoing evaluation of the costs and benefits of municipal energy efficiency and weatherization projects. **EJ:** Closes information gap between municipalities | **CCR:** Tracks progress toward emissions reductions

Objective 2:

Encourage local and sustainably harvested wood and efficient wood heating.

a. Promote EPA III approved energy efficient wood stoves through education and outreach. **EJ:** Improves indoor/outdoor air quality | **CCR:** Reduces heating GHG emissions | **ES:** Uses domestically available fuel

b. Promote sustainable timber harvest from regional and town forests, in accordance with Natural Resources goals, to provide local heating and electricity fuel sources, prioritizing access for low-income citizens. **EJ:** Reduces energy burden for low-income residents; improves air quality compared to older heating methods | **CCR:** Produces less GHG than fossil fuels | **ES:** Provides domestic fuel source and reduces imports

Objective 3:

Support weatherization efforts and optimize building design for energy conservation.

a. Coordinate with CVOEO, Neighborworks, Efficiency Vermont, VEEP, and CEAC's Energy Navigator program to encourage weatherization participation, including event support, grant assistance, project development, and education/outreach collaboration. **EJ:** Improves access to assistance programs for low-moderate income residents | **CCR:** Reduces fossil fuel demand and improves home resilience | **ES:** Reduces imported fuel dependence

b. Promote the installation of air source and geothermal heat pumps. **EJ:** Improves air quality | **CCR:** Reduces heating GHG emissions | **ES:** Reduces imported fuel demand

c. Support thermal energy network development and explore community-based utility models (municipal, neighborhood, cooperative) that build local capacity and resilience. **EJ:** Could reduce and stabilize low-income heating costs | **CCR:** Utilizes waste heat, reduces fossil fuel demand | **ES:** Reduces imported fuel dependence

d. Encourage municipalities, businesses, organizations and homeowners to build to higher energy standards (RBES/CBES "Stretch energy code") and work with willing local planning commissions to incorporate these standards into municipal plans and zoning regulations. **EJ:** Reduces energy costs and improves building safety/comfort; provides planning assistance to under-resourced municipalities | **CCR:** Reduces building sector GHG emissions; increases likelihood of GHG reduction success | **ES:** Reduces imported fuel demand; supports local energy solutions.



Middlebury MarbleWorks with rooftop solar panels

GOAL 3: Modernize the Region's electrical systems and promote efficient energy use in buildings.

Objective 1:

Support energy conservation and efficient use of electricity in buildings.

a. Discourage the use of "always on" lighting in parking lots and other indoor and outdoor lighting in public places. Encourage the use of technology like motion sensors to light areas when needed. **ES:** Reduces non-solar hour electricity demand

b. Advocate for the availability of smart meter technology to help consumers understand and regulate their electricity usage. **EJ:** Helps consumers manage energy use and costs | **ES:** Reduces non-solar hour electricity demand

Objective 2:

Work with municipalities, electric utilities and community groups to modernize grid infrastructure and support the clean energy transition.

a. Help the Region's municipalities investigate and install, or purchase, cost-effective municipal solar and/or wind net-metered facilities to power municipal energy use. **EJ:** Reduces taxpayer energy burden | **CCR:** Reduces municipal GHG emissions | **ES:** Reduces imported fuel dependence

b. Work with GMP to ensure that during the transition to distributed electric generation and increasing consumer reliance on electricity for power, that GMP improves the distribution and transmission grid and substations improves regularly to continue to provide cost effective, reliable service and opportunity for growth to all communities in the Region and eliminates the congestion currently occurring in the Addison Region. **CCR:** Reduces grid vulnerability and supports clean generation | **ES:** Supports local energy generation

c. Advocate for appropriate cost allocation policies: globalizing costs for residential-scale distributed generation while requiring commercial/industrial generators to fund improvements necessary for their projects. **EJ:** Prevents undue burden on communities | **CCR:** Supports climate-friendly grid modernization | **ES:** Supports domestic energy supply

d. Share info with VELCO, GMP and VECOOP to ensure that targets for renewable generation in the Region and across the State are optimized to enhance the cost effectiveness of the transmission and distribution system for the State of Vermont. Support grid upgrades where they will provide the greatest cost/benefit. **EJ:** Economic efficiency reduces energy burden | **CCR:** Improves climate adaptation resource efficiency | **ES:** Reduces cost and improves price stability

e. Strongly encourage the Region's electric utilities to adopt the new standards for digital substations from the National Electrical Manufacturers Association. **EJ:** Reduces price spikes during high demand | **CCR:** Supports renewable generation and grid resilience | **ES:** Improves regional energy security

f. To reduce costs and promote local resilience, strongly encourage new renewable energy projects proposed for the Region to be designed from the outset so they can be connected to onsite or nearby strategically sited energy storage systems to avoid significant retrofitting in the future. **EJ:** Reduces future retrofit costs and stabilizes prices | **CCR:**Enables intermittent renewable integration | **ES:** Improves domestic energy system functioning

g. Require newly installed generation systems to meet the following standards when relevant IEEE1547-2018, IEEE2800-2022, IEEE 2030-2011, and IEEE 2030.7-2017 for connection to the grid. **CCR:** Enables safe low-GHG technology deployment | **ES:** Improves utility-scale renewable functioning



Four Hills Farm, Bristol

GOAL 4: Reduce transportation energy consumption by transitioning to electric vehicles and promoting mode shift away from single-occupancy vehicles.

Objective 1:

Support the development of electric vehicle infrastructure and promote EV adoption.

a. Plan for and install electric vehicle charging infrastructure on municipal property. **EJ:** Expands charging access for those unable to install at home | **CCR:** Accelerates transition to electric vehicles | **ES:** Enables use of domestic electricity

b. Encourage major employers in the Region to install (additional) EV charging stations for employees. **EJ:** Expands charging access for those without home charging | **CCR:** Integrates EVs into commuting | **ES:** Reduces imported commute fuels

c. Develop an EV Readiness report that includes strategic infrastructure improvement recommendations as well as assessments of municipal fleets. **CCR:** Identifies EV adoption progress and barriers | **ES:** Supports transportation infrastructure transition

d. Promote the Drive Electric Vermont website and resources. **EJ:** Reduces information gaps about EV programs | **CCR:** Provides decarbonization information | **ES:** Informs about non-imported fuel options

Objective 2:

Reduce vehicle miles traveled and support the development of alternative transportation options.

a. Support Walk-Bike Council of Addison County efforts to increase safe walking and biking access by facilitating complete streets infrastructure and helping municipalities secure funding for incremental bicycle and pedestrian improvements. **EJ:** Expands affordable transportation access and minimizes municipal costs | **CCR:** Reduces fossil fuel transportation demand | **ES:** Eliminates fuel use for active transportation

b. Support public transit expansion by working with TVT to improve rural service access, encouraging municipal representation on transit boards, promoting park-and-ride and ride-sharing programs, and advocating for enhanced public transit access during planning proceedings. **EJ:** Expands affordable transportation access | **CCR:** Reduces single-occupancy vehicle fossil fuel demand | **ES:** Reduces imported transportation fuel demand

c. Support employer programs to encourage telecommuting, carpooling, vanpooling, for employees' commute trips. **EJ:** Reduces energy burden for rural/extended commuters | **CCR:** Reduces employee fossil fuel demand | **ES:** Reduces imported fuel demand

GOAL 5: Transition medium and heavy-duty transportation to cleaner fuel alternatives.

Objective 1:

Support improvements to rail infrastructure and encourage cleaner fuels for large vehicle fleets.

a. Support transportation goals for expanding passenger and freight rail service (see Transportation Chapter) to reduce vehicle miles traveled and fossil fuel consumption. **EJ:** Provides lower cost long-distance travel | **CCR:** Reduces light and heavy-duty vehicle GHG emissions | **ES:** Reduces imported transportation fuel demand

b. Work with Clean Cities Coalition to encourage large vehicle fleets to switch to conventional natural gas use in situations in which switching to EVs or renewable natural gas is not feasible. **EJ:** Improves air and noise quality | **CCR:** Reduces GHG emissions compared to diesel

GOAL 6: Advance renewable electricity generation while protecting natural resources.

Objective 1:

Encourage municipal renewable energy generation.

a. Analyze the feasibility and support the deployment of municipally owned, leased, or otherwise operated distributed generation facilities that are consistent with the *Regional Energy Project Siting and Design Standards*. **EJ:** Reduces energy-related tax burden | **CCR:** Reduces climate impact and hardens emergency facilities | **ES:** Reduces imported fuel reliance

b. Support the development, implementation, and ongoing evaluation of Municipal Enhanced Energy Plans. **EJ:** Reduces undue community burden | **CCR:** Avoids undermining other climate goals | **ES:**

Objective 2:

Support responsible siting and development of renewable energy resources.

a. Work closely with municipalities affected by proposed energy development projects to evaluate whether those projects are consistent with the *Regional Energy Project Siting and Design Standards*. **EJ:** Prevents unfair community impacts | **CCR:** Reduces opposition to clean energy | **ES:** Builds support for domestic generation

b. Support the expansion of energy storage, microgrids, and other energy system infrastructure in locations and with designs that are consistent with the *Regional Energy Project Siting and Design Standards*. **EJ:** Addresses rural energy disruption frequency | **CCR:** Enables renewable balancing and weather resilience | **ES:** Improves domestic energy functionality

Objective 3:

Encourage compact settlement patterns and conserve forest land as renewable resources.

a. Support housing goals for compact development, infill, village center growth, and shared utility infrastructure (see Housing Section) to reduce transportation energy demand and enable efficient energy systems. **EJ:** Reduces transportation costs and energy burden | **CCR:** Reduces transportation and heating fuel demand | **ES:** Reduces imported fuel dependence

b. Discourage the conversion of forest blocks and other important ecosystems into exclusively energy generating sites. **EJ:** Maintains ecosystem services | **CCR:** Maintains CO^2 sequestration and storm buffering

Appendix B: Energy Units and Conversions

This Plan uses multiple units of measurement to describe current and future energy use. Definitions and conversions for those units are described below.

Table 17: Unit Conversions

Power and Energy Unit Definitions	
Btu	A British thermal unit (Btu) is a measure of the heat content of fuels or energy sources.
MMBtu	One million British thermal units (MMBtu).
KW	A kilowatt (kW) is a unit for measuring power that is equivalent to one thousand watts. It is often used to describe generation capacity.
KWh	A kilowatt-hour (kWh) is a measure of power usage as a function of time. For example, one kilowatt-hour is one hour of using electricity at a rate of 1,000 watts.
MW	A megawatt (MW) is a unit for measuring power that is equivalent to one thousand kilowatts. It is often used to describe generation capacity.
MWh	A megawatt-hour (MWh) is a measure of power usage as a function of time. For example, one megawatt-hour is one hour of using electricity at a rate of 1,000 kilowatts.
GW	A gigawatt (GW) is a unit for measuring power that is equivalent to one million kilowatts. It is often used to describe generation capacity.
GWh	A gigawatt-hour (GWh) is a measure of power usage as a function of time. For example, one gigawatt-hour is one hour of using electricity at a rate of one million kilowatts.
Energy Unit Conversions	
1 kWh of electricity	3,412 BTUs
1 MWh	1,000 kWh
1 MW	1,000 kW
1 GWh	1,000 MWh
1 trillion BTUs	1012 BTUs
1 gallon of heating oil	138,500 BTUs
1 cord of wood	20,000,000 BTUs



Aerial View of Cornwall

Appendix C: Comprehensive Energy Targets List

LEAP Targets

TOTAL ENERGY FUEL SWITCHING TARGETS

Table 18: Total Energy Demand Reduction Targets by Sector

Target Energy Demand Targets (Thousand MMBTUs)				
	2025	2035	2050	Change
Residential	1,332	946	731	(982)
Commercial	832	735	727	(263)
Industrial	1,068	1,101	1217	160
Total	3,232	2,782	2675	(1,085)

Table 19: Residential Total Fuel Switching Target

CAP Mitigation Total Regional Residential Sector Final Energy Demand (Thousand MMBTUs)				
Fuel	2015	2025	2035	2050
Electricity	345	311	413	482
Wood	394	317	173	79
Propane	302	225	107	40
Wood Pellets	98	30	22	18
Biodiesel	-	24	145	110
Heating Oil	525	389	71	-
Biogas	-	2	4	2
Natural Gas	50	35	11	1
Total	1,713	1,332	946	731

Table 20: Commercial Total Energy Fuel Switching Target

CAP Mitigation Total Regional Commercial Sector Final Energy Demand (Thousand MMBTUs)				
Fuel	2015	2025	2035	2050
Electricity	317	335	396	409
Gasoline	31	34	36	38
Kerosene	0	0	0	-
Wood	76	80	90	108
Ethanol	2	2	2	3
Solar	8	20	21	23
Heat	-	-	24	39
Propane	194	106	30	1
Residual Fuel Oil	5	2	2	2
Wood Pellets	-	4	12	19
Biodiesel	-	6	46	64
Heating Oil	220	105	23	-
Biogas	-	9	13	16
Natural Gas	138	127	40	6
Total	990	832	735	727

Table 21: Industrial Total Energy Fuel Switching Target

CAP Mitigation Total Regional Commercial Sector Final Energy Demand (Thousand MMBTUs)				
Fuel	2015	2025	2035	2050
Electricity	260	253	237	251
Natural Gas	302	339	270	95
Gasoline	26	24	25	27
Kerosene	1	1	1	1
Diesel	161	128	44	-
LPG	16	16	15	14
Wood	19	11	11	12
Biogas	-	38	150	411
Ethanol	2	2	3	3
Lubricants	9	6	7	7
Biodiesel	-	62	144	188
Residual Fuel Oil	9	6	6	6
Wood Waste Solids	5	1	1	1
Asphalt and Road Oil	248	181	189	200
Total	1,057	1,068	1,101	1,217

THERMAL EFFICIENCY AND FUEL SWITCHING TARGETS

Table 22: CAP Mitigation Regional Residential New Cold Climate Heat Pumps

Technology	2025	2035	2050
ASHP 2 Head	1,103	2,957	4,366
ASHP Central	1,715	4,631	6,804
ASHP HE	1,619	4,343	6,412
GSHP HE	200	537	792
Total	4,637	12,468	18,374

Table 23: Regional Residential New Retrofits (Number of Housing Units)

Technology	2025	2035	2050
Baseline Scenario	1,232	2,378	4,178
CAP Mitigation	3,356	7,253	11,734

Table 24: Regional Residential New Heat Pump Water Heaters (Number of Units)

Scenario	2025	2035	2050
Baseline Scenario	246	250	257
CAP Mitigation	3,048	10,151	13,928

Commercial

Table 25: CAP Mitigation Regional Commercial New Cold Climate Heat Pumps

	2025	2035	2050
New CCHP	2,336	7,064	9,034



TRANSPORTATION TARGETS

Table 26: CAP Mitigation Regional Transportation Energy Demand (Thousand MMBTUs)

	Passenger Car			Light Truck			Medium Duty			Heavy Duty		
Fuel	**2025**	**2035**	**2050**	**2025**	**2035**	**2050**	**2025**	**2035**	**2050**	**2025**	**2035**	**2050**
Electricity	11	93	192	14	167	295	20	165	352	10	81	147
Natural Gas	-	-	-	-	-	-	-	-	-	-	-	-
Gasoline	416	202	26	1,050	477	64	147	98	26	0	0	0
Diesel	2	1	0	20	12	1	190	108	22	283	91	9
LPG				-	-	-	2	1	0	-	-	-
Ethanol	35	21	3	90	50	7	13	10	3	0	0	0
CNG	-	-	-	-	-	-	-	-	-	-	-	-
Biodiesel	0	0	0	1	1	0	13	14	5	20	12	2
Total	465	317	222	1,176	707	368	384	396	408	312	183	159

Table 27: CAP Mitigation Regional Non-Road Final Energy Demand (Thousand MMBTUs)

Fuel	2015	2025	2035	2050
Diesel	64	61	61	62
Biodiesel	2	4	8	14
Avgas	2	3	3	3
Jet Kerosene	83	82	69	48
Sustainable Aviation Fuel	-	1	16	37
Gasoline	22	20	21	21
Ethanol	2	2	2	3
Lubricants	18	14	14	14
Natural Gas	-	-	-	-
Total	193	187	192	202

Table 28: CAP Mitigation Regional EV and PHEV Stock (Number of Vehicles)

Vehicle Type		2025	2030	2050
Passenger Vehicle EV and PHEV Stock	Battery Electric	606	6,250	14,719
	Plug In Hybrid	115	88	20
	Total	721	6,338	14,739
Light Duty Truck EV and PHEV Stock	Battery Electric	622	8,705	17,753
	Plug In Hybrid	65	86	21
	Total	687	8,792	17,775

ENERGY EFFICIENCY TARGETS

Table 29 below represents total achievable Energy Efficiency (EE) savings through the implementation of improvements listed in Tables 32 and 33. Tables 30 and 31 show the benefits of these efficiency measures on the peak demand pressure on the grid.

Table 29: Regional Program Achievable Electric Energy Efficiency Savings (MWh)

		2025	2030	2035	2040	2050
Residential	Incremental Annual	76	79	86	83	93
Residential	Cumulative Annual	150	510	858	1,082	1,584
Non-Residential	Incremental Annual	76	69	69	68	79
Non-Residential	Cumulative Annual	152	498	765	747	690
Total	Incremental Annual	152	148	155	151	172
Total	Cumulative Annual	302	1,008	1,623	1,829	2,273

Table 30: Regional Program Achievable Electric Energy Summer Capacity (MWh)

		2025	2030	2035	2040	2050
Residential	Incremental Annual	0.006	0.005	0.006	0.006	0.007
Residential	Cumulative Annual	0.013	0.037	0.057	0.065	0.068
Non-Residential	Incremental Annual	0.013	0.011	0.011	0.010	0.012
Non-Residential	Cumulative Annual	0.026	0.082	0.126	0.120	0.105
Total	Incremental Annual	0.019	0.016	0.017	0.016	0.019
Total	Cumulative Annual	0.039	0.120	0.183	0.184	0.173

Table 31: Regional Program Achievable Electric Energy Efficiency Savings (MWh)

		2025	2030	2035	2040	2050
Residential	Incremental Annual	0.02	0.02	0.02	0.02	0.02
Residential	Cumulative Annual	0.03	0.10	0.17	0.22	0.33
Non-Residential	Incremental Annual	0.01	0.01	0.01	0.01	0.01
Total	Incremental Annual	0.03	0.03	0.03	0.03	0.03
Total	Cumulative Annual	0.05	0.18	0.29	0.33	0.43

Table 32: Regional Residential Incremental Annual MWh by End-Use

	2025	2030	2035	2040	2050
Appliances	286	250	301	295	403
Hot Water	205	191	222	192	221
HVAC Equipment	615	832	853	865	905
HVAC Shell	25	29	23	16	6
Lighting	91	5	7	6	7
Misc. Loads	127	100	132	110	135
Motors	8	8	10	8	9
Whole Building	71	86	78	80	79

Table 33: Regional Non-Residential Incremental Annual MWh by End-Use

	2025	2030	2035	2040	2050
Compressed Air	164	170	168	168	193
Plug Loads	36	60	65	63	74
Heating and Cooling	162	183	196	196	227
Ventilation And Circulation	152	189	216	229	261
Lighting	1,463	1,007	917	858	1,020
Refrigeration	268	306	328	341	389
Water Heat	83	110	117	110	130
Motors	75	73	72	72	83
Other	101	175	198	206	236

Appendix D: Energy Maps

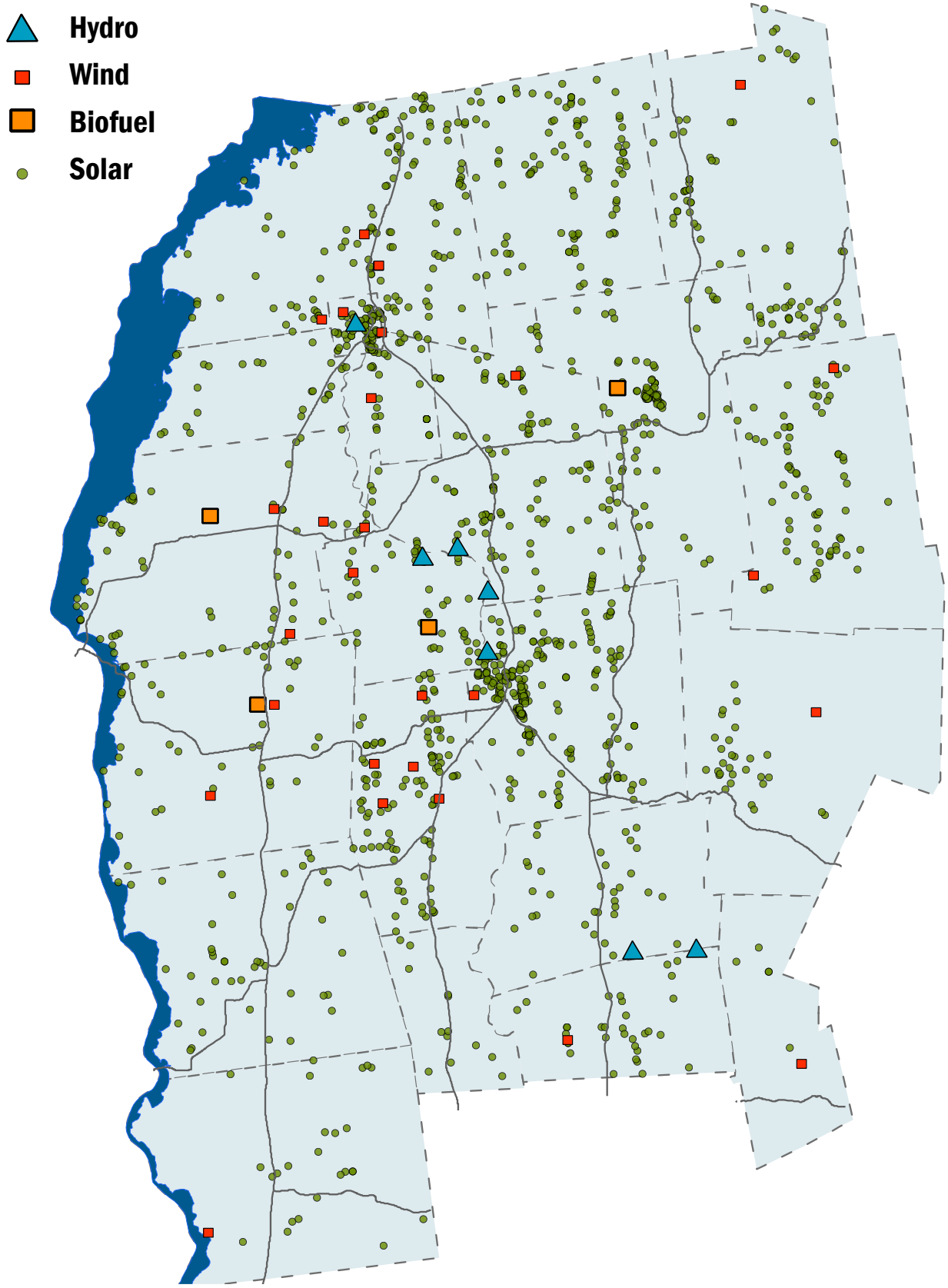
As part of its efforts to discover energy generation potential within the Region, ACRPC created a series of maps depicting generation resources and also potential constraints. These maps show data as required by the **Department of Public Service Determination Standards** and are a required element of enhanced energy planning. The maps show areas that are potentially appropriate or inappropriate locations for future renewable generation facilities. The maps are a planning tool only and may not precisely indicate locations where siting a facility is acceptable. When proposing a generation facility, applicants must verify the presence or absence of the natural resources and other specific characteristics of the site as a part of the application. The following maps are included:

1. **Existing Generation Facilities:** This map presents existing generation facilities greater than 15kW in capacity as well as existing transmission lines and 3-phase power lines in the Region.
2. **Known Constraints:** This map presents the established constraints on land development.
3. **Potential Constraints:** This map suggests where conditions would likely require mitigation, and thus which may prove a site unsuitable for development after site-specific study, based on statewide or regional/local policies that are currently adopted or in effect.
4. **Wind Potential:** This map includes wind speed potential for the Region as well as proximity to 3-phase power lines. Known constraint areas are excluded.
5. **Ground Mount Solar Potential:** This map includes prime and base solar potential for the Region as well as proximity to 3-phase power lines. Known constraint areas are excluded.
6. **Unconstrained Prime Wind:** This map identifies areas with potential for wind development that have no constraints impacting them, including no intersection with habitat blocks as identified in Chapter 1, Natural Resources: Maps 8 and 9.
7. **Unconstrained Prime Solar:** This map identifies areas with potential for solar development that have no constraints impacting them, including no intersection with habitat blocks as identified in in Chapter 1, Natural Resources: Maps 8 and 9.
8. **Preferred Sites:** This map incorporates preferred locations for solar generation previously identified in Municipal Enhanced Energy Plans within the Region, rooftops in coordination with the State priority to develop generation in proximity to demand, and avoid green fields (gradient scale).
9. **Transmission Resources and Constraints:** This map demonstrates a key challenge for Addison County energy generation and electrification efforts with a depiction of the constrained electric distribution network in the Region.
10. **Transportation Infrastructure:** Comprised of three maps that include EV charger locations, public transportation lines and park and ride locations, and bike trail infrastructure.

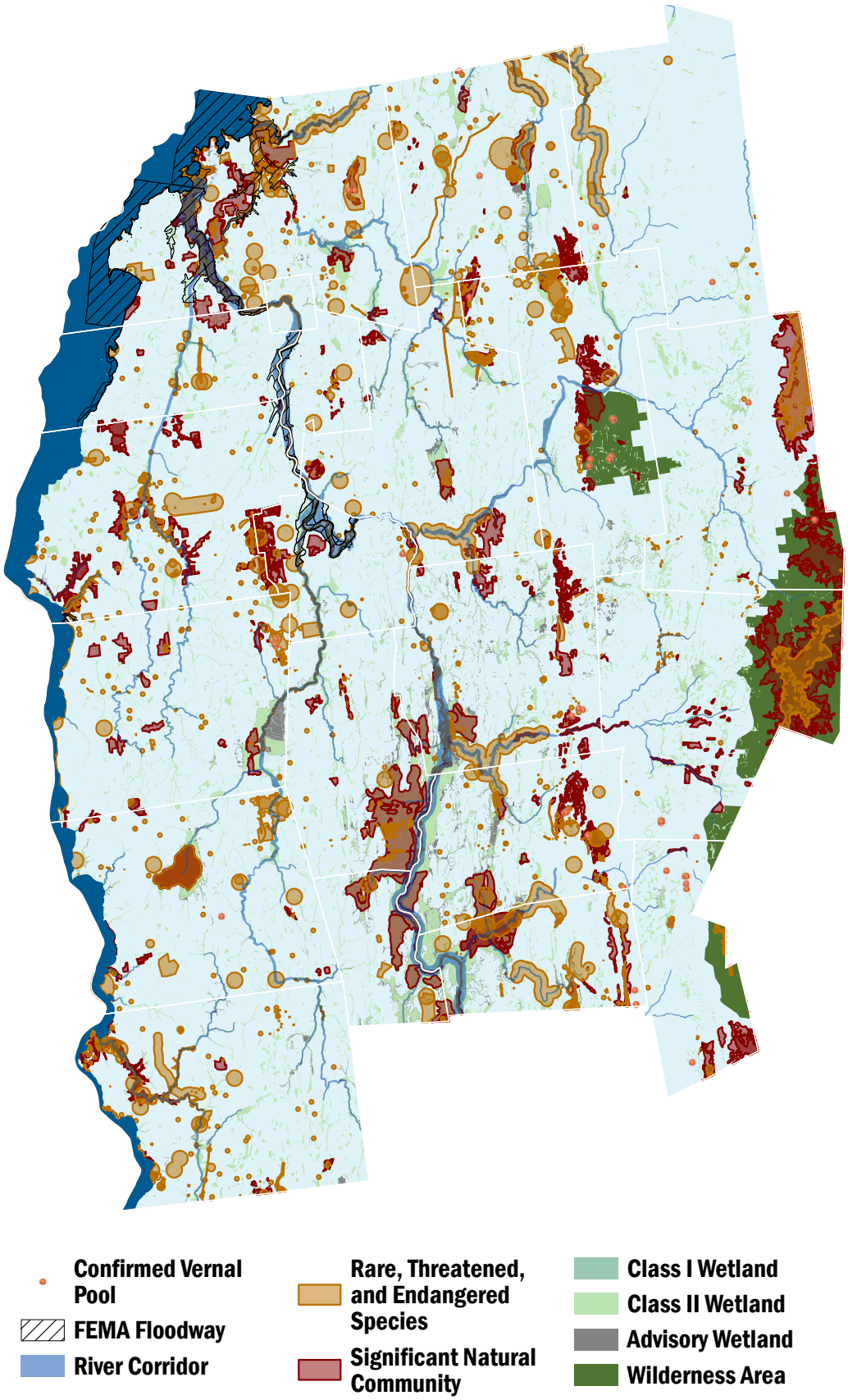


Belden Falls Substation

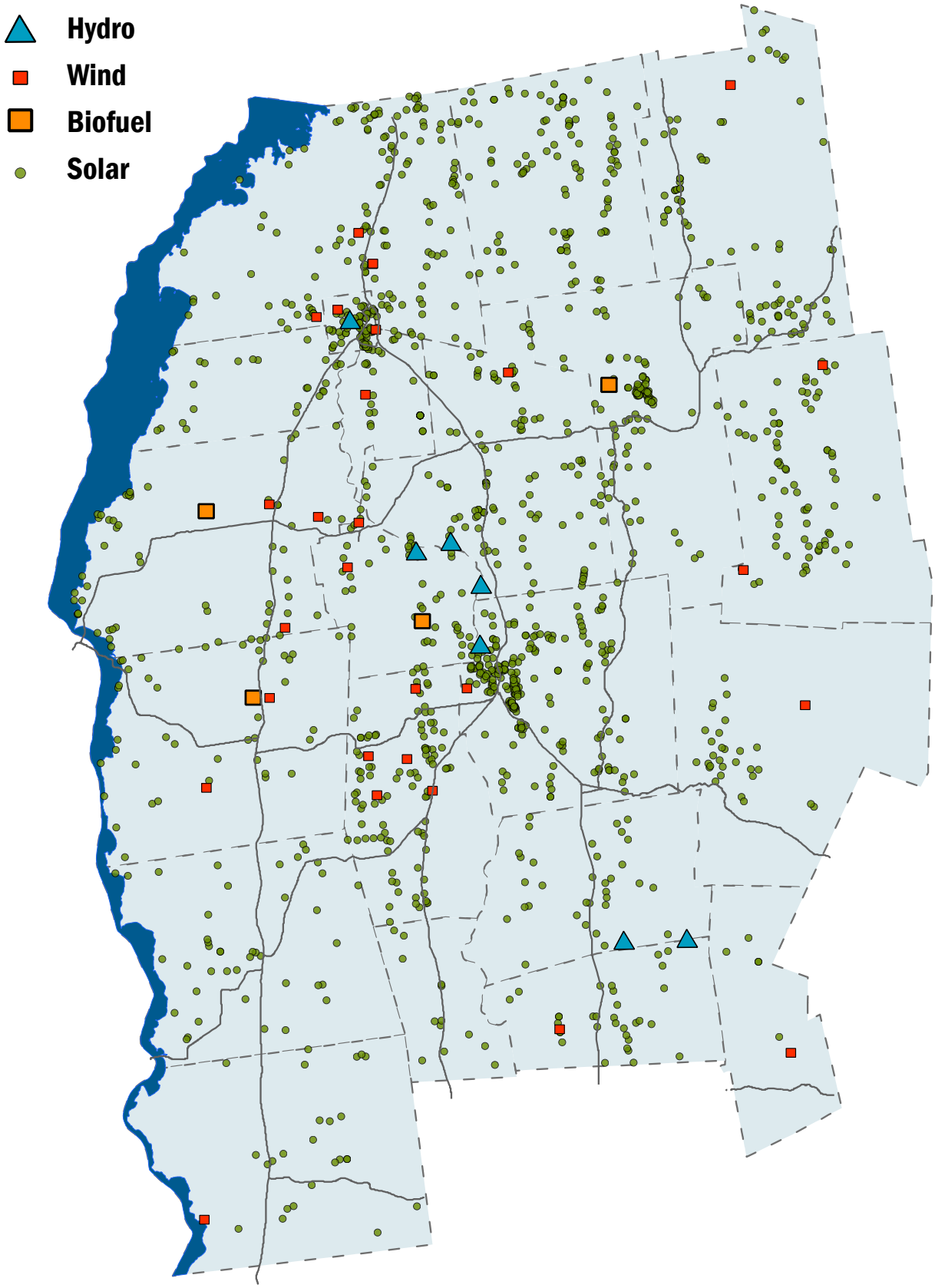
Map 1: Existing Generation Facilities



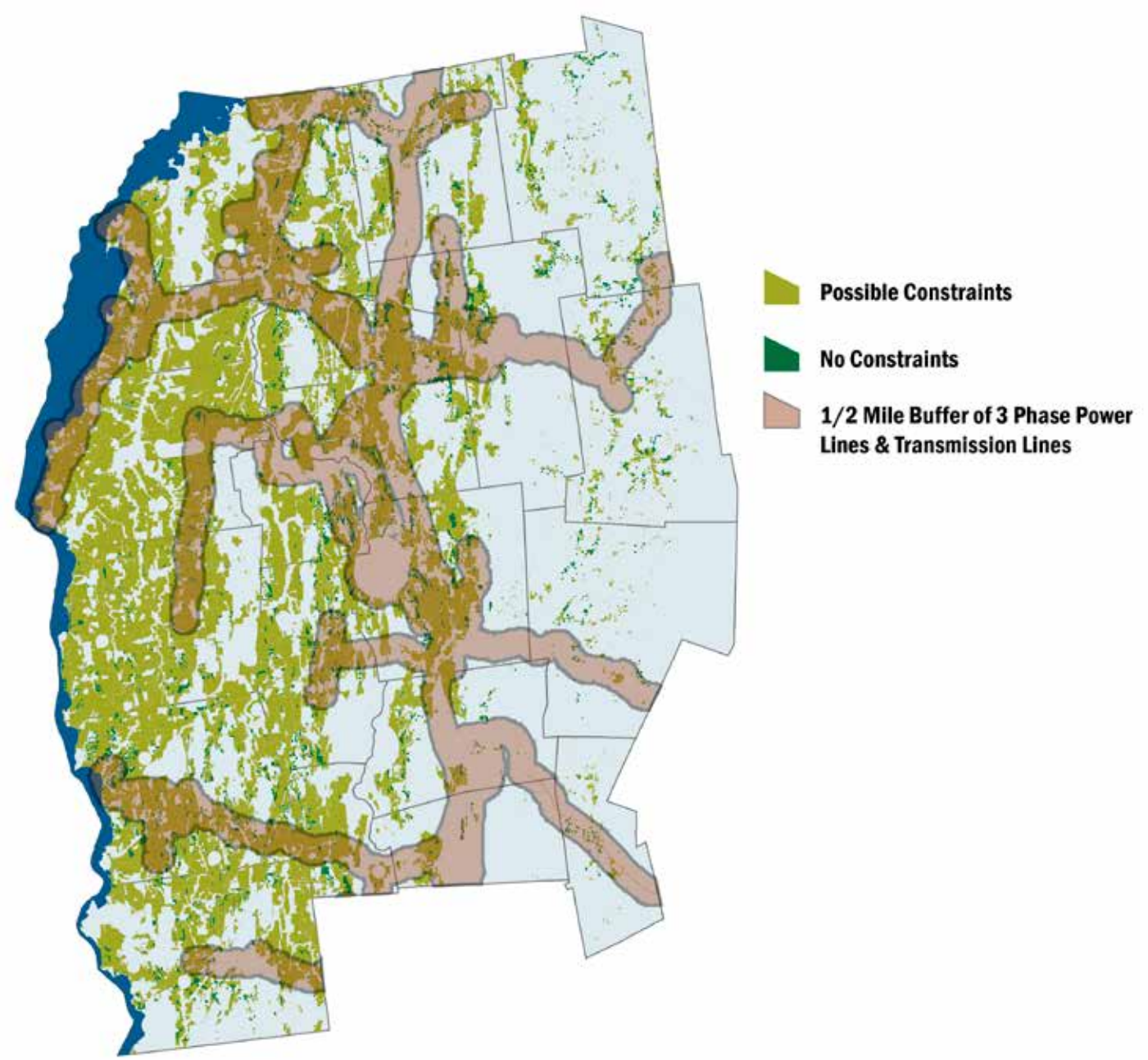
Map 2: Known Constraints



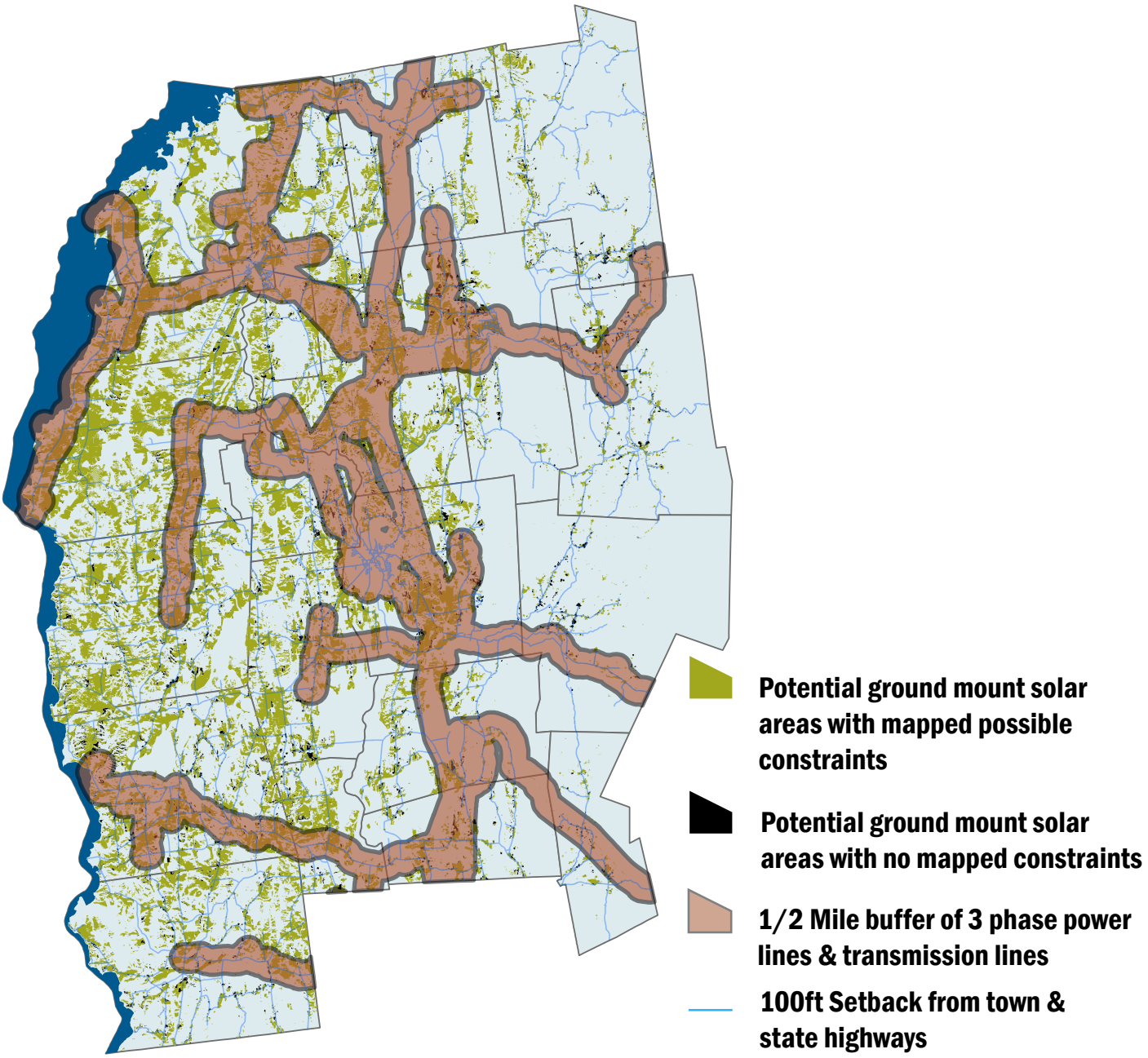
Map 3: Possible Constraints



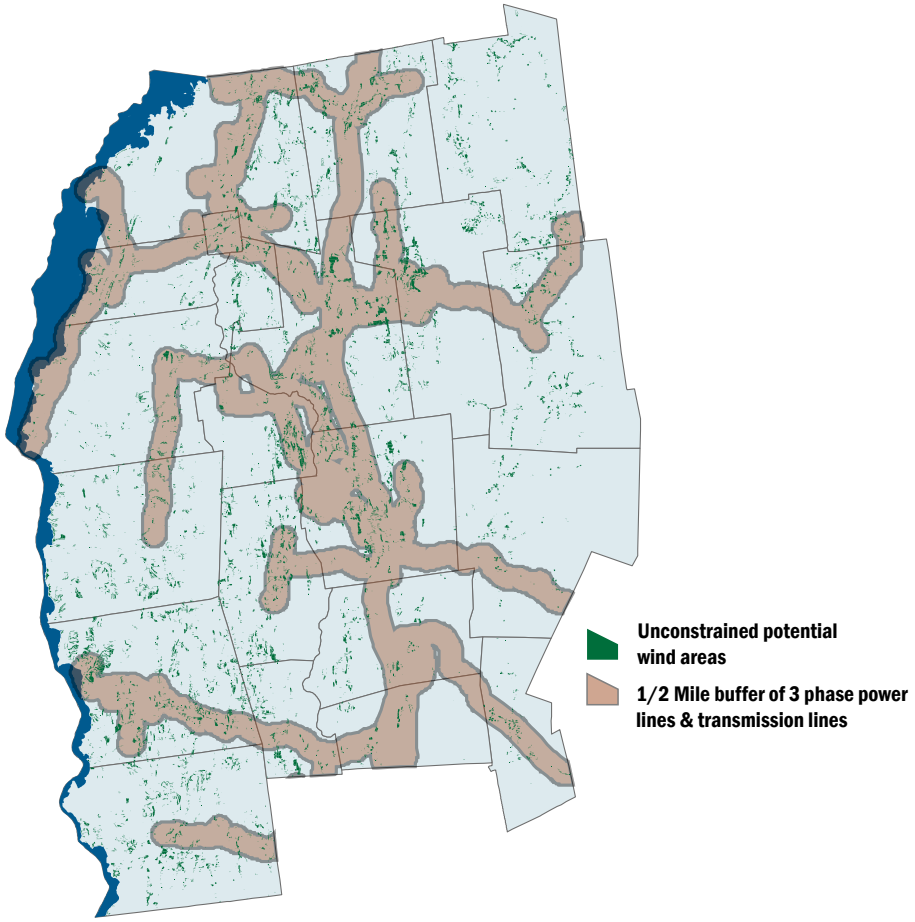
Map 4: Wind Potential



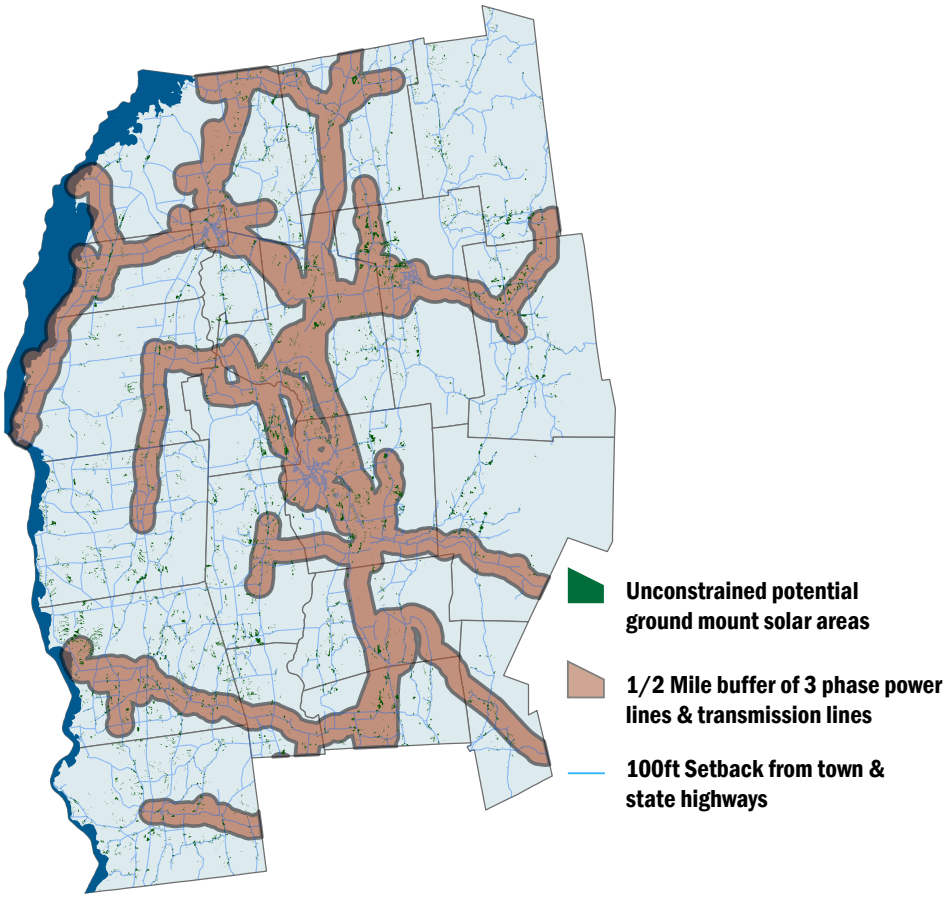
Map 5: Ground Mount Solar Potential



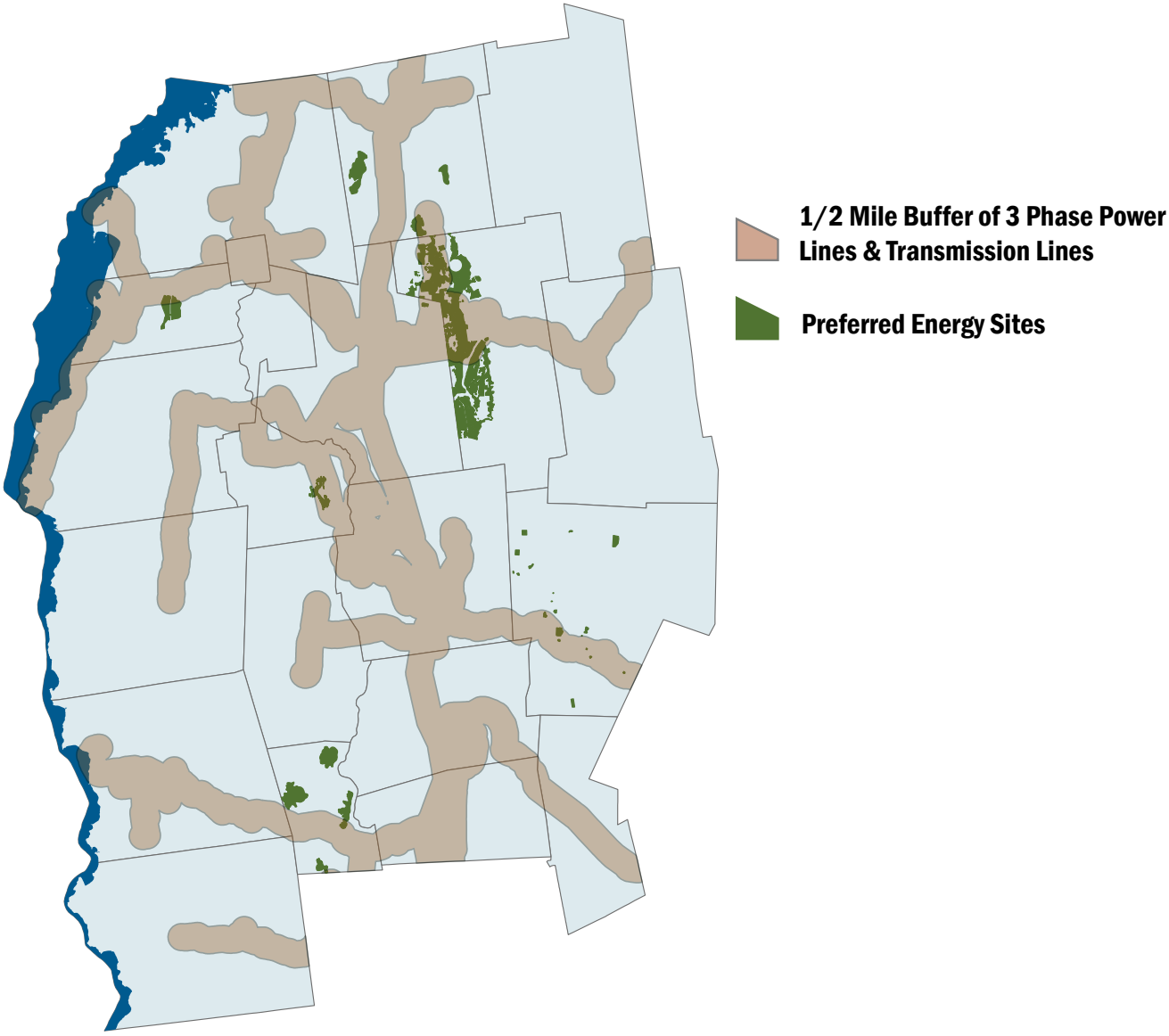
Map 6: Unconstrained Prime Wind Energy



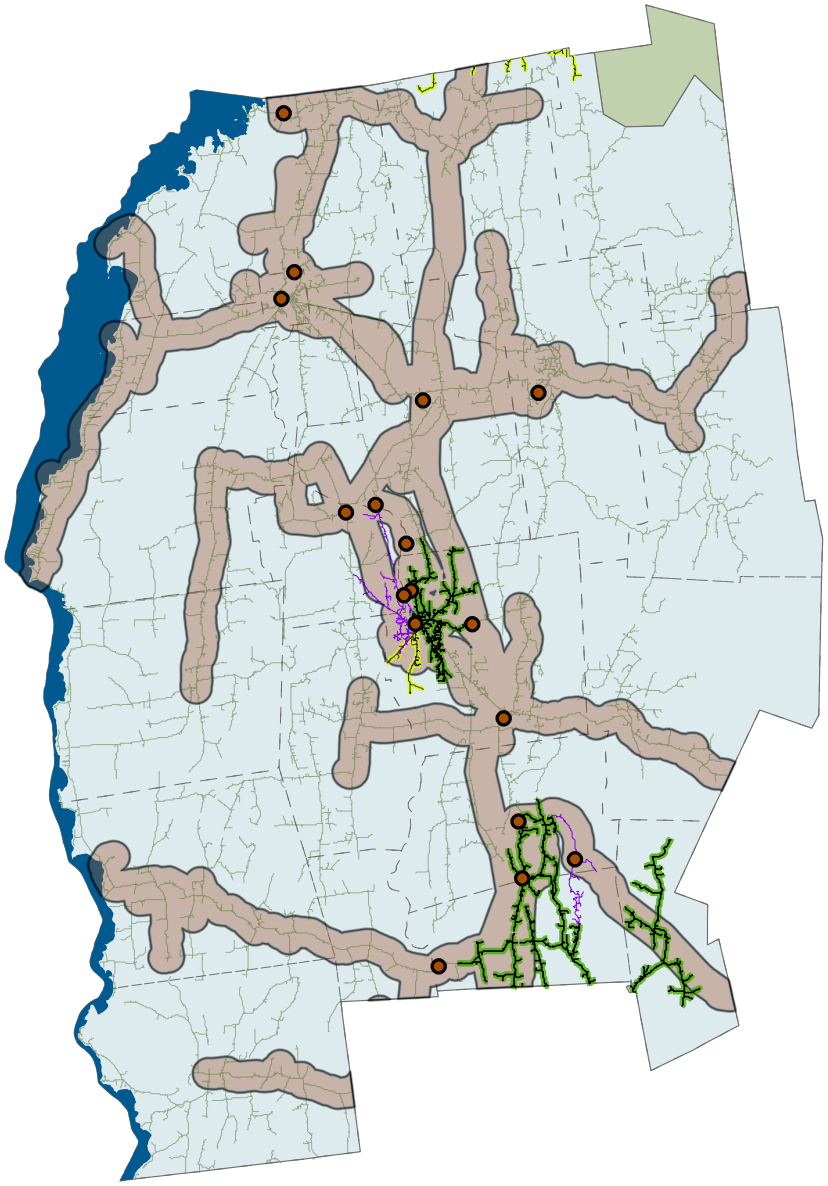
Map 7: Unconstrained Prime Ground Solar Energy



Map 8: Preferred Sites



Map 9: Transmission Resources and Constraints



GMP Service Area

VELCO Service Area

1/2 Mile Buffer of 3 Phase Power Lines & Transmission Lines

Substations

GMP Distribution Capacity

Due to system limitations, interconnections on this circuit may experience higher costs and delayed interconnections

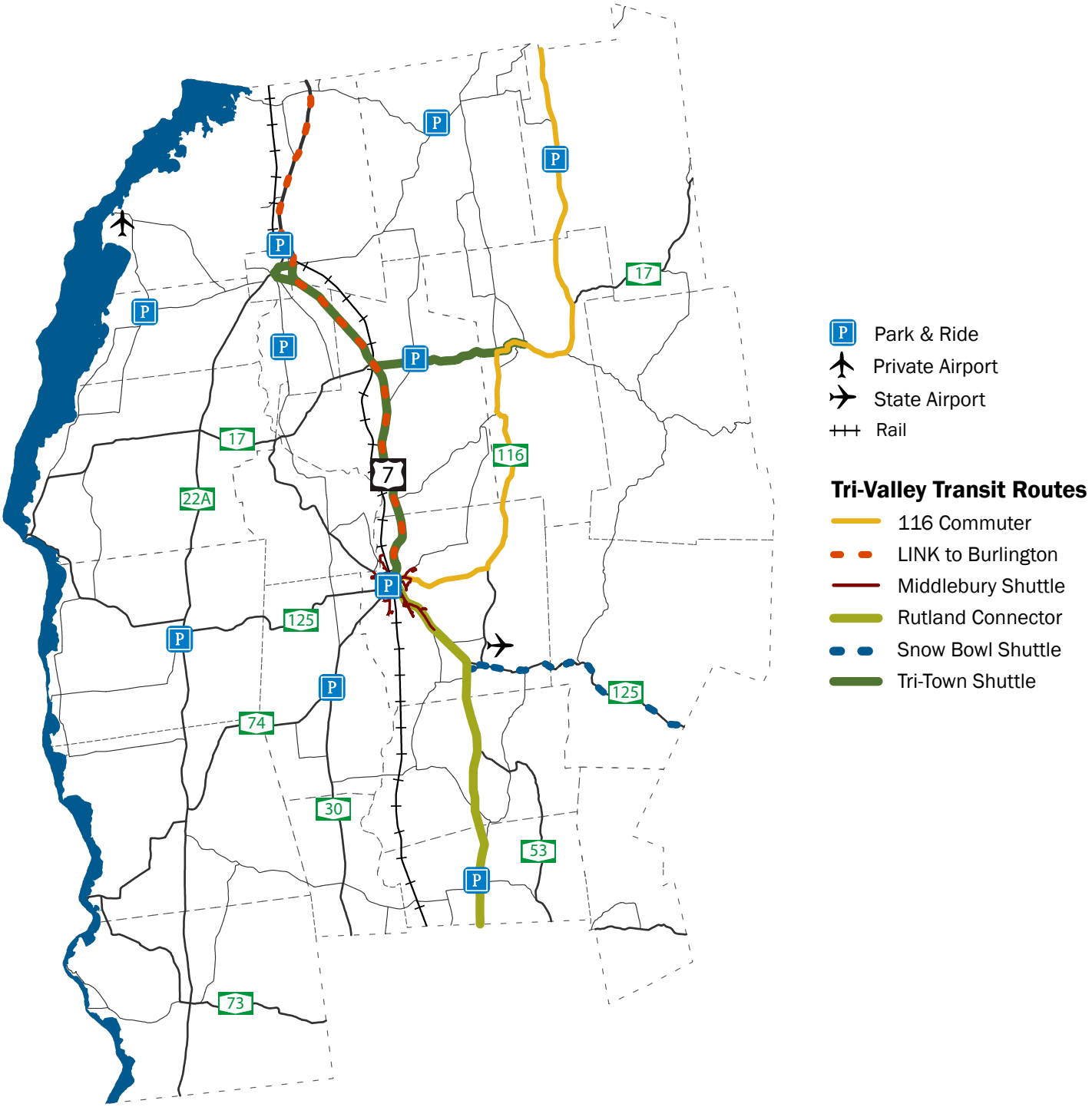
Substation transformer with ≥ 20% capacity remaining

Substation transformer with < 20% capacity remaining

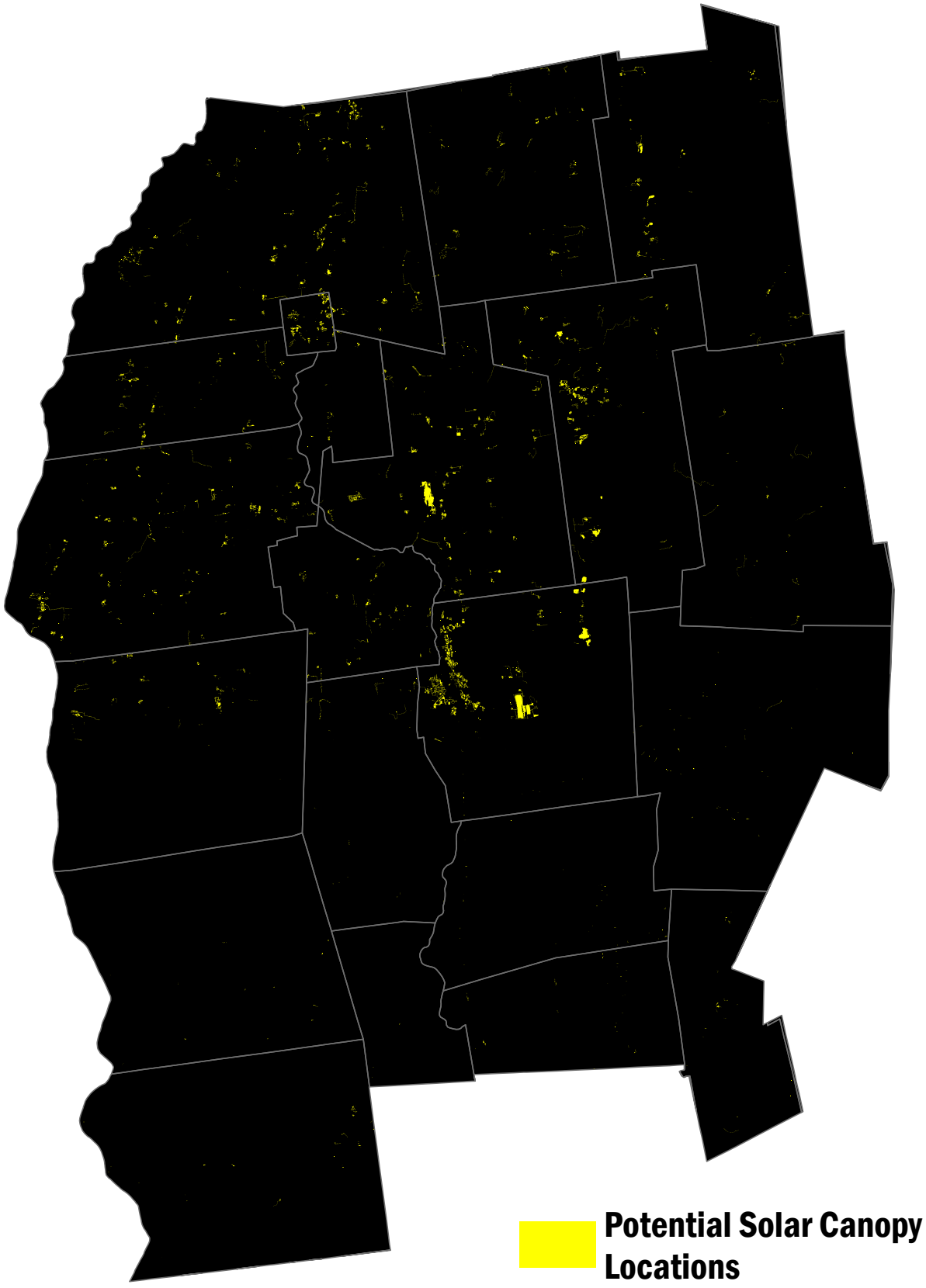
Substation transformer with <10% capacity remaining

Map 10: Transportation Infrastructure

Comprised of three maps that include EV charger locations, public transportation lines and park and ride locations, and bike trail infrastructure (See Chapter 3)



Map 11: Potential Solar Canopy Locations



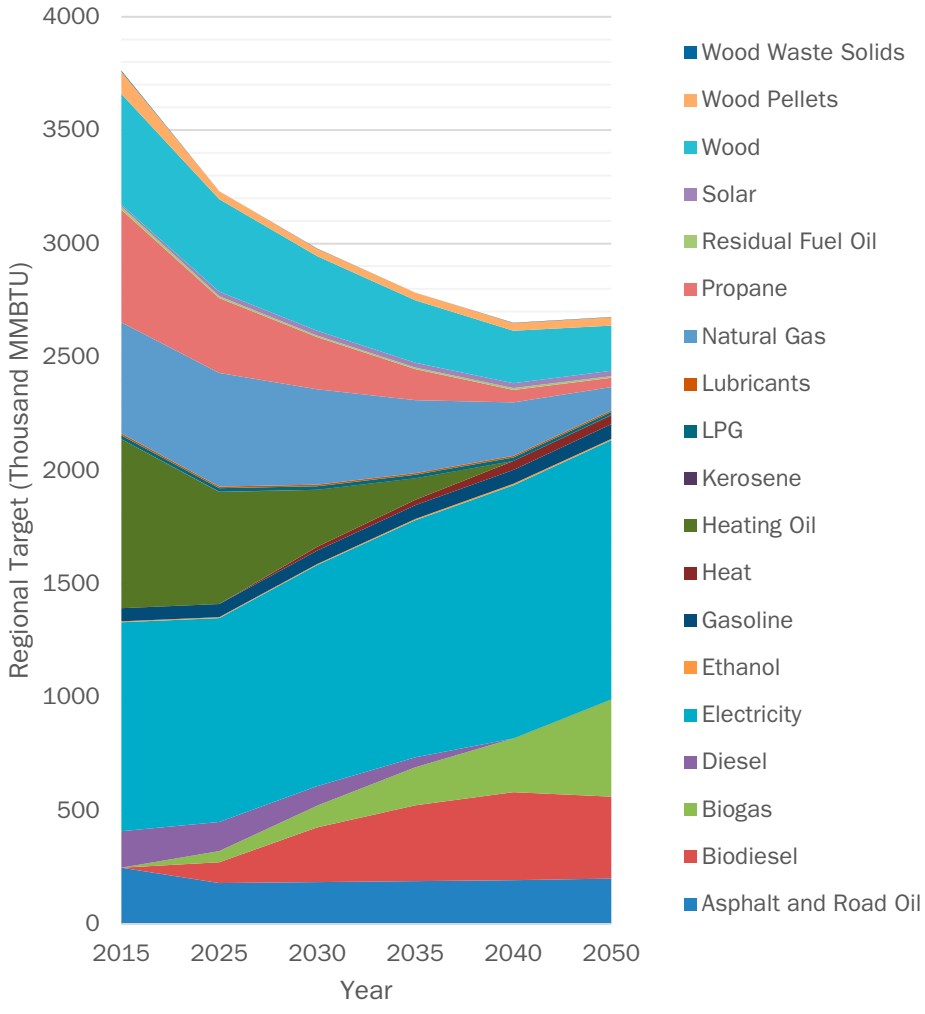
Appendix E: Target Generation Methodology

LEAP Model

Energy targets were created by the Department of Public Service (DPS) using the LEAP (Long-range Energy Alternatives Planning) software to create a model of the demand for and supply of total energy usage in Vermont and the Addison Region. Full details of the LEAP Model methods, data sources, and assumptions may be found as Appendix 103D to the 2022 Comprehensive Energy Plan. LEAP software is a system that allows users to create complex models of future energy use. The LEAP model does not identify specific costs that would be incurred in the future. Instead, it compares 2050 costs among various scenarios, in order to achieve the least-cost alternative to meet legislative goals. The LEAP model also includes impacts that do not result in out-of-pocket costs, such as impacts of pollution.

Figure 10: Total Energy Use Based on LEAP Model

LEAP target data provided by the VT Public Service Department



Because of the model's complexity, it is difficult to explain comprehensively. The following scenarios provide some background on the methodology and the inputs used to create both statewide and regional models in LEAP. **Appendix C** presents the full model results for the Region and the State and as well as a more thorough explanation of the model assumptions and methodology. Targets for generation within the Region were developed by ACRPC in partnership with the Department of Public Service based upon the needs projected in the LEAP model.

The model created in LEAP actually contains two scenarios. The first scenario—the reference scenario—models what we will achieve based on current trends. The second scenario is designed to achieve the goal of meeting Vermont's greenhouse gas reduction obligations under the Global Warming Solutions Act (GWSA). This scenario, called the "CAP Mitigation" scenario, is adapted from the Vermont Total Energy Study (TES) Total Renewable Energy and Efficiency Standard (TREES) local scenarios. More information regarding the TES can be found on the Department of Public Service website.

To meet the GWSA goals, total energy use will need to decline despite a growing population and economy. Electricity use will increase with the intensified use of heat pumps as primary heating sources and the use of electric vehicles. Because those choices are powered by electricity, and electricity is three to four times more efficient compared to fossil fuels, overall energy use will decrease both regionally and statewide. The difference in total energy demand between the reference scenario and the CAP Mitigation scenario is a key point. This difference represents the amount of total energy demand that will need to be eliminated to reach the State's and Region's energy goals by 2050.

This LEAP model was developed for the state Comprehensive Energy Plan and disaggregated for each regional planning commission accounting for share in population, housing units, industries, commercial floorspace, number of vehicles, and presence of natural gas pipelines. More information on the LEAP modeling inputs and assumptions can be found in Appendix D of the 2022 Vermont Comprehensive Energy Plan. This disaggregated "share" represents only one of the many paths the Region may take to attain its energy goals and sets a mandatory aspirational target for the Region to achieve. The Regional Targets are further disaggregated to the municipal scale by ACRPC based on consumption in each sector (transportation, electric, thermal heating). While these estimates use best available data, they should not be considered a unit-by-unit audit of energy use. Rather, they serve as a starting point for better understanding our Region's current energy use patterns, the cost drivers, and what we need to do to achieve long-range energy goals.

Because different fuels are measured in different units (e.g., gallons, cords, pounds, cubic feet), the results of the LEAP model can be difficult to compare. To help make comparisons between fuel types easier, ACRPC has decided to report the scenario results in a standard unit: BTUs.

Please refer to the DPS Act 174 Landing Page which has guidance for regions and municipalities and a host of tools used in the analyses that support this Plan. This supplement provides additional, not comprehensive, methodological information so as not to duplicate that which is already laid out by the State.

Vermont's regional planning commissions have been tasked with developing reasonable estimates for local consumption across the transportation, heating, and electric energy sectors. While these estimates use best available data, they should not be considered a unit-by-unit audit of energy use. Rather, they serve as a starting point for better understanding our Region's current energy use patterns, the cost drivers, and what we need to do to achieve long-range energy goals. Note, estimates and targets are frequently given in British Thermal Units (BTUs) and millions of BTUs (MMBTUs) in order to allow for comparison between different energy types.

Current residential and commercial and industrial electricity usage data is provided by Efficiency Vermont (both municipal and regional totals), Transportation and thermal sector data is estimated via the Municipal Consumption Tool, which pulls from a variety of sources including the Vermont Department of Public Service, American Community Survey, Vermont Department of Labor, the Vermont Department of Motor Vehicles, and DriveElectric (VEIC). Using the regionalized LEAP results provided by DPS, targets are established to provide milestones for thermal efficiency; renewable energy use; and conversion of thermal and transportation energy from fossil fuel based to renewable resources. These milestones are intended to help the Region measure progress towards the overall goals and are not identified as requirements. Regional LEAP targets were disaggregated using each municipality's share of current regional energy use. Municipal disaggregation factors were calculated for transportation (Light Duty Vehicles), residential thermal, commercial thermal, residential electric, and commercial electric. Targets are established for the years 2025, 2035, and 2050 which coincide with the State Comprehensive Energy Plan (updated 2022). Targets include both a "business as usual" baseline and the CAP (Climate Action Plan) mitigation scenario targets. A summary of results is included below and referenced throughout this Appendix. Municipal analyses and targets are available on the ACRPC website. ACRPC can provide a copy of these resources upon request

RESIDENTIAL HEATING ENERGY USE AND COST ESTIMATES

The following explains the series of steps that ACRPC has taken to calculate estimates of residential heating energy use, square footage, and costs for the Addison Region. According to the Department of Public Service, residences in New England use somewhere about 45,000 to 80,000 BTUs of heat energy per square foot annually, averaging statewide at about 110 MMBTUs per residence per year for space and water heating. Space heating is by far the biggest use, and older building stock can require significantly more energy to heat.

Caveats:

- ACS data is based on random sampling over a multi-year period with large margins of error especially for rural communities like many in the Addison Region. As of the writing of this Plan, it remains the most consistent and comprehensive data available on residential heating.
- ACS data identifies only one primary source of heating. In reality, many residents use two or more resources.

Data (ACS 2022-2025 5-Year Estimates used)

a. B25117 Tenure by House Heating Fuel
b. B25010: Average Household Size of Occupied Units by Tenure
c. DP04 Selected Housing Characteristics
d. Total Housing Units

ACRPC downloaded the data sets referred above by town and aggregated them in Microsoft Excel tables

House heating fuel is categorized on the ACS questionnaire as follows:

Utility Gas: This category includes gas piped underground from a central system to serve the neighborhood. The only utility in Vermont that delivers gas in this manner (i.e. natural gas) is Vermont Gas, which serves a portion of our Region and its service area is well outside of our Region. A small number of ACS respondents indicated that they heated with "utility gas." It is most likely that they confused this source with bottled, tank or LP gas. We therefore made adjustments to account for this error.

Bottled, Tank, or LP Gas: This category includes liquid propane gas stored in bottles or tanks that are refilled or exchanged when empty. This is the second most dominant heat source for owner- and renter-occupied homes.

Electricity: This category includes electricity that is generally supplied by means of above or underground electric power lines. Census data does not distinguish between types of electric heat (e.g. resistance vs. heat pumps). We assume that additional homes in this category since the last plan and in the future are new heat pumps and not new resistance heat pumps.

Fuel Oil, Kerosene, etc.: This category includes fuel oil, kerosene, gasoline, alcohol, and other combustible liquids. This category (oil) is the leading source of heat in the Region overall, and for both owner- and renter-occupied homes.

Coal or Coke: This category includes coal or coke that is usually distributed by truck. Some households in our Region use anthracite in stoves, furnaces, and boilers. There are very few of these, if any, still in the Region, as the margin of error suggests potential to be zero.

Wood: This category includes purchased wood, wood cut by household members on their property or elsewhere, driftwood, sawmill or construction scraps, or the like. Wood is the third largest source of heat in the Region for owner-occupied homes, much of which is likely cordwood.

Solar Energy: This category includes heat provided by sunlight that is collected, stored, and actively distributed to most of the rooms. It is difficult to anticipate what residents mean when they select this option; consequently, we combined this estimate with the "other fuel" class.

Other Fuel: This category includes all other fuels not specified elsewhere. This category very likely consists of non-fossil fuel sources, but it is difficult to make further assumptions.

COMMERCIAL ESTIMATES

A worksheet, Municipal Consumption, created by the Department of Public Service, uses data from the Vermont Department of Labor's Economic and Labor Market Information website: www.vtlmi.info. The worksheet determines the municipality's share of the regional commercial building stock and applies assumptions from the Energy Information Institute's Survey of Commercial Uses. The estimate does not include industrial uses that are highly variable.

TRANSPORTATION ESTIMATES

This data was developed using the Department of Public Service's Municipal Consumption worksheet. The total number of vehicles comes from American Communi-

Table 35: Municipal Consumption Summary Disaggregation

Town	Transportation Percent of Region (MMBtu)	Thermal Residential Percent of Region	Thermal Commercial Percent of Region	Electric Commercial Percent of Region	Electric Residential Percent of Region	Total Electric
Addison	4.2%	4.3%	4.3%	3.0%	5.3%	4.1%
Bridport	3.8%	3.6%	3.6%	2.1%	4.0%	3.1%
Bristol	10.8%	10.4%	10.4%	7.2%	9.4%	8.3%
Cornwall	3.1%	3.4%	3.4%	0.4%	4.2%	2.3%
Ferrisburgh	8.5%	9.0%	9.0%	5.1%	10.3%	7.7%
Goshen	0.6%	0.6%	0.6%	0.1%	0.5%	0.3%
Leicester	3.5%	4.2%	4.2%	0.3%	3.5%	1.9%
Lincoln	4.2%	3.8%	3.8%	0.4%	3.7%	2.1%
Middlebury	16.0%	19.5%	19.5%	57.6%	15.8%	36.7%
Monkton	6.2%	5.0%	5.0%	0.5%	5.9%	3.2%
New Haven	6.1%	4.5%	4.5%	4.1%	5.2%	4.6%
Orwell	3.2%	3.5%	3.5%	1.2%	3.8%	2.5%
Panton	2.1%	1.9%	1.9%	1.0%	2.9%	2.0%
Ripton	1.7%	1.9%	1.9%	0.9%	1.7%	1.3%
Salisbury	3.6%	4.0%	4.0%	1.5%	4.0%	2.7%
Shoreham	3.9%	3.6%	3.6%	3.2%	4.0%	3.6%
Starksboro	5.9%	5.0%	5.0%	0.7%	4.9%	2.8%
Vergennes	7.4%	7.0%	7.0%	9.7%	5.5%	7.6%
Waltham	1.5%	1.2%	1.2%	0.2%	1.3%	0.8%
Weybridge	2.3%	2.1%	2.1%	0.5%	2.9%	1.7%
Whiting	1.3%	1.3%	1.3%	0.2%	1.3%	0.8%

ty Survey (ACS) 5-Year Estimates. Average annual VMTs account for slightly longer-than-average commutes and more incidental trips in the rural and commuter parts of the Region. Total vehicle miles traveled assumes an average fuel economy of 22 miles per gallon. Registered ICE (internal combustion engine) vehicles are assumed to travel 12,000 miles per year which is the mid-range of the provided estimate. Registered EVs were determined by the Vermont Energy Investment Corporation (Drive Electric) and use the low estimate provided by the DPS's average of 9,000 VMTs per EV annually, taking into account early trends in EV adoption including reducing trips in adverse weather and use of alternative transportation modes, as well as the high percentage of our Region's population that is retired and thus without a daily commute.

ELECTRICITY ESTIMATES

Efficiency Vermont provides an annual report with compiled data from the most recent three years, based on that provided by utilities serving the Region. ACRPC has compiled all of the annual reports from EVT into a single report providing data between 2015 and 2023.

Thermal Efficiency & Fuel Switching Targets (Residential & Commercial)

Targets for thermal efficiency of residential and commercial structures are based on a methodology developed by the regional Long-range Energy Alternatives Planning (LEAP) analysis carried out by the Department of Public Service and then disaggregated using municipal share of regional energy use determined via the Municipal Consumption Tool. See the Municipal Consumption Summary (live) tab in the Municipal Consumption Tool to see how each regional target was disaggregated to the municipal scale. See **Table 35.**

Table 36: Conversion Factors

Resource	Acres/ MW	Capacity Factor	MWh/MW
Solar	7	15.0%	1314
Rooftop Solar	1.5	14.5%	1270
Wind	40	22.5%	1971
Large Wind	10	30.0%	2628
Natural Gas	0.343	75.0%	6570
Biomass	6.375	70.0%	6132
Hydro	1	50.0%	4380

ELECTRICAL EFFICIENCY TARGETS

Efficiency and conservation measures are integrated into the thermal sector targets. Electricity efficiencies were embedded into the 20-year load forecast used in the updated LEAP model, thus are not an output of their own (and why the Public Service Department removed the Electric Sector tab of the updated Analysis and Targets Tool). Therefore, electric efficiency targets were provided separately in the EEU Potential Study Data Sheet and disaggregated to the regional scale using the recommended methodology. Municipal disaggregation uses the Total Electric percentage, which comes from the Municipal Consumption Tool and is applied to the EEU Potential sheet. These tools and materials are available upon request.

FUEL SWITCHING TRANSPORTATION TARGETS

Table 28 displays a target for switching from fossil fuel-based vehicles to EVs. This target is calculated using the Regional LEAP data and disaggregates the regional target based on the municipal share of current transportation consumption as estimated in the Municipal Consumption Sheet. The targets are cumulative.

Generation Targets

EXISTING RENEWABLE ENERGY GENERATION

Significant effort was made to aggregate the most comprehensive list of existing renewable energy generation sites possible for the region. The Department of Public Service periodically provides an updated Distributed Generation (DG) Inventory, which includes projects that have been submitted to the Public Utility Commission and are less than <5MW. Unfortunately, crowd-sourced Energy Atlas data is unfortunately 7+ years out of date. Data from the most recent data set provided in the dashboard were cross referenced with the DG data provided by the PSD.

Capacity Factor is the ratio of actual electrical energy output over a given period of time to the theoretical maximum over that same period (the theoretical maximum energy output of a given installation being continuous operation at full nameplate capacity over the relevant time period).

GROUND-MOUNTED SOLAR ENERGY POTENTIAL

The methodology for estimating ground-mounted solar electricity potential is to divide the number of acres available as prime and base resources by 7 acres per MW for prime solar; 60 acres per MW is used for base solar to account for the presence of possible constraints that reduce the land usable for solar panels. The annual electricity production is then estimated using this formula: Solar MWh of energy = (number of MW) * (8760 hours per year) * (0.15 capacity factor).

ROOFTOP SOLAR ENERGY POTENTIAL

Rooftop solar potential data is sourced from the Vermont Center for Geographic Information (VCGI) dataset named Town Rooftop Solar Potential – Act 174 2022. As explained in the release notes, these estimates use a geographic information system (GIS) model of building footprints to determine the total surface area of rooftops suitable for solar photovoltaic panels (accounting for amount of solar radiation, slope, aspect, shading of nearby objects, and minimum size of rooftop viable for solar panels). Using published data for solar radiation, the VCGI data also estimates an annual solar energy production potential for each suitable rooftop, summarized by municipality, applying a capacity factor of 13.76% as published by the U.S. Environmental Protection Agency. The total system capacity in megawatts is then estimated using the following formula: Rooftop MW of capacity = (number of annual MW) * ((0.145 capacity factor) * (8760 hours per year)). This was further curtailed by ACRPC to provide a conservative estimate as roof and condition could not be integrated at this point in analyses.

WIND ENERGY POTENTIAL

The methodology for estimating wind electricity potential is to divide the number of acres available as prime and base resources by 25 acres per MW. There is no reduced land factor for base wind since possible constraints have a lesser impact on actual equipment siting due to the vertical nature of wind turbines. Then to estimate the amount of production using this formula. Wind MWh of energy = (number of MW) * (8760 hours per year) * (0.225 capacity factor).

CALCULATING RENEWABLE ENERGY GENERATION TARGETS

Municipalization is based on a weighted average of the following factors agreed upon by the ACRPC Energy Committee: Land Area: 20%, Existing Generation: 10%, Demand: 50%, Population: 20%. The target selected was the maximum available of 25% In-State Generation. All data used and targets generated can be found in the ACRPC Generation Scenarios Tool.

STATE KNOWN AND POSSIBLE CONSTRAINT DEFINITIONS AND DESCRIPTIONS

The following is a list of the known, possible, and regional constraints that were used and referenced in the mapping section of this document. A definition of the constraint including source of the data is provided. As discussed in the report, RPCs supported a coordinated effort by the Department of Public Service, VCGI, and ANR to aggregate these layers which are now available via the Act 174 tab of the DHCD Planning Atlas.

KNOWN CONSTRAINTS

Vernal Pools (confirmed and unconfirmed layers)

Source: Vermont Fish and Wildlife, 2009 - present. Vernal pools are temporary pools of water that provide habitat for distinctive plants and animals. Data was collected remotely using color infrared aerial photo interpretation. “Potential” vernal pools were mapped and available for the purpose of confirming whether vernal pool habitat was present through site visits. This layer represents both those sites which have not yet been field-visited or verified as vernal pools, and those that have.

Department of Environmental Conservation (DEC) River Corridors

Source: DEC Watershed Management District Rivers Program, January 2015. River corridors are delineated to provide for the least erosive meandering and floodplain geometry toward which a river will evolve over time. River corridor maps guide State actions to protect, restore, and maintain naturally stable meanders and riparian areas to minimize erosion hazards. Land within and immediately abutting a river corridor may be at higher risk to fluvial erosion during floods. River corridors encompass an area around and adjacent to the present channel where fluvial erosion, channel evolution, and down-valley meander migration are most likely to occur. River corridor widths are calculated to represent the narrowest band of valley bottom and riparian land necessary to accommodate the least erosive channel and floodplain geometry that would be created and maintained naturally within a given valley setting.

Federal Emergency Management Agency (FEMA) Floodways

Source: FEMA Floodway included in Zones AE – FEMA Map Service Center. These are areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. A “Regulatory Floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

State-significant Natural Communities and Rare, Threatened, and Endangered Species

Source: Vermont Fish and Wildlife, National Heritage Inventory. The Vermont Fish and Wildlife Department’s Natural Heritage Inventory (NHI) maintain a database of rare, threatened, and endangered species and natural (plant) communities in Vermont. The Element Occurrence (EO) records that form the core of the Natural Heritage Inventory database include information on the location, status, characteristics, numbers, condition, and distribution of elements of biological diversity using established Natural Heritage Methodology developed by NatureServe and The Nature Conservancy. An EO is an area of land and/or water in which a species or natural community is, or was, present. An EO should

have practical conservation value for the Element as evidenced by potential (or historical) presence and/or regular recurrence at a given location. For species Elements, the EO often corresponds with the local population, but when appropriate, may be a portion of a population or a group of nearby populations (e.g., metapopulation).

National Wilderness Areas

Source: United States Department of Agriculture Forest Service. A parcel of Forest Service land congressionally designated as wilderness. Class 1 and Class 2.

WETLANDS

Source: Vermont Significant Wetland Inventory (VSWI) and advisory layers. The State of Vermont protects wetlands which provide significant functions and values and also protects a buffer zone directly adjacent to significant wetlands. Wetlands in Vermont are classified as Class I, II, or III based on the significance of the functions and values they provide. Class I and Class II wetlands provide significant functions and values and are protected by the Vermont Wetland Rules. Any activity within a Class I or II wetland or buffer zone which is not exempt or considered an "allowed use" under the Vermont Wetland Rules requires a permit. Class I wetlands have been determined to be, based on their functions and values, exceptional or irreplaceable in its contribution to Vermont's natural heritage and, therefore, merits the highest level of protection. All wetlands contiguous to wetlands shown on the VSWI maps are presumed to be Class II wetlands, unless identified as Class I or III wetlands, or unless determined otherwise by the Secretary or Panel pursuant to Section 8 of the Vermont Wetland Rules.

POSSIBLE CONSTRAINTS

Agricultural Soils

Source: Natural Resources Conservation Service (NRCS) "Primary agricultural soils" are defined as "soil map units with the best combination of physical and chemical characteristics that have a potential for growing food, feed, and forage crops, have sufficient moisture and drainage, plant nutrients or responsiveness to fertilizers, few limitations for cultivation or limitations which may be easily overcome, and an average slope that does not exceed 15%." Present uses may be cropland, pasture, regenerating forests, forestland, or other agricultural or silvicultural uses. The soils must be of a size and location, relative to adjoining land uses, so that those soils will be capable, following removal of any identified limitations, of supporting or contributing to an economic or commercial agricultural operation. Unless contradicted by the qualifications stated above, primary agricultural soils include important farmland soils map units with a rating of prime, statewide, or local importance as defined by the Natural Resources Conservation Service of the United States Department of Agriculture.

FEMA Special Flood Hazard Areas

Source: Federal Emergency Management Agency. (1985). Flood Maps. [Data set]. (Note: Digitized by ACRPC from paper FEMA maps in 2002). The land area covered by the floodwaters of the base flood is the Special Flood Hazard Area (SFHA) on National Flood Insurance Program (NFIP) maps. The SFHA is the area where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Protected Lands

Source: Vermont Center for Geographic Information. (2026). Vermont Protected Lands Database. [Data set]. Vermont Center for Geographic Information. https:geodata.vermontlgov/datasets/VTANR::vt-significant-natural-communities-public/about. State fee land and private conservation lands are considered protected lands. Other state level, nonprofit and regional entities also contribute to this dataset. The Vermont Protected Lands Database is based on an updated version of the original Protected Lands Coding Scheme reflecting decisions made by the Protected Lands Database Work Group to plan for a sustainable update process for this important geospatial data layer.

Act 250 Ag Mitigation Parcels

Source: Vermont Department of Agriculture. All projects reducing the potential of primary agricultural soils on a project tract are required to provide "suitable mitigation," either "onsite or offsite," which is dependent on the location of the project. This constraint layer includes all parcels in the Act 250 Ag Mitigation Program as of 2006.

Deer Wintering Areas (DWA)

Source: Vermont Department of Fish and Wildlife. Deer winter habitat is critical to the long-term survival of white-tailed deer (Odocoileus virginianus) in Vermont. Being near the northern extreme of the white-tailed deer's range, functional winter habitats are essential to maintain stable populations of deer in many years when and where yarding conditions occur. Consequently, deer wintering areas are considered under Act 250 and other local, state, and federal regulations that require the protection of important wildlife habitats. DWAs are generally characterized by rather dense softwood (conifer) cover, such as hemlock, balsam fir, red spruce, or white pine. Occasionally DWAs are found in mixed forest with a strong softwood component or even on found west facing hardwood slopes in conjunction with softwood cover. The DWA were mapped on mylar overlays on topographic maps and based on small scale aerial photos.

Vermont Conservation Design include the following Highest Priority Forest Blocks

Connectivity, Interior, and Physical Landscape Diversity

Source: Vermont Department of Fish and Wildlife. The lands and waters identified in this constraint are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend.

Hydric Soils

Source: Natural Resources Conservation Service. A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. This constraint layer includes soils that have hydric-named components in the map unit.



Limstone Bluff Cedar-Pine Forest



Canoeing on Bristol Pond

Transportation

Location	Action	Lead	Partners	Timeframe	Cost
US ROUTE 7 - RECOMMENDED ACTIONS:					
Middlebury	Exchange Street: enhance U.S.7 - Exchange Street Gateway and construct the proposed roundabout	Town of Middlebury	VTrans, U.S. DOT	short-term	$$
Middlebury	Perform traffic study to address congestion at Foote Street-Middle Road South - U.S.7 intersection	VTrans	U.S. DOT, Town of Middlebury,	mid-term	$
Middlebury	Identify and implement intersection improvements at Boardman Street - U.S.7 intersection	VTrans	U.S. DOT, Town of Middlebury	mid-term	$$
Middlebury	Implement improvements at (1) Charles Avenue-Monroe Street - U.S.7 and (2) Court Street-Mary Hogan Drive intersections	Town of Middlebury	VTrans, U.S. DOT	short-term	$$
General	Advocate for corridor improvements outlined in Western Corridor Plan, including: shoulder widening, truck climbing lanes, etc.	VTrans	ACRPC	long-term	$$$
General	Study High Crash Locations along U.S.7 and identify recommended improvements	VTrans	ACRPC	mid-term	$
VT ROUTE 22A - RECOMMENDED ACTIONS:					
Addison, Bridport and Shoreham	Apply traffic calming elements identified by previous studies, including the Western Corridor Plan, Middlebury Traffic Calming Feasibility Study (contains traffic calming toolbox applicable to entire region), Traffic Calming and Non-Vehicular Routes for Five Addison County towns, and RRPC Route 22A Corridor Study (Orwell)	Municipalities	ACRPC, VTrans	short-term	$ to $$
Vergennes	Reconstruct intersection at VT 22A-South Water Street-MacDonough Drive	City of Vergennes	ACRPC, VTrans	mid-term	$$
Vergennes	Address congestion forecasted in 2030 at Panton Road-VT 22A intersection	City of Vergennes	ACRPC, VTrans	long-term	$$
Orwell	Identify and implement actions to improve safety and traffic flow at the VT 73 - VT 22A intersection	Town of Orwell	ACRPC, VTrans	long-term	$$
Addison	Identify and implement actions to improve safety and traffic flow at the VT 17- VT 22A intersection	Town of Addison	ACRPC, VTrans	long-term	$$
General	Advocate for corridor improvements outlined in Western Corridor Plan, including: shoulder widening, traffic calming, truck climbing lanes, cellular service, etc.	VTrans	ACRPC	long-term	$ to $$
General	Create truck routes that address concerns of Vergennes and neighboring communities as identified in the PEL Study.	VTrans	ACRPC, Municipalities	short-term	$$$
General	Study High Crash Locations along Route 22A and identify recommended improvements	VTrans	ACRPC	mid-term	$

Location	Action	Lead	Partners	Timeframe	Cost
VT ROUTE 17 - RECOMMENDED ACTIONS:					
New Haven	Identify and implement actions to improve safety at the VT 17- Hallock Rd.- Quaker Village Rd. intersection.	VTrans	ACRPC, U.S. DOT, New Haven	mid-term	$$$
Bristol	Advocate for bicycle and pedestrian-related improvements east of Bristol Village, including recommendations in Bristol to Rockydale Bicycle and Pedestrian Feasibility Study	Bristol	VTrans, ACRPC	mid-term	$$$
Addison	Complete study to explore safety improvements at Route 17-Route 22A intersection	Addison	ACRPC, VTrans	short-term	$$
General	Study High Crash Locations along Route 17 and identify recommended improvements	VTrans	ACRPC	mid-term	$$$
VT ROUTE 30 - RECOMMENDED ACTIONS:					
General	Promote the use of this scenic and low -volume corridor as a byway for traffic desiring to enjoy the Region's rural countryside.	ACRPC	VTrans, towns	Short-term	$
General	Advocate for improvements necessary to promote as bike alternative to Route 22A and U.S. 7	ACRPC	VTrans, towns	Short-term	$
VT ROUTE 116 - RECOMMENDED ACTIONS:					
Bristol	Monitor capacity at VT 116-VT17 intersections both north and south of Bristol	ACRPC	VTrans	mid-term	$
Bristol	Advocate for bicycle and pedestrian-related improvements east of Bristol Village, including recommendations in Bristol to Rockydale Bicycle and Pedestrian Feasibility Study	Bristol	VTrans, towns	mid-term	$$$
Bristol	Work with Town of Bristol to implement improvements to create village gateways	Bristol	VTrans, ACRPC	short-term	$
General	Apply traffic calming elements identified by previous studies, including Middlebury Traffic Calming Feasibility Study, Starksboro Complete Streets study, and Traffic Calming and Non-Vehicular Routes for Five Addison County Towns (Starksboro)	Town of Starksboro	ACRPC, VTrans	short-term	$ to $$
General	Address all structurally deficient bridges identified in Tables 2 and 3 on page 16	VTrans	U.S. DOT	mid-term	$$$
General	Study High Crash Locations along Route 116 and identify recommended improvements	VTrans	ACRPC	short-term	$$
VT ROUTE 125 - RECOMMENDED ACTIONS:					
125 East	Identify and advocate for general corridor improvements, including shoulder widening, truck climbing lanes, , etc.	ACRPC	VTrans	long-term	$ to $$$

Location	Action	Lead	Partners	Timeframe	Cost
125 East	Implement flood and erosion-related resiliency improvements recommended by the Middlebury River/VT 125 Benefit-Cost Analysis	VTrans	ACRPC, Middlebury, Ripton	long-term	$$$
125 West	Implement the recommendations of STP 0172(11) in Cornwall and Middlebury related to roadway profile improvements, intersection improvements, shoulder widening, and ledge removal.	VTrans	ACRPC	long-term	$$$
General	Support development of Old Town Rd. as an alternative route in the event of catastrophic flooding	VTrans	Ripton, Middlebury, ACRPC	medium-term	$$$
General	Address all structurally deficient bridges identified in Table 3 on page 6-16 as that list is amended annually	VTrans	U.S. DOT	mid-term	$$$
General	Study High Crash Locations along Route 125 and identify recommended improvements	VTrans		mid-term	$$
VT ROUTE 53 - RECOMMENDED ACTIONS:					
General	Address safety concerns, including improvements to signs, sight distances, and drainage along Lake Dunmore in Salisbury and Leicester	Salisbury	Leicester, ACRPC, VTrans, U.S. DOT	short-term	$
General	Work to identify and implement measures to reduce detour traffic traveling between U.S. 7 and Route 73 East	VTrans	Salisbury, Leicester, ACRPC	mid-term	$
LOCAL CORRIDORS - RECOMMENDED ACTIONS:					
Leicester-Whiting	Address drainage and flooding issues along Leicester-Whiting Rd.	ACRPC	VTrans, Leicester, Whiting	short-term	$$$
Monkton	Apply traffic calming elements and other improvements identified by previous studies in Monkton Ridge and Boro areas, including the Town of Monkton - Commuter Corridor Planning and Feasibility Study and Monkton Ridge Village Complete Streets Planning and Feasibility Study	Town of Monkton	ACRPC, VTrans	short-term	$ to $$
PUBLIC TRANSIT - RECOMMENDED ACTIONS:					
TVT	Support actions which provide TVT with the resources needed to provide optimum service	TVT	ACRPC	short-term	$
TVT	Continue to explore pilot programs to expand potential TVT services	TVT	ACRPC	short-term	$
TVT	Continue assisting TVT with planning, marketing, and general coordination	ACRPC		ongoing	$
General	Support connectivity between transit and bicycling and walking	Towns	ACRPC, VTrans	short-term	$
General	Incorporate transit planning into town plans, focusing on possible transit stops and hubs in proximity to parking availability.	Towns	TVT, ACRPC, VTrans	short-term	$

Location	Action	Lead	Partners	Timeframe	Cost
General	Monitor transit demand to ensure that service continues to perform at acceptable levels and connects to places where riders can access the system with Park and Rides	TVT	ACRPC	mid-term	$
General	Support TVT's efforts to expand facilities to accommodate transition to electric vehicles.	TVT	ACRPC	mid-term	$$
General	Assist TVT in recruiting volunteer drivers	TVT	ACRPC	short-term	$
PEDESTRIAN AND BICYCLE FACILITIES - RECOMMENDED ACTIONS:					
General	Continue to support the efforts of the Walk-Bike Council of Addison County, by providing staff assistance, outreach and coordination, especially as liaison to the TAC.	ACRPC		ongoing	$
General	Pursue the projects identified in the Regional Bicycle and Pedestrian Plan and by the Walk-Bike Council of Addison County	Towns	ACRPC, WBCAC	short-term	$ to $$
General	Assist communities with the development of local transportation plans and policies that consider and plan for multi-modal improvements	Towns	ACRPC	short-term	$
General	Encourage Safe Routes to School programs/ plans for all Village Center Designation areas	ACRPC		short-term	$
General	Identify and promote designated parking facilities for E-bikes	Towns	ACRPC	short-term	$
General	Support projects to improve conditions on designated bike routes including the Triangle Bike Loop and Champlain Bikeways	Towns	ACRPC	medium-term	$ to $$
Bristol	Improve pedestrian and bicycle connectivity along VT116 between South Street and Lincoln Road	VTrans	Town of Bristol, ACRPC	mid-term	$$$
Middlebury	Implement local bicycle and pedestrian system plan	Town of Middlebury	ACRPC	short-term	$ to $$$
Middlebury	Improve pedestrian connection on U.S.7 south to Boardman St.	Town of Middlebury	ACRPC, VTrans	medium-term	$$
Middlebury	Improve pedestrian and bicycle conditions on Exchange St.	Town of Middlebury	ACRPC	medium-term	$$
Monkton	Support safer connections from Ridge to Borough	Town of Monkton	ACRPC	short-term	$$
New Haven	Support follow-up to 2016 walk-bike survey work	Town of New Haven	ACRPC	short-term	$
Salisbury/ Leicester	Complete conceptual alignment analysis of route around Lake Dunmore and Fern Lake	Towns of Salisbury and Leicester	ACRPC	short-term	$$$
Vergennes	Support implementation of Downtown-Basin Plan	City of Vergennes	ACRPC	mid-term	$
Waltham	Support safe sidewalk/bike route connections to Vergennes	Town of Waltham	ACRPC	short-term	$$
Weybridge	Support walk/bike connections to downtown Middlebury	Town of Weybridge	ACRPC	short-term	$$

Location	Action	Lead	Partners	Timeframe	Cost
AIR - RECOMMENDED ACTIONS:					
Middlebury Airport	Construct additional hangars and parking	VTrans		mid-term	$$
General	Work with VTrans and Addison County Economic Development (ACEDC) to help recruit new business to use the Middlebury Airport facility	ACRPC	VTrans, ACEDC	short-term	$
RAIL - RECOMMENDED ACTIONS:					
General	Implement the signal system and track improvements called for in the 2021 VT STate Rail Plan to improve the safety and efficiency of the corridor to serve the Region's economy	ACRPC	VTrans, towns	short-term	$$
TRUCK TRAFFIC AND FREIGHT - RECOMMENDED ACTIONS:					
General	Encourage towns to develop hazard mitigation plans that address hazards from materials transported through the community	Towns	ACRPC, VTrans	short-term	$
General	Explore and create truck routes that address concerns of Vergennes and neighboring communities	VTrans	ACRPC, towns	short-term	$$$
General	Study High Crash Locations along Route 22A and identify recommended improvements	VTrans	ACRPC	mid-term	$$$
AGRICULTURAL IMPACT - RECOMMENDED ACTIONS:					
General	This Plan encourages farms and government agencies to use best management practices and work to minimize damage to the road system	VTrans	ACRPC, towns	short-term	$
TRAVEL DEMAND MANAGEMENT - RECOMMENDED ACTIONS:					
General	Work with TVT, GoVT and others to make emerging ridesharing technologies available in the Region.	TVT	ACRPC, VTrans	Mid-term	$
PROMOTES ECONOMY - RECOMMENDED ACTIONS:					
General	Strategically improve arterial roads and practice access management to preserve travel times for commerce	VTrans	ACRPC	mid-term	$$$
General	Build complete streets, especially in village and downtowns to create vibrant attractive communities	ACRPC	Towns, VTrans	mid-term	$ to $$$
General	Support rail and air improvements within the western corridor to provide additional opportunity for commercial and passenger activity	VTrans	ACRPC	short-term	$$$

Location	Action	Lead	Partners	Timeframe	Cost
SAFE MODES OF TRAVEL - RECOMMENDED ACTIONS:					
General	Support the installation of highway safety improvements at high crash locations as identified and recommended in the corridor plans	VTrans	ACRPC	mid-term	$$
General	Support context-sensitive roadway improvements that enhance bicycle and pedestrian safety	ACRPC	VTrans	mid-term	$$
General	ACRPC will continue to support programs like the Safe Routes to School, and Strong Communities, Better Connections to ensure safe multi-modal transportation	VTrans	ACRPC	mid-term	$
ENERGY EFFICIENCY AND CONSERVATION - RECOMMENDED ACTIONS:					
General	Actively support TVT and other forms of local public transit	ACRPC		ongoing	$
General	Promote the expansion of the existing park and ride system, focusing on low-cost options in or adjacent to village centers	ACRPC		ongoing	$$
General	Provide technical assistance to the Addison County Walk-Bike Council, and support their mission to increase walking and biking region-wide	ACRPC		ongoing	$
General	Work with VTrans and GoVT to actively support and promote van pools between Chittenden and Addison County	ACRPC		ongoing	$
ELECTRIC VEHICLES - RECOMMENDED ACTIONS:					
General	Identify ideal locations and develop strategies for construction of EV charging stations along major regional corridors	VTrans	ACRPC	mid-term	$
General	Encourage municipalities to explore potential for EV charging stations in village centers or at other recreational/community facilities or Park and Rides	ACRPC	Towns	mid-term	$
General	Encourage commercial development regulations to provide for charging stations in timed/metered parking areas.	Towns	ACRPC	mid-term	$
General	Encourage residential development regulations to provide for 220 volt receptacles in accessible spaces.	Towns	ACRPC	mid-term	$
ENHANCING REGIONAL LAND USES AND SENSE OF PLACE - RECOMMENDED ACTIONS:					
General	Encourage appropriately scaled roundabouts and other traffic calming features as preferred safety improvements and as community/village gateways	VTrans	ACRPC, Towns	ongoing	$$
General	Complete Streets appropriate scale to location	ACRPC	Towns	short-term	$

Location	Action	Lead	Partners	Timeframe	Cost
General	Support access management efforts, focusing on keeping major arterial roads moving freely	ACRPC	Towns, VTrans	ongoing	$$
RESILIENCE TO NATURAL HAZARDS - RECOMMENDED ACTIONS:					
General	Assist ACRPC municipalities with efforts to conform to MRGP requirements.	ACRPC	VTrans	ongoing	$
General	Continue to support Addison County Regional Emergency Management Committee and encourage all communities to adopt Local Hazard Mitigation Plans and Local Emergency Operations Plans.	ACRPC		short-term	$
General	Assist communities with the adoption of flood mitigation measures which increase the percentage of ERAF funding offered by the state in the event of a Federally Declared Disaster.	ACRPC	VTrans, ANR/DEC	short-term	$
SUFFICIENT FUNDING - RECOMMENDED ACTIONS:					
General	Diversify transportation funding and policies to address rising maintenance costs	ACRPC	VTrans, Towns, TVT	mid-term	$
General	Address limited availability of infrastructure and road maintenance materials	ACRPC	VTrans, U.S. DOT	short-term	$
General	Help municipalities to plan for and implement capital budgeting for transportation infrastructure	Municipalities	ACRPC, VTrans	short-term	$
General	Help municipalities access additional funding to improve water quality and reduce long term maintenance expenses	VTrans	ANR, ACRPC	short-term	$
General	Advocate for more non-municipal dollars (e.g. state, federal) to support our transportation network.	ACRPC	Municipalities	short-term	$

Economic Development

The Addison County Regional Planning Commission created the Economic Development Chapter jointly within its partner agency, Addison County Economic Development (ACEDC) to coordinate our planning and economic development goals. This economic development Appendix captures a lot of that work and highlights the activities ACEDC will lead to implement economic development within the Region. It also incorporates and compares statistics to performance matrixes taken from the Addison portion of the West Central Vermont Comprehensive Economic Development Strategy.

VISION STATEMENT

Addison County is regionally and nationally renowned as a model for a dynamic and diversified rural economy where local entrepreneurs leverage the area's unique access to natural resources to launch and grow small businesses that contribute to an unmatched quality of life for residents and an unforgettable experience for visitors.

PILLARS OF THE VISION

1. Dynamic and diversified: Addison County's economy boasts over 700 farms, more than 150 retail businesses, nearly 1,400 service-based businesses, approximately 70 manufacturers, a prestigious university, a thriving hospital, and a state-of-the-art production facility for a global aerospace company.

This level of diversification ensures economic resiliency while providing employment opportunities for a varied labor force. The goals and objectives of this plan should promote further economic diversification to maximize resiliency and expand opportunity in Addison County.

2. Unique access to natural resources: There are 255,578 acres of natural forest in Addison County (52% of the County's total land area) and 177,719 acres of active farmland (34 % of the County's total land area). In addition to 56 miles of shoreline on Lake Champlain, Addison County also hosts several rivers and creeks including Otter Creek, Lewis Creek, the New Haven River, and the Middlebury River.

Addison County's waterways, forests, and farmland fuel the local economy by supplying raw materials to value-add manufacturers, artisans, and craftspeople while simultaneously enhancing quality of life by providing residents with access to fresh healthy food and outdoor recreation. The goals and objectives of this Plan promote the responsible stewardship of these resources to ensure they can continue to fuel the economy and enhance quality of life for generations to come.

3. Local entrepreneurs launch and grow small businesses: 99% of Vermont businesses meet the Small Business Administration's industry-specific criteria for small business classification. In Addison County, 82% of businesses qualify as micro-businesses, defined as 10 employees or less.

Addison County is home to brilliant, enterprising people who have launched and grown a multitude of businesses. Over 40% of Addison County residents have a bachelor's degree or higher. Empowering even more community members with tools to channel their creativity into profitable enterprises will power sustainable economic growth, expand opportunity, and improve quality of life in Addison County. The goals and objectives of this plan should promote strategies that seek economic growth through small local enterprise.

4. Unmatched quality of life: Addison County ranks in the top three among Vermont counties in both health outcomes and health factors, has the lowest rate of poverty in the state, and ranks in the 90th percentile of all U.S. counties for safety based on a crime rate of 17.82 per 1,000 residents.

Beyond the data, the anecdotal indicators for quality of life in Addison County are hard to miss: easy access to outdoor recreation, quality schools, and tight-knit communities with bustling Main Streets. The goals and objectives of this Plan acknowledge the vital role quality of life factors play in attracting talent and driving economic growth and strive to preserve the unique factors that distinguish quality of life in Addison County.

5. Unforgettable visitor experience: The annual economic impact of tourism in Vermont recently reached $4 billion. From downhill thrills at the Middlebury Snow Bowl, in Hancock, VT, to aquatic adventures on Lake Champlain, Addison County offers ample amenities for an unforgettable visitor experience.

With a population of just 37,495, one of the biggest challenges to economic growth in Addison County is its limited consumer base. The simple reality is that for most small businesses in Addison County to survive and grow, they need to sell their goods and services to visitors and consumers outside the county. The goals and objectives of this Plan harness the positive economic impacts of tourism while prioritizing local needs and consumer preferences.

IMPLEMENTATION AND PERFORMANCE MEASURES

Goals & Objectives Overview

The following goals and objectives are organized according to four strategic focus areas: workforce development, business development and entrepreneurship, operational infrastructure, and quality of life. These focus areas reflect the goals and objectives set forth in Chapter 6 of the Addison County Regional Plan, the West Central Vermont Comprehensive Economic Development Strategy (CEDS), and the Addison County Economic Development Corporation's Strategic Plan.

Each focus area is defined by a broad, aspirational goal statement that reflects measurable outcomes to be achieved through a series of objectives and corresponding actions.

The objectives proposed under each focus area represent specific incremental outcomes that contribute to progress toward achieving the ultimate outcomes set forth in the goal statements of each focus area. These goals and objectives will be executed using actions recommended in the Implementation & Performance Measures section.

Matrix Overview

The following Implementation & Performance Measures Matrix contains 61 actions each corresponding to one of the 15 objectives and 4 goals respectively.

The Matrix is structured as follows:

Action: A brief narrative detailing the specific action.

Partners: Indicates either ACRPC or ACEDC as the lead partner followed by a series of supporting partners who will be instrumental in achieving the specific action.

Status: Indicates how advanced the specific action is at present.

- Actions with "Conceptual" status are simply ideas that have never been implemented or pursued through formal planning by either ACEDC or ACRPC.
- Actions with "Planning" status are actions that are already in process but require some additional work by ACEDC, ACRPC and supporting partners in order to be fully implemented.
- Actions with "Implementation" status are actions that are being actively implemented on an ongoing basis and, in most cases, represent existing ACEDC or ACRPC projects, programs, and services that support the goals and objectives of the REDS.

Completion: Indicates the time required to complete the specific action. The three timeframes for completion are:

- 0-2 years: Actions that can reasonably be achieved in the near-term.
- 3-5 years: Actions that require more intensive work but can reasonably be achieved within five years.
- 5+ years: In most cases, these actions have no clear endpoint but rather will be performed on an ongoing basis in perpetuity.

Performance Measures: A brief description of qualitative and quantitative measures that can be used to determine progress toward achieving each specific goal.

Evaluation of progress toward achieving the stated goals and objectives and updates on specific actions will be compiled on ongoing basis by ACEDC and ACRPC and presented annually to each organization's respective boards of directors. Supporting partners are also welcome to request annual presentations on plan progress.

Goal Area: Workforce development

GOAL STATEMENT: Addison County has a robust and expanding labor force that allows employers in all sectors to hire

Objective:

Addison County's housing stock offers sufficient supply to meet the needs of workers at every income level.

Action	Partners	Status	Completion	Performance Measures
1. Ensure Act 181 future land use mapping maximizes opportunities for developing housing, particularly dense, mixed-income housing in close proximity to jobs and established commercial centers.	Lead: ACRPC Support: ACEDC, Municipalities	Implementation	0-2 years	Qualitative: Confirm approval of future land use maps by State Land Use Review Board. Quantitative: Report on the number of areas in the County approved for Tier 1A/1B status.
2. Coordinate with Addison County municipalities to identify appropriate, shovel-ready development sites that can be actively marketed to housing developers.	Lead: ACEDC, ACRPC Support: Municipalities, Private Property Owners	Planning	0-2 years	Qualitative: Confirm the launch of a public database of shovel-ready development sites. Quantitative: Track the number of development sites included in the database on an ongoing basis.
3. Launch a project-based tax-increment financing (TIF) program that provides critical financing for infrastructure that supports new housing development.	Lead: ACEDC Support: Municipalities, Private Property Owners	Planning	0-2 years	Qualitative: Confirm the launch of a Project-based TIF program by ACEDC in 2026. Quantitative: Track the number of Project-based TIF applications supported by ACEDC each year.
4. Support Addison County municipalities in drafting applications for municipal planning grants to support updates to land use plans and zoning codes that support increased housing development.	Lead: ACRPC Support: Municipalities, ACEDC	Implementation	5+ years	Qualitative: Confirm which municipalities in Addison County require updates to land use plans and zoning code in the next 5-8 years. Quantitative: Track the number of planning grant applications submitted each year and the number of plan and code updates completed as a result.
5. Assist property owners in securing State Downtown and Village Center tax credits and grants to support small-scale, adaptive reuse infill housing development.	Lead: ACEDC, ACRPC Support: Private Property Owners, Downtown Orgs, Municipalities	Implementation	5+ years	Qualitative: Report on efforts to share info on tax credits with eligible property owners on an annual basis. Quantitative: Track the number of tax credit applications supported by ACEDC each year.

Objective:

Addison County's network of vocational training programs and workforce development organizations is nimble and responsive to the ever-changing needs of employers, providing adequate training opportunities that enable local residents to secure and thrive in local jobs.

Action	Partners	Status	Completion	Performance Measures
1. Deploy a Vermont Department of Labor (VDOL) workforce expansion coordinator for two years to build partnerships between workforce service providers and area employers in the manufacturing and human services sectors.	Lead: ACEDC Support: VTDOL, Workforce Service Providers, Employers	Implementation	0-2 years	Qualitative: Document efforts of the workforce expansion coordinator. Quantitative: Track the number of employers served through the workforce expansion program.
2. Use the Addison County Workforce Alliance's (ACWA) bi-monthly meetings to facilitate conversations between Addison County employers and workforce service providers.	Lead: ACEDC Support: Workforce Service Providers, Employers	Implementation	5+ years	Qualitative: Confirm ongoing administration of bi-monthly ACWA meetings. Quantitative: Track the number of employers and workforce service providers participating in bi-monthly ACWA meetings.
3. Assist employers and workforce service providers to secure funding for new training programs.	Lead: ACEDC Support: Workforce Service Providers, Employers	Planning	5+ years	Qualitative: Document efforts to share info on funding programs with employers and workforce service providers. Quantitative: Track the number of funding applications submitted each year to support workforce training.
4. Support the long-term viability and effectiveness of existing educational facilities, including Career and Technical Education Training for youth and adults.	Lead: ACEDC Support: Workforce Service Providers, Employers	Implementation	5+ years	Qualitative: Document engagements with educational facilities and workforce training providers and engagements with State elected officials and administrators related to career and technical education and workforce training. Quantitative: Track the number of students and adult learners enrolled in local career and technical education classes and workforce training programs.

Objective:

In Addison County, labor force participation rates among historically marginalized and underemployed populations exceed the state and national averages.

Action	Partners	Status	Completion	Performance Measures
1. Deploy a VDOL workforce expansion coordinator for two years – housed by ACEDC – to connect residents from three priority populations: youth ages 16-24, adults without a high school diploma, and people with disabilities to jobs in manufacturing and human services. This includes supporting the development of the corresponding action plan to continue efforts after the program ends.	Lead: ACEDC Support: VTDOL, Workforce Service Providers, Employers	Implementation	0-2 years	Qualitative: Document efforts of the workforce expansion coordinator. Quantitative: Track the number of employers served through the workforce expansion program.
2. Develop a program that connects New Americans with job opportunities in Addison County.	Lead: ACEDC Support: Workforce Service Providers, Employers	Conceptual	3-5 years	Qualitative: Confirm the launch of a New Americans jobs program within 3-5 years. Quantitative: Track the number of New American workers served through the program.

KEY METRICS:

Labor force participation rate: 2025 Baseline - 64.2% (Vermont Department of Labor)

Unemployment rate: 2025 Baseline - 2.2% (Vermont Department of Labor)

Size of workforce: 2025 Baseline - 20,469 (UVM Office of Engagement, Annul Data Services Report)

Live/Work ratio: 2025 Baseline – 50% (UVM Office of Engagement, Annul Data Services Report)

Prime working age population over 60: 2025 Baseline – 34% (UVM Office of Engagement, Annul Data Services Report)

Goal Area: Business Development and Entrepreneurship

GOAL STATEMENT: Addison County consistently experiences positive annual net growth in the number of small businesses operating in the county and corresponding growth in inflation adjusted gross sales and sales tax receipts.

Objective:

Entrepreneurs experience low barriers to launching a business and receive easy access to technical assistance and financing.

Action	Partners	Status	Completion	Performance Measures
1. Advocate for streamlined State permitting processes that reduce the time it takes for businesses to launch and expand.	Lead: ACEDC, ACRPC Support: ACRPC, ACCOC, Downtown Orgs, VTACCD, VTANR	Implementation	5+ years	Qualitative: Document outreach to State elected officials and administrators related to permitting and approvals for commercial development. Quantitative: Track the number of commercial projects applying for an Act 250 permit each year and the amount of time required for permit approval.
2. Work with municipalities to identify realistic opportunities for easing local permitting and lowering fees that make it cheaper and easier to launch a business in Addison County.	Lead: ACEDC, ACPRC Support: Municipalities, ACCOC, Downtown Orgs, ACRPC, VTSBDC	Conceptual	3-5 years	Qualitative: Document engagement with municipalities related to local permitting and fees for business startup and expansion. Quantitative: Track the number of business expansion projects completed in Addison County on an annual basis.
2. Convene Addison County economic development partners to coordinate the marketing of local business support services and to maximize the reach of coordinated marketing efforts.	Lead: ACEDC Support: ACCOC, Downtown Orgs, VTSBDC	Conceptual	3-5 years	Qualitative: Confirm the launch of a collaborative marketing campaign between Addison County-based economic development organizations. Quantitative: Track the number of referrals between organizations and the total number of businesses served across organizations.
3. Recapitalize the ACEDC's revolving loan funds while seeking new opportunities to provide access to capital for new and expanding business that struggle to access conventional financing.	Lead: ACEDC Support: VTACCD, USDA-RD	Planning	0-2 years	Qualitative: Confirm that new lending capital has been secured within two years. Quantitative: Track the amount of capital available to be lent out through ACEDC RLFs on an annual basis.
4. Help create and review business plans for entrepreneurs.	Lead: ACEDC Support: VTSBDC	Implementation	5+ years	Qualitative: Document efforts to promote business planning services. Quantitative: Track the number of clients receiving business planning consultations through VTSBDC and ACEDC each year.
5. Introduce entrepreneurs to peers, service providers, and associated businesses.	Lead: ACEDC Support: VTSBDC, ACCOC, Downtown Orgs, Municipalities, VTACCD	Implementation	5+ years	Qualitative: Document communications between economic development partner organizations. Quantitative: Track the number of referrals between organizations on an annual basis.

Objective:

Businesses that launch in Addison County choose to grow in Addison County and are able to reach maturity without relocating outside of the county.

Action	Partners	Status	Completion	Performance Measures
1. Work with growing businesses to anticipate and help address their expansion needs including but not limited to: financing and investment, physical expansion or relocation, increased hiring, and access to new markets.	Lead: ACEDC Support: VTSBDC, VEDA, VTACCD	Implementation	5+ years	Qualitative: Document engagements with businesses seeking expansion in Addison County. Quantitative: Track the number of businesses that completed physical expansions or executed investments that expanded employment in Addison County on an annual basis.
2. Seek opportunities for connecting local businesses with slow capital that allows for sustained growth without the constraints of burdensome debt service.	Lead: ACEDC Support: VTSBDC, VCLF, CCoVT, VCF	Implementation	5+ years	Qualitative: Document business referrals to alternative lenders and investors. Quantitative: Track the number of small business loans with terms greater than 10 years facilitated by ACEDC on an annual basis.

Objective:

Addison County is an attractive destination for relocating entrepreneurs, remote workers, and expanding small businesses regionally and nationally.

Action	Partners	Status	Completion	Performance Measures
1. Implement "Think Vermont Grants for Relocation Outreach Work" (GROW), which fund efforts to attract and retain new residents to Addison County.	Lead: ACCOC Support: ACEDC, VTACCD	Implementation	5+ years	Qualitative: Continue State-mandated reporting on administration of the GROW grant program. Quantitative: Continue tracking the number of new resident prospects and actual new residents engaged through the program.
2. Work with local and State partners to promote Addison County as a desirable place to live and work.	Lead: ACEDC Support: ACCOC, ACRPC, VTACCD	Implementation	5+ years	Qualitative: Document efforts outside of the GROW grant program to promote Addison County as a desirable place to live and work. Quantitative: Track overall population, labor force, and number of businesses in Addison County on an annual basis.

KEY METRICS:

Number of active businesses: 2025 Baseline - 1,158 (U.S. Census Bureau)

Number of new businesses (annually): No 2025 Baseline

Number of businesses in operation for 5 years or more: No 2025 baseline

Gross sales at Addison County businesses: 2024 Baseline - $1,038,281,743 (Vermont Department of Taxes)

Annual sales tax receipts: 2024 Baseline - $227,799,489 (Vermont Department of Taxes)

Goal Area: Operational Infrastructure

GOAL STATEMENT: Businesses in Addison County benefit from robust and resilient conventional infrastructure as well as accessible operational infrastructure.

Objective:

Addison County offers adequate industrial and commercial facilities to support new and expanding businesses.

Action	Partners	Status	Completion	Performance Measures
1. Develop the Phase II and Phase III areas of the Middlebury Industrial Park, providing much-needed new commercial and industrial space for expanding businesses.	Lead: ACEDC Support: Middlebury College, Town of Middlebury	Planning	5+ years	Qualitative: Confirm the completion of engineering and permitting for new infrastructure in 2026. Confirm funding has been secured for infrastructure build out in 3-5 years. Quantitative: Track the number of shovel-ready sites on the market at the Industrial Park on an annual basis following construction of new infrastructure.
2. Advance new commercial/industrial development at the Firehouse Industrial Park, Bristol.	Lead: ACEDC Support: Stoney Hill Properties, Town of Bristol	Planning	5+ years	Qualitative: Confirm that new development is underway at Firehouse Industrial Park in the next 5 years. Quantitative: Track the total square feet of new commercial/industrial space developed at the Firehouse Industrial Park.
3. Plan and facilitate commercial and industrial redevelopment along the Vergennes N. Main Street corridor as envisioned in the Transportation Oriented Development Master Plan.	Lead: ACEDC, ACRPC Support: City of Vergennes, ACRPC, Vergennes Partnership, Private Property Owners	Conceptual	5+ years	Qualitative: Confirm the availability of sites in the N. Main Street corridor for commercial/industrial development or redevelopment in the next 5 years. Quantitative: Track the total square feet of new or improved commercial/industrial space along the N. Main Street corridor on an annual basis.
4. Continue to explore opportunities to plan and develop a business incubator with a special focus on agricultural businesses and value-add manufacturers.	Lead: ACEDC Support: ACORN, VTAFM, VTACCD	Conceptual	5+ years	Qualitative: Confirm that a site has been secured/identified for an agriculture and manufacturing-focused business incubator in the next 5 years. Quantitative: Track the number of businesses served through the incubator on an annual basis.
5. Pursue the recommendations of the Vergennes Planning and Environmental Linkages Study to improve truck traffic and business conditions in downtown Vergennes.	Lead: ACRPC Support: City of Vergennes, Vergennes Partnership, ACEDC, VTDOT	Planning	3-5 years	Qualitative: Confirm the selection of a desired PELS alternative and the commencement of work on the selected alternative in the next 5 years. Quantitative: Track traffic volumes following completion of the selected alternative.

Appendix - Economic Development

Objective:

Addison County offers adequate industrial and commercial facilities to support new and expanding businesses.

Action	Partners	Status	Completion	Performance Measures
6. Identify and assess Brownfields sites while pursuing further funding for environmental remediation.	Lead: ACRPC Support: ACEDC, Municipalities, Private Property Owners, VTACCD	Planning	5+ years	Qualitative: Confirm that a new EPA Brownfields Assessment grant has been secured in the next 5 years. Quantitative: Track the number of brownfield sites assessed annually.
7. Build an affordable and resilient telecommunications network throughout the Region for individuals and businesses.	Lead: ACRPC Support: Telecomm service providers, ACEDC, Municipalities	Implementation	5+ years	Qualitative: Confirm the completion of the Maple Broadband fiber-optic network within 5 years. Quantitative: Track the number of residential and commercial fiber-optic connections annually. Track the rate for fiber-optic service in Addisson County annually.



Aqua Vitea tank storage, MIddlebury



Aqua Vitea facility, Middlebury

Objective:

Affordable, sustainable energy sources are accessible for all businesses.

Action	Partners	Status	Completion	Performance Measures
1. Encourage the development of cost-effective, community-scale thermal systems, such as geothermal, Thermal Energy Networks, and waste heat recovery.	Lead: ACRPC Support: VCTN, ACEDC, VGS	Planning	5+ years	Qualitative: Document engagement with businesses and commercial users interested in geothermal networks. Quantitative: Track the number of thermal energy networks proposed, planned, and developed in Addison County annually.
2. Encourage Green Mountain Power (GMP) to make distribution upgrades to support continued renewable generation.	Lead: ACEDC, ACRPC Support: GMP, ACRPC	Planning	5+ years	Qualitative: Document engagements with GMP related to upgrades to local distribution system and investments in renewable generation. Quantitative: Track the dollars invested in upgrades to existing distribution system and in new renewable generation.
3. Leverage the municipal and energy infrastructure at the Middlebury Industrial Park to attract new and expanding businesses.	Lead: ACEDC Support: Town of Middlebury, VGS	Planning	5+ years	Qualitative: Document referrals of new/expanding business prospects to utility providers serving the Industrial Park. Quantitative: Track the number of new users connecting to existing municipal and energy infrastructure in the Industrial Park on an annual basis.
4. Develop farm and municipal digesters that produce clean energy, promote the circular economy, and improve water quality.	Lead: ACEDC, ACRPC Support: Purpose Energy, Municipalities, VGS	Conceptual	5+ years	Qualitative: Document engagements with farmers and municipal partners related to developing anaerobic digestors. Quantitative: Track the number of anaerobic digestors developed for energy production in Addison County annually.
5. Leverage energy incentives available from energy efficiency utilities and distribution utilities.	Lead: ACEDC Support: Municipalities, VGS, Efficiency Vermont, GMP	Implementation	5+ years	Qualitative: Document engagements with businesses and commercial energy users related to energy-related incentives. Quantitative: Track the number and value of energy incentives awarded to businesses and commercial users annually.

Objective:

Addison County manufacturers, artisans, and craftspeople benefit from adequate facilities for harvesting, processing and storing raw materials, work-in-progress goods, and value-added products.

Action	Partners	Status	Completion	Performance Measures
1. Advocate for responsible timber harvesting and develop strategies for retaining and expanding local lumber mills.	Lead: ACEDC Support: VTAFM, Local Mills, Value-add Businesses, VTANR	Planning	5+ years	Qualitative: Document engagements with State and local partners related to statewide timber harvesting and local timber milling. Quantitative: Track the number of value-add businesses in Addison County sourcing timber from within the state annually. Track the number of active lumber mills operating in Addison County annually.
2. Develop and implement strategies for retaining dairy farms and ensuring adequate access to processing facilities.	Lead: ACEDC Support: VTAFM, Local Dairies	Planning	5+ years	Qualitative: Document engagements with local dairy operations. Quantitative: Track the number of active dairy operations in Addison County annually. Track the output and revenue of active dairy operations in Addison County annually.
3. Work to expand access to warehousing and storage facilities for local producers and manufacturers and explore the feasibility for a shared facility with third-party logistics services.	Lead: ACEDC Support: Local Producers and Manufacturers, Industrial Property Owners	Planning	5+ years	Qualitative: Document engagements with local producers related to warehousing and storage. Quantitative: Track the total number of warehousing and storage facilities serving producers in Addison County and the total available square footage at warehousing and storage facilities.
4. Develop a shared aging facility for local cheesemakers.	Lead: ACEDC Support: Local Cheesemakers, VTAFM	Conceptual	5+ years	Qualitative: Confirm the need for a shared aging facility within five years. Quantitative: In the near term, track the number of local cheesemakers using aging facilities outside the county annually. Long term, track the number of local cheesemakers using a shared aging facility in the county annually.
5. Support efforts to develop a new grain processing facility in Addison County.	Lead: ACEDC Support: Champlain Valley Grain Center	Planning	3-5 years	Qualitative: Confirm the start of construction on a new grain processing facility in Addison County within five years. Quantitative: Track the volume of grain being processed within Addison County annually.
6. Along with efforts to establish a business incubator, coordinate efforts to establish shared commercial kitchen space in Addison County.	Lead: ACEDC Support: PAHCC, ACORN	Conceptual	3-5 years	Qualitative: Confirm that a shared/community commercial kitchen has been established within 5 years. Quantitative: Confirm the number of businesses utilizing a shared commercial kitchen annually.
7. Support opportunities at the Hannaford Career Center to serve as a hub for entrepreneurship.	Lead: ACEDC Support: PAHCC	Implementation	5+ years	Qualitative: Document referrals of local businesses to the Hannaford Career Center. Quantitative: Track the number of businesses that partner with Hannaford Career Center for training and business development annually.

Objective:

Addison County businesses have easy access to distribution networks that allow them to affordably and efficiently deliver their products to local, regional, and national markets.

Action	Partners	Status	Completion	Performance Measures
1. Seek opportunities to expand refrigerated food delivery services in Addison County.	Lead: ACEDC Support: ACORN, VTAFM	Conceptual	3-5 years	Qualitative: Confirm the need for expanded refrigerated food delivery in Addison County. Quantitative: Track the number of local service providers offering refrigerated food delivery in Addison County and the number of local producers served by local refrigerated food
2. Work with the Vermont Agency of Agriculture Food Markets to seek opportunities for launching and expanding distribution cooperatives among Addison County farm and forest producers and small businesses.	Lead: ACEDC Support: VTAFM, ACORN	Planning	5+ years	Qualitative: Document engagements with State staff and local producers related to shared distribution. Quantitative: Track the number of local producers and small businesses participating in distribution cooperatives annually.

Objective:

Expand critical water and wastewater infrastructure in existing villages to support development. Businesses in the Region play an active role in planning and, when appropriate, financing the expansion.

Action	Partners	Status	Completion	Performance Measures
1. Engage manufacturers and large industrial and commercial users in discussions on future infrastructure needs.	Lead: ACEDC Support: ACRPC, Local Industrial and Commercial users, State and Local Utility Providers	Planning	5+ years	Qualitative: Document engagements with large industrial and commercial users related to future infrastructure needs. Quantitative: Track the number and value of investments in infrastructure upgrades in Addison County annually.
2. Advocate for zoning and land use planning that promotes mixed-use development, allowing for commercial and industrial users to absorb the cost for upgraded and expanded infrastructure.	Lead: ACRPC Support: ACEDC, Municipalities	Planning	5+ years	Qualitative: Document engagements with municipal partners related to zoning updates. Quantitative: Track the number of zoning districts within Addison County that permit mixed-use

KEY METRICS:

Square feet of new commercial/industrial space constructed (annually): 2025 Baseline needed

Dollars invested in water and wastewater infrastructure (annually): 2025 Baseline needed

Dollars invested in road, telecom, and energy infrastructure (annually): 2025 Baseline needed

Office vacancy rate: 2025 Baseline needed

Retail vacancy rate: 2025 Baseline needed

Goal Area: Quality of Life

GOAL STATEMENT: High quality of life is regularly cited as the number one reason talent and industry choose to locate and remain in Addison County.

Objective:

A commitment to equity among businesses, municipalities, and civic organizations ensures Addison County's high quality of life is enjoyed by all residents.

Action	Partners	Status	Completion	Performance Measures
1. Refine ACEDC's existing programs to include measurable business startup and entrepreneurial activity among minority populations in Addison County to determine a baseline for monitoring progress in advancing minority and women-owned businesses.	Lead: ACEDC Support: VTDC, VCF, VT-POC, VTCWE	Conceptual	5+ years	Qualitative: Document efforts to market ACEDC programs and services to minority populations. Quantitative: Track the number of minority and women-owned businesses served by ACEDC annually.
2. Work with lending partners to determine strategies to help minority and women entrepreneurs access capital.	Lead: ACEDC Support: Commercial Lenders, VEDA, VCLF, CCOVT, VCF	Conceptual	5+ years	Qualitative: Document engagements with lending partners related to strategies for minority and women-owned business lending. Quantitative: Track the number and value of loans issued by ACEDC to minority and women-owned businesses annually
3. Establish business training and mentorship programs tailored specifically to marginalized and underrepresented populations.	Lead: ACEDC Support: VTDC, VCF, VTPOC, VTCWE	Conceptual	0-2 years	Qualitative: Confirm the launch of new programs specifically tailored to marginalized and underrepresented populations. Quantitative: Track the number of entrepreneurs and business owners from marginalized and underrepresented populations served by ACEDC annually.
4. Refine ACEDC's programs to ensure they assist marginalized and underrepresented populations with market research, product development, packaging design, distribution strategies, marketing and promotion strategies, and facilitate access to retail partnerships.	Lead: ACEDC, Support: VTDC, VTPOC, VTCWE	Conceptual	5+ years	Qualitative: Document efforts to market ACEDC programs and services to marginalized and underrepresented populations. Quantitative: Track the number of entrepreneurs and business owners from marginalized and underrepresented populations served by ACEDC annually.
5. Refine ACEDC's and others' programs to ensure they link marginalized and underrepresented populations with larger contracts and financial opportunities, potentially including business-to-business (B2B) linkage forums for joint ventures and teaming solutions.	Lead: ACEDC Support: VTDC, VTPOC, VTCWE, VCF	Conceptual	5+ years	Qualitative: Document efforts to connect entrepreneurs and small business owners from underrepresented and marginalized populations to new business and contracting opportunities. Quantitative: Track the number of entrepreneurs and small business owners from marginalized and underrepresented populations that receive assistance accessing new business and contracting opportunities annually.

Objective:

Addison County's businesses, municipalities, and civic organizations work together to preserve and expand access to recreational and cultural amenities.

Action	Partners	Status	Completion	Performance Measures
1. Draft a countywide master plan for municipal forests that includes an economic development chapter supporting the Moosalamoo National Recreational Area Master Plan.	Lead: ACRPC Support: ACEDC	Conceptual	3-5 years	Qualitative: Confirm that a countywide master plan for municipal forests/public lands is completed or underway within 5 years. Quantitative: Track the total acres and miles of trails included in master planning.
2. Measure the economic impact of outdoor recreation in Addison County.	Lead: ACEDC, Support: MALT	Conceptual	5+ years	Qualitative: Confirm a strategy has been established within 5 years for measuring the annual economic impact of outdoor recreation in Addison County. Quantitative: Track the amount of consumer spending that can be directly attributed to outdoor recreation in Addison County annually.
3. Identify and pursue funding streams to support arts events, venues, and pop-ups for individual artists and artistic organizations.	Lead: ACEDC, Support: Downtown Orgs	Implementation	5+ years	Qualitative: Document efforts to promote funding opportunities to artists and arts organizations in Addison County. Quantitative: Track the number of funding applications for arts and cultural programming and projects annually and the volume of funding awarded.
4. Investment in trail infrastructure, signage, and maintenance along the TAM to improve accessibility.	Lead: ACRPC Support: MALT, GMC, ACBC, Municipalities, Downtown Orgs, ACEDC	Implementation	5+ years	Qualitative: Document the current need for trail maintenance and improvements along the TAM. Quantitative: Measure volume and value of investments made in improving the TAM annually.
5. Develop a completely interconnected trail network that supports active transportation, recreation, and health while also driving sustainable tourism and business growth.	Lead: ACRPC Support: MALT, GMC, ACBC, Municipalities, Downtown Orgs, ACEDC	Planning	5+ years	Qualitative: Confirm that a plan or strategy has been developed for building out a regional trail network within 5 years. Quantitative: Track the miles of interconnected trails spanning municipalities within Addison County annually.

Objective:

A thriving business sector offers residents access to essential goods and services.

Action	Partners	Status	Completion	Performance Measures
1. Conduct a consumer survey to identify gaps in Addison County's retail and service sectors.	Lead: ACEDC Support: ACCOC, Downtown Orgs	Conceptual	0-2 years	Qualitative: Confirm that a survey has been completed within 2 years. Quantitative: Track the number of survey respondents and measurable demand for specific retail and services.
2. Use the market data developed in the Transit Oriented Development market study to identify gaps in retail and service sectors.	Lead: ACEDC Support: ACRPC, ACCOC, Downtown Orgs	Implementation	0-2 years	Qualitative: Confirm an analysis has been completed of TOD market study data. Quantitative: Track the number of retail and service gaps in the market annually.
3. Proactively recruit businesses that offer goods and services currently missing in the market.	Lead: ACEDC Support: ACCOC, Downtown Orgs, Municipalities, Commercial Landlords	Implementation	5+ years	Qualitative: Document efforts to recruit business that fill gaps in the market. Quantitative: Track the number of new businesses opening in Addison County annually that provide goods or services that were previously unavailable in the market.
4. Provide coordinated succession planning for existing businesses to ensure businesses providing essential goods and services continue to operate after transitions in ownership.	Lead: ACEDC Support: VTSBDC, ACCOC	Implementation	5+ years	Qualitative: Document engagements with owners planning an exit from their businesses. Quantitative: Track the number of businesses that successfully transfer ownership annually.

Objective:

Addison County maintains high ratings for health factors and health outcomes.

Action	Partners	Status	Completion	Performance Measures
1. Advocate for the vital role that health factors play in sustaining a vibrant and effective local workforce in planning processes.	Lead: ACEDC, Support: Local Healthcare Providers, ACRPC	Planning	5+ years	Qualitative: Document engagements with healthcare providers and community partners related to health factors and workforce development. Quantitative: Track health factors in Addison County annually using the County Health Rankings & Roadmaps database.
2. Work with partners in health and health care, through initiatives like Community Health Needs Assessments (CHNA) and Community Health Improvement Plans (CHIP) to assess and design actions that improve economic mobility for our workforce and economic development for our county, while helping control rising healthcare costs.	Lead: ACEDC Support: Local Healthcare Providers	Planning	5+ years	Qualitative: Confirm ACEDC's participation in the next Addison County Community Health Needs Assessment (CHNA) and Community Health Improvement Plan (CHIP), planned for 2027. Quantitative: Track the number of CHIP objectives that directly support workforce and economic development.
3. Explore the feasibility of health-based bond programs such as social impact bonds and development impact bonds to drive local investments in health and wellness.	Lead: ACEDC Support: VCF, VCLF, Local Healthcare Providers	Planning	3-5 years	Qualitative: Confirm the feasibility of health-based bond programs in Addison County within 5 years. Quantitative: Track the number of businesses and community partners consulted on topic of health-based bonds.
4. Develop promotional campaigns and marketing initiatives that recognize local employers who invest in the health and wellness of employees.	Lead: ACEDC Support: VTDOL, Local Healthcare Providers	Planning	3-5 years	Qualitative: Confirm the launch of marketing and promotional campaigns that recognize local employers who invest in employee health and wellness. Quantitative: Track the number of employers in Addison County making significant investments in employee health and wellness annually.

KEY METRICS:

Poverty rate: 7.4% (2024 Addison County Community Health Need Assessment)

Uninsured rate: 4.7% (2024 Addison County Community Health Need Assessment)

Cost-burdened renters/homeowners: 47%/24% (2024 Addison County Community Health Need Assessment)

Percentage of adults experiencing food insecurity in prior year: 7% (2024 Addison County Community Health Need Assessment)

Ratio of population to primary care physicians: 890 to 1 (2024 Addison County Community Health Need Assessment)

Conclusion

This Regional Economic Development Strategy (REDS) acts as the guiding plan for the Addison County Economic Development Corporation (ACEDC), and extends the West Central Vermont Economic Development Strategy and the Economic Development Chapter of the Addison County Regional Plan.

The ACEDC and ACRPC began this effort in the spring of 2025. The base of the strategy was inspired by the West Central Vermont Economic Development Strategy, the original Economy Chapter of the Addison County Regional Plan and the operating strategy of the ACEDC. This basis was then adjusted by the REDS Steering Committee through several meetings and draft overviews. After a substantial draft was completed, ACRPC and ACEDC, hosted two open houses to provide the community with opportunities for input. Invitations were extended through direct, internal, and public channels to ensure broad community buy-in. Throughout this process, professionals were consulted in their area of expertise and edits were presented to the Committee for review.

The implementation of this plan will be largely performed and measured by the ACEDC. The organization is the lead on most actions, a partner on almost all actions, and will be engaged with the entire plan's implementation and evaluation. This is a living document, intended to be revised as conditions and goals evolve. The Regional Plan requires formal revisiting every eight years, which further enforces the need for constant revision.

The Addison County Economic Development Corporation and the Addison County Regional Planning Commission would like to thank the following groups and organizations for their contributions and support for this process:

REDS STEERING COMMITTEE:

Nicole MacTavish (ACEDC Board), Renny Perry (ACEDC Board), Mark Foster (ACEDC Board), Gioia Kuss (ACRPC Board), Ron Dendas (ACRPC Board), Melanie Sands (ACRPC Board), Jennfier Erwin (ACRPC Board), Phil Pedlikin (ACRPC Board).

COMMUNITY PARTNERS THAT REVIEWED THE PLAN:

Middlebury Area Land Trust, Vermont Gas Systems, Vermont Community Thermal Networks, Patricia A. Hannaford Career Center, Kennedy Brothers, Causton Consulting, and Tri-Valley Transit.



Future Land Use

Figure 1: Substantial Regional Resources

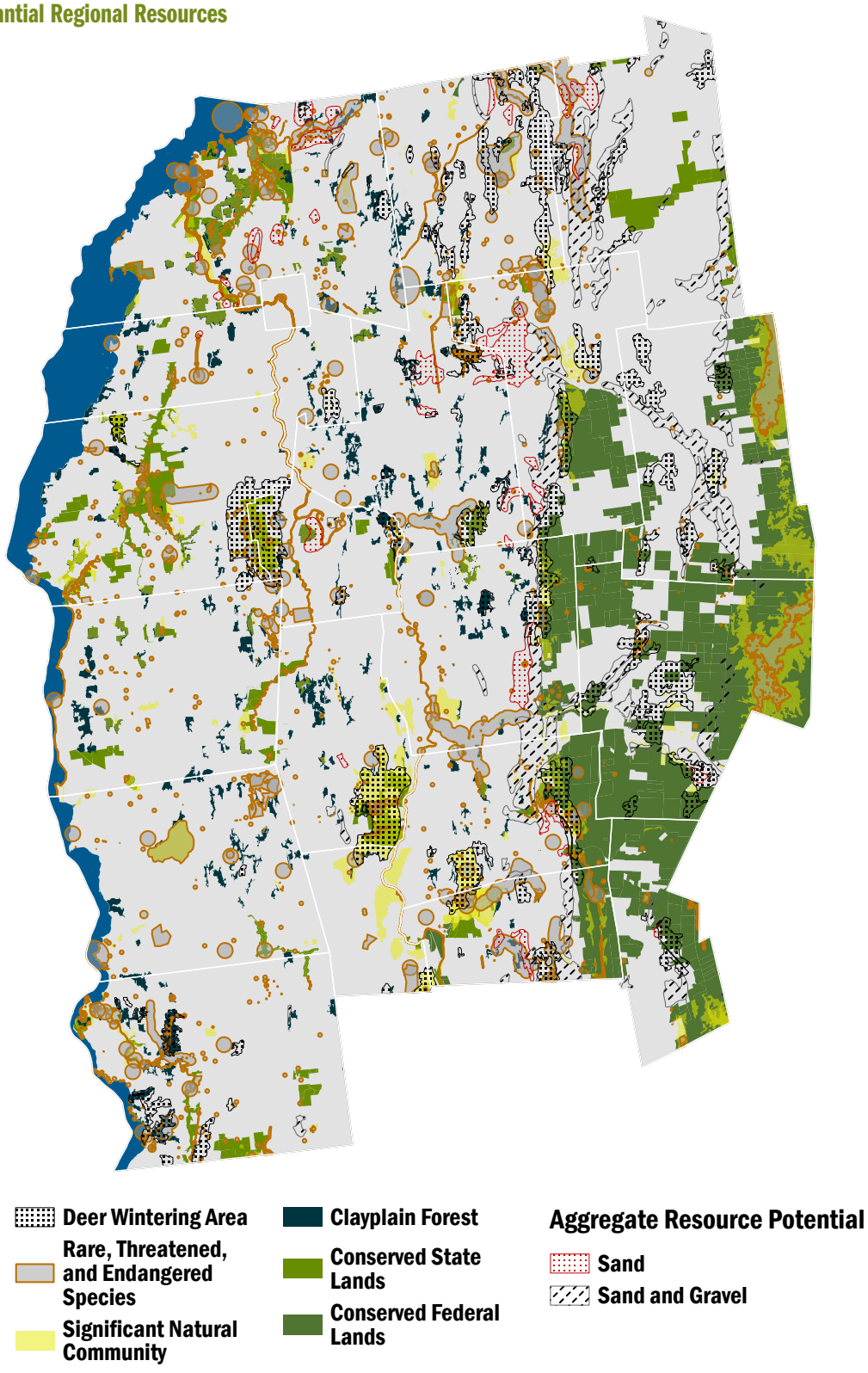
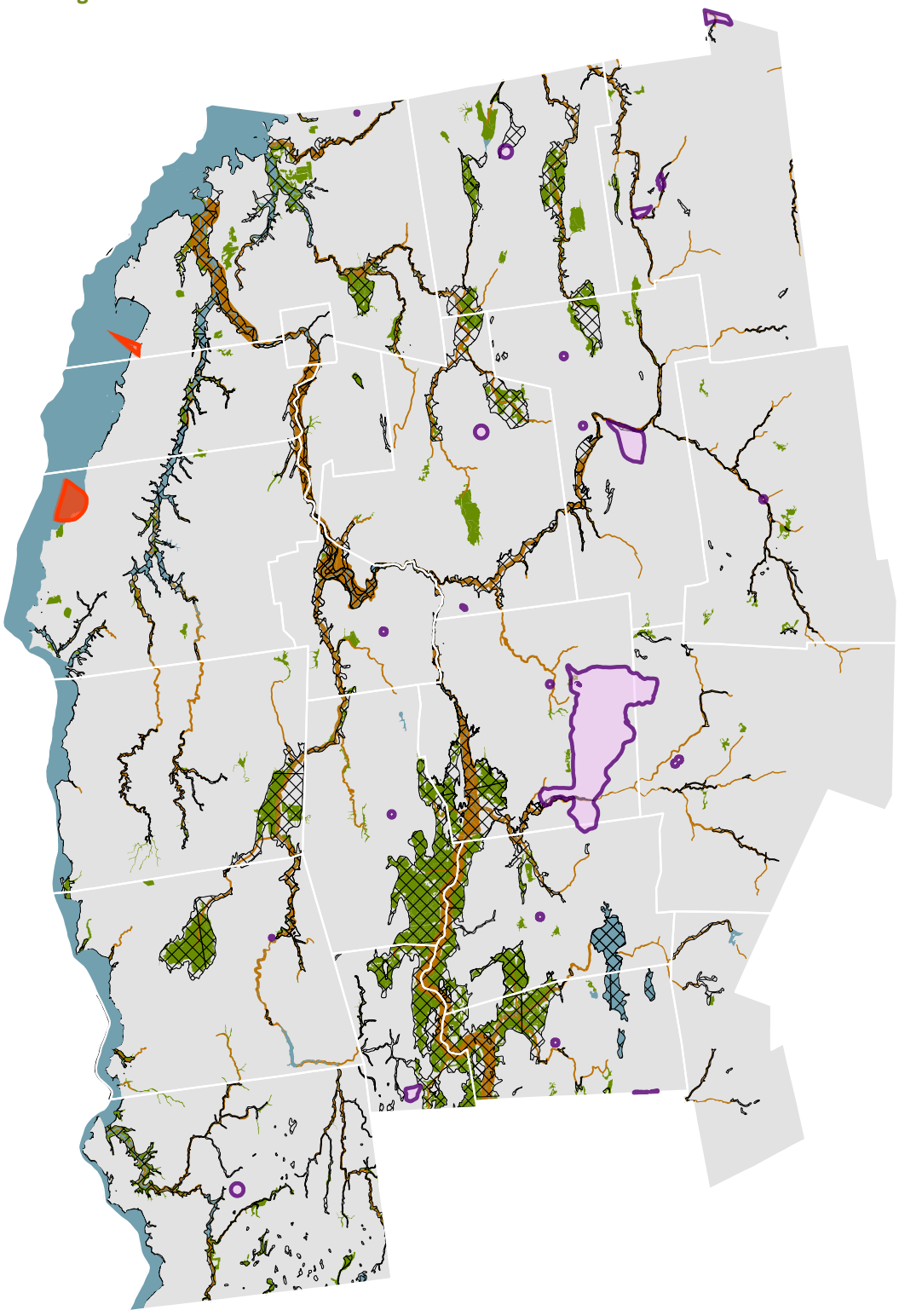
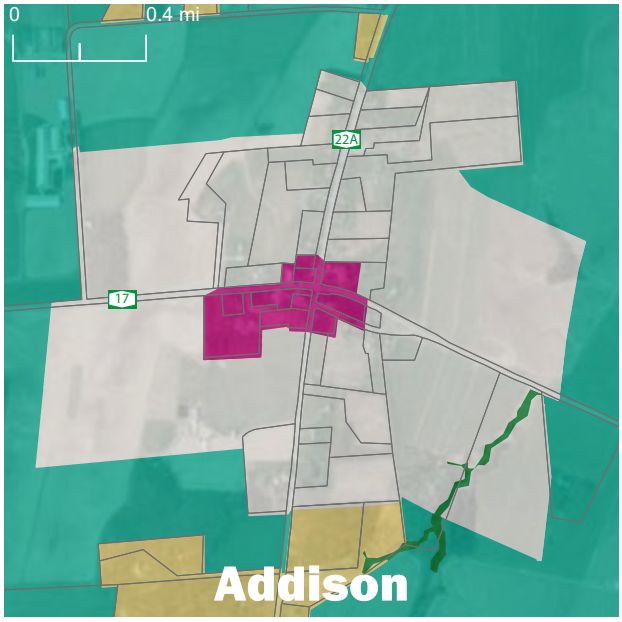


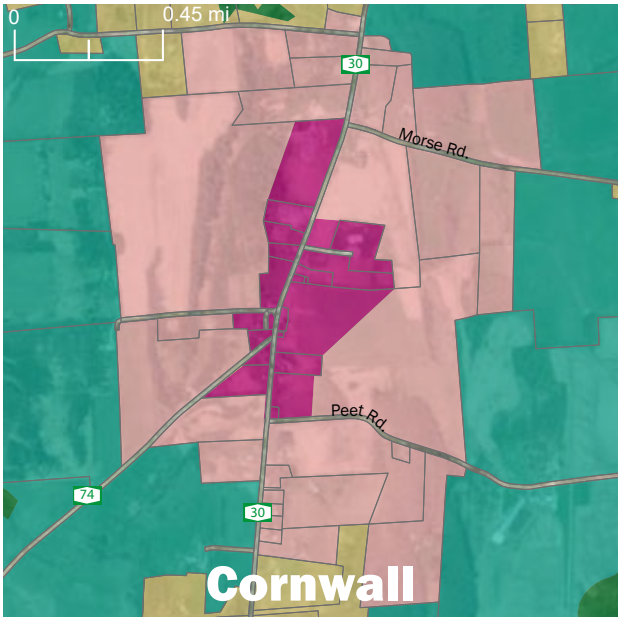
Figure 2: Substantial Regional Natural Resources

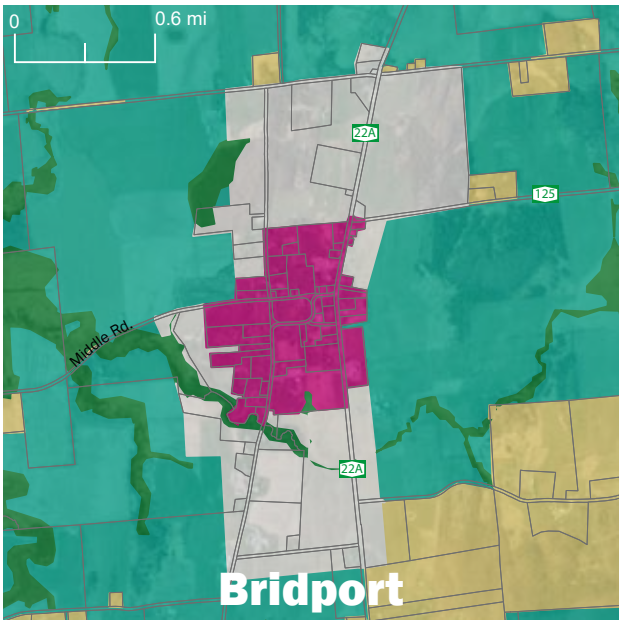


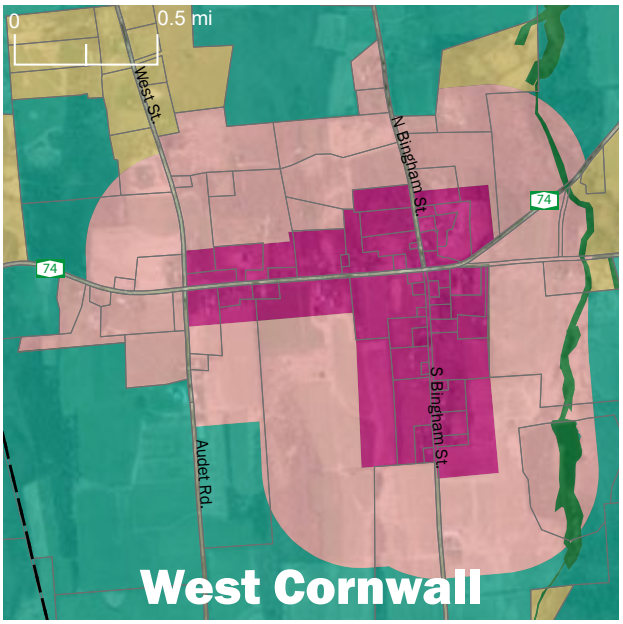
Regionally Significant Resource- Land	Description	Map Data Source
Conserved Federal Lands		
USFS National Forest Land	GMNF-managed land, Including Wilderness Areas	Forest Service National Map Dataset, VCGI VT Wilderness Areas
Conserved State Lands		
VT State Parks	State-managed land within Kingsland Bay, Button Bay, D.A.R., Branbury State Parks land boundaries	VCGI VT Data - Vermont Protected Lands Database
Wildlife Management Areas	Cornwall Swamp, Dead Creek, East Creek, Lemon Fair, Lewis Creek, Little Otter Creek, Lower Otter Creek, Pond Woods, Snake Mountain	VCGI VT Data - Vermont Protected Lands Database
Historic Sites	DAR John Strong Mansion Museum, Chimney Point State Historic Site, Mount Independence Historic Site	VCGI VT Data - Vermont Protected Lands Database
Rare, Threatened, Endangered Species	Rare, Threatened, and Endangered Plant and Animal Species included in database maintained by the Vermont Natural Heritage Inventory (VNHI).	Vermont Natural Heritage Inventory (VNHI), VT ANR Atlas
Significant Natural Communities	"Natural Communities recorded as, S1 (Very Rare): Extremely uncommon, with generally 1-5 high-quality occurrences in Vermont. S2 (Rare): Uncommon, with a small number of sites or limited total area in the state- includes Clay Plain forest"	VT ANR Atlas
Deer Wintering Areas	Potential deer-wintering habitat areas identified by VFWD District Biologists in 2010, areas more than 20 acres and below 2,000 feet elevation, generally characterized by rather dense softwood (conifer) cover, such as hemlock, balsam fir, red spruce, or white pine, occasionally mixed forest with a strong softwood component or west-facing hardwood slopes in conjunction with softwood cover.	VT ANR Atlas
Aggregate Resource Potential	Sand, Sand and Gravel areas with potential aggregate resources derived from U.S. Geological Survey (USGS) sources.	VT ANR Atlas
Regionally Significant Resource- Water	**Description**	**Map Data Source**
Major Lakes & Ponds (>20 acres)	Lake Champlain, Lake Dunmore, Bristol Pond, Richville Pond, Cedar Lake, Silver Lake, Fern, Sugar Hill Reservoir, Johnson Pond, Mud Pond, Spruce Pond	VT ANR Atlas
Major Rivers	Otter Creek, Lemon Fair, Dead Creek, Lewis Creek, Middlebury River, New Haven River, Little Otter Creek	VT ANR Atlas
Source Protection Areas	Ground Water source protection areas for active groundwater intake sources: Middlebury Water Dept, East Middlebury Fire Dept., BristolWater Dept., Whiting Water Corp., Starksboro Village Water Coop., and various Mobile Home Parks and Schools	VT ANR Atlas
	Surface Water Source Protection Area for active surface water intake of TriTown Water and future water intakes	VT ANR Atlas
Wetlands		
Class I Wetlands	Beaver Meadows wetland (NW Ripton), with 400 foot buffer zone, and wetlands petitioned for this Class designation in the future	Vermont State Wetland Inventory, VT ANR Atlas
Class II Wetlands (> 20ac)	Cornwall Swamp, Leicester-Salisbury Swamp, Shoreham Swamp, and all other wetlands over 20 acres	Vermont State Wetland Inventory, VT ANR Atlas
River Corridors	Meander and buffer areas identified for Large Rivers (>2.0 mile square watershed)	State River Corridor (2019), VT ANR Atlas
FEMA Special Flood Hazard Areas	1% annual chance Floodplains (aka 100-year floodplains) as mapped by FEMA/USGS on Flood Insurance Rate Maps	FEMA FIRMS as digitized under contract to ACRPC, 2008 [Anticipated USGS update to digital FIRMS in 2028]

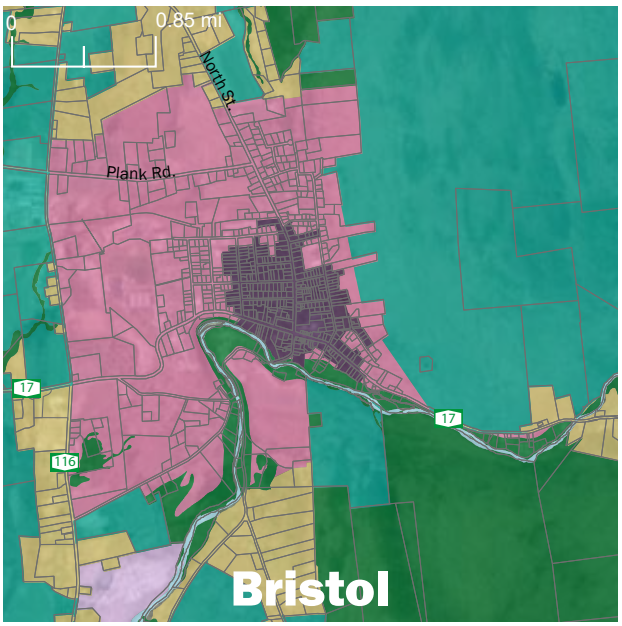
FUTURE LAND USE MAPS BY MUNICIPALITY

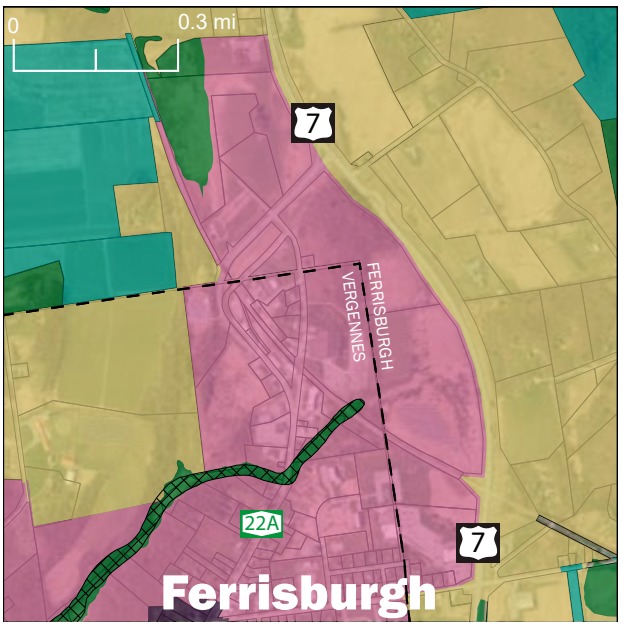




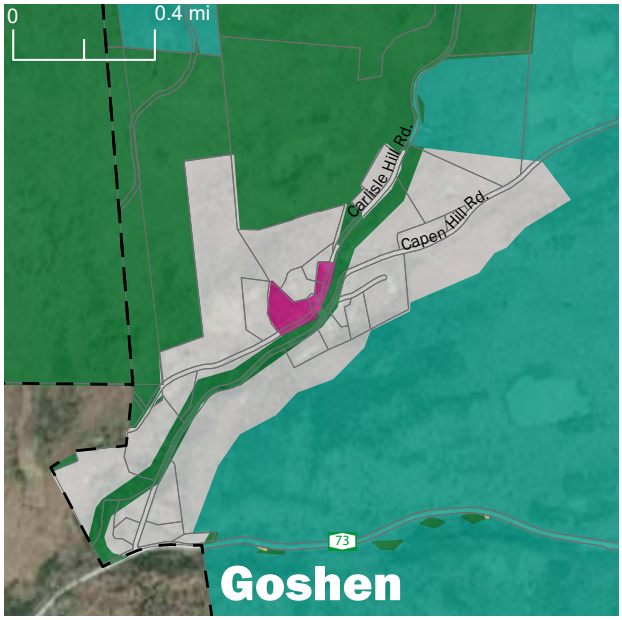


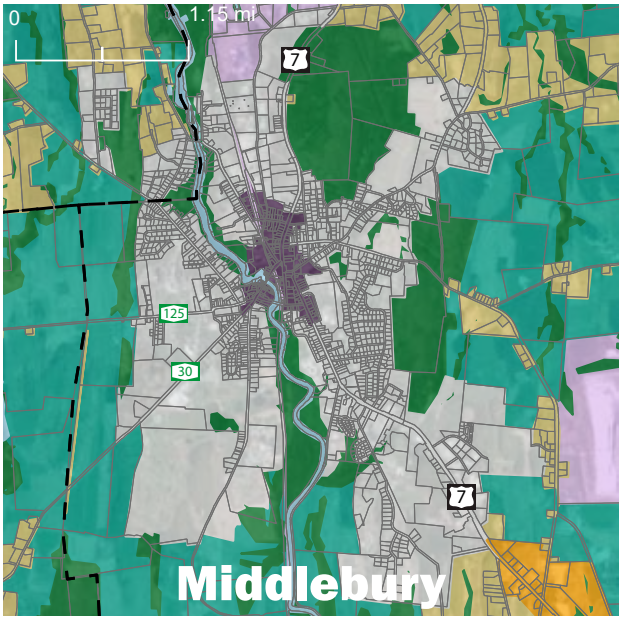


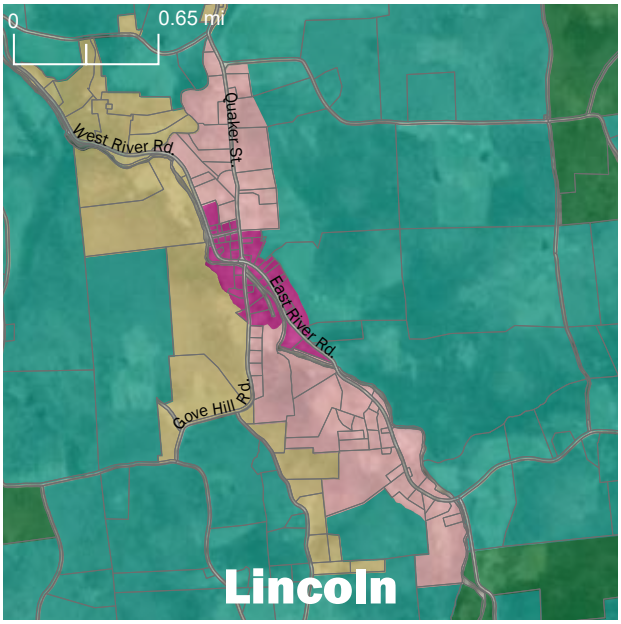


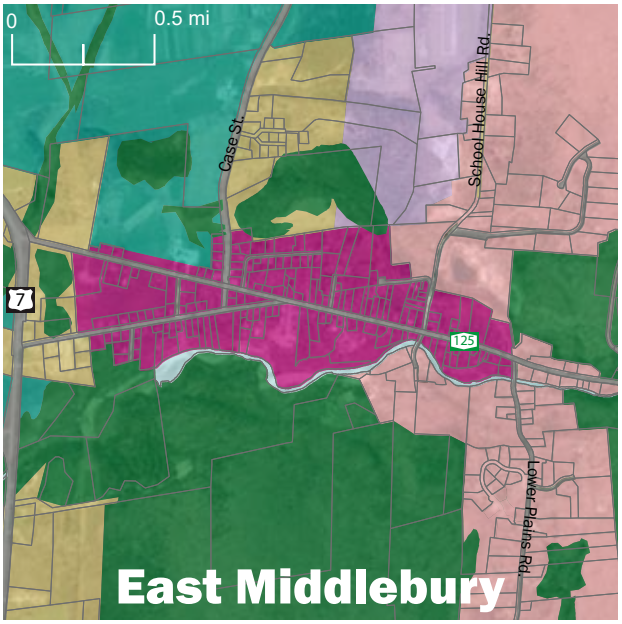


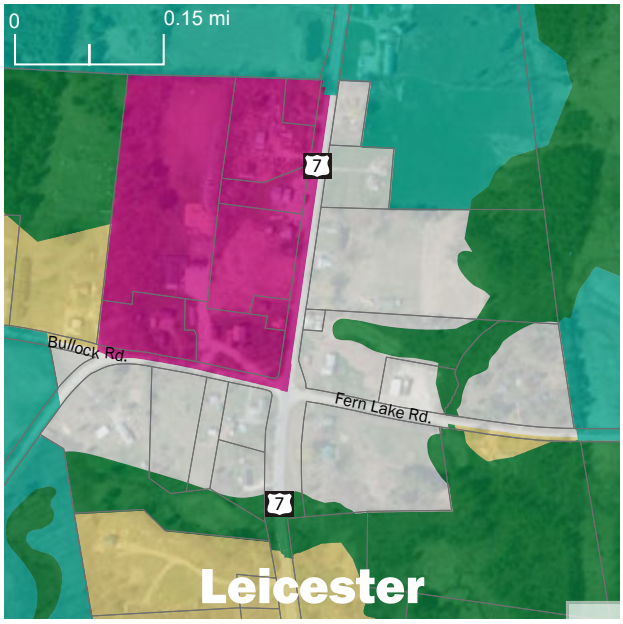
Appendix - Future Land Use

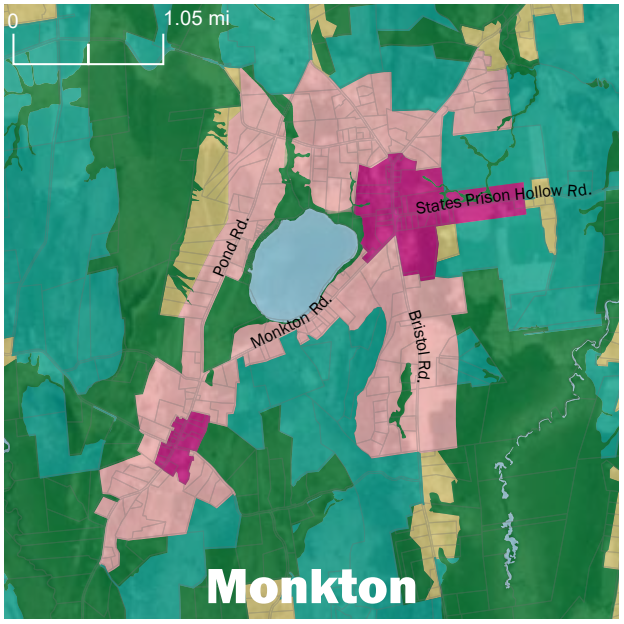


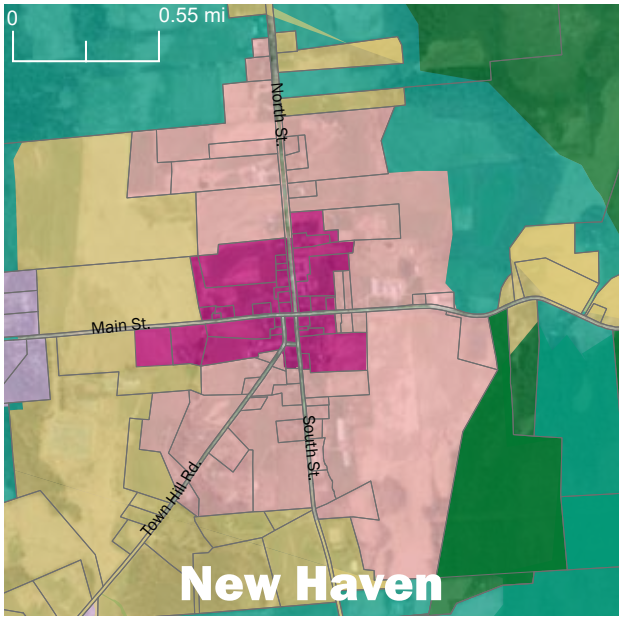


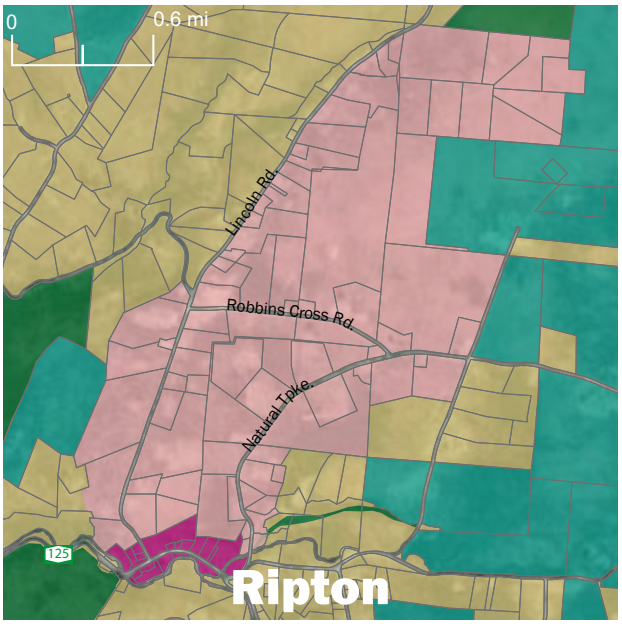


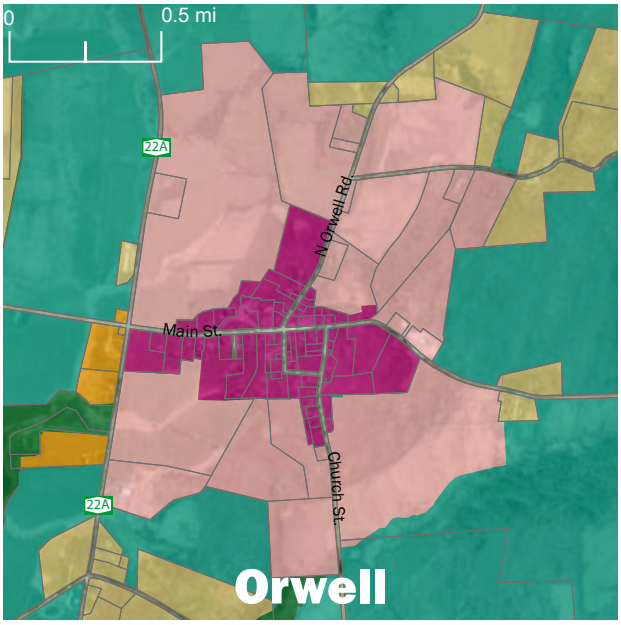


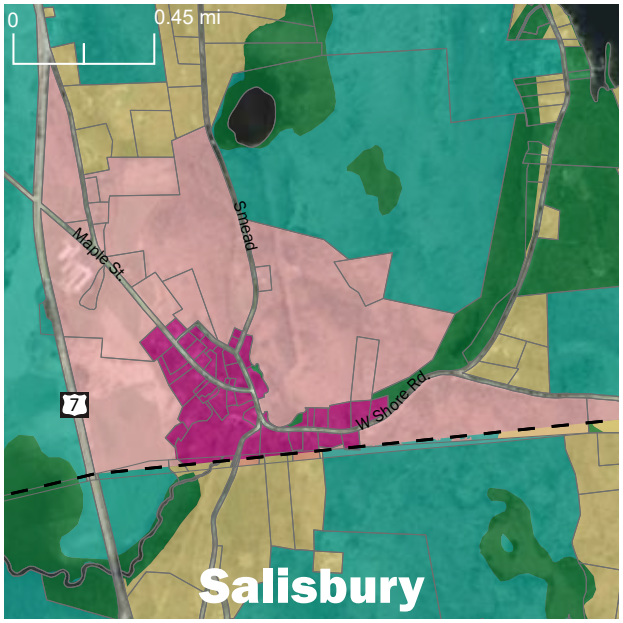


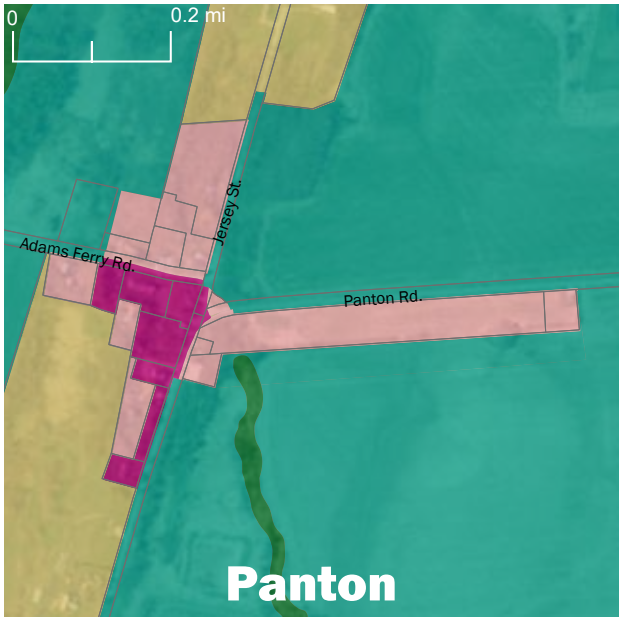


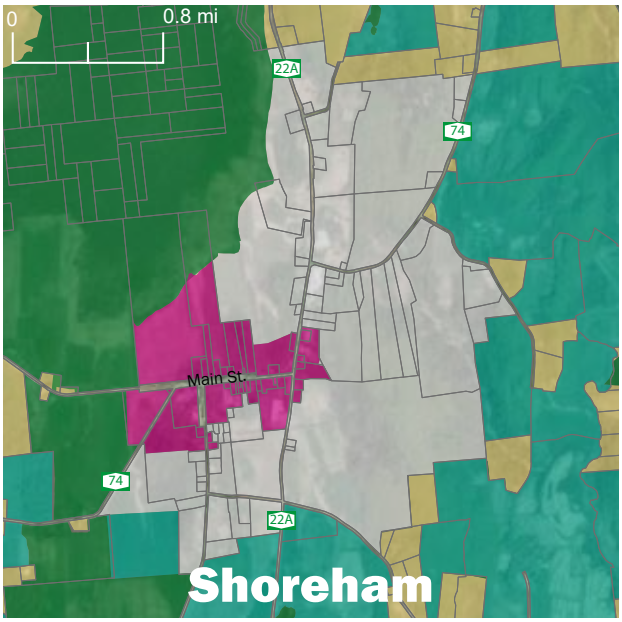

0
0.55 mi
North St.
Main St.
South St.
Town Hill Rd.
New Haven

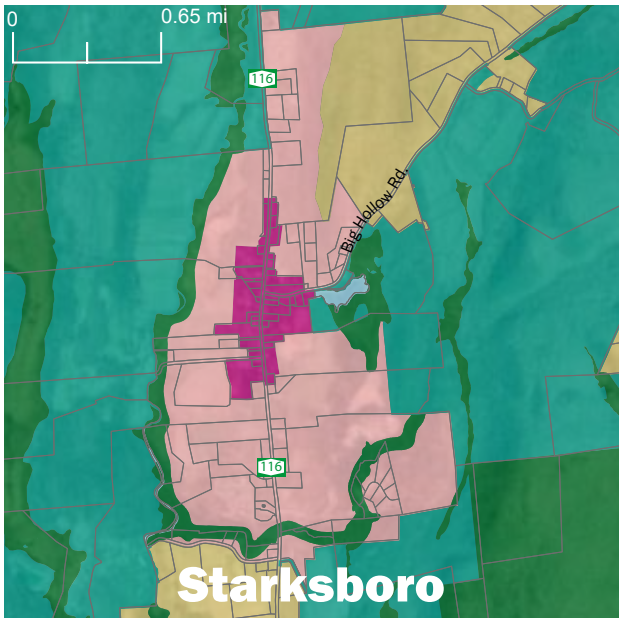

0
0.6 mi
Lincoln Rd.
Robbins Cross Rd.
Natural Tpke.
125
Ripton

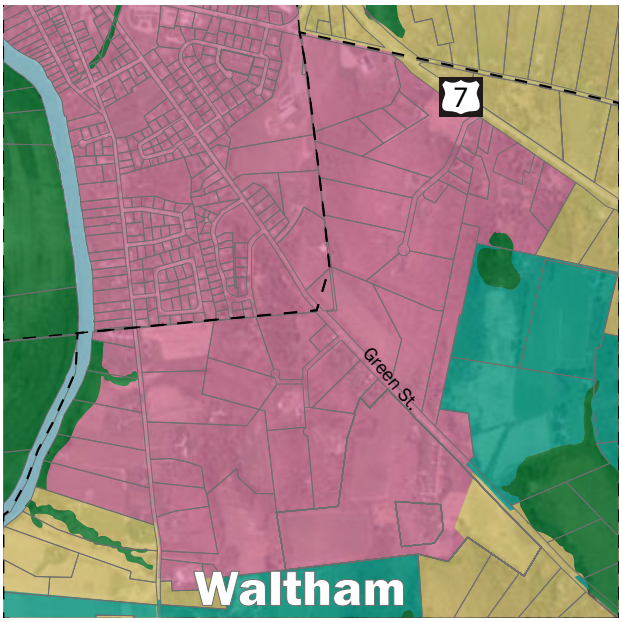

0
0.5 mi
22A
N Orwell Rd.
Main St.
Church St.
22A
Orwell

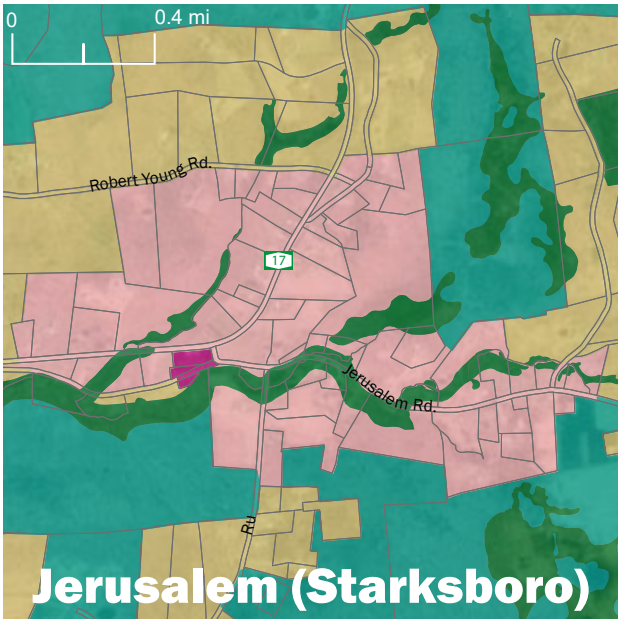

0
0.45 mi
Maple St.
Smead
7
W Shore Rd.
Salisbury

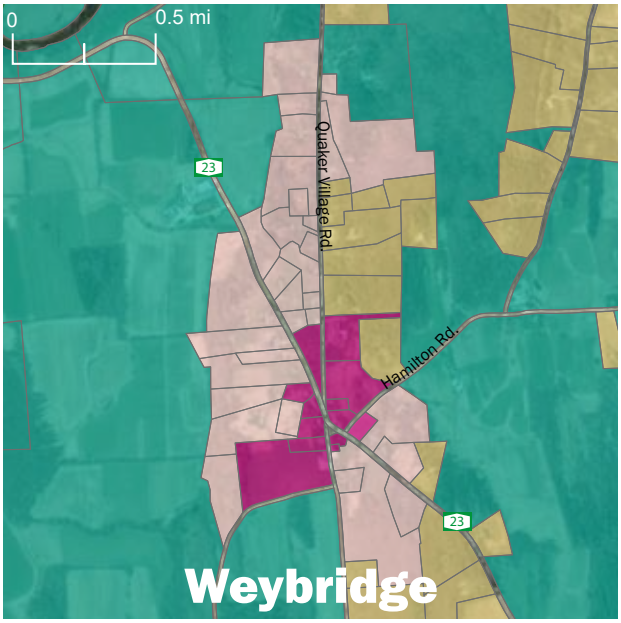

0
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Jersey St.
Adams Ferry Rd.
Panton Rd.
Panton

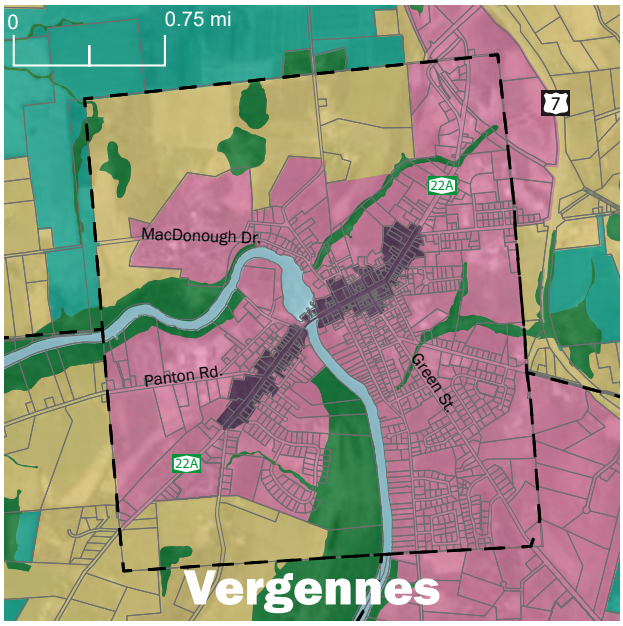

0
0.8 mi
22A
74
Main St.
74
22A
Shoreham

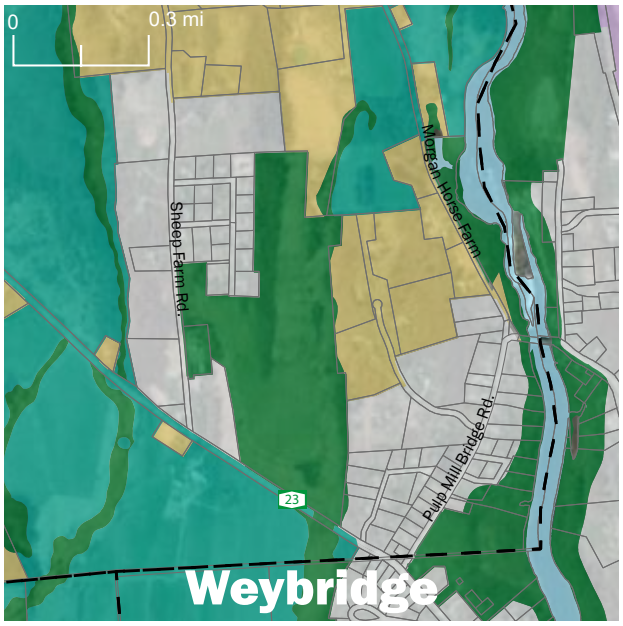

0
0.65 mi
116
Bird Hollow Rd.
116
Starksboro

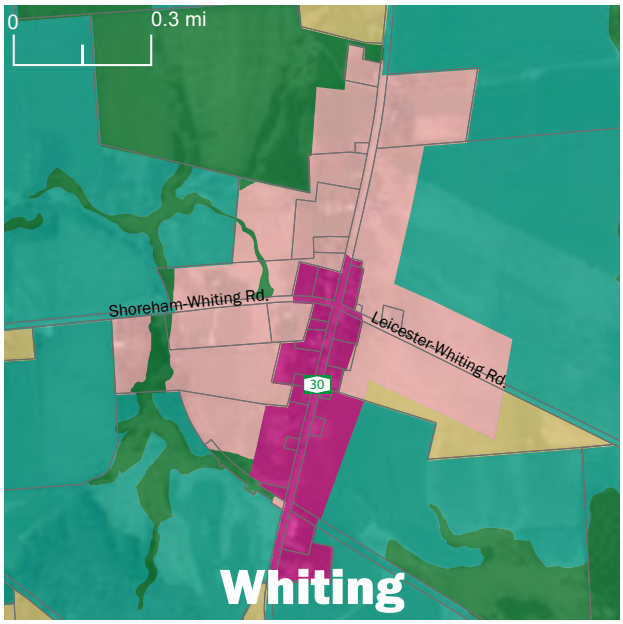

7
Green St.
Waltham


0
0.4 mi
Robert Young Rd.
17
Jerusalem Rd.
Rd
Jerusalem (Starksboro)


0
0.5 mi
23
Quaker Village Rd.
Hamilton Rd.
23
Weybridge


0
0.75 mi
7
22A
MacDonough Dr.
Panton Rd.
Green St.
22A
Vergennes


0
0.3 mi
Sheep Farm Rd.
Morgan Horse Farm
Pulp Mill Bridge Rd.
23
Weybridge



FUTURE LAND USE MAPS BY MUNICIPALITY

Title 4302(c) subdivision 2791(13) states:

(13) "Smart growth principles" means growth that:

a) Maintains the historic development pattern of compact village and urban centers separated by rural countryside.

b) Develops compact mixed-use centers at a scale appropriate for the community and the region.

c) Enables choice in modes of transportation.

d) Protects the State's important environmental, natural, and historic features, including natural areas, water quality, scenic resources, and historic sites and districts.

e) Serves to strengthen agricultural and forest industries and minimizes conflicts of development with these industries.

f) Balances growth with the availability of economic and efficient public utilities and services.

g) Supports a diversity of viable businesses in downtowns and villages.

h) Provides for housing that meets the needs of a diversity of social and income groups in each community.

i) Reflects a settlement pattern that, at full build-out, is not characterized by:

i. scattered development located outside compact urban and village centers that is excessively land consumptive;

ii. development that limits transportation options, especially for pedestrians;

iii. the fragmentation of farmland and forestland;

iv. development that is not serviced by municipal infrastructure or that requires the extension of municipal infrastructure across undeveloped lands in a manner that would extend service to lands located outside compact village and urban centers;

Glossary

Glossary

AAFM - Agency of Agriculture and Farm Markets / Vermont Agency of Agriculture, Food & Markets

ACBC - Addison County Bike Club

ACCD - Agency of Commerce & Community Development

ACCoC - Addison County Chamber of Commerce

ACORN - Addison County Relocalization Network

ACRPC - Addison County Regional Planning Commission

ACRWC - Addison County River Watch Collaborative

ACSWMD - Addison County Solid Waste Management District

ACTR - Addison County Transit Resources

Act 200 - The 1988 amendments to 24 V.S.A. Chapter 117; the Vermont Municipal and Regional Planning and Development Act

Act 250 - (10 V.S.A. §6001); Vermont Land Use and Development Law; the state environmental review process conducted by a District Environmental Commission to consider a proposed development's impact using 10 established criteria

Adaptation - Adjusting to the current or anticipated climate impacts by making improvements to, or preventing the deterioration of, natural and man-made systems and structures. 10 V.S.A. § 590

Adaptive Forest Management - Management practices that optimize forest structure, composition, and function to increase levels of forest resiliency

Adaptive Reuse - The process of repurposing an existing building or structure for a new use, often preserving historic or valuable architectural elements while meeting modern needs

Affordable Housing - Housing is affordable when households with an income below the county median income pay no more than 30% of their income on housing costs. Housing costs for renters include rent and utilities. Housing costs for homeowners include principle and interest, property insurance, and property taxes / Spending no more than 30 percent of household income on housing. 24 V.S.A. § 4303 (1)

Agricultural Land - Real estate capable of supporting commercial farming (10 V.S.A. §331 [2])

Agritourism - Tourism in which tourists take part in farm or village activities, as animal and crop care, cooking and cleaning, handicrafts, and entertainments. 12 V.S.A. § 5871

Agroecology - The application of ecological principles to agriculture, with attention to how agricultural practice will affect habitats or ecosystems. 6 V.S.A. § 4710

ANR - Vermont Agency of Natural Resources

AOT - Agency of Transportation

Aquifers - Underground layers of water bearing rock or sediment that store groundwater. 10 V.S.A. § 1391

Archaeology - The study of physical evidence of past human activity, often unearthed through excavation or analysis

Area-Based Zoning - A type of zoning ordinance that establishes a formula for the number of non-farm dwellings permitted per acre, with houses typically built on small lots

Areas of High Flood Risk - Areas of High Flood Risk are Special Flood Hazard Areas as mapped by the U.S Federal Emergency Management Agency and River Corridors as mapped by the Vermont Agency of Natural Resources. 10 V.S.A. § 752

Audubon Vermont - State program of the National Audubon Society, focused on bird conservation, habitat protection, and environmental education

Benefit Cliff - The sudden decrease that can occur from a small increase in earnings that can make people ineligible for benefits, but not making enough to sustain themselves

Berm - A raised barrier or shelf of land, often made of compacted soil, that separates areas vertically

BGS - Buildings & General Services

Biological Rhythms - Natural cycles in living organisms, such as sleep-wake cycles or seasonal behaviors, influenced by environmental cues

BIPOC - Black, Indigenous, and People of Color (used as a unifying identity label for people of color that also emphasizes the unique racial experiences of Black people and Indigenous people)

BMP - Best Management Practices

BRELLA - Brownfields Reuse and Environmental Liability Limitation Act

BRIC - Building Resilient Infrastructure and Communities grant

British Thermal Unit (Btu) - The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit)

Brownfield - A property where the presence, potential presence, or perception of hazardous substances, pollutants, or contaminants complicates its expansion, redevelopment, or reuse. 10 V.S.A. § 6642

Brownfields Reuse Program - A program that aims to assess, clean up, and reuse sites that have the presence or potential presence of hazardous substances

BTN - Bristol Trails Network

Building Height - The vertical measurement of a building, as measured from ground elevation to the highest point of the structure

BWQC - Basin Water Quality Council

Bylaw - Zoning regulations, subdivision regulations, shore land and flood hazard by-laws, an official map and capital budget/program adopted under 24 V.S.A. Chapter 117 § 4401

Capital Improvement Planning (CIP) - Short-range plan that identifies capital projects and equipment purchases, provides a planning schedule, and identifies options for financing the plan. 24 V.S.A. § 4382(a)

Cascading Disaster - Occurs when an initial event, such as a natural disaster, triggers a series of subsequent events that lead to further crises, often compounding the overall impact

CCRPC - Chittenden County Regional Planning Commission

CCoVT - Community Capital of Vermont

CDBG - Community Development Block Grant

CEDS - Comprehensive Economic Development Strategy

CERT - Community Emergency Response Team

Certified Local Government (CLG) - A local government recognized by the National Park Service and state preservation office for meeting standards in historic preservation; eligible for grants and involvement in federal reviews

CIP - Capital Improvement Plan

Clean Water Service Provider - A regional entity responsible for overseeing and implementing non-regulatory water quality projects within a designated water basin. 10 V.S.A. § 924

Climate Change - Long-term shifts in average temperature, humidity, and rainfall patterns for local, regional, and/or global environments

Climate Justice - Links sustainable development and human rights to achieve a rights-based approach to addressing climate change. 3 V.S.A. § 6002

Co-Benefits - The additional positive outcomes that arise from a single action or intervention

Community Lifeline - The most fundamental services in a community that enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security

Community Resilience - The overall ability of a community to prepare for, withstand, respond to, and adapt readily to any kind of adversity, such that people are capable of surviving and thriving

Community Supported Agriculture (CSA) - Community-supported agriculture organization or CSA organization means a farm or group of farms each subject to regulation under the Required Agricultural Practices that as part of the business of the farm stand or CSA organization grow, raise, or produce agricultural products for consumer shareholders or subscribers who pledge or contract to buy a portion of the agricultural products of the farm or group of farms. 6 V.S.A. § 2776(6)

Complete Streets - Streets which provide for the safety and accommodation of all transportation system users (motorists, pedestrians, cyclists & transit riders), regardless of age, ability, or modal preference. 19 V.S.A. § 10b

Conflict - When the Regional Plan allows for the project but the Town Plan doesn't, or vice versa

Cooling Sites - A community-provided resource for those needing extra assistance to stay safe during hot weather; this can include air-conditioned buildings with amenities or an outdoor location providing shade, swimming, spray water, and/or drinking water

Creative Economy - Economic activity derived from human creativity, including the arts, culture, design, and innovation

Criteria Pollutants - A group of six common air pollutants regulated by the U.S. Environmental Protection Agency due to their harmful effects on human health and the environment

Cross-State Pollution - Air pollution that originates in one state and travels across state lines, impacting air quality in other states

CSA - Community Solar Array

CUD - Communications Union District

CWSP - Clean Water Service Provider

Cyanobacteria Blooms - A rapid increase of a type of photosynthetic bacteria in a water body that can potentially release toxins harmful to humans and animals

DA - Designated Agency/Designated Mental Health Agency

DEC - Vermont Department of Environmental Conservation

DEI - Diversity, Equity, & Inclusion

Demand Side Management - Planning, implementing, and monitoring activities of electric utilities which are designed to encourage consumers to modify their level and pattern of electricity usage (US Dept. of Energy)

DEMHS - Vermont Department of Emergency Management and Homeland Security

Development - The division of a parcel into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any building or other structure, or of any mining, excavation or landfill, and any change in the use of any building or other structure, or land, or extension of use of land

Development Constraint - A factor that limits or prevents the development of a piece of land

DHCD - Department of Housing and Community Development

DIBG - Design/Implementation Block Grant

DOHHS - Vermont Department of Health and Human Services

DOJ - Department of Justice

DPS - Vermont Department of Public Service

EAS - Emergency Alert System

ECO - Environmental Careers and Opportunities

Ecosystem - All the living and non-living parts within an environment and the interaction between those parts. Two of the main types of ecosystems are those for freshwater and terrestrial systems

Ecosystem Services - Any positive benefit that wildlife or ecosystems provide to people

Ecotourism - Tourism to places having unspoiled natural resources, with minimal impact on the environment being a primary concern

EECBG - Energy Efficiency Community Block Grant

Effective Forest Management - Maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations. 10 V.S.A. § 2601

Electric Vehicle Supply Equipment (EVSE) - Electric Vehicle chargers

Emergency Management Cycle - A continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action to ensure effective coordination during incident response

Emergency Relief Assistance Fund (ERAF) - An incentive where state funding is provided to match FEMA aid after federally declared disasters; the match ranges from 7.5% to 17.5% depending on which flood mitigation measures have been adopted

EMPG - Emergency Management Planning Grant

Enterprise Areas - Locations of high economic activity and employment that are not adjacent to planned growth areas. 24 V.S.A. § 4348a(2)(F)

Environmental Benefit - As defined in state law. 3 V.S.A. § 6002 (1)

Environmental Burden - As defined in state law. 3 V.S.A. § 6002 (2)

Environmental Stewardship - Responsible use and protection of the natural environment through active participation in conservation efforts and sustainable practices. 6 V.S.A. § 4963

EOC - Emergency Operations Center

EOP - Emergency Operations Plan

EPA - Environmental Protection Agency

Equitable Access - The principle that all individuals should have fair and just opportunities to resources, education, and professional support. 3 V.S.A. § 6002

Expected Annual Loss - The average economic loss in dollars resulting from natural hazards as it relates to buildings, people, and agriculture

False Spring - Occurs when a stretch of unexpectedly warmer temperatures occurs in late winter/early spring, followed by sudden freezing events

Family - A family consists of a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption

Farmland Access Program - The Vermont Land Trust's Farmland Access Program is an innovative, successful, and evolving tool for the transfer of farmland to the next generation

Federally-Declared Disaster - Any disaster subsequently determined by the President of the United States to warrant assistance by the Federal Government under the Robert T. Stafford Disaster Relief and Emergency Assistance Act

FEMA - Federal Emergency Management Agency

FEMC - Forest Ecosystem Monitoring Cooperative

FHWA - Federal Highways Administration

FIRM - Flood Insurance Rate Map

Flash Flood - A sudden, violent flood that is caused by intense rainfall events and can occur anywhere

Flood Hazard Area Bylaws - Local laws that restrict or regulate construction and land use in Special Flood Hazard areas to minimize the risk of flood damage to property and infrastructure. 24 V.S.A. § 4424

Flood Insurance Rate Map (FIRM) - FEMA-mapped floodplains that are used to determine whether flood insurance is required for property owners

Floodplain - The land in the community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the National Flood Insurance Program maps / An area of low-lying land adjacent to a river that absorbs water during heavy precipitation events, thus reducing the risk of downstream flooding. 10 V.S.A. § 753

Fluvial Erosion - The movement and deposition of soil and rock by flowing water in stream and river channels; often precipitated by flash floods

Food Deserts - An area, usually low-income, in which many residents cannot easily get to stores that sell affordable, healthful foods

Food Hubs - A centrally located facility with a business management structure facilitating the aggregation, storage, processing, distributions, and/or marketing of locally/regionally produced food products

Food Insecurity - Limited or uncertain access to sufficient, nutritious food. Contributing factors include economic disparities, rural isolation, and limited access to affordable, healthy food options

FTE - Full Time Equivalent

Full Value - The total value of a property, including both land and improvements (e.g., buildings), as determined by the tax assessor for property tax purposes

GHG - Greenhouse Gas Emissions. 10 V.S.A. § 578

GIA - Grants in Aid (transportation and water quality)

Gig Towns - A community that has completed fiber expansion and has access to high-speed internet

GIS - Geographic Information Systems

GMC - Green Mountain Club

GMP - Green Mountain Power

GPD - Gallons Per Day

Grand List - Compilation of all taxable properties within a municipality or state

Groundwater - Means water below the land surface in a zone of saturation but does not include surface waters within the meaning of 10 V.S.A. §1251 (13)

GSWI - Green Stormwater Infrastructure

H-2A Visa - Non-immigrant visa program that allows US employers to bring foreign nationals to the US to fill low-skill, temporary or seasonal agricultural jobs for which US workers are not available

Hazard Mitigation Grant Program (HMGP) - Federal funding that is provided to state and local governments following a federally declared disaster to protect eligible public or private property through various impact reduction measures

HCA - Vermont Health Care Authority

Highest and Best Use - The most profitable and efficient use of a property, based on its physical, legal, and financial characteristics, as determined by tax assessors for property tax purposes

Historic Preservation - The act of protecting, conserving, and restoring historic buildings, landscapes, or objects of cultural significance

Household - A household includes all the people who occupy a housing unit. Occupants in this category include a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements

HSU - Homeland Security Unit

HUD - Housing and Urban Development

IC - Incident Commander

ICP - Incident Command Post

ICS - Incident Command System

Impact Fees - As defined in state law. 24 V.S.A. § 5201(3)

Individual Assistance - A suite of federal programs providing financial or direct assistance to impacted individuals and households following a federally declared disaster

Infrastructure - The system of public works (including roads, transit routes, power lines, sewer and water lines etc.) for the Region

INS - Immigration and Naturalization Services

Inundation Flood - The often-gradual rise of water on low-lying land

Invasive Species - An organism introduced to non-native ecosystems that is capable of causing harm to the environment, the economy, or human health

IPP - Independent Power Producer

Kilowatt-hour (kWh) - A unit of energy equivalent to using one kiloWatt of electricity for one hour, equal to 3,412 BTU's / A measure of electricity defined as a unit of work or energy expended for 1 hour. One kWh is equivalent to 3,412 Btu

kw - Kilowatt

Labor Markets - The supply of and demand for labor

Land Value - The value of just the land, excluding any improvements or structures, as assessed by the tax assessor to establish the property's taxable land value

Landscape Scale Conservation - Conservation that considers the broader landscape, recognizing the interconnectedness of ecosystems and the importance of movement and migration for wildlife

LCA - Lewis Creek Association

LCBP - Lake Champlain Basin Program

LEC - Local Exchange Carrier

Legislative Body - The selectboard in the case of a town, the trustees in the case of an incorporated village, and the mayor and City Council members in the case of a city, and the supervisor in the case of an unorganized town

LEMP - Local Emergency Management Plan

LEPC - Local Emergency Planning Committee (statewide in Vermont)

LESA - Land Evaluation and Site Assessment

Level of Service (LOS) - A qualitative measure describing operational conditions within a traffic stream; generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Level of service is reported as being in the range of A to F, with A the best and F the worst

LHMP - Local Hazard Mitigation Plan

Light Pollution - The excessive or inappropriate use of artificial light outdoors which disrupts the natural darkness of the night sky

Living Wage - Minimum income necessary for a worker to meet their basic needs. 2 V.S.A. § 526

Local Food Systems - Collaborative network that integrates sustainable food production, processing, distribution, consumption, and waste management in order to enhance the environmental, economic, and social health of a particular area. 10 V.S.A. § 330

Local Hazard Mitigation Plan (LHMP) - A prerequisite for federal funding, this plan identifies all natural hazards facing a community, ranks them according to local vulnerabilities, and develops strategies to reduce risks

LoS - Letter of Support

Low-End Estimate - A conservative or minimal projection

LPG - Liquid Petroleum Gas

MALT - Middlebury Area Land Trust

Managed Retreat - An adaptation strategy that proactively moves people, homes, and infrastructure away from high-risk areas to avoid damage and minimize recovery costs

Marble Slurry - A byproduct of marble processing, consisting of fine particles suspended in water

Marshes - Wetlands dominated by herbaceous plants, often found in low lying areas. 10 V.S.A § 902

MCI - Multiple Casualty Incident

Meaningful Participation - As defined in state law. 3 V.S.A. § 6002 (6)

Mechanization - The act or process of introducing machines into an industry or other area of activity in order to replace human labor

Megawatt-hour (MWh) - One thousand kilowatt-hours or 1 million watt-hours. 30 V.S.A. § 202b

MERP - Municipal Energy Resilience Program

Meteorological Parameters - Variables such as temperature, humidity, wind speed, and precipitation used in weather climate analysis. 10 V.S.A. § 554

MGD - Million Gallons per Day

Microgrid - A local energy system

Microplastics - Extremely small pieces of plastic debris resulting from the disposal and breakdown of consumer products and industrial waste

Microtransit - On-demand transit that does not operate on a fixed route, but operates on a dynamic route based on rider demand with riders booking trips using an app or calling a phone number

Mitigation - The reduction of heat-trapping emissions and/or the enhancement of carbon sinks to stabilize and reduce global temperature rise. 10 V.S.A. § 590

MMBtu - One million British thermal units. 30 V.S.A. § 202b

MPG - Municipal Planning Grant

MRGP - Municipal Roads General Permit

Municipal Ethics Requirements - Act 171, Municipalities must adopt a standardized code of ethics. 24 V.S.A §§ 1991-1999

Municipality - A town, a city, or an incorporated village

MVRT - Missisquoi Valley Rail Trail

MW - Megawatts

National Flood Insurance Program (NFIP) - Provided to property owners, renters, and businesses to share the risk of flood losses through flood insurance and reduce flood damages by restricting floodplain development

Natural Hazard - A naturally occurring event or phenomenon that has the potential to cause harm or damage to human life, property, or the environment

NEPA - National Environmental Policy Act

NFLC - Northern Forest Land Council

NFLS - Northern Forest Land Study

NIMS - National Incident Management System

NMC - Northwestern Medical Center

NRCD - Natural Resources Conservation Districts

NRCS - Natural Resource Conservation Service

NRPC - Northwest Regional Planning Commission

NVDA - Northeastern Vermont Development Association

NWI - National Wetlands Inventory

O&M - Operations and Management

OCTBP - Otter Creek Tactical Basin Plan

One Hundred Year Flood - A flood event that has a 1% chance of occurring in any given year on average

Open Meeting Law - All meetings of public bodies must be open to the public at all times. 1 V.S.A. § 312

Option to Purchase at Agricultural Value (OPAV) - Voluntary legal agreement that restricts the sale of land to only certain farmers or to family members, and restricts the sale price to agricultural value. 10 V.S.A. § 6303a(7)

Orderly Development - The planned growth or change of an area through an organized process that creates outcomes aligned with the goals and values of the community. 24 V.S.A. § 4302c(1)

Organic Food - Organic food refers to fresh or processed products grown using organic farming methods. These methods avoid synthetic chemicals, such as artificial pesticides and fertilizers, and prohibit the use of genetically modified organisms (GMOs)

PAHCC - Patricia Hannaford Career Center

Parcelization - The division of larger parcels of land into smaller ones, often for the purpose of sale or development

Payroll Tax - Taxes paid on wages, tips, and salaries by employees and employers

PDM - Pre-disaster Mitigation

Peak Demand - Amount of capacity required during the single moment when the grid as a whole experiences the highest demand for power

Pedestrian - Any individual afoot or operating a wheelchair or other personal mobility device, whether motorized or not, and including an electric personal assistive mobility device. 23 V.S.A. § 4(67)

PEL/PELS - Planning and Environment Linkages Study

Percolate - Process of a liquid slowly passing through a filter or porous substance

Per-Pupil - Total amount of money spent on each student's education

Physiographic Region - An area of land defined by its unique geology, topography, and the native plants and animals that inhabit it

PIO - Public Information Officer

PL - Public Law

Planned Unit Development - As defined in state law. 24 V.S.A. § 4303(19)

Polyfluoroalkyl - A group of synthetic chemicals used in industrial and consumer products, known for persistence in the environment and potential health risks. 18 V.S.A §§ 1661 - 1695

ppm - Parts Per Million (equal to milligrams/liter)

PPP - Public Participation Plan

Prime Agricultural Soils - An important farmland soils map unit that the Natural Resources Conservation Service of the U.S. Department of Agriculture (NRCS) has identified and determined to have a rating of prime, statewide, or local importance, unless the District Commission determines that the soils within the unit have lost their agricultural potential. 10 V.S.A. § 6001(15)

PSD - Vermont Department of Public Service

PSB - Vermont Public Service Board

Public Assistance - A federal grant traditionally given to state, local, territorial, and tribal governments for disaster response and recovery following a federally declared disaster

Public Subsidy - Public program or benefit designed to stimulate economic development, create or retain jobs, provide assistance to corporations, industries, or sectors

Public Water System - A water supply system with 10 or more connections or that serves an average of at least 25 individuals for at least 60 days per year / Any source(s) or combination of sources owned or controlled by a person, that provides drinking water through pipes or other constructed conveyances to the public and that has at least 15 service connections or serves an average of at least 25 individuals daily for at least 60 days out of the year. 10 V.S.A. § 1671(5)

Public Wastewater System - The collection and treatment of municipal wastewater originating from a combination of domestic, commercial, and industrial activities. Wastewater is treated to established standards before discharge to a receiving water. 10 V.S.A. § 1972(5)

RAP - Required Agricultural Practices

RDC - Regional Development Corporation

REI - Road Erosion Inventory

Resilience - The capacity of individuals, communities, and natural and built systems to withstand and recover from climatic events, trends, and disruptions. 10 V.S.A. § 590

Resilience Hub - A community-serving facility outfitted to support residents, coordinate communication, and distribute resources both in everyday life and during disaster events

Retrofits - Modifying existing equipment, buildings, or systems

RFP - Request for Proposals

RFQ - Request for Qualifications

Risk Index Value - A FEMA metric rating a community's overall level of risk by multiplying the expected annual loss value by the community risk factor (social vulnerability score divided by community resilience score)

River Corridor Plan - These plans identify locations where restoration and conservation projects can improve or maintain river stability. Restoration projects include a variety of activities, such as stream bank plantings, bridge and culvert upgrades, and floodplain restoration

River Corridors - State-mapped areas adjacent to the river that represent the space required to accommodate the load of a river and minimize erosion-based hazards. 10 V.S.A. § 1422(12)

RPC - Regional Planning Commission

RRPC - Rutland Regional Planning Commission

RRP - Rapid Response Plan

RSMS - Road Surface Management Systems

Rutland Region - Rutland County is made up of 28 towns in southwestern Vermont. The Rutland Regional Planning Commission has responsibility for 27 of these towns—a jurisdiction referred to as the Rutland Region

Section 248 - Vermont law contained in 30 V.S.A. granting judicial power to the Public Service Board to hold proceedings and to determine facts upon which to issue a Certificate of Public Good for new electrical or gas transmission lines, or generation facilities in the state

SERC - State Emergency Response Committee

SHPO/SHiPO - State Historic Preservation Officer

Smart Growth Principles - As defined in state law. 24 V.S.A. § 2791 (13)

Smog - A type of air pollution caused by the interaction of sunlight with pollutants like nitrogen oxides and volatile organic compounds. 10 V.S.A. § 554

SNAP - Need-based federal program to help low-income households supplement their budget to buy food. 33 V.S.A. § 1701

Social Cohesion - Refers to the quality of inter-human relationships; indicators include strong social networks, trust in people and institutions, and expressions of solidarity

Social Vulnerability - The susceptibility of social groups to adverse natural hazard impacts, including disproportionate death, injury, loss, or disruption of livelihood

Source Protection Area - A surface or subsurface area through which contaminants are reasonably likely to reach a public water system source including both surface and ground water supplies (formerly referred to as Wellhead Protection Areas in the Vermont Water Supply Rule, ANR)

SPA - Source Protection Areas

Special Flood Hazard Area (SFHA) - Demarcated areas on flood insurance rate maps that have a high-risk of inundation flooding

Sprawl - Unplanned, low-density village expansion into rural lands

SRP - Standard Response Protocols

Strip Development - Linear, low-density development that typically occurs along major roads or highways. 10 V.S.A. § 6001(38)

Subdivision Regulations - Local rules governing the division of land into smaller parcels, including the layout of streets, provision of utilities, and requirements for environmental protection. 24 V.S.A. § 4418

Substantial Regional Impact - This is the threshold for precedence of this Regional Plan as the primary planning document to consider in Act 250 proceedings if a 'conflict' exists between the Town Plan and Regional Plan. 24 V.S.A. § 4345a(17)

TAC - Transportation Advisory Committee

Tactical Basin Plan - These plans describe the projects or actions needed to protect or restore specific waters and identify appropriate funding sources to complete the work, based on monitoring and assessment data

Telecommunications - Communication over a distance by means of the internet, telephone, radio, television, etc.

Tetrachloroethylene - A chlorinated solvent commonly used in dry cleaning and metal degreasing. It is a hazardous air and groundwater contaminant known for its health risks. 10 V.S.A. § 554

Three-Phase Power - Type of power supply used in commercial and industrial facilities

TIP - Transportation Improvement Program

TMDL - Total Maximum Daily Load

TOEC - Town Officers Education Conference

Total Maximum Daily Load (TMDL) - The maximum amount of a pollutant that a waterbody can receive while still meeting water quality standards. 10 V.S.A. §§ 1250 - 1284

TPI - Transportation Planning Initiative

TVT - Tri-Valley Transit

Ubiquitous - Present or found everywhere

Undue Adverse Effect (or Impact) - An unnecessary or excessive net effect or impact that (1) violates a clearly stated community standard including policies of the regional plan and (2) which cannot be avoided through site or design modifications, on or off-site mitigation, or other conditions of approval

Unified Development Bylaws - A single regulatory document for all land use regulation types. At minimum, it combines zoning regulations and subdivision regulations. 24 V.S.A. § 4419

USDA-RD - U.S. Department of Agriculture-Office of Rural Development

Use-Value Appraisal - Value of a property assuming a specific use, which may or may not be the property's Highest and Best Use, on the effective date of the appraisal. 32 V.S.A. §§ 3750 - 3763a

UVM - University of Vermont

VACD - Vermont Association of Conservation Districts

VAL - Vermont Adult Learning

Value-added - A product whose value has been increased by special manufacturing, marketing, or processing

VAPDA - Vermont Association of Planning and Development Agencies

VCEP - Vermont Comprehensive Energy Plan

VCF - Vermont Community Foundation

VCGI - Vermont Center for Geographic Information

VCIC - Vermont Criminal Information Center

VCLF - Vermont Community Loan Fund

VCTN - Vermont Community Thermal Networks

VCWE - Vermont Center for Women Entrepreneurs

VDHA - Vermont Department of Health and Human Services

VDHP - Vermont Department of Historic Preservation

VDPS - Vermont Department of Public Service

VEDA - Vermont Economic Development Authority

Vector-Borne Diseases - Diseases that are carried, transmitted, and spread by bites from "vectors" like mosquitoes, ticks, and fleas (e.g. West Nile)

VEPC - Vermont Economic Progress Council

Vermont Wetlands Rules - Rules that identify and protect significant wetlands and their buffer zones

VGS - Vermont Gas Systems

VHCB - Vermont Housing and Conservation Board

Viewshed Analysis - A GIS-based method for determining what areas are visible from a specific location, often used in planning to preserve scenic views

VLCT - Vermont League of Cities and Towns

VMT - Vehicle Miles Traveled

VORec - Vermont Outdoor Recreation Grant

VPOC - Vermont Professionals of Color

VSBDC - Vermont Small Business Development Center

VSCPT - Vermont School Crisis Planning Team

VSA - Vermont Statutes Annotated

VTACCD - Vermont Agency of Commerce & Community Development

VAAFM - Vermont Agency of Agriculture, Food & Markets

VTANR - Vermont Agency of Natural Resources

VTDC - Vermont Diversity Council

VTDOH - Vermont Department of Health

VTDOL - Vermont Department of Labor

VTDOT - Vermont Department of Transportation

VTP - Vermont Telecommunications Plan

VTrans - Vermont Agency of Transportation

WBCAC - Walk-Bike Council of Addison County

Wetlands - Those areas of the state that are inundated by surface or groundwater with a frequency sufficient to support significant vegetation or aquatic life that depend on saturated or seasonally saturated soil conditions for growth and reproduction / Areas saturated with water, either permanently or seasonally, that support distinct ecosystems. 10 V.S.A §§ 902 - 928

WHPA - Wellhead Protection Area

WHPP - Wellhead Protection Program

WMZ - Waste Management Zone

Working Landscape - Cohesive unit of land that is ecologically, socially, and economically connected. 6 V.S.A. § 4603

Zoning Regulations - Local rules that define how properties in specific geographic zones can be used. 24 V.S.A. § 4414

ACRPC Staff



Executive Director **Adam Lougee**

Assistant Director & Transportation Planner **Mike Winslow**

Senior Community Planner **Katie Raycroft-Meyer**

Community Planner **Danelle Birong**

Emergency Management & Natural Resources Planner **Andrew L'Roe**

GIS Manager & Natural Resources Planner **Hannah Andrew**

Energy Planner **Jolyon Larson**

Planning Consultant **Maddison Shropshire**

Director of Finance & Operations **Rebecca Elder**

Finance Administrative Assistant **Kerry Dashnaw**

ACRPC Committees

Executive Committee: Shannon Haggett, Tim Davis, Anna Burns, Arabella Holzapfel, Stephen Pilcher, Melanie Sands, Harvey Smith

Act 250: Steve Revell, Joe Andriano, Jeremy Grip, Arabella Holzapfel, Steve Huffaker, Jim Walsh

Local Government: Shannon Haggett, Diane Benware, Steve DeCarlo, Jennifer Erwin, Sharon Macedo, Herb Olson, Philip Pedlikin, Jim Pulver

Natural Resources (ad hoc): Arabella Holzapfel, Stan Grzyb, Jeanne Montross, Debra Sprague, John Roberts, Ron Payne, Harvey Smith, Lisa Sausville

Energy (ad hoc): Cheryl Brinkman, James Dayton, Jim Walsh, Jeremy Grip, Rich Warren, Tom Perry, Bob Schatz

Housing (ad hoc): Anna Burns, Herb Olson, Tom Perry, Chris Stackhouse, Tim Davis, Rich Warren, Del Thompson

Economic Development (ad hoc): Gioia Kuss, Ron Dendas, Melanie Sands, Philip Pedlikin, Alex Armani-Munn

Transportation Advisory Committee (ad hoc): Andrea Treadway, Kyle Rowe, Abe Koffman, Martin Haitz, Christine Dubois, Sharon Macklin, Drexel Wheeler, Brian Kemp, Tim Davis, Diane Benware, Ken Stockman, Laura Asermily, Thomas Steadman, Steve Pilcher, Mike Audy, John Roleau, Mike Christian, Norm Tjossem, Jonathan Heppell, Shannon Haggett, Michael Grace, Cookie Steponatis, Robert Wood, Steve Quenneville

ACRPC Commissioners

Name	Town	Delegate/ Alternate
Bob Schatz	Addison	D
Chris Stackhouse	Addison	A
Del Thompson	Bridport	D
Renée Brodeur	Bridport	A
Ron Dendas	Bristol	D
William Sayre	Bristol	A
Stan Grzyb	Cornwall	D
Anna Burns	Cornwall	D
Tim Davis	Ferrisburgh	D
Arabella Holzapfel	Ferrisburgh	D
Steve Huffaker	Ferrisburgh	D
Jim Pulver	Goshen	D
Chad Chamberlain	Goshen	A
Diane Benware	Leicester	D
Tom Barker	Leicester	D
Steve Revell	Lincoln	D
Jo Jackson	Lincoln	D
Tim McGowan	Lincoln	A
Melanie Sands	Middlebury	D
Philip Pedlikin	Middlebury	D
Stephen Pilcher	Monkton	D
Debra Sprague	Monkton	D
Jim Walsh	New Haven	D
Harvey Smith	New Haven	D
Joe Andriano	Orwell	D
Daniel Redondo	Orwell	A
Cian Quinn	Orwell	A
James Dayton	Panton	D
Logan Roth-Longe	Panton	A
Jeremy Grip	Ripton	D
Jonathan Heppell	Ripton	A
Nick Causton	Shoreham	D
Herb Olson	Starksboro	D
Tom Perry	Starksboro	D
Rich Warren	Starksboro	A
Shannon Haggett	Vergennes	D
Cheryl Brinkman	Vergennes	D
Lisa Sausville	Waltham	D
Fran Colangelo	Waltham	A
Gioia Kuss	Weybridge	D
Jennifer Erwin	Whiting	D

Name	Organization	Delegate/ Alternate
Phil Summers	Addison County Chamber of Commerce	A
Jeanne Montross	HOPE	D
Ron Payne	Otter Creek Audubon Society	D
Marcia Parker	Otter Creek Audubon Society	A
Charles Roy	Addison County Farm Bureau	D
John Roberts	Otter Creek Natural Resource Conservation District	D
Jonathan Chamberlain	Otter Creek Natural Resource Conservation District	A
Alex Armani-Munn	Addison County Economic Development Corp.	D
Richard McKerr	Addison County Economic Development Corp.	A

Addison County Regional Plan



2026

Addison County
REGIONAL PLANNING COMMISSION