

# Colchester

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## Vermont



Environment



Community

Economy

# 2019 TOWN PLAN

## Town of Colchester

781 Blakely Road  
Colchester, VT 05446

802 264 5605

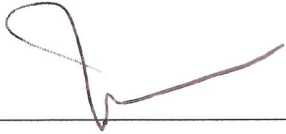
[www.colchestervt.gov](http://www.colchestervt.gov)



Shaping our community,  
together.

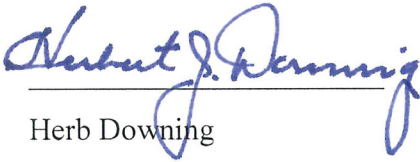
## COLCHESTER TOWN PLAN

We, the Colchester Selectboard, hereby adopt this comprehensive municipal development plan, for the Town of Colchester.



Nadine Scibek

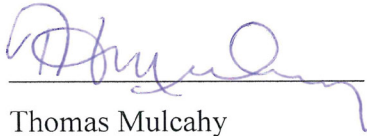
\_\_\_\_\_  
Jacki Murphy



Herb Downing



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Jeffrey Bartley



Thomas Mulcahy

Dated at Colchester, County of Chittenden, State of Vermont.

Adopted this 26th day of March, 2019.

COLCHESTER SELECTBOARD





# Colchester

VERMONT

**2019**

**TOWN**

**PLAN**

# ACKNOWLEDGEMENTS

The Colchester 2019 Town Plan was made possible through the hard work and passion by the Planning Commission and Selectboard, working together with our community of residents, property owners, business people, Colchester Schools, town staff and interns. We also acknowledge the work of previous commissions and boards in creating a legacy of planning through their hard work on previous Town Plans and hope to build upon those efforts and accomplishments.

## SELECTBOARD

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## TOWN MANAGER

Aaron Frank

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# INTRODUCTION

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# FOREWORD

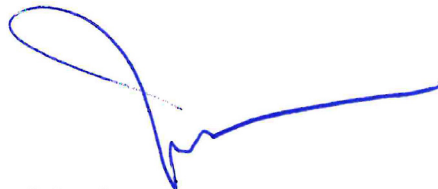
On behalf of the Selectboard and Town Manager Aaron Frank, it is with pleasure that we present to you Colchester's 2019 Town Plan. A big "thank you" to all of you who participated in the drafting and revision of this Plan. We also want to sincerely thank our Planning Commission, led by Chair Pam Loranger, for their outstanding work in seeing this plan through to completion. A great deal of time and effort went into creating this crucial document.

Our Town Plan is very important work, as it implements our vision for Colchester. Our Town has evolved immensely over the last 256 years and its economic vitality, natural beauty, and engaged citizens strive to keep moving it in the right direction. The previous plan was adopted in 2014 and revised in 2017. Since the implementation of the 2014 Plan, the Town has seen \$20 million in economic development improvements, an increase in the non-residential tax base that reduced property tax rates lower than those in 2012, and integrated Town and School planning strategies. We have also implemented a stormwater utility to improve water quality in our streams and Malletts Bay, increased our sustainable energy sources by installing two large solar net metering projects, and added the Get Engaged Program to introduce student members to our boards and commissions.

The 2014 Town Plan utilized the Colchester Heritage Project's Community Strategic Plan 2012-2022 as its foundation of town-wide input. The 2019 Town Plan builds upon this solid foundation, updated with thorough community outreach and engagement. The plan also addresses Colchester's role in the State of Vermont's long term energy goals.

President Dwight Eisenhower once said: "Planning is everything, the plan is nothing." The only way this plan can succeed is through implementation, primarily by citizens and the private sector. While many of the plan's actions are long-term, through the participation of our citizens, one act at a time, we will achieve our goals. Town government's role is to enact the vision, develop through our policies regulations such as zoning, capital plans, and projects. The plan is a document that helps to guide us, the outcomes of which will be seen and remembered in the future of our town.

These actions that support our developmental planning goals are well within our reach. They set the framework to inform other plans and processes within the larger region. In 1964, the year Colchester completed its first town plan, the Town conceptualized groundwork with great foresight and inspiration. As a result, Colchester is now a sought-after place to live, work, and play! With collective effort, creativity, passion, and teamwork we are certain we can make the future presented here a reality.



Selectboard Chair Nadine Scibek, Colchester, VT

# INTRODUCTION

## OUR COMMUNITY

Colchester is located in the northwestern corner of Vermont, along the shores of Lake Champlain within the rolling landscape of the Champlain Valley. Situated between the mouths of the Winooski and Lamoille Rivers, Colchester is defined by its rich water resources and varied geography, from the rugged coastline of Clay Point to the sandy beaches of the inner bay, rolling fields of Shipman Hill, and rocky knobs of Colchester Pond Park. With over 36 square miles, our Town does not feel like the fifth most populated municipality in Vermont. Lacking our historic downtown (now Winooski), Colchester is often identified by its neighborhoods. The Severance Corners Growth Center is hoped to become this new center over time and provide a central downtown for the future.

While our natural heritage and parks systems provide a wealth of outdoor recreation opportunities, our community has a rich history that

spans over 250 years. The Fort Ethan Allen National Register Historic District is home to many of our cultural resources and one of our two colleges. Colchester schools continue to rank highly, both within the state and nationally. Annual events such as Winter Carnival, Pond Hockey Tournament, Concerts in the Park, 4th of July Parade and Colchester Triathlon entertain residents and bring many others to our friendly town. Ranked as a best place to live multiple times by Money Magazine, many people have come to stay a few days, the summer, or now call Colchester home.

In 2012, the Town undertook a broad visioning process in a community strategic plan: The Heritage Project. This project served as the basis of the 2014 Town Plan and now provides the underpinnings of this 2019 Town Plan. As we look to the future of Colchester, the vision of the Heritage Project sums up what Colchester is and strives to be:

“Colchester, Vermont located on Lake Champlain’s Malletts Bay is a diverse, civic-minded community endowed with a rich heritage of commercial, agricultural, recreational, and educational gifts. Proud of the quality of life enjoyed here, the people of Colchester seek to build upon this foundation to ensure economic prosperity, recreational opportunity, and an entrepreneurial spirit for future generations.”

## ORIGIN OF THE PLAN

Beginning in 1964, the Town of Colchester created a Town Plan, or municipal plans, to envision its future land use. The creation of the Planning and Development Act in 1968, Vermont State Statute (24 V.S.A. Chapter 117) defined the process for a municipal plan as well as what should be in it. Act 200 in 1988 substantially updated these requirements.

Periodically, the plan was amended and updated with several rewrites along the way. The most significant recent rewrite was the 2014 Town Plan, which drew from the 2012 Colchester Heritage Project. The Town Plan informs infrastructure investments, conservation efforts, and development, as well as zoning. State statute now requires communities to adopt a new plan at least every eight years to address changes that may impact a town’s long-term vision as laid out in the plan.



The Heritage Project laid out a long-term, civic-driven vision for Colchester. With many of the project's goals achieved and many more in progress, the Project is still a vibrant vision for our town. The community input received in the 2019 plan process reaffirms this.

In spring 2018, the Planning Commission sought community involvement in the 2019 plan development first with a Town Meeting Day survey and then a visioning session. The three biggest issues facing Colchester were identified to be affordability, economic opportunity and infrastructure. Specific needs, as well as possible solutions, were offered. These themes are prevalent through the plan and align with the three sections of the plan: social, economy, and environment.

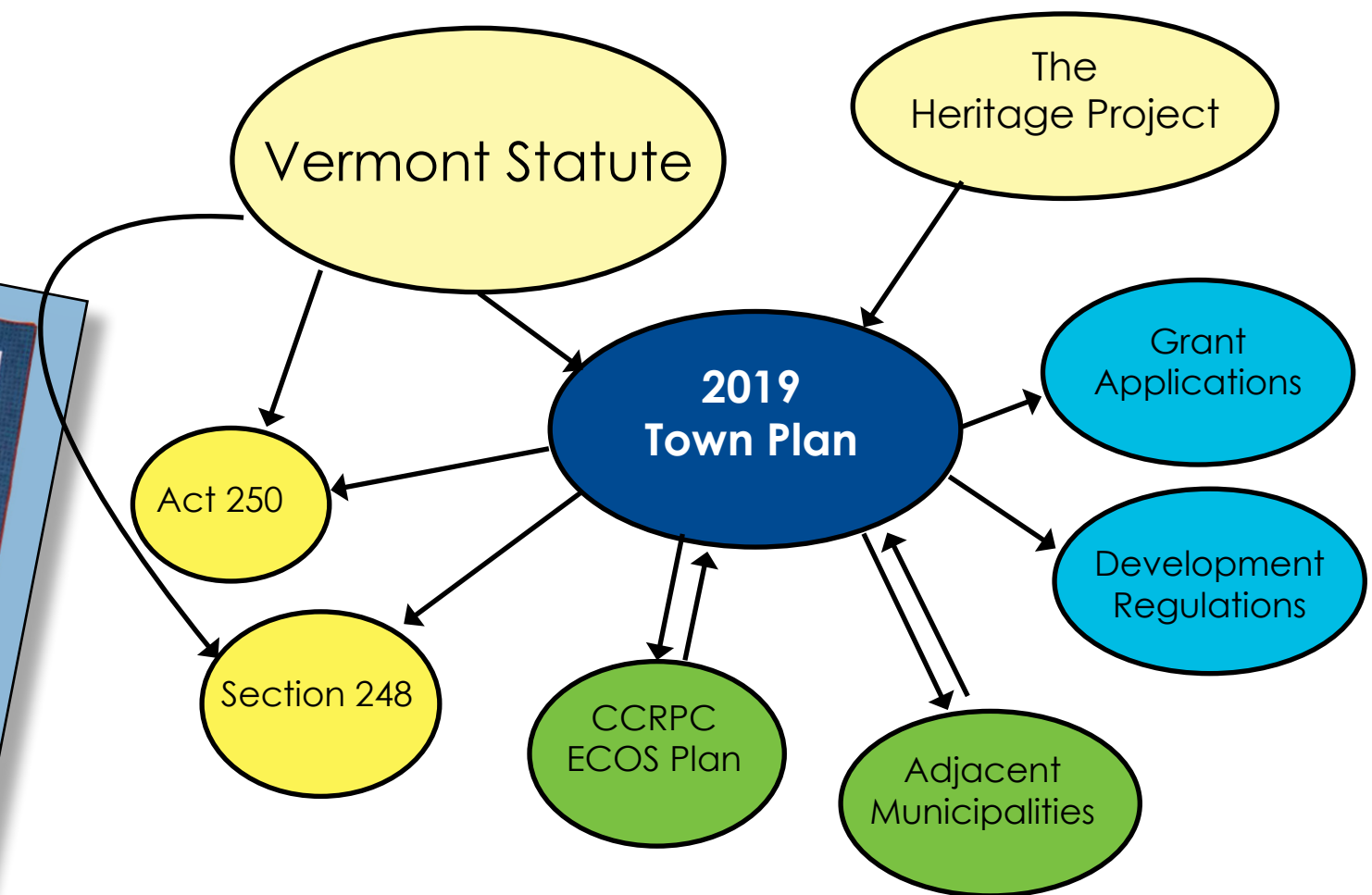
Over the summer and fall of 2018, specific topics such as housing, energy, and transportation were reviewed by the Planning Commission, as well as specific neighborhoods. A town-wide mailing invited all residents to these meetings. On-line engagement proved to yield greater participation with topical surveys, the Thoughts on Thursday e-newsletter, podcasts of the meeting, Front Porch Forum posts, and social media. These comments and survey results also informed the Commission as they developed the new plan. After several months of drafting and editing, the Commission warned the plan for hearing on February 5, 2019. The Commission voted 5-1 to transfer the plan to the Selectboard, which then considered the plan at two public hearings in March, 2019, before adopting it on March 26, 2019. The 2019 Town Plan will continue to be a living document and, while it will expire in 2027, may be re-examined from time to time by the Planning Commission and Selectboard as needed.





# A Reader's Guide

The 2019 Colchester Town Plan, or municipal plan, was developed under the enabling authority of Title 24 of the Vermont Statutes Annotated, Chapter 117, and complies with the goals and elements of Sections 4302 and 4382. This plan will serve to inform other plans, such as the regional plan (ECOS Plan), plans of adjacent municipalities, and regulatory process, such as applications under Act 250 (10 V.S.A. Section 6086) and Section 248 (30 V.S.A. Section 248). While the plan lays out the Town's vision for the future, it is not intended to be a regulatory document. The Colchester Development Regulations will continue to be the implementation of the plan and offer specific guidance in regulatory processes whenever feasible.



As with all plans, the best way to understand it is to fully read it. The plan is the sum of its parts, and, without all parts, Colchester's vision cannot be realized. Since not all circumstances permit a full read, the plan has been divided into themes, chapters, and sections.

## HOW TO NAVIGATE THE PLAN

There are color-coded side tabs connecting chapters to overall themes.



### ENVIRONMENT

Critical to understanding and protecting the landscape of the community. Environmental factors constitute a unique reason people visit and live in Colchester.



### COMMUNITY

Meaningful social experiences and services are necessary to thrive as a Town. Social aspects build character and relationships with the people in a community and with other Towns.



### ECONOMY

Fundamental to our financial success now and moving forward. A strong infrastructure and business attraction drives economic development.



Each chapter of the plan has major sections that offer overviews of what Colchester wants to accomplish and how it intends to do so:

**VISION:** What direction Colchester should move towards.

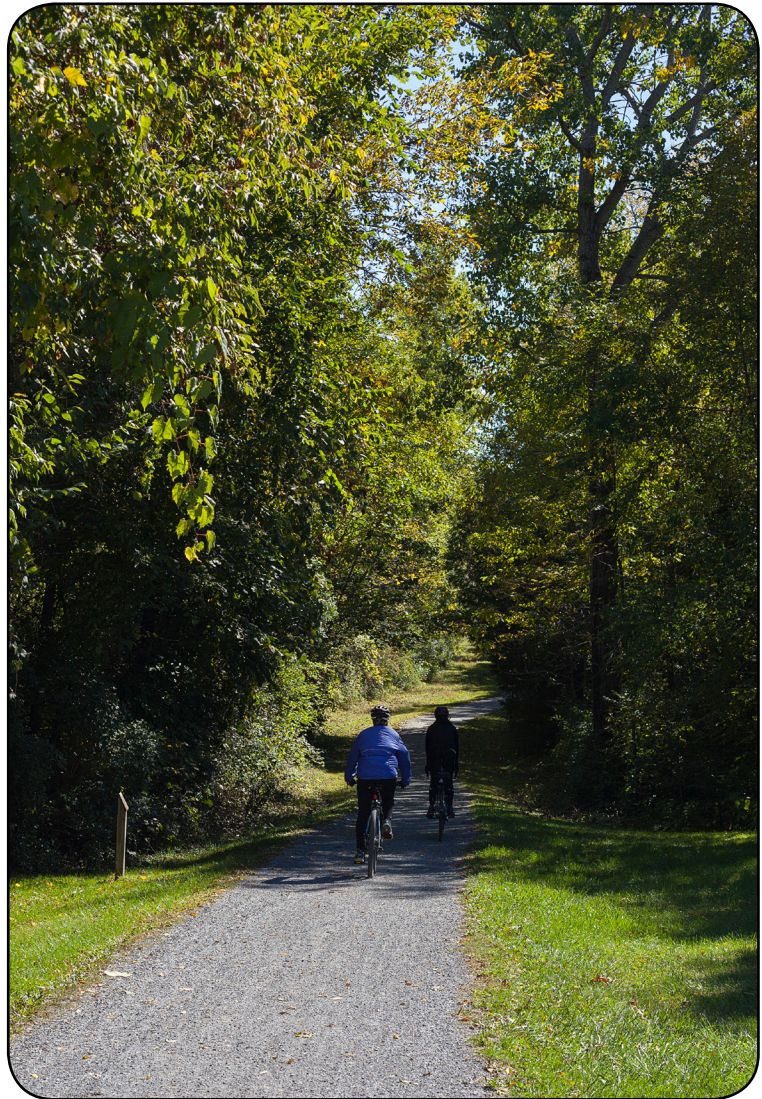
**GOAL:** How the community's vision is achieved.

**OBJECTIVE:** How the chapter's goal can be realized.

**OVERVIEW:** Background information, challenges, and direction the community plans on taking during the term of this plan.

**POLICIES:** What areas of the chapter need to be addressed to reach Colchester's vision.

**ACTIONS:** What methods can be employed to address each policy.



Over the term of this plan, the Planning Commission will provide the Selectboard with, at a minimum, an annual report updating the status of action items and compliance with the policies of this plan. Several of the policies and action items listed in this plan are for a longer term than this plan covers. For this reason, care should be taken in changing the course of this plan, even though the term of the plan is set at eight-year intervals. Long-term benefits should generally outweigh short-term gains. No one policy should be evaluated in and of itself. In implementing the Town Plan, the whole should always outweigh the sum of its parts. With the collaborative efforts of the community, residents, business owners, commission, boards, Town staff, and many others, Colchester will realize its vision for the future. Together we will achieve great things.

# THE LANDS OF COLCHESTER

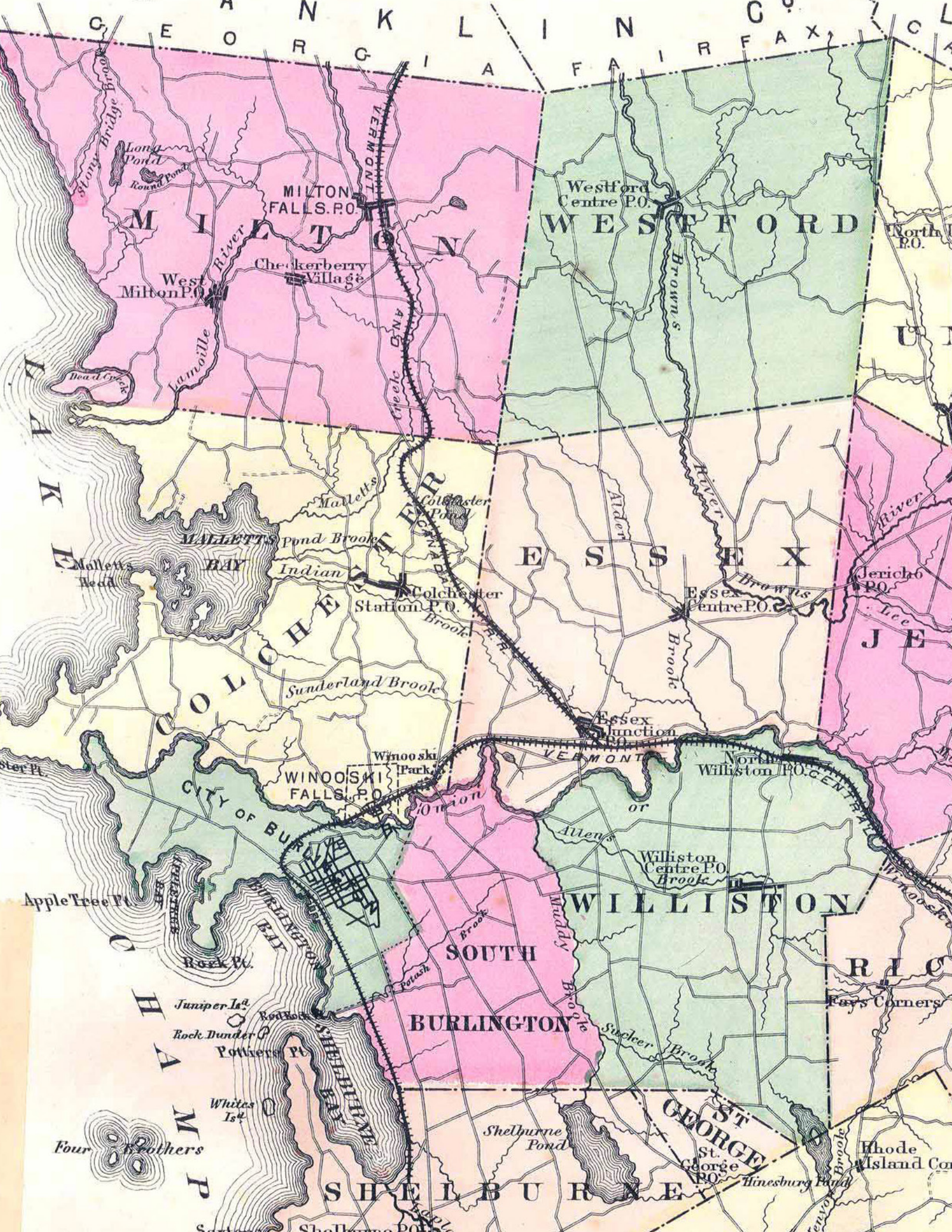
History on the Land

A Land Use Plan for Now  
and the Future

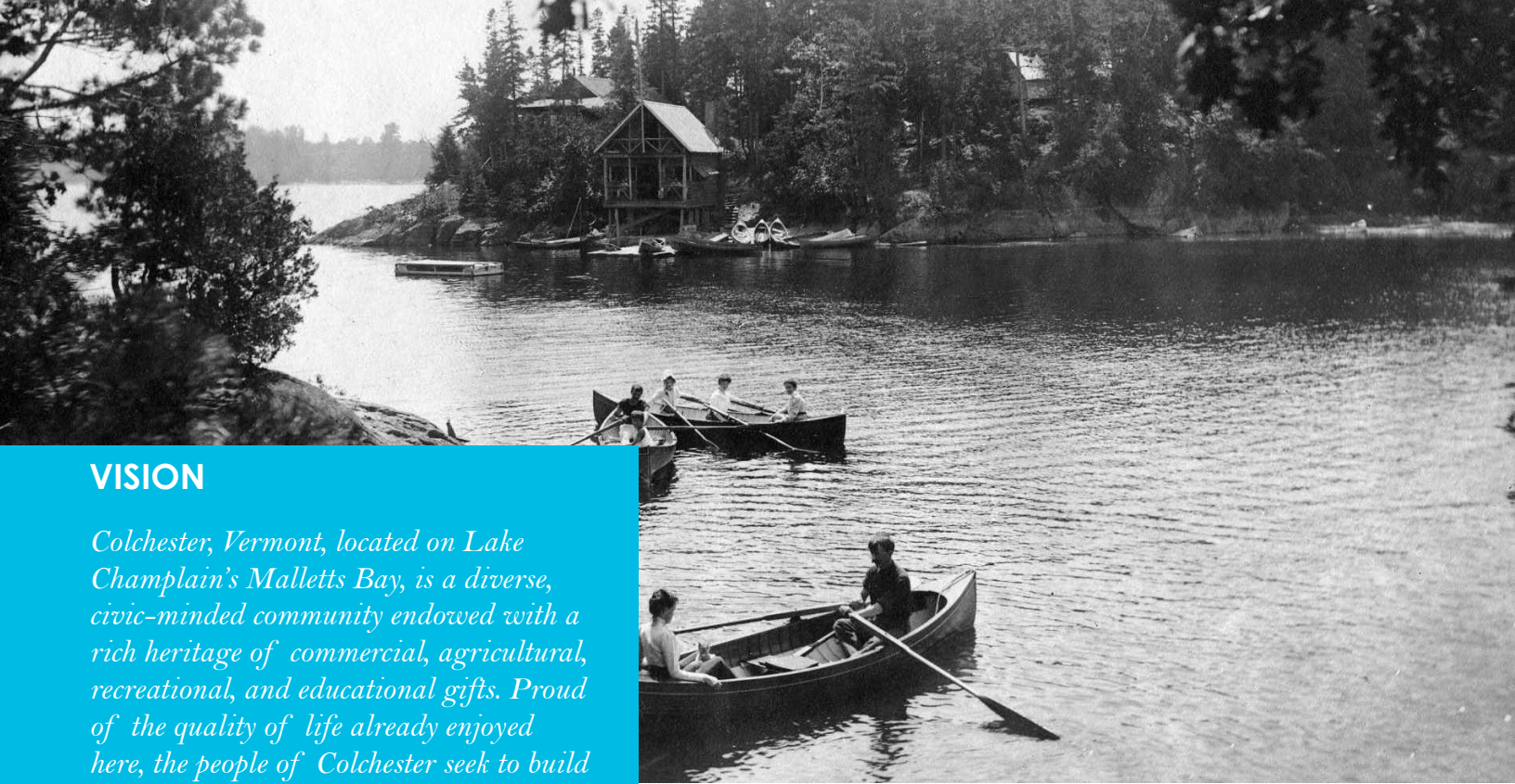
Planning our  
Neighborhood Areas











## VISION

*Colchester, Vermont, located on Lake Champlain's Malletts Bay, is a diverse, civic-minded community endowed with a rich heritage of commercial, agricultural, recreational, and educational gifts. Proud of the quality of life already enjoyed here, the people of Colchester seek to build upon this foundation to ensure economic prosperity, recreational opportunity, and an entrepreneurial spirit for future generations.*

## GOAL

Colchester has a unique diversity of land types and uses including: residential, agricultural, recreational, commercial, industrial, institutional, and natural areas. As the Town continues to grow, it will be important to maintain the diversity of the community and the character of the Town.

## OBJECTIVE

The six land use categories on the Future Land Use Map (See Appendices Map 3) set land uses for the Town over the term of this plan. The Development Regulations provide specific detail for land uses.

## HISTORY ON THE LAND

Approximately 12,000 years ago, glacial sheets receded and gave way to the Champlain Sea, which cloaked most of the Champlain Valley under its waters. As the Sea receded, Native populations began to utilize the lands of Colchester. Archaic and Woodland Period archaeological sites, located along present and former stream channels, provide evidence that native peoples made use of the area's stone for tools and abundant plant and animal resources for food and other necessities of life.

In 1609, Samuel de Champlain entered the area, during an exploration of the waters now called Lake Champlain, introducing a European presence into the area. In 1763, New Hampshire Governor Benning Wentworth chartered the Town of Colchester. The first European settlers of Colchester purchased land from the Onion River Land Company and attempted to take residency during the years preceding the Revolutionary War. After the War, the settlement of Colchester began to take hold, as the region stabilized and land feuds between neighboring states were settled. Ira Allen was among the first residents of Colchester when the Town held its first Town meeting of record in 1793. The first parcels of land were mapped by N. Baker in 1802.

In the late eighteenth and early nineteenth centuries, Colchester was reliant on agriculture as its economic base. The gently rolling, fertile soils of Colchester were well-suited to agriculture, but often required substantial clearing. Saw and grain mills developed along waterways, and dams were built to exploit water power. The Village of Winooski Falls (later Winooski) was the Town's first center. Malletts Bay was developed as a port of

trade. Later, nineteenth century developments brought the railroad to the Town. The twentieth century brought change with the advent of the automobile, but the Town remained relatively agrarian until the second half of the twentieth century, when development pressures spilled onto the Colchester landscape. In 1922, the Village of Winooski voted to change from an incorporated Village in the Town to a separate City. What remained of Colchester was more rural and agricultural while the City of Winooski remained as the center of commerce and population.

Colchester remained primarily agricultural through the mid-1960's. Now, about 20% of the land is zoned for agricultural use. Over time, agricultural uses have declined while demand for residential development has grown, creating development pressures on undeveloped areas.

The original 1955 zoning map and 1969 Town Plan include commercial, industrial, residential, and resort land uses, which are still present. The resort land use classification, used for summer seasonal camp communities in areas such as Sand Dunes, Colchester Point, Mills Point, Spauldings West Shore, Porters Point, Coates Island and Goodsell Point, has been retired. These communities were generally constructed in the 1940's and 1950's. Many were owned by successive generations of families. The majority of seasonal summer cottages, or camps, has transitioned to year-round occupation. In 2002, the Town developed guidelines for the conversion of camps to year-round homes to forestall environmental damage and devaluation of surrounding properties.

While Colchester evolves, historical development patterns are still evident. Multiple areas within the Town served as commercial centers for various portions of the community, at a time, when travel was more time

consuming and costly. Suburban residential developments have occurred in areas all over the Town. The distinct areas of the Town have grown together, with a few farming and rural areas in between. However, due to the incredibly disbursed development that has arisen due to the Bay, rivers, wetlands, and land geography, it is not financially possible to bring fee-based utilities (water, sewer) or transportation infrastructure to all areas of the Town.

With the creation of a growth center at Severance Corners in the 1990s, the Town has sought to provide an area where residences and businesses are co-mingled in more of a town center setting. This area now benefits from State investment in an improved intersection, bus service, fee-funded water, and fee-funded sewer.

The commercial areas of Warners Corners and the Village have evolved to meet changing needs. Infill development continues within commercial and residential areas, with development standards evolving to provide better protections for

sensitive areas, particularly along the Lake. As we look to our future, two cornerstones will continue to ensure sustainable development and protect our natural resources to foster resilience from the changing natural environment. Existing land use is further detailed on Appendices Map 2.

## A LAND USE PLAN FOR NOW AND THE FUTURE

### Agriculture Mixed Use

Farms are an important part of Colchester's community character and heritage. The Town seeks to retain and support these farms. The Agricultural/Mixed Use area balances continued agricultural use with property owners' needs and also includes opportunities for agricultural tourism and the commercial elements that are necessitated by the changing face of agriculture (see Appendices Map 3: Future Land Use). This area is zoned Agricultural Mixed Use.





## Rural

These areas tend to be open and sparsely developed (see Appendices Map 3: Future Land Use).

Agricultural uses and low-density residential uses are compatible within these areas that often include significant natural resources, prime agricultural soil, and other characteristics that generally make these areas unsuitable for denser development. The lack of density creates privacy within more natural surroundings. The tradeoff is often more auto-centered travel required of residents. Some limited silvicultural activities also occur within these areas, although these activities tend to be small and informal. Recreational facilities and uses may also be appropriate. These areas are generally zoned AGR, R10 & R5.

## Suburban Residential

These areas are appropriate for residential development at a medium density of one to three units per acre, generally matching the existing development pattern (see Appendices Map 3: Future Land Use). Limited development of neighborhood commercial services, such as small offices and stores, schools, recreational facilities, religious institutions, or daycares may also be considered, where appropriate. These areas are generally zoned R1, R2, R3, and Mobile Home Park (MHP).

## Village Mixed Use

These are primarily existing developed areas with a mix of residential and business use (see Appendices Map 3: Future Land Use). Future development is meant to be compatible with existing uses. Additional public infrastructure will generally not be required to support desired levels of growth and density. Within a subset of the Inner Bay neighborhood in the Lakeshore

Districts, a change in wastewater treatment systems is needed to remediate water quality issues resulting from existing development. Uses appropriate for village mixed use include residential, small office, restaurant, small retail, agriculture, and many businesses integrated into neighboring residential uses.

Appropriate industrial uses should be contingent on their ability to fit with neighboring uses. Although multi-family and higher residential densities are encouraged, lower density Residential Districts such as R-1 and especially R-2 are also compatible in village mixed-use areas. Depending on their densities, mixed-use areas can be walkable, and depending on their proximity to other more dense areas, they can be connected via bike/ped paths and, in some cases, public transit to create alternatives to single-occupancy trips. These areas are generally zoned LS1, LS2, GD1, GD2, or GD4.

## Business Use

These areas support large scale commercial development and/or manufacturing and distribution uses (see Appendices Map 3: Future Land Use). These areas are zoned commercial, industrial, or business district with care being taken to separate these uses within the land use categories. Growth and expansion of new and existing businesses, especially medical, research and high-tech uses, is encouraged within this area. These areas are generally zoned Commercial (COM), Industrial (IND), and Business District (BD).

## Growth Center

This area calls for higher-density, compact, highly integrated, mixed use development, and is intended to be the primary area for new development in Colchester (see Appendices Map 3: Future Land Use). The allowed uses include office, restaurant, civic



## UNDERSTANDING ZONING DISTRICTS

R1: Residential 1  
R2: Residential 2  
R3: Residential 3  
R4: Residential 4  
R5: Residential 5  
R10: Residential 10  
GD1: General Development 1  
GD2: General Development 2  
GD3: General Development 3  
GD4: General Development 4  
LS1: Lakeshore 1  
LS2: Lakeshore 2  
COM: Commercial  
IND: Industrial  
BD: Business  
AGR: Agricultural  
MHP: Mobile Home Park  
FP: Flood Plain  
AMU: Agriculture Mixed Use  
GD4C: General Development 4 Commercial  
GDOS: General Development 4 Open Space  
SD: Shoreland  
WPD: Water Protection  
HPD: Historic Preservation  
TDRD: Transfer of Development Rights  
GD1C: General Development 1 Commercial

facilities, residential, retail and a variety of businesses. Multi-family and high density single-family residential are strongly encouraged. Building heights will be greater than other areas of Town, providing they can be blended into the topography, are visually compatible with the area and include architectural features that mitigate the visual impacts. The growth center requires fee-based water and sewer services. The growth center is intended to be a walkable area, connected with public transit and bike/pedestrian paths that increase transportation opportunities serving this area. This area is zoned General Development Three (GD3).

## PLANNING OUR NEIGHBORHOOD AREAS

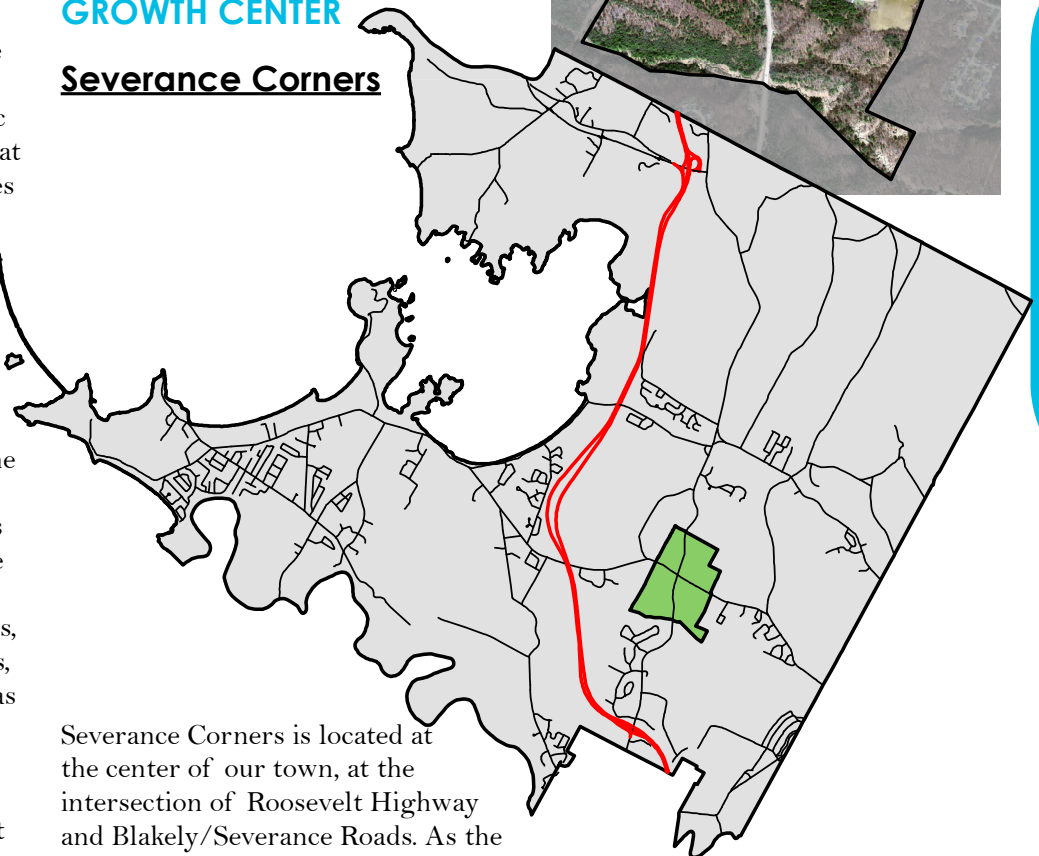
Individual neighborhood areas are assigned land use categories from the above descriptions (see Appendices Map 4). While community members apply both broader (“The Bay,” “The Village,” “The Fort”) and more specific (Broad Lake, Norses Corners, Warners Corners, Chimney Corners, Creek Farm, etc.) designations, it was necessary to create “Neighborhood Areas” for the purpose of the Town Plan. Neighborhood Areas were selected to create adjacent areas that internally relate, from an adjacent land use perspective. Individual Neighborhood Areas are described from multiple perspectives. They vary greatly including historical land use based on geographic and water features, development density (which significantly impacts the amount of infrastructure) and proximity to stores, transportation, cultural and natural resources.

Private sector infrastructure includes electric, land and wireless phone, cable and natural gas. Government fee-based infrastructure includes water and sewer. Areas are described in terms of characteristics and opportunities. The reader should

understand that land use is regulated by the Town, but almost all development is made by the private sector and driven primarily by markets. Neighborhood Areas provide implementation strategies for future land use planning. The Neighborhood Area Map outlines locations of these areas.

## GROWTH CENTER

### Severance Corners



Severance Corners is located at the center of our town, at the intersection of Roosevelt Highway and Blakely/Severance Roads. As the Town’s designated growth center, Severance Corners is the focal point for the community’s growth during the term of this plan and the long term. The area is served by both municipal fee-based water and fee-based sewer. Properties outside the growth center are low and rural density zoning districts. The Town adopted General Development Three, form-based zoning for this area, to promote a dense, mixed-use village type development pattern suited for its planned growth center future land use designation. The area is intended to contain pedestrian amenities and connectivity, community space, and access to public transportation.

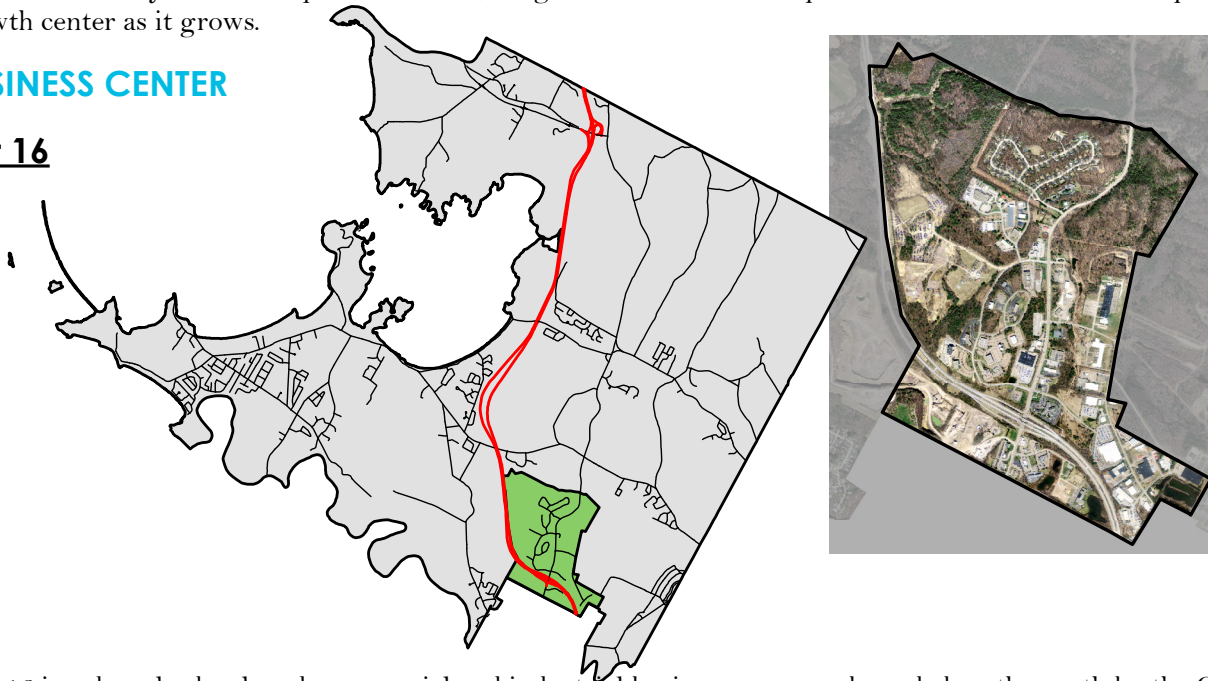
The Town obtained State designations for Severance Corners as a New Town Center in 2007 and a Growth Center in 2009. Benefits of such designation include exemption from Act 250 and prime agricultural soil mitigation rights, which makes it advantageous to develop within growth centers. The growth center designation has been beneficial to realizing plans for Severance Corners and renewal of the designations will be pursued again after the adoption of this plan.

Development for this area should strive for a balance of residential and commercial uses, respecting markets which ultimately determine

this balance. Rooftop solar may be appropriate in this area; however, ground-mounted alternative energy production is not, given the planned building density. Form-based zoning was implemented in 2013, to encourage higher densities and additional commercial development. This area is served by fee based sewer, fee based water, and remains a location where traffic volumes and densities warrant a significant intersection improvement, and pedestrian and bicycle facilities. The Town will continue to work with VTrans to implement transportation improvements in the area. While civic and recreational uses are encouraged in the growth center, no new civic uses are anticipated in this area during the term of the plan. Privately owned but public facilities, religious institutions, and private schools could be developed within the growth center as it grows.

## BUSINESS CENTER

### Exit 16



Exit 16 is a densely-developed commercial and industrial business use area, bounded on the south by the City of Winooski, on the east by Camp Johnson, the Fort Neighborhood, on the north by Severance Corners, and on the west by Interstate 89. Exit 16 of Interstate 89 and Roosevelt Highway bisect this area. It is geographically separated from Severance Corners by the Sunny Hollow ravine. Fee-based municipal water and municipal sewer serves the area. Commercial, Industrial, and Business Districts are the dominant zoning in this neighborhood.

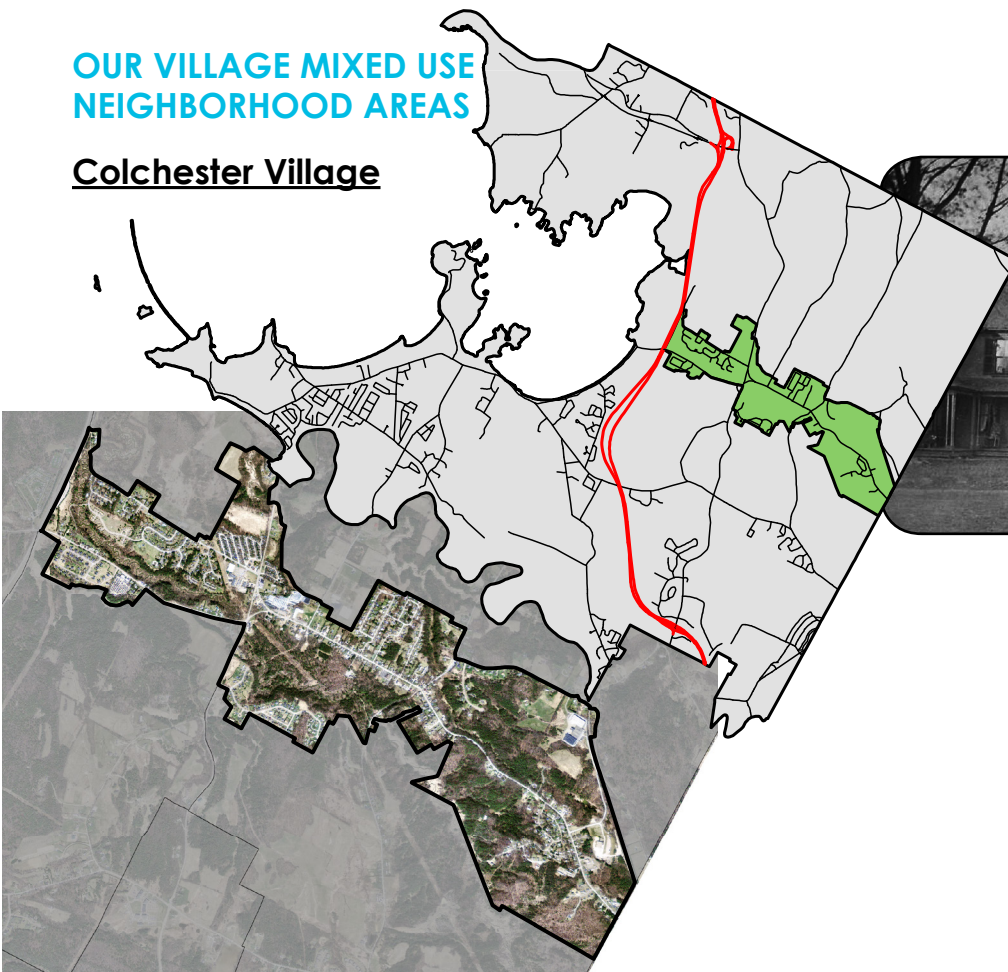
This area is the current center of business within Colchester, with several hotels, a national retailer, a grocery store, heavy industry, a quarry operation, numerous small businesses, Class A office space, and the University of Vermont's medical research facility. A residential neighborhood, Sunderland Woods, was constructed within a high-density R3 residential zone on the northern cusp of this neighborhood. As this area will remain the center of large-scale commercial and industrial expansion for Colchester, no extension of residential uses will be considered during the term of this plan. Alternative energy production is appropriate in this area provided that it enhances existing uses and does not detract from the commercial and industrial development opportunities, the aesthetics of the gateway or negatively impact the natural areas present. Separations of commercial uses and heavy industrial uses should remain, to ensure the continued viability of both uses. Integration of mutually sustaining uses, such as fitness centers and daycares within employment centers, is encouraged. Current projections demonstrate that this area has the potential to accommodate many additional years of continued commercial and industrial growth. The Exit 16 area contains the majority of commercial and industrial land within Colchester. Areas for expansion include undeveloped sites at Water Tower Hill, the area surrounding the former Rathe landfill and brownfields along Hercules Drive. The synergy of the Albany College of Pharmacy, the University of Vermont's research facility and the State of Vermont Health Laboratory provide high-tech employment in the area.

The Town of Colchester is working with the State of Vermont Agency of Transportation to advance the Exit 16 diverging diamond intersection and associated improvements on Roosevelt Highway. Although capacity and safety issues have made these transportation improvements vital, development should continue while these improvements are made. The project includes gateway enhancements, including pedestrian and aesthetic improvements, recognizing that Exit 16 and Roosevelt Highway are primary entrances to the community. No changes should be made to the zoning in this area during the term of this plan.



## OUR VILLAGE MIXED USE NEIGHBORHOOD AREAS

### Colchester Village



The Colchester Village Neighborhood Area begins with the historic Colchester Village at the intersection of Main Street/Mill Pond and East Road. It extends from the Interstate to the Essex Town Line along Creek Farm Road and Main Street (Route 2A). It is bounded on the north by the Northeast Quadrant, on the west by the East Lakeshore Drive Neighborhood, and on the south by the Mill Pond and Poor Farm Road Neighborhoods. It is accessed by Roosevelt Highway and is designated village mixed use. The area includes a mix of zoning ranging from industrial to high density residential: R1, R2, R3, GDI, COM, & IND). The entire area is served by fee-based municipal water and private on-site septic, except for Creek Farm Plaza and Brault's Mobile Home Park, which have fee-based municipal sewer, funded primarily by Brault's.

The historic core begins along Roosevelt Highway and proceeds

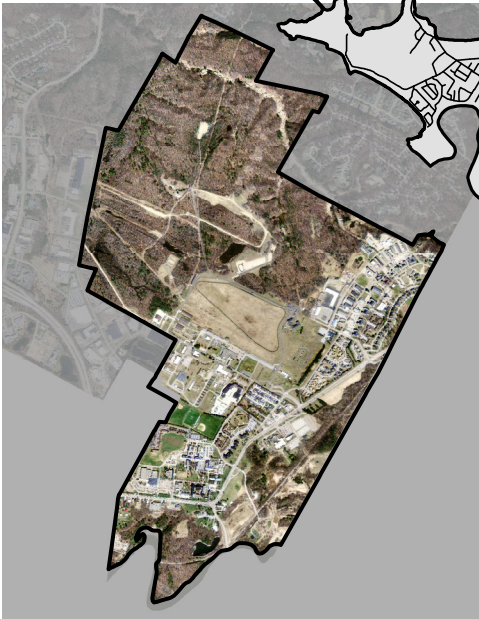
easterly along Main Street to the vicinity of the intersection of Mill Pond Road and East Road. This area has much of the character expected of New England villages but not found elsewhere in Colchester, including old homes close to the road, churches, small businesses, the Burnham Library, the Historical Society, the Colchester Food Shelf, and Union Memorial Elementary School. This area is designated as village mixed-use and zoned General Development One to preserve this blend of commercial and residential development and encourage infill that preserves the historic character of the area. Alternative energy facilities should be small in scale and held to the same standards as commercial and residential development. No rezonings are appropriate for this neighborhood during the term of this plan.

The greater Village area includes some commercial properties, but

mostly consists of residential neighborhoods. With the exception of the existing commercial/industrial properties along the railroad right-of-way that is planned for business use, commercial growth outside the Village core should be limited, in keeping with the mixed use future land use designation, and respective of the impact of additional truck traffic on the village. Those properties fronting along the railroad right-of-way are the only properties in Colchester that have the opportunity to have a rail siding for freight and therefore are appropriate for business use.

The natural corridors of Indian and Pond Brook should be maintained and enhanced and deer wintering yards should be kept open. The greater Village area is in need of improved pedestrian and bicycle facilities between outlying neighborhoods, such as Country Meadows. The development of the Village Park during the term of this plan may encourage informal off-road pedestrian connections between this area and the core, which may later be formalized. The Library is growing its stewardship of the Town Green from the Library to the Historical Society Building. This provides opportunities for increased inside and outside use and event programming. The Green should be cultivated as a community gathering spot.

## The Fort



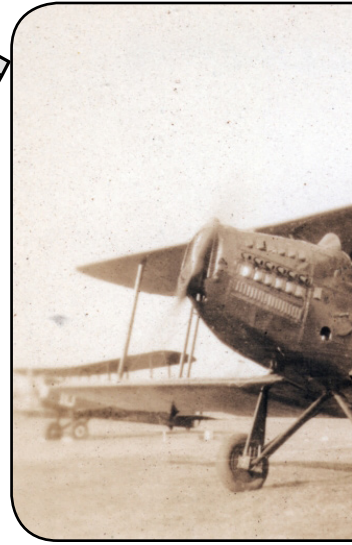
This neighborhood area occupies the southeastern part of Colchester, bounded on the east by the Town of Essex, on the south by South Burlington, on the west by the City of Winooski and the Exit 16 neighborhood, and on the north by the Severance neighborhood. Fort Ethan Allen is accessed from Colchester by Severance Road or Route 15. Either access requires that one cross through either Essex or Winooski. The Fort is separated from South Burlington by the Winooski River ravine. The neighborhood is designated as mixed-use on the Future Land Use Map and the majority is zoned General Development Two. No changes to zoning designations are appropriate during the term of this plan.

Three major institutions occupy this neighborhood and have a significant impact on land use patterns within the area and the greater community's

economy: Saint Michael's College, UVM Medical Center's Fanny Allen Campus, and Camp Johnson. Fort Ethan Allen is the historic military outpost that has transitioned into the Vermont National Guard at Camp Johnson. The historic Fort is mostly in Colchester but also partially in the Town of Essex. These historic National Register structures, which define the area and over time have been repaired, rehabilitated and renovated for reuse, including multi-family housing, small businesses, educational and cultural organizations. Development shall not cause undue adverse impact to the historic properties and scenic views of this area. Alternative energy production within the National Register District must be sympathetic to the historic structures. Outside the District, energy production may be accommodated in this neighborhood in a manner that does not detract from existing development or scenic views. A variety of electronic communication organizations occupy the historic Fort. Outside the mixed-use Fort area, there are also several residential developments within the

area, such as Winchester Place and the State of Vermont-owned mobile home park. The historic parade grounds are now a park jointly managed by the Town of Colchester and the Town of Essex. The Fort is a cultural center for Colchester, with the Saint Michaels Colleges Elly Long Music Center, which houses the Vermont Youth Symphony Orchestra, Vermont Refugee Resettlement Program, the Islamic Society of Vermont and the Vermont Genealogy Center. The balance among the businesses, residences, and educational and cultural facilities is continually shifting, based on market changes. This area should be maintained and enhanced to include community gathering places and other amenities that would foster the development of the neighborhood as a cultural center. The Fort neighborhood is served by fee-based municipal water and fee-based sewer.

Saint Michael's College is a private, Catholic, liberal arts school that confers both bachelor's degrees in addition to graduate degrees. The majority of its 2,000 students live on







campus, along the northern edge of Route 15. The College contributes to the community as a major employer, a cultural and recreational resource, and through its volunteer fire and rescue services, which are coordinated with the Town.

The Religious Hospitallers of St. Joseph founded the Fanny Allen Hospital in 1894. Through the twentieth century, nuns affiliated with this Catholic order staffed the hospital. The hospital consolidated in 1995 with the UVM Medical Center. The site provides outpatient surgery, diagnostics, medical rehabilitation, medical offices, and a commuter parking lot for the main UVM Medical Center Campus in Burlington. The former convent has housed a variety of uses and now functions as a school.

Camp Johnson is the main facility of Vermont's National Guard, "the Green Mountain Boys." In 1894, the U.S. Army established a cavalry post at Fort Ethan Allen, authorizing a portion of the fort for National Guard training. The Fort was deactivated in 1944. Most structures on the

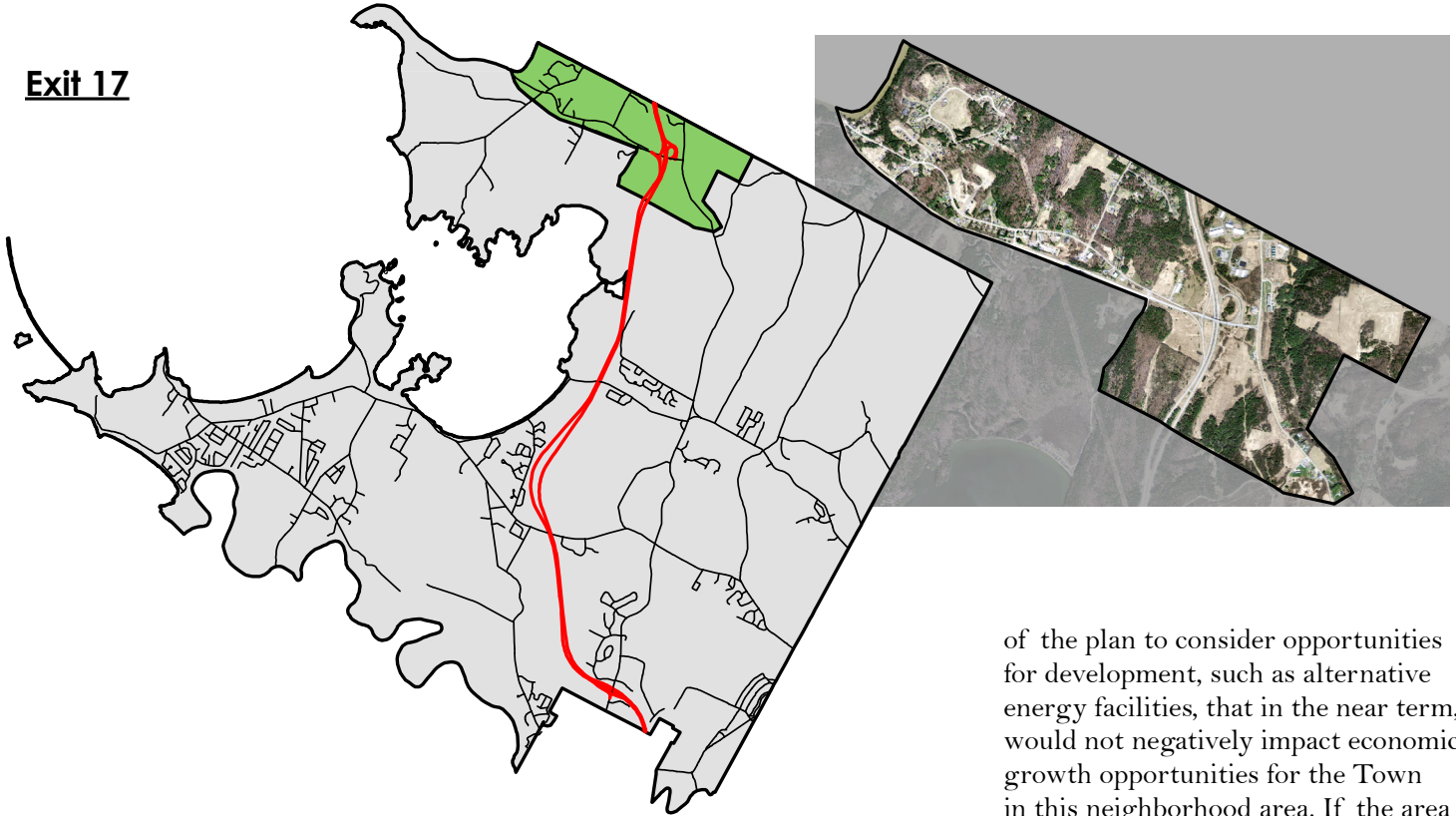
base are used for administration on State-owned land, while the undeveloped training areas are located on federally-owned land. The Green Mountain Boys, or the Vermont Brigade, the 86th Infantry Brigade Combat Team are known for their mountain warfare skills. The Town is supportive of the Guard, its mission and the many military families in the community. While the camp contains a significant amount of undeveloped land, no change in use for this area is expected during the term of this plan. The Town will continue to work on implementing bicycle and pedestrian improvements along Route 15. Green Mountain Transit, with financial support from the Town, provides the

State's highest level of public transit service along this corridor.

The Town should continue to work with the Chittenden County Regional Planning Commission to implement the Route 15 Corridor Study and the various bike and pedestrian improvements called for in this corridor plan. It is recognized that a full interchange at Exit 15 would benefit the Exit 16 neighborhood, in concert with a road connection through Camp Johnson. This is not likely to occur during the term of this plan.



## Exit 17



This neighborhood area is bounded on the north by the Milton Town Line, on the south and east by the rural lands of the Northeast Quadrant, and on the west by Niquette Bay Road, Route 2, and the Lamoille River. It is bisected by the Interstate 89 Exit 17 interchange and US Route 2, a limited access highway. The character of the area is influenced by the movement of US Route 2 from Jasper Mine Road to its current alignment. Businesses do not have direct access to the route. This leaves the area appearing devoid of development and very rural. This neighborhood is classified as village mixed-use and allows a variety of residential, commercial, and industrial uses. However, the scattered original development pattern presents difficulties in infill and the majority of this area will not be able to achieve the density needed to create a true village center.

This area is a mixed-use area which may be developed incrementally over time, notably after Severance Corners is complete. It is largely undeveloped,

with some light industrial and residential uses scattered within the area east of Interstate 89 and North of US 2. Development within this area is influenced by topography and soil conditions and a lack of municipal fee-based water and sewer. The Town should work to ensure that, as development continues to occur within this neighborhood area, it is compatible with the goals of the village mixed-use future land use, including provisions for recreation and pedestrian/bicycle circulation, especially along the Route 7 corridor. Development, including alternative energy facilities, should not detract from the scenic views of the area as identified in the current GD4 open space overlay district. The Town should also continue to work with the State to implement traffic improvements within the area, to preserve capacity for the future and sufficiently handle background growth in traffic. Given the current dispersed development patterns, the current mixed-use zoning, GD4, should be evaluated during the term

of the plan to consider opportunities for development, such as alternative energy facilities, that in the near term, would not negatively impact economic growth opportunities for the Town in this neighborhood area. If the area becomes considerably denser over a longer time frame than this plan, bike and pedestrian infrastructure could be explored, to link the neighborhood internally and add connections to Milton along Route 7 and Colchester Village.

The low-density residential area north of Route 2 lacks sufficient water to sustain build-out under current R1 zoning. Residential densities should remain for the term of this plan and into the future. If a decision is made in the future to create greater density, a water system would need to be developed and financed in the area. Existing private well-served properties would then be required to connect to the fee-based system. The village mixed-use area zoned GD4 and GD1 between Route 2 and Jasper Mine Road is also challenged by geography, which has limited development and no fee-based water and sewer. Therefore development should continue to be of a limited scale.

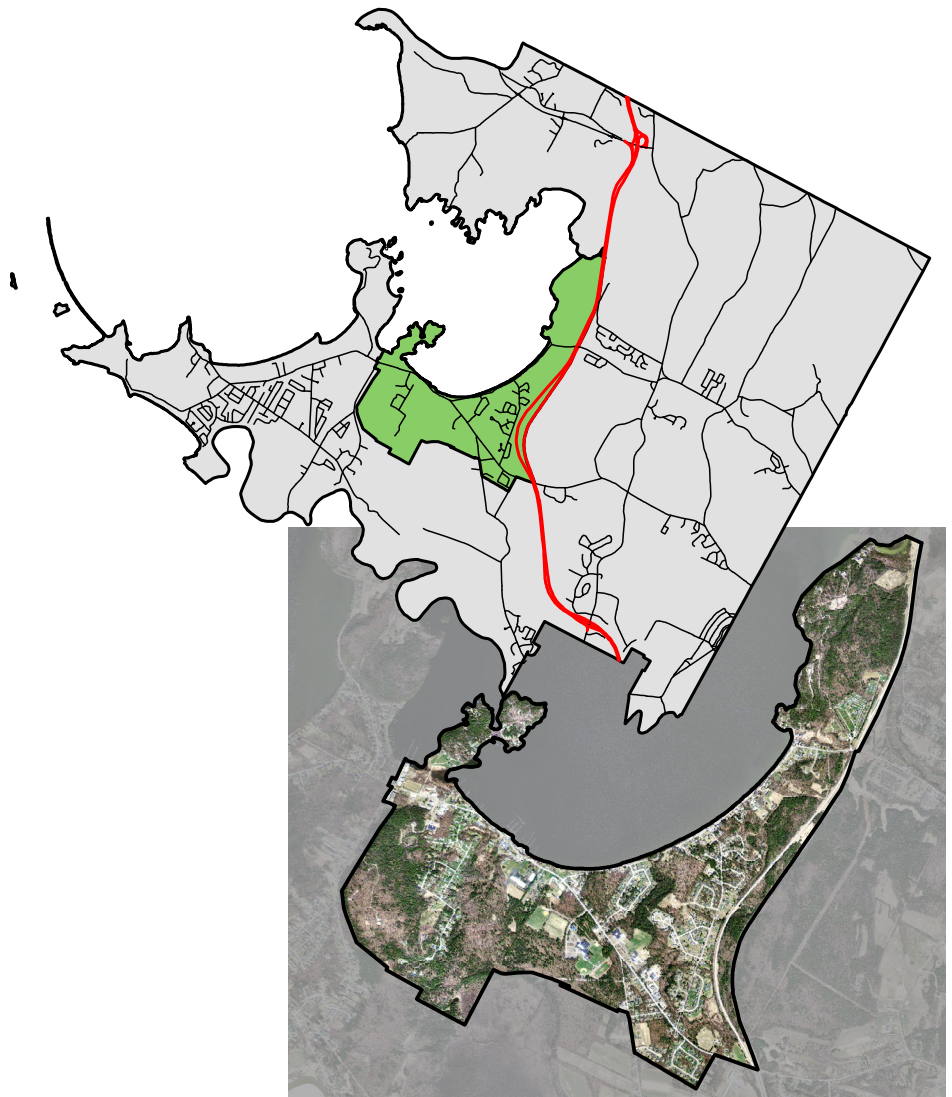


## Inner Bay

This area includes the lands west of Interstate 89, from Malletts Creek to Prim Road. Williams Road, portions of Bay Road, Blakely Road, West and East Lakeshore Drives are included in this area.

The Lakeshore Drive area is the center of recreational access to Malletts Bay. West Lakeshore Drive includes the Town beach, boating opportunities, a variety of commercial uses and the Hazelett Stripcasting Company. This area is designated village mixed-use on the Future Land Use Map and is served by fee-based municipal water and private on-site septic. Alternative energy facilities should be small in scale and held to the same standards as commercial and residential development. The southern boundary of this neighborhood has significant natural resources.

In 2015, new zoning was created for the West Lakeshore Drive area: Lakeshore One and Lakeshore Two Districts. The Malletts Bay Initiative, begun in 2015, included a comprehensive look at bike/pedestrian improvements, the road corridor, stormwater, and wastewater disposal along the Bay. Since the adoption of the new districts, the Town has developed a preferred design alternative for the West/East Lakeshore and Blakely Roads intersection, is developing stormwater remediation plans, bike/pedestrian improvements, and is developing for consideration an extremely limited sewer system to provide for environmental clean-up in the inner bay. General plans for the redevelopment of the Town's Bayside Park and the development of the Town's Bayside Hazelett parcel will be gradually implemented, as funding allows. During the term of this plan, it is anticipated that many of these projects will be advanced.



West Lakeshore Drive carries heavy traffic volumes. While a bypass road was discussed in previous plans, the traffic benefit-to-cost makes pursuing such a road unwarranted and the abandonment of the circumferential highway further removes this possibility. Given the lack of a parallel road to West Lakeshore Drive, an alternative emergency connection from Malletts Bay Avenue to Prim/Heineberg Roads, perhaps in combination with or using a future recreational path, should be explored, not on its own, but as opportunities arise.

The West Lakeshore Drive neighborhood area will remain a focal point for tourism and recreation, with opportunities for infill development as designated on the future land use

map. Commercial uses in this area serve recreational activities, local residents and regional commuters. Alternative energy facilities should be small in scale and held to the same standards as commercial and residential development. Services and recreational access for residents and tourists should be improved. The Hazelett Company should remain as an employment center in this area and expand as needed. Small businesses are important to maintaining the economic vibrancy of this neighborhood area. Development must be balanced with environmental impacts. Views and access to the Bay should be preserved and enhanced. Green infrastructure requirements for redevelopment and new development will help to improve or maintain



water quality. With existing on-site septic, this goal for infiltration may prove difficult, given some of the smaller lot sizes; however, the planned sewer service area will help create more space for infiltration.

The development of the parks and the limited sewer system for environmental remediation, are extremely limited in their ability to support additional development. The LS1 and LS2 zoning districts create a framework for the type and scale of development planned for the neighborhood, and no changes to this zoning is warranted during the term of this plan. The planned infrastructure will enable the village mixed use long envisioned for the West Lakeshore Drive area.

East Lakeshore Drive serves as an arterial roadway and an alternative commuting choice to Route 127 (Blakely Road). The area has almost contiguous summer seasonal and year-round residences. Non-conforming and failing private on-site septic, as evidenced by DNA testing indicating human waste bacteria in the Bay, indicate that the wastewater systems are not adequate. The area between East Lakeshore Drive and the Lake is constrained, often requiring more structural solutions for shoreline stabilization. Shoreline stabilization in this neighborhood should continue to balance structural needs with the need to maintain and enhance the aesthetics of the Shoreland and include native vegetation and deemphasize mass of structures. The area east of East Lakeshore Drive and surrounding Williams Road functions as suburban residential with R2 zoning, as does much of the area along Bay Road. North of Bay Road is the seasonal campground Lone Pine, zoned GD1, which still brings many summer residents to the community. The areas west and north of Lone Pine are zoned R1 are significantly less dense with a scattered collection of summer

seasonal and year round homes in a rural setting.

The areas south of Bay Road function cohesively as a walkable medium-density residential neighborhood area. The presence of seasonal camps along East Lakeshore Drive preserves the historic summer seasonal culture of Colchester and contributes to the character of the area, with the majority of residences between the road and the Lake still occupied only seasonally. These area attributes should be sustained. Recent rebuilding of homes between the Lake and the road has inhibited views of the Lake. During the term of this plan, zoning should be examined to address view preservation, as rebuilds continue in this area. Existing properties should be redeveloped in compliance with the Development Regulations. Alternative energy facilities should be small in scale and held to the same standards as commercial and residential development.

If the Lone Pine campground transitions into a more permanent use area, care should be taken to tie it into the existing neighborhood to the south, while limiting effects on the rural areas to the north and west. Although existing development often exceeds current zoning densities, no up-zoning shall be considered, as the uses often exceed the capacity of the land to provide adequate septic and stormwater treatment, as well as parking and other basic site amenities. Environmental concerns arising from the close proximity of the area to the Lake, roadway capacity, and rugged geography north of Bay Road limit densities in this area. Care should be taken not to increase traffic on East Lakeshore Drive. No additional densities or development shall be considered for Bay Road, Williams Road, and East Lakeshore Drive areas, given the existing site constraints.

The Public facilities, including the Town Office Building, Police

Department, Colchester High School, Colchester Middle School, Malletts Bay School, and the Colchester School District Offices, are almost contiguous along Blakely Road. The Town's facilities provide a base of operations to serve the entire community. The school facilities contain recreational amenities, including the playing fields for the high school and community functions that accompany sporting events. The Town's Post Office lies on the southern edge of this neighborhood. A number of small businesses, predominantly professional office space, line Blakely Road within this neighborhood. Surrounding neighborhoods are medium-density in nature. Alternative energy facilities should be small in scale and held to the same standards as commercial and residential development. The current Lakeshore Two and General Development One District incorporates existing businesses and services around current sites along Blakely Road, surrounded by residential uses R2 zoning. No changes are anticipated to zoning for the Blakeley Road area.





## **The Bay**

As distinguished from the water area of inner and outer Malletts Bay, this neighborhood spans the area from the Winooski River north to the West Lakeshore Drive and Marble Island Neighborhoods bounded on the west by the Winooski River and Lake Champlain and on the east by Malletts Bay Ave. Neighborhood. It is a gateway from the City of Burlington and is developed with a mixture of retail, commercial and professional office uses along the Heineberg/Prim Road corridor surrounded by medium-density residential neighborhoods and the large floodplains to the south and east. This corridor is designated as mixed-use, with the surrounding area designated at suburban residential.

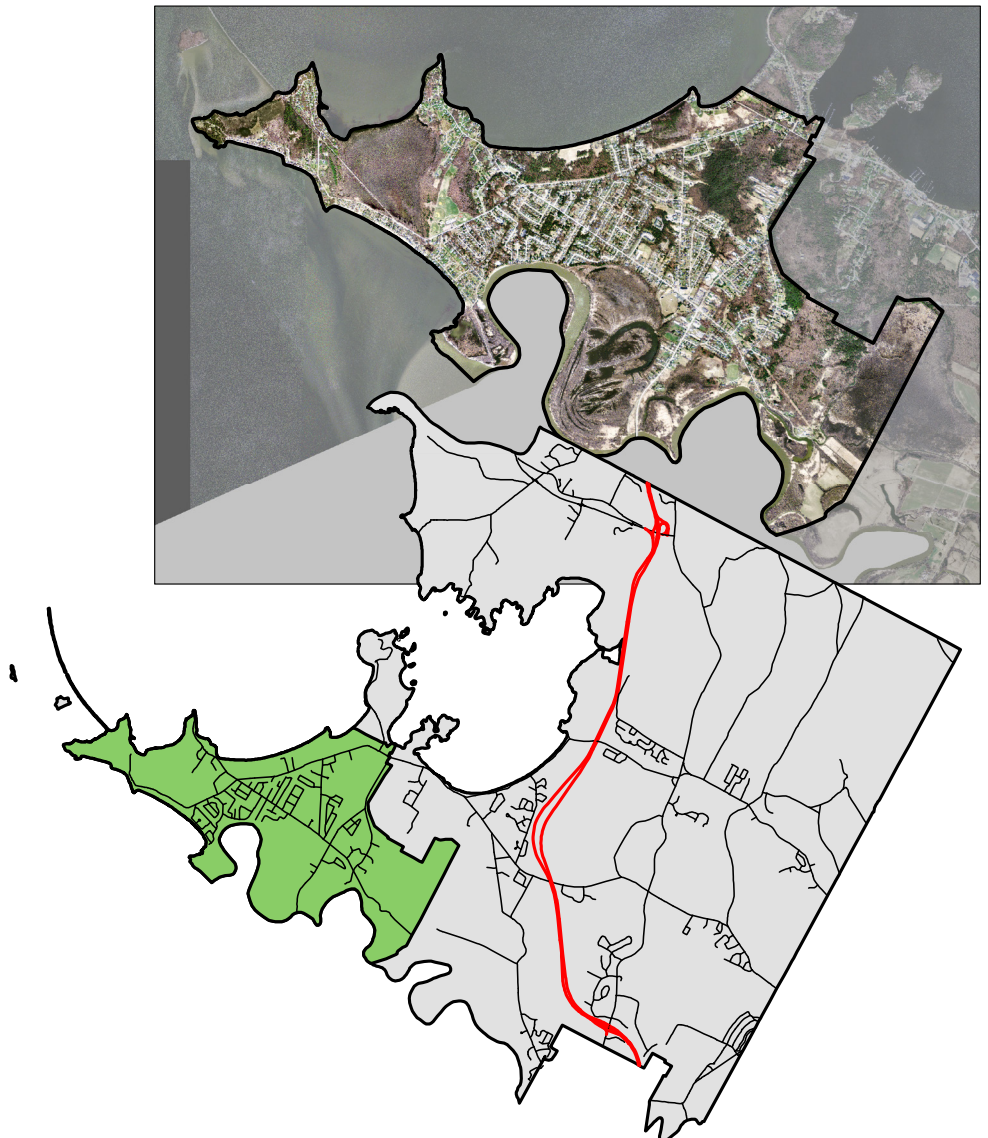
The majority of the properties along the Heineberg Drive and Prim Road corridor are zoned General Development One. These roads function as regional arterial roads as part of the Route 127 Corridor and also serve local road functions.

Porters Point Road functions as an arterial road. Planned improvements include an upgrade to the West Lakeshore/Prim intersection, an extension of the West Lakeshore Drive Path from Church Road to Prim Roads, and in the more distant future, a path along Prim Road.

Commercial development of an appropriate scale to serve the neighborhood should continue around Warners Corners. This area, at the intersection of Prim Road and Heineberg Drive, should also continue to see redevelopment of existing commercial sites. Alternative energy facilities should be small in scale and held to the same standards as commercial and residential development. Many of these wetlands

in this neighborhood will continue to be protected by the State through wetland buffer requirements and the Town's Water Protection Overlay District. Over the term of this plan, this District is anticipated to be changed, to better address fluvial erosion hazard areas, such as the banks of the Winooski River. This is an area that could also benefit from public transportation linking the neighborhood to downtown Burlington. During the term of this plan, grants to study public transportation options should be evaluated to explore if there is a cost-effective service that could provide reasonable service time to Burlington.

The Porters Point Road area is a mostly built-out suburban





residential neighborhood containing a significant number of homes that were constructed in the mid to late twentieth century. Medium to high-density residential R2 and R3 zoning is typical within this neighborhood, although flood plain zoning is present in the more environmentally sensitive portions of this area. The majority of the neighborhood has fee-based municipal water and private on-site septic. While not on the Lake, Airport Park is a significant resource for the entire Town. The lakeshore and river access points make the area vibrant in the summer. A variety of sensitive natural areas exist in this area, including Delta Park, Rossetti Natural Area, Half Moon Cove, and sandplains. Minor infill development has occurred as open lots are built and a few multi-family residences are built. This area contains affordable housing with smaller older homes, as well as the designated “senior only” apartments. While infill opportunities should be encouraged in this area, care should be taken to ensure that infill development does not erode the affordable housing stock in this area or adversely impact the infrastructure of the area. The character of the area should be maintained and care taken to ensure that lakeshore and river frontage development does not detract from this character or present environmental concerns.

The Macrae and Bean Road area has drainage issues and marginal soils that restrict densities to existing R1 zoning. The steep and eroding banks of the Winooski River should be evaluated under fluvial erosion hazard standards in the future. The flood plains and the Winooski Valley Park District’s Macrae Park provide for continuity between the habitats of this neighborhood with the larger Intervale and Malletts Bay Avenue floodplains. No changes are suitable to the zoning during the term of the plan.

## THE LANDS BETWEEN

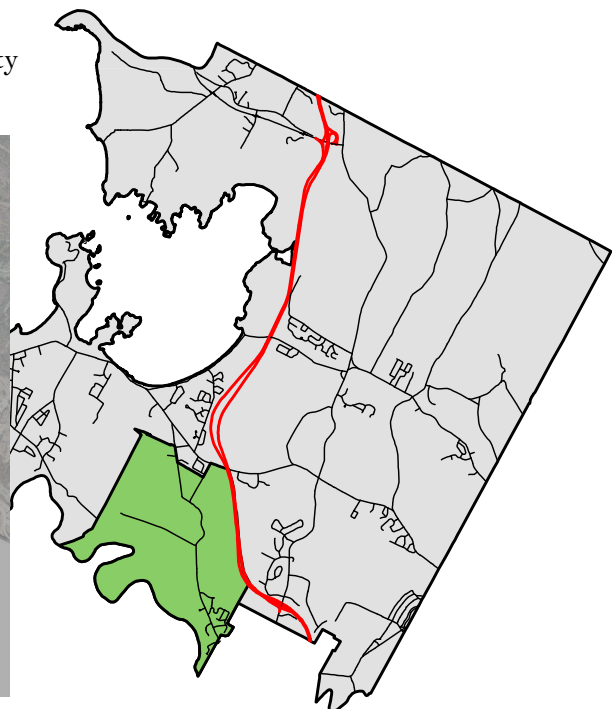
### Malletts Bay Ave

This is the area between Interstate 89 and the Flood Plain, south of the East/West Lakeshore neighborhood area, along Malletts Bay Avenue and Lavigne Road extending south to Winooski, including agricultural lands known as Shipman Hill, farmlands and floodplains along the bottom of the hill, an industrial park, a quarry, active farms, and residential areas.

Climate, soils, location and property ownership have made this area a center of farming operations, which produce vegetables, fruits, eggs, dairy products, livestock, flowers and landscape plantings for the community. The level topography, well-drained soils and proximity to population centers that make this area ideal for truck farms also makes the land very attractive for residential development. Larger scale alternative energy facilities may be appropriate in this area, as long as conflicts with existing uses and natural areas are minimized.

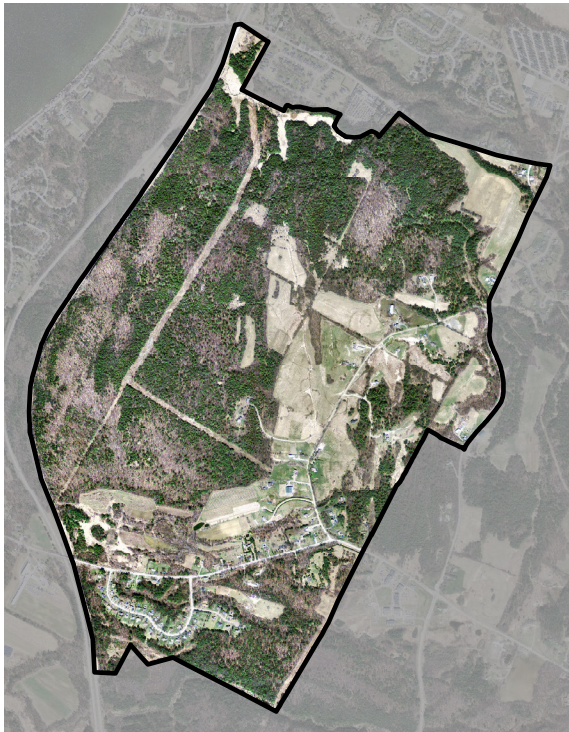
Zoning varies accordingly from industrial to agricultural to low-density R1 residential to high-density

R3 residential to Floodplain. The highest residential density is along the Winooski Town Line. Residential development has been allowed, with the stipulation that property owners be made aware of the pre-existing industrial and agricultural uses in the area, although this does not seem to mitigate neighbor complaints. Within the Shipman Hill area, the Agricultural Mixed Use (AMU) Zoning District was created specifically for this neighborhood to recognize the opportunities in this area for agri-tourism and complimentary commercial uses. During the term of this plan, the AMU zoning should be revisited for the remainder of the rural lands in this neighborhood that are not precluded from development by floodplains. It is recognized that the floodplains contribute to agriculture in this area and should continue to be protected from any development, including alternative energy siting. The AMU District should continue to be a versatile tool for farmers as farming practices grow more complex. No other zoning changes are warranted during the term of this plan.





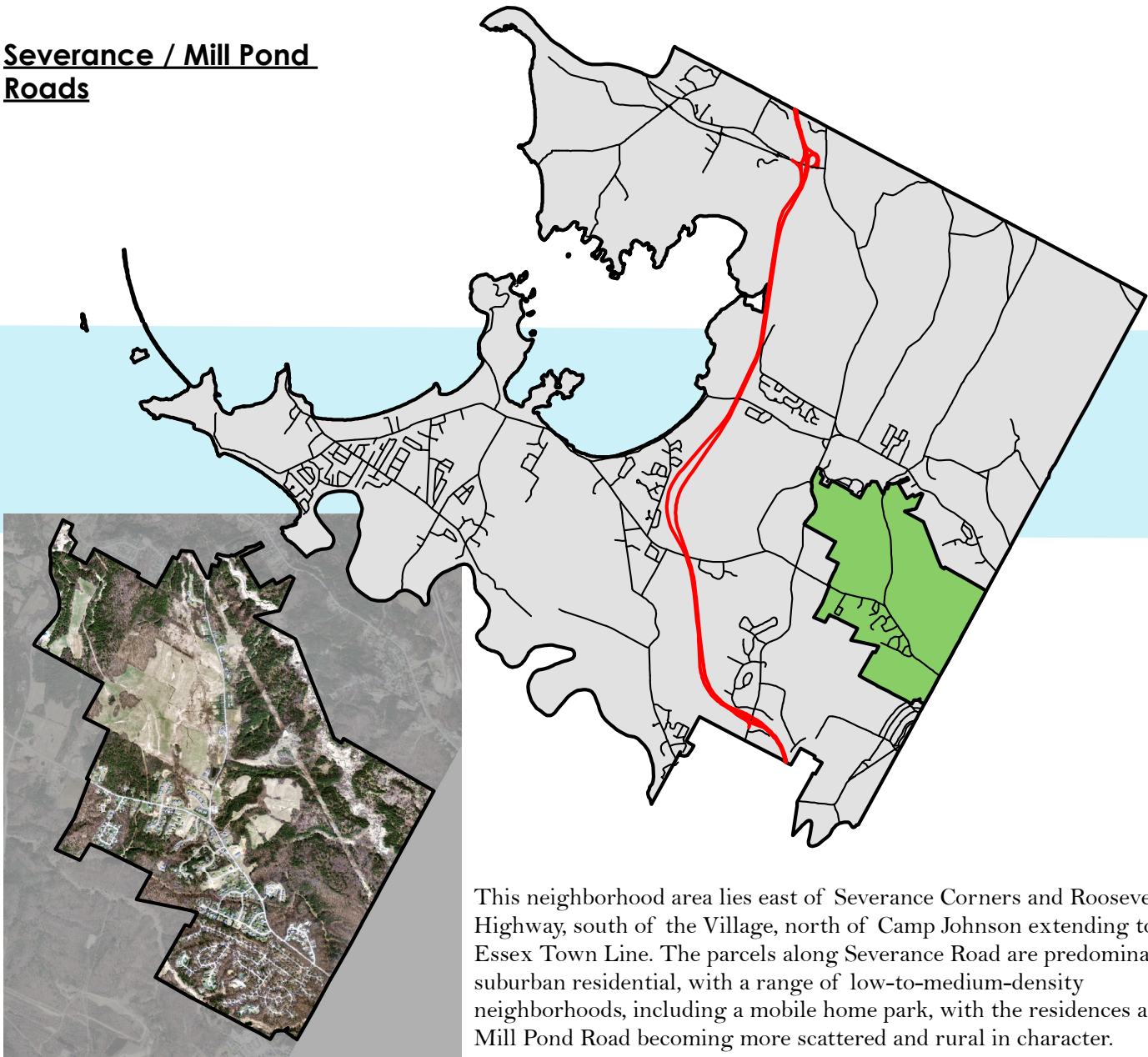
## Blakely / Poor Farm Roads



This area is between Severance Corners on the east, the Inner Bay neighborhood area and Interstate 89 on the west, the Village Neighborhood Area along Bay Road on the north, and the Exit 16 neighborhood on the south. The properties included in this area are: 1) suburban residential, R1, properties along Blakely Road and in the Edgewood neighborhood, which loops off of Blakely Road; and 2) larger rural properties zoned R10 or Agricultural along Poor Farm Road.

The rural area along Poor Farm Road is valued as an outstanding rural setting, as the topography and soils have left the area more rural. Deeryards and a gravel road help define the character of this neighborhood. The maintenance of or addition to agricultural operations along Poor Farm Road should be encouraged. Alternative energy production that does not negatively impact the rural character or existing agricultural operations may be appropriate for this area. No changes are warranted for this neighborhood during the term of the plan.

## Severance / Mill Pond Roads

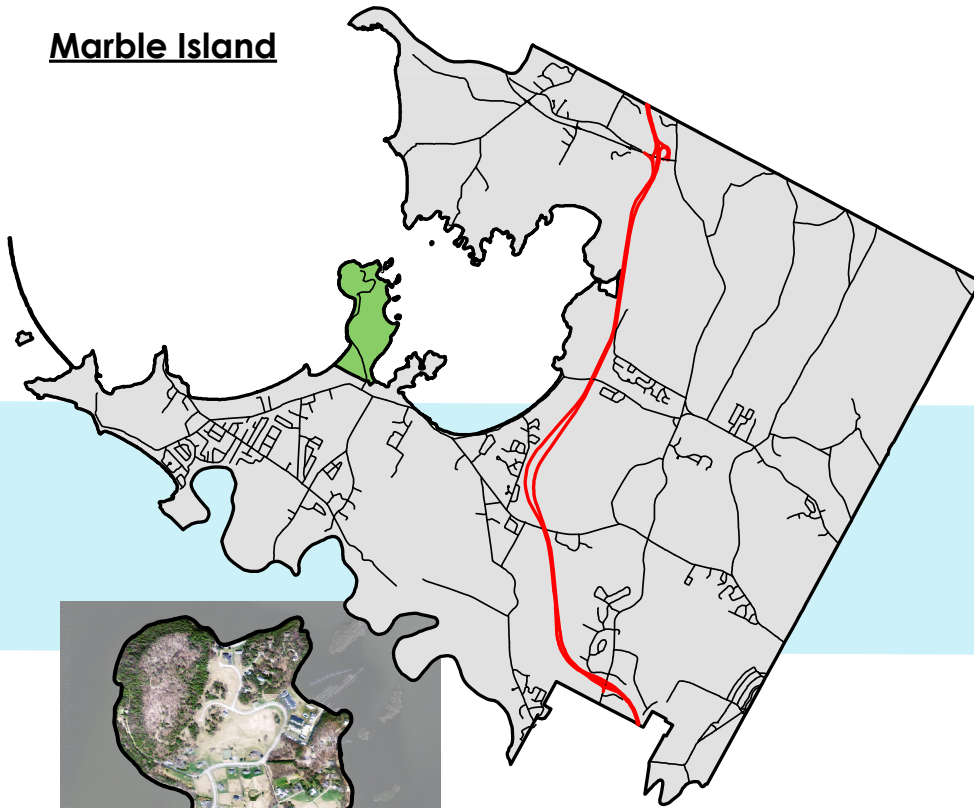


This neighborhood area lies east of Severance Corners and Roosevelt Highway, south of the Village, north of Camp Johnson extending to the Essex Town Line. The parcels along Severance Road are predominately suburban residential, with a range of low-to-medium-density neighborhoods, including a mobile home park, with the residences along Mill Pond Road becoming more scattered and rural in character.

The more rural lands of the Mill Pond Road corridor are important for east-west connectivity of natural areas along Indian Brook. The low-density residential and agricultural uses along Mill Pond Road are well-suited to the rolling terrain and marginal soils of this area and serve to limit residential infill, which could diminish the character of the area and the connectivity of natural areas. In the distant future, Severance Road may serve as a pedestrian and bicycle connection from Severance Corners to the Suzie Wilson Road area in Essex. As agricultural uses transition, outdoor recreational uses may be appropriate that do not diminish this character. Alternative energy production that does not negatively impact the rural character or existing agricultural operations may be appropriate for this area. No changes should be made during the term of the plan to the suburban residential (R1, R3, and MHP) along Severance Road or the rural area along Mill Pond Road (R1 and AGR) during the term of this plan.



## Marble Island



This is the headland extending into Malletts Bay, defining inner and outer Malletts Bay. Malletts Head has low-density residential uses with commercial recreational uses, at the Marble Island Marina and Brown Ledge Camp. Natural areas in this neighborhood include three undeveloped hills, which are prominent natural land features as seen from the water. Marble Island and Cave Island are part of the Lake Champlain Paddlers Trail, which encompasses this area.

While this area is designated as suburban residential on the Future Land Use Map, R5 low-density residential zoning exists. Low-density residential uses along the shoreline assist in preserving lake views. The Marble Island Resort has transitioned to a residential community. Any additional development should be sensitive to existing uses, such as Brown Ledge Camp, sensitive to the natural features and resources of the area, and have sufficient emergency access. Alternative energy facilities shall be limited in scale and held to the same standards as other development, with particular sensitivity to scenic views of and from the lake. The existing marina is an important private recreational amenity, as is the paddlers' trail. New development should preserve views of the lake and from the lake to the greatest extent possible and enhance access to the Lake. The natural area, with views, at the crest of Malletts Head, should be considered for acquisition by a Land Trust if private funding is available. Over the term of this plan, the zoning for this area should be reevaluated, to determine if a better zoning could be created that would preserve the rural character but maintain residential densities and setbacks.

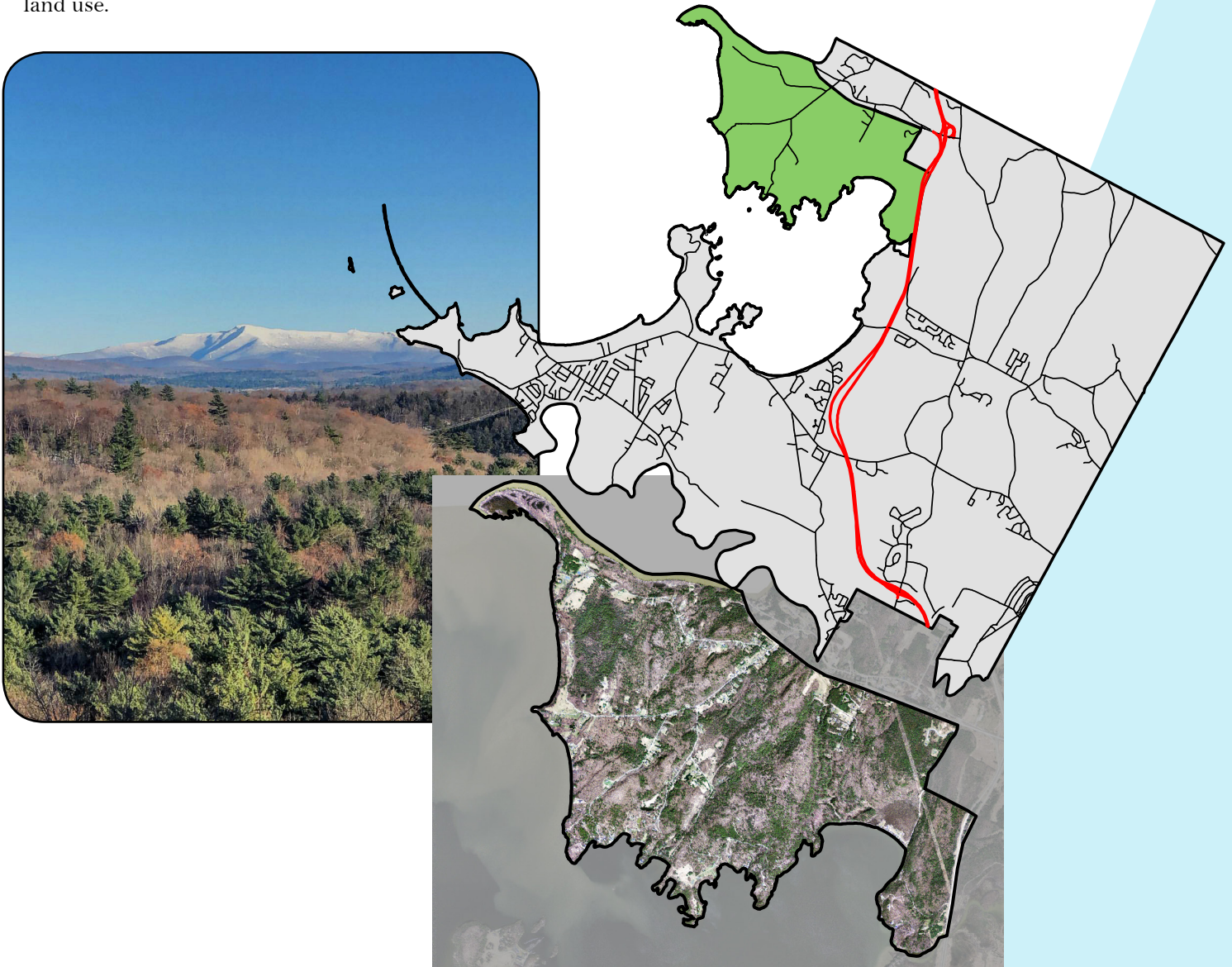


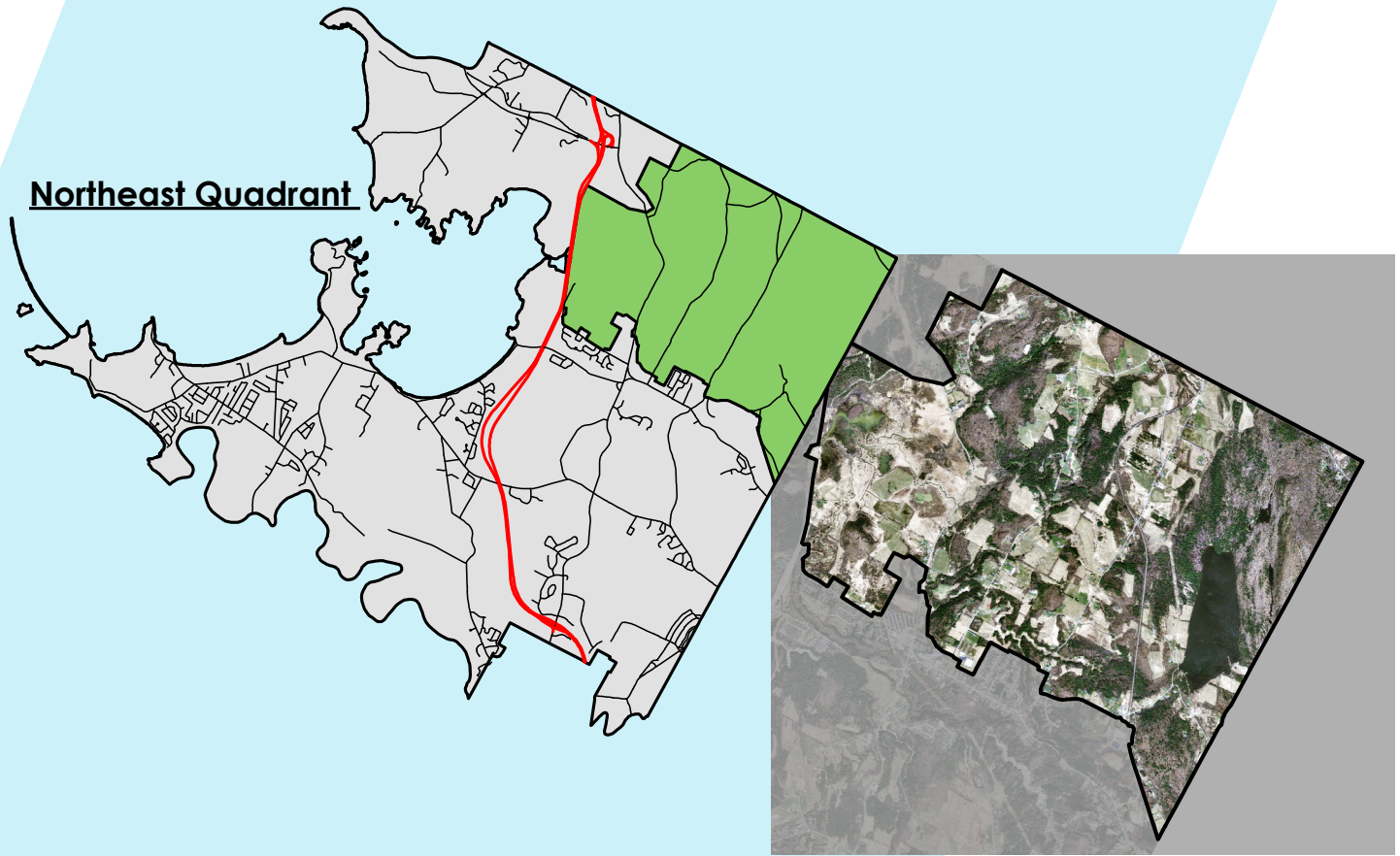


## OUR RURAL LANDS

### Clay Point

This area includes all land west of I-89, south of Route 2 and north of Malletts Creek, excluding the Exit 17 Neighborhood Area. The Clay Point Area is geographically rugged, with striking lakeshore ledges, thick forests and numerous rock outcrops, beaver ponds and other wet areas. This area is attractive, due to its natural beauty and sparser development. Private development in the area has been limited by the geography, resulting in lower-density development along with private roads private water and on-site septic systems, which have lower capital costs but higher ongoing costs. This is contrasted with other developments, where infrastructure is installed by developers with the cost passed on to home buyers before being turned over to government. Property owners and residents should be aware that the Town does not plan to add road infrastructure or municipal water and sewer lines in this area. A significant portion of this neighborhood has been set aside as Niquette Bay State Park. This area is zoned for low-density residential use, R1, and is designated rural for future land use. Alternative energy production that does not negatively impact the rural character or scenic lake views may be appropriate for this area. During the term of this plan, the zoning for this area should be re-evaluated to determine what zoning would best maintain the character of the area, considering its natural limitations, the desires of current residents, and the planned rural land use.





This area is the most rural area of Colchester, and is characterized by small farms, large residential lots, and on-site septic systems, and difficult terrain to develop. The area is bounded on the east by the Essex and Westford Town Lines, on the north by the Milton Town Line, on the west by the Exit 17 neighborhood area and Interstate 89, and on the south by the Colchester Village Neighborhood. The northwestern edge of this area has naturally-occurring radioactive properties within the bedrock, causing issues for potable water and radon. The area contains the only railroad line in Colchester and has three main transportation routes bisecting the area: Roosevelt Highway, East Road, and Middle Road. East Road is becoming more of a commuter route to Milton. This area is home to Colchester Pond and the Wolcott Natural Area, both owned by the Winooski Valley Park District. These areas include the most significant forestry blocks within the community, including the historic Town Forest at Colchester Pond. The preservation of additional land surrounding these parks is encouraged. The area is designated as rural for future land use.

The rural and agricultural character of this area shall be preserved. While the area contains a rail line, railyards and rail spurs are not in keeping with the rural character of the area and should not be permitted. The marginal soils and limited areas of fee-based municipal water and the presence of radioactive properties in the bedrock serve to discourage additional development. Property owners and residents should be aware of the radioactive bedrock properties (see Appendices Map 12 Soils), and new development should not increase the degree of human exposure to these properties. The high level of connectivity between forestry blocks and natural features, particularly between Colchester Pond and Essex's Indian Brook Park (which fosters wildlife habitat) should be recognized and maintained. The rise of horse farms and equestrian facilities in this area should be recognized and encouraged. Outdoor recreational opportunities and on-the-farm enterprises and events should be evaluated for further inclusion in the existing zoning during the term of this plan. Care should be taken to recognize the limitation of the land, transportation corridors, and existing character of the area. Primitive overland trails for pedestrians, bicyclists, horses, snowmobiles, and ATVs are appropriate if they do not detract from existing agricultural uses. The area should continue to be zoned as agricultural or low density R5 and R10 residential during the term of this plan. Fixed area developments, opportunities for recreational uses, on-the-farm enterprises, and event facilities may be considered during the term of this plan. Alternative energy production that does not negatively impact the rural character or existing agricultural operations may be appropriate for this area.

# POLICIES

1. No rezoning should occur during the term of this plan, except as called for herein.
2. Severance Corners should remain a Growth Center and be the focus of new development over the term of this plan.
3. The Town will continue to work with the State on advancing intersection and bike/pedestrian improvements at Severance Corners and Exit 16 during the term of this plan.
4. The Town will work with the State to advance regional projects, such as the Exit 17 Scoping Study and Route 15 Corridor plan to address the impacts of traffic growth on the community.
5. Cooperative efforts should continue between the Towns of Colchester and Essex to support the Fort as a cultural center, and the expansion and vitality of businesses and institutions located here.
6. At such time as feasible, a connection should be made between Exit 16 and the Fort.
7. The Malletts Bay Initiative infrastructure improvements should begin under the term of this plan and remain a priority to maintain and improve water quality.
8. The Route 127 Corridor Plan should continue to be implemented as funding allows and within the context of town-wide transportation priorities. Preservation of right-of-ways along the abandoned circumferential highway, for the possibility of limited emergency access and or bike / pedestrian connections is encouraged.
9. Affordable public transit to the growth center should be maintained. Private development of walking and biking infrastructure within the center should be required to connect the center to surrounding neighborhoods.
10. Infill of village mixed use areas is to be encouraged to make best use of land and to be compatible with bike/ped infrastructure



# ACTIONS

1. The Planning Commission shall not consider rezoning, except as called for in this plan or to correct spot zones or split lots.
2. The Town should apply for renewal of the Growth/New Town Center with the State as necessary over the term of this plan.
3. Within three years of adoption of this plan, fluvial erosion hazard standards in the Development Review Regulations should be updated to reflect the Vermont River Corridor Maps. Development shall continue to be prohibited in the floodplain and redevelopment, only allowed if it addresses Development Regulation requirements for floodproofing.
4. The AMU zoning should be revisited within six years of adoption of this plan. The remainder of the rural lands in this neighborhood that are not precluded from development by floodplains should be considered for AMU zoning.
5. The zoning on East Lakeshore Drive and similar areas should be examined within two years of adoption of this plan, to address view preservation as rebuilds along the Shoreline continue.
6. The zoning for Clay Point should be re-evaluated within two years of adoption of this plan, to determine what zoning would best maintain the character of the area and the planned rural land use.
7. The GD4 zoning at Exit 17 should be evaluated within five years of the adoption of this plan to consider opportunities for development that would not negatively impact economic growth opportunities for this neighborhood over the long-term.
8. Within seven years of adoption of this plan, the zoning for Marble Island should be reevaluated to determine if better zoning could be created that would maintain the rural character but maintain residential densities and setbacks.
9. Within five years of adoption of this plan, the zoning of the Northeast Quadrant should be reviewed for possible incorporation of fixed-area-based density cluster developments and more opportunities for recreational uses and on-the-farm enterprises and event facilities.
10. During the term of this plan, grants to evaluate public transportation options for the Bay should be explored, to see if there is a cost-effective service that could provide reasonable service time to Burlington.
11. In evaluating the rural character of a neighborhood, the Open Space Plan should be looked to for guidance.
12. Within a year of adoption of this plan, the Development Regulations should be revised to include a solar screening bylaw, to ensure that similar screening standards are applied to solar as to commercial development.

# NATURAL HERITAGE

Water Resources

Flora & Fauna

Natural Areas

Climate

Agricultural Lands











## VISION

*The Town of Colchester thrives on an abundance of natural resources that have shaped the Town's development and character and should be celebrated and embodied into its plans for the future.*

## GOAL

Protect, preserve, and enhance Colchester's air, water, wildlife, forests, and other natural resources to ensure a healthy environment and a viable working landscape for future generations.

## OBJECTIVE

Identify and plan for Colchester's natural resources as an integral part of its land use, while improving the ecological and environmental viability.

## OVERVIEW

From the shores of Malletts Bay and Lake Champlain to the adjacent wetlands, fertile uplands, and dry sandplains, Colchester has an abundance of diverse natural resources rarely found within the borders of a single town. The total land area of the Town is 24,000 acres. Approximately 12% of these lands are owned by local, state, or federal government, or by other public or not-for-profit entities. In addition to these lands, another 20% of Town land is characterized as floodplain, wetland, significant habitat site or other natural area. Colchester also contains 2,662 acres of water resources just within Malletts Bay. These varied resources provide an attractive and healthy place to live and work, yet can be challenging to manage and integrate into land-use planning. Often our natural resources are impacted by actions taken outside of Colchester. Lake Champlain is a resource managed by the State of Vermont, State of New York, Province of Quebec, U.S. Army Corps of Engineers and other federal entities. Colchester is at the mouth of the Lamoille and Winooski Rivers, two significant watersheds that span into most of northern and central Vermont. The quality of water in Colchester is not ours to control alone. Similarly, changes to the global climate impact Colchester, but cannot be significantly affected by the efforts of Colchester alone. This chapter will describe the Town's natural resources



and challenges facing Colchester's environment, while offering actions that can be taken over the term of this plan to improve and sustain these resources. Other chapters, such as the Serving Colchester chapter should be looked to for specific information on stewardship.

## WATER RESOURCES

Our water resources are an outstanding community asset that provides significant natural, economic, and recreational opportunities including swimming, boating, fishing, and skating. In a preliminary town plan survey, 55% agreed that the lake requires the most protection in Colchester, compared to all other natural resources, such as prairies, forests, and wetlands. Colchester will continue its efforts to improve water quality through its Development Regulations, localized stormwater and erosion control standards and permits, wastewater regulation and education, and infrastructure improvements, such as the Malletts Bay Sewer project and stormwater utility. The Town will also need to work with other partner organizations to address upstream impacts to its waterways. These hydraulic features are further detailed on Appendices Map 11.

### Lake Champlain

Colchester's single greatest asset is Lake Champlain. The Town has twenty-seven miles of shoreline, which influences our economy, land use patterns, and everyday life in the community. Outstanding views can be enjoyed, both from the shoreline and from the water. Views of Colchester from the Lake generally belie the developed nature of the Town. Malletts Bay is renowned for its recreation, including swimming, sailing, and boating in the summer as well as winter activities like ice-boating and the Vermont Pond Hockey Classic tournament each

year. Fishing continues to play an important role in our recreation, economy, and environment as Malletts Bay is gaining recognition as a premier fishing destination. Fishing in 2018 brought \$500,000 to the Town, through the usage of Malletts Bay for a Major League Fishing competition. Colchester has regulated a Shoreland District, 250 feet back from the mean water mark, elevation 95.5 feet, of the Lake, since the 1980s to ensure that development is sensitive to the natural shoreline and intrusions into views from the Lake are kept minimized. The Shoreland Overlay District section of the Development Regulations encourages preserving natural vegetation around the Lake and limits disturbance within 100 feet of the mean water mark, which provides opportunities for preserving natural habitat, views, and filtering runoff. In 2015, the Town received delegation from the State of Vermont for its Shoreland Protection District, which gives permit authority to municipalities. Landowners in delegated municipalities do not need a state shoreland permit for creation of cleared area or impervious surface within the Protected Shoreland Area.

Colchester's economy benefits from the non-structured recreation

opportunities offered on Malletts Bay, such as boating. Colchester currently offers three state boat launches, with two on the Winooski River and one in Malletts Bay. During the summer, thousands of boaters visit Colchester and purchase goods and services such as moorings, storage, or repairs. In the winter, the Bay becomes a center for ice-fishing, snowmobiling, and skating. These recreational opportunities provide a welcoming atmosphere for tourists to enjoy Colchester, even if they are not directly involved with one of these activities. As lands along the Bay develop or redevelop, care should be taken to improve public access and keep the Lake available and attractive for future uses. Paddlers, sailors, and motorboat operators often struggle to share open water on the Bay. Since the water of the Lake is regulated by State and Federal entities, Colchester has no control over number and location of moorings or docks. Colchester provides a seasonal police patrol unit in the Bay to help ensure safety, as the Vermont State Police Marine Patrol and U.S. Coast Guard operations out of Burlington are responsible for the entirety of the Lake.

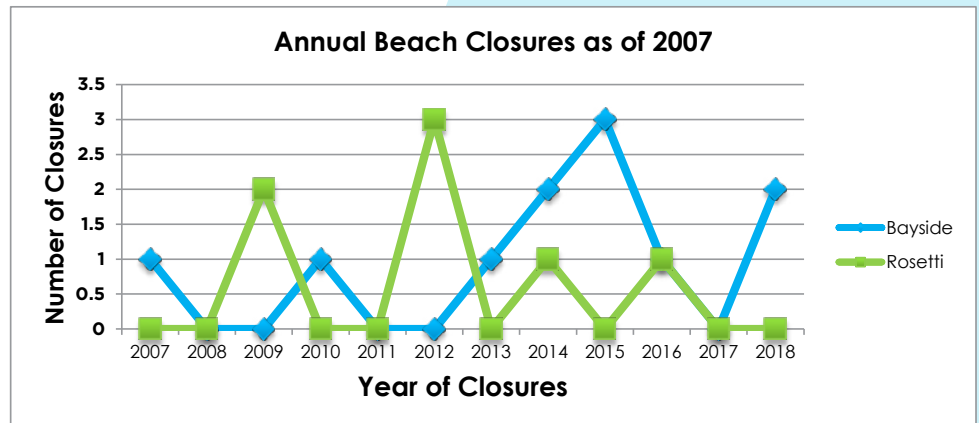


The marinas in Malletts Bay are parts of private recreation industries that significantly impact tourism. Some of these marinas are small residential offerings and private clubs, while others are larger commercial offerings. Colchester provides most of the moorings for Northwestern Vermont, and the majority of these are reserved. Fifteen transient spaces are available for passing boaters to use, so that they may stop and visit the Town. Over 130 boats use the transient slips seasonally, with a majority of users coming from Quebec and staying three days on average.

Water quality in Malletts Bay is a community-wide concern. The Lake has brought people to Colchester for hundreds of years and helped solidify Colchester as a recreation destination. Increasing pollution from storm water runoff, septic contamination, invasive species, blue-green algae and acid rain are some of the water quality inhibitors that plague the greater Lake. The inner bay continues to have high bacterial (E.coli) counts that often close beaches to swimmers. The Town maintains a seasonal water sampling program to track water quality and notify the community when beaches should be closed. Outbreaks of blue-green algae have occurred in sporadic locations. The Integrated Water Resources Management Plan, completed in 2013, provides guidance on the water quality challenges facing Colchester. While the Lake provides for a diversity of wildlife species, bacteria such as cyanobacteria (blue-green algae) threaten the habitat of these animals. Exotic species such as Eurasian milfoil, Zebra Mussels, and Alewife fish have entered the Lake and been spread by unwitting boaters and fishermen. As of 2007, Colchester began testing water samples at a consistent set of locations and at the same frequency. While Malletts Bay has some of the lowest phosphorus

concentrations in the Lake, elevated bacteria counts have caused public beach closures in recent years. Over the last 11 years, Bayside Park and Rosetti Park have been closed a total of 18 times. During the term of this plan, Colchester will continue to perform these tests to ensure optimum water quality for public use.

river bank consists of uninhabited flood plains. Between River Road and the confluence, there is a high, steep, eroding bank with some structures close to the edge.



The Lake Champlain Total Maximum Daily Load (TMDL) Plan provides a limit of how much phosphorus the Lake can take while still meeting water quality standards. Although the TMDL is not likely to be fully implemented during the term of this plan, its future impacts on Colchester's stormwater permits and practices are likely to be significant. During the term of this plan, Colchester will continue to look to its Integrated Water Resources Management Plan for guidance on sustaining and improving water quality.

## Winooski and Lamoille Rivers

Colchester's southern border consists of about 9 miles of frontage on the Winooski River, between the Lime Kiln Gorge and Delta Park. The river corridor in Colchester upstream of the City of Winooski is undeveloped. A spectacular gorge and a hydro-electric dam exist between the Lime Kiln Bridge and I-89. Between the City of Winooski and River Road, the

Colchester has three miles of frontage on the Lamoille River. The shoreline of the river is forested, inaccessible, and sustains productive wildlife habitat. The Lamoille River Basin Plan identifies the top water quality issues for the 84 miles of river and its basin

State Watershed Planners are responsible for evaluating river and stream problems and threats and are continuously working to address these issues through a tactical planning process. During the development of this plan, the Winooski River Tactical Basin Plan was being drafted, with the Lamoille River Tactical Basin Plan already adopted in 2016. Both of these basin plans will provide water quality improvement recommendations for Colchester, along with the many other communities along these watersheds. While Colchester will do its part to implement these recommendations, the plans need the cooperative efforts of State, regional, and other municipal partners.





The lower Winooski River is currently assessed as not fully fishable or swimmable under the criteria of the Clean Water Act. The lower Lamoille is rated as fully fishable and swimmable. Given the drainage basin characteristics, it is not likely that significant contamination enters either the Winooski or Lamoille River from Colchester. The State of Vermont created a Lower Winooski River Basin plan with objectives, goals, and action plans for treating stormwater, managing roads and parking lots, and stream crossings within this larger basin.

Both the Lamoille and Winooski Rivers are protected by the Fluvial Erosion Hazard Overlay District in the Development Regulations. In addition, the majority of parcels along the rivers are restricted by the top-of-bank setbacks and Floodplain District requirements. Many properties along the Winooski River were developed prior to these regulations. New development and redevelopment of these properties should address bank stabilization and meet setbacks.

## Colchester Pond

Colchester Pond is located in the far Northeast corner of Town and is one mile long and a quarter mile wide. The Pond is within the Shoreland Overlay District of the Development Regulations that restricts an area 250 feet back from the mean water mark. The Pond results from impounded drainage. Most of the shoreline of the Pond is undeveloped woodland and pasture. The Pond is hydrologically isolated, has good water quality, and has no known exotic species. Colchester Pond and most of the surrounding land is owned by the Winooski Valley Park District. The State of Vermont has recognized Colchester Pond as an exceptional water resource and has excluded motor-boats.

## Floodplains

The Town of Colchester is situated between the mouths of the Lamoille River and the Winooski River along Lake Champlain. As a result of these significant features, fifteen percent of the land area in Colchester

has been identified as wetlands or floodplains, with the majority of the floodplain area in Colchester along Lake Champlain and the Winooski and Lamoille Rivers. Approximately 3,259 acres are identified as Special Floodplain Hazard Areas.

The fertile floodplain of the Winooski River, often referred to as the Intervale, is involved in active agricultural production and contains a substantial portion of the Town's working lands. The 100 year flood elevation of Lake Champlain (Special Flood Hazard Area), as determined by the Federal Flood Insurance Program, is depicted on the FIRM maps. The Floodplain District and the Town's Shoreland District are identified on Appendices Map 11. Development within the Flood Zone has been prohibited in Colchester for several decades; however, significant development predated the regulations and there are many structures still located in the flood hazard zone. The majority of these structures are seasonal residences and accessory structures that are occupied during the summer months. The 2011 Lake Champlain flood exceeded all known historic floods with the lake level exceeding 102 feet above sea level and flood damage up to 105 feet locally. The Town of Colchester's Development Regulations ensured that damaged structures rebuilt were floodproofed to Federal standards, and, as a result of these standards, Colchester was able to join the Community Rating System of the Federal Emergency Management Agency in 2016. This program and the Development Regulations should be maintained during the term of the plan. Through the Town's proactive policies and education on flooding risk, the Town enjoys a higher rate of reimbursement in declared disasters, and property owners are eligible for discounted flood insurance rates.





## Wetlands

Wetlands enhance water quality, are important wildlife habitats, attenuate flooding, and are recreational resources. The State of Vermont and Army Corps of Engineers provide oversight to Colchester's many wetlands and associated buffers. About 93% of Colchester's wetlands are functionally significant (Class 2), according to the State Wetland Rules. Class 2 wetlands are identified on National Wetland Inventory (NWI) maps. These mapped wetlands, and any additional wetlands that are found to directly connect to NWI wetlands, are subject to both State and Federal regulations. Federal definitions of wetlands have expanded since the NWI maps were prepared. Additional "wet meadows" and other lands are also now considered wetlands (Class 3) under the federal definition; however, they remain largely unmapped. Several Natural Areas within Colchester contain significant wetland areas, such as Half Moon Cove.

## Watercourses

Watercourses consist of named and unnamed streams, brooks, tributaries, and drainage ways. Mapped resources do not accurately depict intermittent drainage ways and streams. Colchester has implemented the Water Protection Overlay District, which requires an 85-foot setback from the centerline of watercourses. These buffers have been created with the intention of providing protection for the natural areas along the Town's surface waters and to provide improved protection for water quality and the provision of open space areas and wildlife habitat. The State of Vermont also regulates most aspects of watercourses.

River corridor planning in Vermont has evolved and communities are being asked to prepare for changes in stream and river locations due to storm events, such as Tropical Storm Irene in 2011. Fluvial hazard areas take into account the dynamic nature of streams and rivers and note

areas at risk of erosion due to river or stream movement. Colchester's location between the mouth of the Winooski and Lamoille Rivers is characterized by broad channels that are typically slower moving and less dynamic. Both of Colchester's existing district protections and the State's River Corridors are shown in detail on Appendices Map 11. During the term of this plan, Colchester's current regulations should be examined to potentially incorporate State-recommended river corridor protections and fluvial erosion hazard zone areas.

## FLORA & FAUNA

### Significant Habitat Sites

Colchester has a diversity of habitat that sustains a variety of both common and rare wildlife and plants, as detailed on Appendices Map 10 Natural Features. Significant habitats are sites where at risk or irreplaceable species can be found. Sites may be defined as significant if they consist of unusually large concentrations of wildlife and/or are habitats that are rare in the region. These habitat sites are regulated by the State and the Federal Governments and violations can carry the consequences of criminal prosecution for alteration or demolition. Much of Colchester's data and mapping of significant habitat sites, endangered species sites, and biological natural areas has not been updated and cannot be relied upon to be site specific. While the State Act 250 permitting process can require onsite investigations, this creates piecemeal updates to statewide mapping.

Another aspect of maintaining habitat is the role of hunting. Hunting has had a role in the management of wildlife; however, it is declining. Hunters have historically relied on the right to use private lands for this activity, while landowners have relied

on the right to post land limiting use for hunting and other activities. Hunters have been left with few areas to hunt in, due to exclusions from private lands as infill development occurs and exclusions from parks and natural areas. In looking to sustain hunting in Colchester, opportunities for hunting should not be excluded from land conservation and landowners should be encouraged not to post property and developments.

During the term of this plan, it is recommended to update the Town's Open Space Plan and mapping of these resources. The Open Space plan guides the preservation of open space in the development review process, as well as the conservation of resources in both site plan and subdivision projects. Through better recognition of these resources, management can be improved and steps taken to protect habitat through land conservation or avoidance in the development review process.

## Deeryards

Deeryards are critical winter habitat for deer and other wildlife as detailed on Appendices Map 10 Natural Features. While some protection is provided to deeryards under State Act 250 permitting, there are no regulations regarding other wildlife habitats. The locations and boundaries of deeryards were determined using color infrared aerial photos by the State, which are not accurate for development review and may be updated on a site-by-site basis. Habitat is dynamic and not static to fixed locations.

## Endangered Species Sites

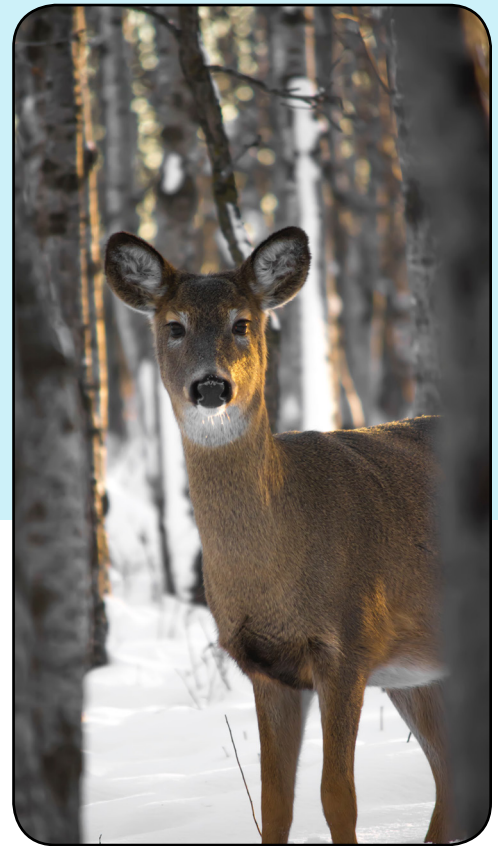
The Nongame and Natural Heritage Program (NNHP) of the Vermont Department of Fish and Wildlife has identified a number of sites containing one or more rare, threatened, or endangered species or one or more significant natural

communities within Colchester as detailed on Appendices Map 10 Natural Features. The size of these sites varies and State mapping is intentionally vague to hide the location of these sites.

## Biological Natural Areas

Natural areas are biological communities made up of scenic, geological, or ecological significance which shall remain undisturbed. Development and maintenance in these areas are limited to that required for health and safety. More significant natural areas may have management plans for important natural resources present on the site. The Vermont Nongame and Natural Heritage Program's (NNHP) "Biological Natural Areas of Chittenden County" identifies 29 sites with statewide significance in Colchester, including sandplains, vernal woodland pools, peat bogs and other ecologically significant natural communities. Due to this statewide significance, Colchester was recognized for supporting "one of the greatest biotic diversities of any town in Vermont."

An important subset of the Biological Natural Areas and ANR's Natural Areas is sandplain habitat. Colchester is the only area in Vermont with extensive areas of sandy, well-drained soils. The Pine/Oak/Heath plant community that inhabits these sandplains is largely unique to Colchester. Sandplains are characterized by flat, well-drained soil (making it desirable for development) that is acidic and nutrient-poor. They have an open canopy more characteristic of woodlands than forest. Pitch pine, white pine, black oak, red oak, and heath shrubs predominate. Sandplain areas often require controlled burns to encourage tree development. Colchester's sandplains are home to 27 rare plants, including 6 grasses, 4 sedges, 13



herbs, 3 shrubs, 1 tree and 2 rare animals. Less than five percent of the original sandplain habitat exists, increasing State scrutiny of this resource in the development process.

Opinions differ on the minimum size of land necessary to sustain sandplain communities, ranging from a low of 25-40 acres to a high of 2000 acres. It is generally believed that with proper management, communities as small as 50 acres could preserve a large majority of the natural community's members. While Colchester lacks forestry operations and industry, the active management of woodlands that does occur in Colchester stems from the need to manage sandplains, as these sites often require disturbance to sustain themselves. Since sandplains are unique to Colchester, there are many challenges in managing these areas. No sandplain community larger than 250 acres exists in Colchester. Public and private development

occurring prior to or after the 1991 report has significantly reduced the natural portion of some mapped areas. Diminished sites include the Old Colchester Airport (fringes of sandplain at the edge of town ballfields), Porters Point Road Sandplain (Crossfield subdivision) and the Holy Cross Church Woodland (elderly housing complex).



**Because the lowest estimate of minimum size needed is 25-40 acres, the Vermont Natural Heritage program considers the following sites to be “Rare and Irreplaceable Nature Areas”:**

Camp Johnson

Colchester High School Vicinity

Sunderland Brook

Holy Cross Vicinity



**Other smaller parcels containing sandplains:**

Smith Hollow Vicinity

Sunny Hollow

Winooski Bluff

Little Gap Woods

Twin Bridges

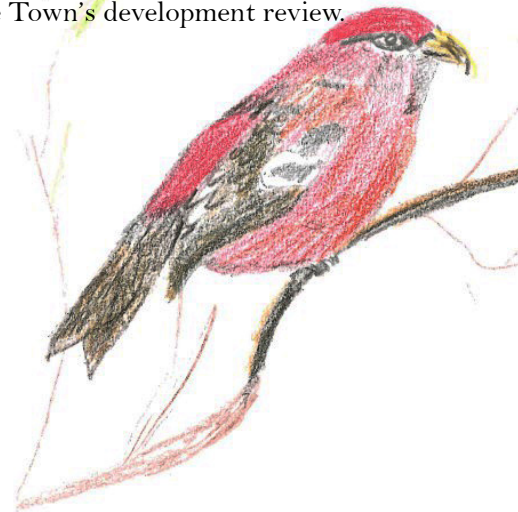
Macrae Road

## Forests

The Town of Colchester has a variety of forested areas, as detailed on Appendices Map 10 Natural Features, with the most significant located around Colchester Pond. This includes Colchester’s town forest, and sandplain communities. Improved forestry mapping would also improve the management of these resources. Large tracts of connected forest ecosystems can provide for wildlife habitat and foster diversity of the biome. The majority of tracts in Colchester are fragmented, which presents challenges for forestry planning and stewardship. Commercial forestry operations are not present in Colchester with the exception of many small-scale firewood operations, as well as sugaring and small tree farms usually specializing in Balsams and other “Christmas” trees. These silvicultural uses are mostly exempt from current Colchester Development Regulations. With the need to have more sustainable fuel sources, opportunities for new sustainable harvesting of wood products may increase over the term of this plan and should be accommodated in the Development Regulations.

Although fragmented, many of these smaller forestry parcels can contribute to wildlife habitat, recreation, air quality, water quality, and scenic or aesthetic values. Connections between these fragments can promote the health, viability, and ecological functions of the forest. Forestry operations and other forestry management plans are encouraged and beneficial to sustaining our limited forestry resources. By encouraging the maintenance of such forest blocks and habitat corridors between them, ecosystems can be improved to defend against biodiversity loss. Landowners should be encouraged to develop and maintain forestry

plans and implement recommended practices such as selective harvests and plantings (see Appendices Map 9 for managed forests in the State’s Land Use Program). During the term of this plan, updates to the Open Space Plan should include forestry blocks and habitat corridors. Improved mapping and awareness of these resources could lead to better consideration of potential impacts in the Town’s development review.



## Other Resources

The following areas have been identified by the Town as sites of natural resource significance. Should development be proposed within these areas, care should be taken to conserve these features and mitigate any long-term adverse impacts to these resources.

- Cave Island contained within parcel: 57-012002
- Cave West of Indian Brook contained within parcel: 08-014003
- Clay Point Road Caves contained within parcels: 16-057000 and 16-042000
- Colchester Bog contained within parcels: 33-056002, 33-058002, 34-100002, 34-101002, 44-004072, 43-034002, 43-026002, 44-045012, 44-007022, 44-007002, 43-009002, 31-007062, and 30-002002
- Colchester Point Rush meadow contained within parcel: 29-002002



- Colchester Pond Ridge contained within parcels: 12-036000, 12-030000, 15-001000, 12-035000, and 15-011000
- Colchester Sea Caves contained within parcels: 14-007020 and 14-007010
- Devil's Den Caves contained within parcels: 08-014003 and 08-014013
- Mallets Head contained within parcel: 56-004002
- Mallets Bay North Shore Headlands – From Niquette Bay State Park westwardly along the shoreline terminating on parcel 77-020000
- Mallets Creek Marsh – Munson Flat contained within parcels: 11-016020, 11-020000, 11-017010, 11-025000, 14-020000, 14-022000, 11-004003, and 14-026020
- Marble Island contained within parcel: 57-013002
- Parrot Jasper Mine contained within parcel: 13-003000
- Walnut Ledge Cave contained within parcel: 16-028000
- Pine Island Flood Plain contained within parcels: 06-013002, 02-026052, and 02-006002

## NATURAL AREAS

The Town has a wealth of natural areas (as shown on Appendices Map 9 Public Conservation Lands) that, while often protecting significant natural resources, also provide recreation and a desirable community to live in. These are lands set aside for preservation of significant natural resources, open spaces, visual aesthetics, and buffering that may also include passive recreation, such as walking paths or canoe launches. Most of these areas are permanently conserved through deed or easement. While there are no size requirements for natural areas, these areas must generally be of sufficient size to preserve the natural resources contained on site. The Colchester Bog maintained by the University of Vermont is such a natural area.

While development of these natural areas is generally prohibited, land management can require considerable disturbances. Recreational use of natural areas needs to be weighed against the need to manage and protect ecosystems. The Winooski Valley Park District, State of Vermont, and Town of Colchester manage the majority of natural areas and often balance protections with

passive recreation. It is important, where feasible, to maintain access for enjoyment of these areas even if only through trails or overlooks. Many natural areas of more limited and smaller size exist throughout Colchester on private land. Through the development review process or similar permitting, natural areas have been set aside on private land in perpetuity to protect resources. The primary function of many of these smaller sites is to preserve or maintain the resources, and access should remain restricted. Whenever feasible, management plans for natural areas should be developed and deployed. Contained within Appendices Map 9 is an inventory of current natural areas that are publicly owned. The Town of Colchester owns and maintains the following natural areas:

*Porter Natural Area:* Porter Natural Area is a 56-acre parcel that has no master plan at this time.

*Rossetti Natural Area:* Rossetti Natural Area is a 47 acre natural area between Lake Champlain and Lakeshore Drive/Holy Cross Road/Church Road intersection.

A boardwalk/trail and 50 car parking lot serve the property.



*Sunny Hollow Natural Area:* Sunny Hollow Natural Area is located off Hercules Drive. This 80-acre diverse area has limited parking and three miles of mountain biking, walking and x-country trails.

## CLIMATE

Vermont's climate is changing. Average temperatures in Vermont have increased, with winter starting later and spring arriving earlier, according to the Vermont Climate and Health Profile released by the Vermont Department of Health in 2016. Annual precipitation has increased by seven inches over the past fifty years. Extreme weather events have become more frequent, with 18 federally-declared disasters between 2007 and 2016, twice as many as the previous ten years. While there are benefits that can be derived from a changing climate, such as a longer growing season and a longer boating season, heavy rains increase stormwater runoff and warming waters can increase bacteria growth within these

waters. The Department of Health has recommended the strategy of building resilience against climate effects. As extreme weather events increase, Colchester has already taken actions to build resilience against flooding. As hot weather increases, heat stroke and other health-related issues are anticipated to increase state-wide. Hot weather emergency preparedness plans, increased planting of trees and vegetation, and modifying buildings to increase cooling can help communities adapt. In a preliminary town plan survey, 62% of those responding stated that we should focus more attention on natural resource protection and flood resiliency to protect the intrinsic values and improve the quality of life in Colchester. Improving resilience to increased heat and extreme weather events will position the community well to respond to changes in our climate.

The Vermont Climate Action Commission's (VCAC) 2018 report offers recommendations on how Vermont can meet the reductions in

greenhouse gas (GHG) emissions called for in the 2016 Vermont Comprehensive Energy Plan to combat climate change. There is a lot of overlap between energy strategies and GHG emission reductions. Increased weatherization, renewable energy resources, incentivizing electric vehicles, improving bike and pedestrian paths, and promoting dense mixed-use development are all strategies that reduce GHG emissions and improve energy use. Other strategies recommended to reduce GHG emissions include land conservation, rebuilding soil health, and sequestering carbon in our forests. The 2018 VCAC report states that more than half of Vermont's annual carbon emissions are being absorbed by the annual growth of these forests; however, that growth is declining. Promoting forested area for carbon offsets may also offer economic and environmental benefits.

## AGRICULTURAL LANDS

Due to its location and resources, Colchester has a proud history





of a working landscape. Situated between two rivers with relatively flat and rolling lands, the soils of Colchester have been conducive to agriculture. Historically, farms evolved out of necessity to provide settlers with sustenance. Throughout the nineteenth century, commercial agricultural operations grew, with dairy becoming a prominent use. In recent years, agriculture has transitioned and diversified to include vegetables, fruits, eggs, dairy products, livestock, horses, flowers and landscape plantings. Agricultural operations are becoming less dependent on traditional farming practices. Market demand for local food will sustain community-supported agriculture operations, community, and backyard gardens. Farm stands and community sustained agricultural shares provide fresh produce within the community. Colchester's large vegetable operations provide a great source of farm-to-table options that should continue to be supported and

expanded. Hoop houses and other indoor operations are expected to continue to expand during the term of this plan, as these alternatives offer greater predictability in harvesting and providing a wide range of products. While it is anticipated that agriculture will continue to transition during the term of this plan, Colchester's soil will continue to be adaptable to a variety of uses.

Primary agricultural soils make up more than eighty percent of the lands of Colchester. Primary agricultural soils are defined by the State in 10 VSA §6001 as important farmland soils that the Natural Resources Conservation Service of the U.S. Department of Agriculture has identified and determined to have a rating of prime, statewide, or local importance (see Appendices Map 12 Soils). Physical or topographic barriers, as well as wetlands and other constraints, may make these soils impractical to use for agriculture thereby reducing their value. As Colchester's agricultural community

continues to transition, it will be well served by its resources, including its soil.

Livestock operations will continue to dwindle as horse ownership declines and dairy becomes economically unviable. This will impact the need for hay and corn, making it increasingly difficult to maintain large open tracts of land for agriculture. The Town should continue to work with organizations such as the Intervale Center to promote incubator farms, succession planning, and business plans for new and existing farms. These plans may include the sale and purchase of development rights. The Town should continue to be supportive of land conservation and the use of prime agriculture mitigation money acquired through the State's Act 250 process for local conservation projects. Parcels in the State's Land Use Program for agriculture are noted on Appendices Map 9. Development Regulations should continue to allow for a variety of on-the-farm businesses and agri-tourism to support and supplement agricultural operations. In revisiting the Open Space Plan, the Town should actively engage farmers and other agriculture entrepreneurs in developing strategies for the community to support the changing face of agriculture.

Colchester's natural heritage provides a diverse environment. These resources attract many to travel, live, and preserve an unparalleled quality of life. Over the term of this plan, Colchester's environment will face difficult challenges; as a result, new stewardship opportunities will emerge. The Town of Colchester will work to continue a balanced approach to preserve and protect these resources while encouraging their enjoyment.





# POLICIES

1. The Town will work with local, regional, and State partners to implement the recommendations of the Lamoille and Winooski Basin Plans, as well as the Lake Champlain TMDL.
2. During the term of this plan, Colchester will continue to look to its Integrated Water Resources Management Plan for guidance on sustaining and improving water quality.
3. The Town should continue its work to reduce flood insurance rates and improve flood resiliency.
4. The Open Space Plan should continue to be used in the municipal development review process.
5. Opportunities for hunting should not be excluded from land conservation and landowners should be encouraged not to post property and developments.
6. The maintenance of forest blocks, and the habitat corridors between them, is encouraged and landowners are recommended to develop and implement forestry plans.
7. Forested areas should be promoted for various environmental and economic reasons, including the use of carbon offsets that may offer economic and environmental benefits.
8. The Town should continue to work with organizations such as the Intervale Center to promote incubator farms, succession planning, and business plans for new and existing farms.
9. The Town should continue to be supportive of land conservation and the use of prime agriculture mitigation money acquired through the State's Act 250 process for local conservation projects.
10. Development Regulations should continue to allow for a variety of on-the-farm businesses and agri-tourism to support and supplement agricultural operations.

# ACTIONS

1. The FEMA Community Rating System should be maintained.
2. Colchester's current regulations should be examined to consider additional river corridor protections and fluvial erosion hazard zone areas.
3. The Open Space Plan should be updated during the term of this plan and the mapping of resources should be improved, as feasible.
4. Management plans for natural areas should be developed and deployed, as feasible, with recreational uses receiving due consideration.
5. The community should continue its efforts to building resilience against climate effects by maintaining flood and hot weather emergency preparedness plans.
6. The Town should actively engage farmers and other agriculture entrepreneurs in developing strategies for supporting the changing face of agriculture.



# OUR HOMES

Condition of Housing  
Stock

Home Values

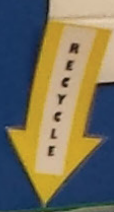
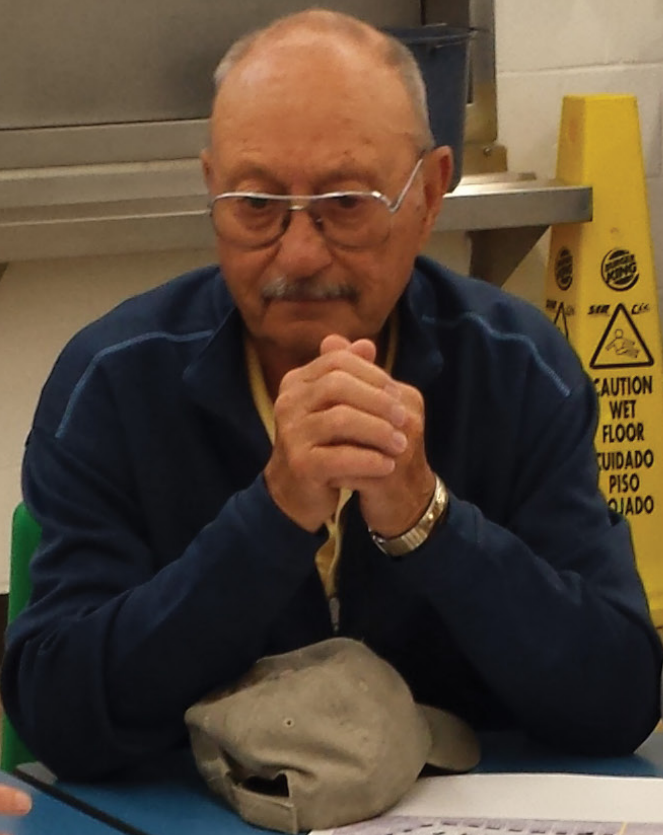
Housing Affordability

Current Trends

Future Needs

Challenges









## VISION

*Colchester should continue to provide a wide variety of housing options. As the community grows, care should be taken to maintain residential affordability and housing quality. Starter, senior, and smaller housing should be priority housing needs for the community over the term of this plan.*

## GOAL

Housing growth should occur in conformance with the Town's land use plan.

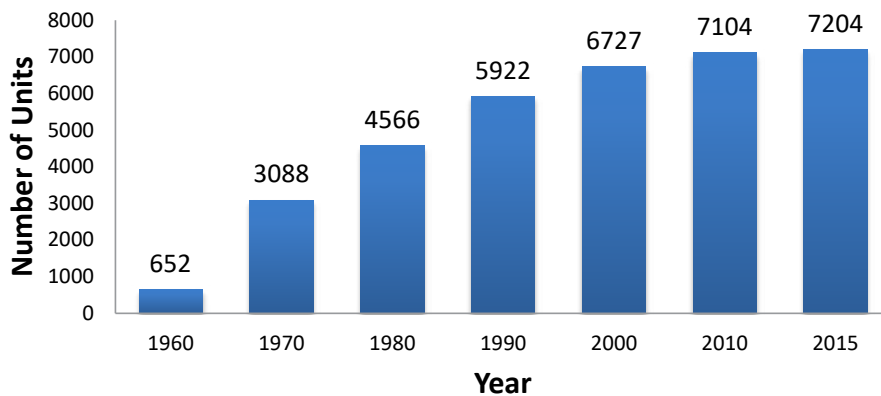
## OBJECTIVE

A sustainable rate of residential growth of approximately 40 new dwelling units a year should be maintained to meet local housing needs, as well as to accommodate regional housing needs. It should be recognized that 44 units is an annual average and over the term of this plan there may be years where the number of units annually is exceeded or not met.

## OVERVIEW

Colchester benefits from a diverse housing stock that offers a variety of both rental and homeownership opportunities. Fair housing opportunities in Colchester should abound for all, regardless of race, color, religion, national origin, sex, family status, or disability. The majority of Colchester's homes were constructed during Colchester's population boom in the 1960s and 1970s, a time when an average of nearly 200 new dwelling units were being built each year. The rate of housing growth has since slowed significantly - especially since 2000. Since 2010, the Town has issued permits for an average of 43 units per year, decreasing from 88 units per year in the 1990s. As of the 2015 American Community Survey of the U.S. Census (ACS), Colchester's housing stock numbered 7,204 units, or 10.7% of the County's total housing stock. Between the 2010 Census and the 2015 ACS report, 265 units were added, averaging 53 units a year, indicating a slight increase to the rate of growth in recent years. It is notable that this data significantly differs from the Town of Colchester's Assessor data, which indicates that there were 8,101 dwelling units in Colchester in 2018. Town permit data shows approximately 44 units on average being added annually between 2010 and 2019. While there is greater vacillation in recent years of the number of units annually, the number of permitted units on average has not changed substantially in the past decade. Of the total units reported, approximately 56% of Colchester's

## Housing Growth



Source: U.S. Census Bureau – Census of Population & Housing (Summary File 1)

dwelling units are single-family homes and 42% are rental units.

Historically, Colchester's housing stock was scattered throughout the Town, located near waterways, tillable fields and along major roads. During the housing boom of the 1960s and 1970s, large housing developments were built in the Bay and by Colchester Village, close to major roads, potable water supplies, and services. Development also occurred in areas with potable water and percable soils. The Town's zoning during this time was fairly basic and frequently revised, based upon development pressures. Mobile home parks, apartment complexes, and a range of single-family homes were built during Colchester's housing boom. Development during the 1980s and 1990s focused on increasingly larger single-family homes, duplexes, and townhouse developments.

Since the 1990s, the growth rate of homes has tapered off and the size of dwelling units has increased. Single-family homes constructed during the 1960s and 1970s ranged from 1,000 to 2,000 square feet, while homes built in the past two decades range from 2,500 to 3,000 square feet. The number of

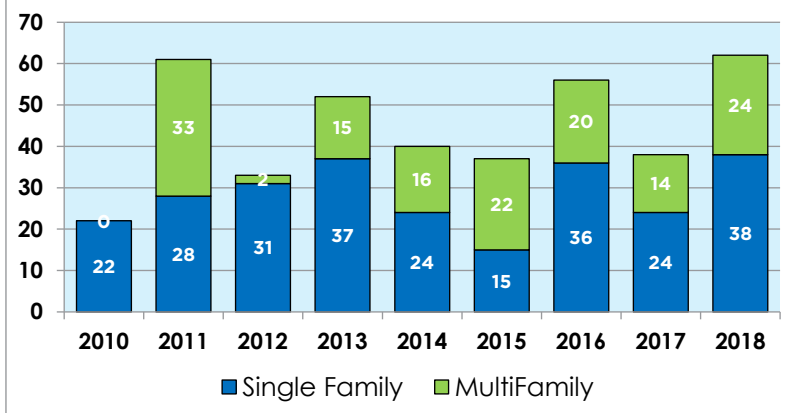
mobile homes on the Town's grand list has remained fairly constant since 2000. There were 625 mobile homes included on the 2018 grand list. More than 600 of these units are located in the Town's five mobile home parks and represent affordable housing for many Colchester residents. Conversion of seasonal residences also leveled out. Traditional summer "camps" and other vacation or second homes continued to make up about 5.4% of the Town's housing stock. According to Census data, in 2010 Colchester had 30% of the County's seasonal residences and 28% or more of the County's mobile homes. Since

2000, more multi-family than single-family units were constructed in the Town, reflecting a shift in the regional housing market. The development of the Severance Corners Growth Center, an area served by municipal water and sewer, has accounted for a substantial amount of residential growth since 2004, especially in smaller multi-family units.

## CONDITION OF HOUSING STOCK

Colchester's housing stock is generally in good condition, based upon traditional measures of the ACS including age, occupancy, and whether homes have full kitchen or plumbing facilities. According to the ACS estimates, all Colchester housing units have indoor plumbing and kitchen facilities. The estimated median year of house construction was 1979, which suggests half of local housing predates the 1978 ban on the use of lead paint, and may therefore be subject to new EPA remodeling and construction requirements. The Colchester Assessor's data rates the quality of homes on a scale of one to ten, with one being the lowest quality. In 2018, the average Assessor rating of Colchester homes was 3.5. This rating reflects the age of the housing

## Permitted Housing Units



Source: Town of Colchester Permit Data



stock and perhaps the need to update and weatherize many of our oldest homes.

The Town's building code and inspection process work to improve the condition of local housing. First adopted in 1960, Colchester's building code has ensured that the majority of the Town's housing stock meets construction standards. Colchester's on-site septic regulations, first adopted in 1967, also have ensured the quality of residential infrastructure. The Town has also taken over the State's Wastewater Program and inspects for local and State septic permits. These programs will continue to ensure the quality and safety of Colchester's homes.

Since 1990, approximately 30% of the Town's current housing stock has been added. Permit data from the Town indicates a trend toward renovating and adding onto existing homes in recent years. It is often more affordable for homeowners to upgrade in place, rather than buying up in a tight housing market. As noted in the Powering Colchester Chapter, renovations are opportunities for weatherization and improved efficiencies. According to the 2017 Housing Needs Assessment conducted by the Town of Colchester, an estimated 6,000 homes were built before 1998 (over 80% of current stock) and, based on their age, should be weatherized. Given the high number of properties that could benefit from weatherization, it is recommended that the Town promote retrofits and other efficiency programs.

Unfortunately tight housing markets, as currently seen within the region, create competition for housing that can result in occupancy of substandard rental units. Colchester, in accordance with State Statute, has a Health Officer that responds to complaints regarding rental units. While the majority of these

units are public buildings regulated under State Building Code, State-wide inspection of rental units is not proactive, leaving communities to enforce complaints as they arise. This system is inadequate. While Colchester could put into place a localized rental inspection process, the number of rental units and associated complaints does not warrant such a program at this time. Types of rentals are anticipated to increase over the term of this plan as Airbnb, VBRO, and other short-term online rental programs increase with little oversight. While rental complaints should continue to be evaluated and appropriate solutions pursued as needed, the renovation of existing housing and the continued addition of new homes should gradually improve condition of housing stock.

## HOME VALUES

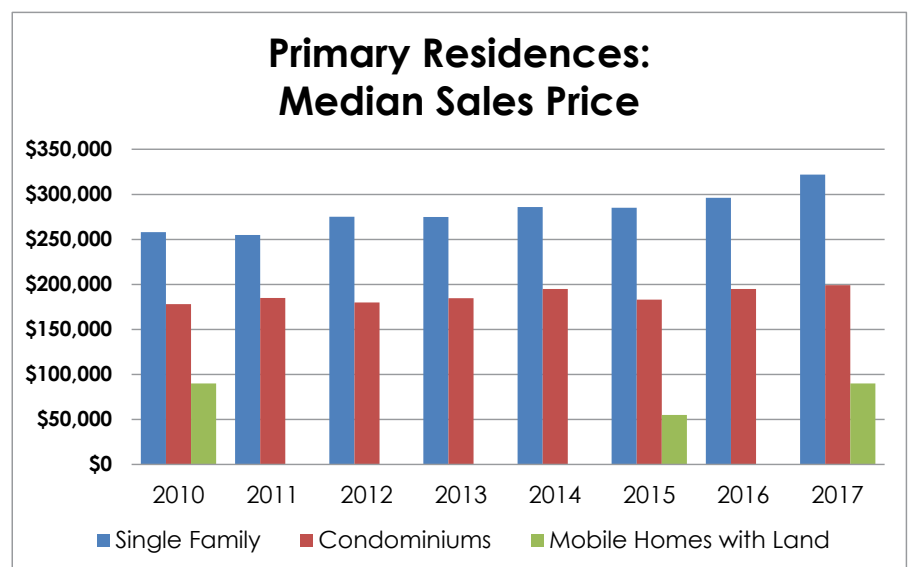
Home values are quantified and tracked through U.S. Census Bureau estimates, sale prices reported for property transfers, and local assessment data. House sales and prices most accurately reflect current market conditions. Local home sales over the past decade have continued to track regional market trends. Since the national 2008 mortgage crisis

and subsequent recession, increased financing regulations have cooled off home buying, especially for first-time homebuyers.

During the first half of the last decade, prices gradually increased. A shift in the regional market occurred from single family homes to condo units. The sales prices of condos have stagnated in recent years, as new supply has increased and financing requirements have presented some difficulties with condo purchases. Rental housing has become more attractive to local developers as barriers to home financing have increased, and the cost of homeownership has become out of reach for more people.

## HOUSING AFFORDABILITY

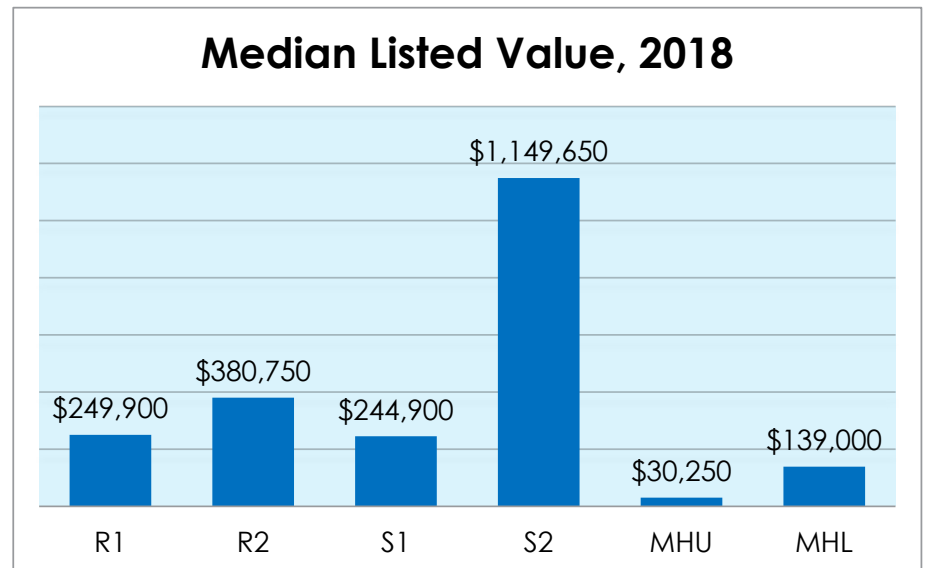
Given the variety of Colchester's housing stock, a significant portion remains affordable for most households. The traditional definition of "affordable" housing is housing for which a household spends no more than 30% of its income on housing-related expenses, including mortgage or rent as well as insurance, taxes, and association fees. Under this definition, ACS estimates for Colchester suggest that housing is currently unaffordable



Source: VT Tax Data

for 30% of local homeowners with mortgages, 20% of homeowners without mortgages, and 49% of renters. New definitions of housing affordability also incorporate estimated commuting costs. Housing, under this definition, is unaffordable if a household spends more than 45% of its income on housing and commuting expenses. Under this definition, housing and commuting expenses average 49% for Colchester households (H+T Affordability Index, <http://htaindex.cnt.org/map/>).

The U.S. Department of Housing and Urban Development (HUD) estimated that, in 2018, the median income for a family of four in the Burlington-South Burlington Metropolitan Statistical Area (MSA), including Colchester, was \$93,000. At that income level, a homebuyer could afford to purchase a house valued up to \$295,500 under traditional models (30% of household income) and combined house and transportation costs of \$356,000, based upon the new definition (45% of household income for housing and transportation). Based on assessed (listed) values, 70% of the Town's existing housing stock, and the majority of primary residences for sale in recent years (including condos and mobile homes) would be considered affordable. This has



*Source: Town of Colchester 2017 Assessor's Data with R1 = year round less than 6 acres, R2 = year round more than 6 acres, S1 = seasonal less than 6 acres, S2 = seasonal more than 6 acres, MHU = mobile home on leased land, and MHL = mobile home on owned land.*

increased five percent in the past seven years and is perhaps reflective of the increase in smaller multi-family units constructed during that time period. For moderate income families (making up to 120% of median income), approximately 83% of homes would be affordable.

Housing affordability, for purposes of planning, land use regulation, and many affordable housing programs, is defined more specifically to apply to lower-income households as housing that is affordable to households

earning 80% of the median income for the Burlington-South Burlington MSA or, in 2018, \$74,400. At this income level, a homebuyer could buy a housing unit valued up to \$234,500, or slightly less than half of the housing units in Colchester. The median assessed value of year-round residential properties in 2018 (R1, R2 shown below) was \$253,000, and slightly lower than the 2015 ACS estimated median of \$264,400. Mobile home units (MHL), especially those on leased land (MHU), continue to provide the most affordable form

Local Housing Affordability						
HUD Incomes (MSA)			Affordable Price		% Listed Properties	
	2011	2018	2011	2018	2011	2018
Median Family (4-person)	\$75,500	\$93,000	\$254,000	\$295,000	59.2%	70.0%
Moderate (120%)	\$90,840	\$111,600	\$305,000	\$355,000	75.0%	83.3%
Low (80%)	\$60,550	\$74,400	\$202,500	\$234,500	32.5%	45.6%
Very Low (50%)	\$37,850	\$46,500	\$126,000	\$146,500	12.9%	14.7%
1-person (70% MFI)	\$52,990	\$65,100	\$176,500	\$206,500	22.3%	31.9%
2-person (80% MFI)	\$60,560	\$74,400	\$202,500	\$234,500	32.5%	45.6%

*Note: Affordable prices based upon VHFA Assumptions: 5% down payment; average interest rates, property taxes, insurance premiums and closing costs; no more than 30% of household income spent on housing expenses. Listed properties are from Colchester Assessor data.*

*MSA = Metropolitan Statistical Area from the U.S. Dept. of Housing and Urban Dev.*

*MFI = Median Family Income*



of homeownership and for this reason will continue to be an important part of providing affordable home options in Colchester. While mobile homes present challenges in efficiency, improvements in manufactured housing continue to improve. These medians do not include condo units. The Primary Residence Median Sales Price Chart shows condo median sale prices at than \$125,000 in 2018. The majority of condo units are therefore affordable.

Rental affordability is typically defined in terms of a housing wage: the hourly rate or wage required to rent a typical 2-bedroom apartment with associated housing costs totaling no more than 30% of household income. For a 2-bedroom unit in Colchester, the 2018 housing wage, based on HUD fair market rents, was \$27.73/hour (\$57,678/year). Someone earning the average wage paid by Colchester employers in 2018 could likely afford a two-bedroom apartment; however someone earning the minimum wage of \$10.50 per hour, would have to work 83 hours a week to afford a one-bedroom apartment.

Influencing local rental rates are 356 affordable rental units located over eight properties. The Champlain Housing Trust (CHT) operates a significant portion of these rentals. Colchester's affordable rental housing (excluding mobile homes) represents 9% of the County total. Windemere Estates, one of Colchester's five mobile home parks, is also owned and operated by an affiliate of the Vermont State Housing Authority. CHT recently increased the number of shared-equity homes in Colchester with the conversion of 18 rental units at Coolidge Court to bring Colchester's total units to 58. Under this model, CHT retains an ownership interest in the unit upon resale in order to maintain affordability for subsequent buyers.

It should be noted that housing typically becomes much less affordable for smaller households including households with only one wage earner, seniors on fixed incomes, and those entering the housing market for the first time. As noted in the Who We Are Chapter, household sizes continue to decline, impacting affordability.

Decreases in household size increase the number of households, thereby creating more demand for housing, and especially affordable housing. Smaller households, more households, and increases in population have contributed to relatively low vacancy rates in both owned and rental units, according to ACS figures. In 2018, the homeowner vacancy rate was 1.8% and the local rental vacancy rate was 2.2%. A healthy housing market for buyers, sellers and renters has a vacancy rate of three to five percent. Due to these factors, there continues to be a regional and local need for more affordable housing, including workforce housing for both low and moderate income households.

## CURRENT TRENDS

Population and housing growth have stabilized in recent years, with smaller, steady gains. These trends will likely continue over the term of this plan, with an approximately 40 to 44 new units expected to be permitted and occupied each year. These new units are expected to be sufficient to meet the anticipated housing demand, according to population projections that include decreasing household sizes and a slight increase in population (see Who We Are Chapter). Decreasing household sizes will require more housing units, even with a relatively stable population size.

## FUTURE NEEDS

To understand the future needs of Colchester, the regional housing needs must also be considered. The Colchester Housing Needs Analysis, last updated in December of 2017 by Front Porch Community Planning & Design, noted that the Housing Market Area (includes all of Chittenden, Franklin and Grand Isle Counties) was balanced as of 2017, yet a need for an additional 1,225 homeowner units and 850 new

2018 Rents & Housing Wages			
	2018	Wage	
		Hourly	Annual
HUD FM Rent (MSA)			
1-bedroom	\$1,121	\$21.56	\$44,844
2-bedroom	\$1,442	\$27.73	\$57,678
3-bedroom	\$1,921	\$36.94	\$76,840
4-bedroom	\$2,025	\$38.94	\$81,000
Allen and Brooks (County)			
1-bedroom	\$1,076	\$20.69	\$43,040
2-bedroom	\$1,312	\$25.23	\$52,480
3-bedroom	\$1,958	\$37.65	\$78,320

Sources: U.S. Department of Housing and Urban Development Fair Market Rent and the 2018 Allen, Brooks, and Minor Inc. rents survey



market-rate rental units existed. According to the Chittenden County Housing Needs Assessment, prepared for the Vermont Department of Housing and Community Development in 2014 by Bowen National Research, county population will increase by 2.9% and the number of households will increase by 3.7% between 2015 and 2020. An additional 2,971 units will be needed during this period, with more than half needed for households earning less than 80% of the median income. In 2016, the Chittenden County Regional Planning Commission launched “Building Homes Together” in concert with local housing providers and business leaders. The campaign seeks to create 3,500 new homes in Chittenden County by 2021 with 80% of the new units within planned growth areas such as Severance Corners. Although Colchester’s approximately 43 new units a year are a minor part of the target of 700 units annually, the majority of units that Colchester has added in recent years have been within these planned areas for growth in Colchester. During the term of this plan, it is expected that low

vacancy rates will persist, driving up demand for housing within the larger region, especially for smaller and more affordable units. The Town cannot significantly affect the regional housing market or overcome all of the challenges to meeting housing needs alone. To this end, the Town will continue to work with regional and state entities and organizations to seek housing solutions. A healthy regional housing market is important to Colchester’s future and to the future of economic development within the region.

Regional demand for housing may further increase pressures on Colchester. With density often limited by environmental constraints, especially on-site septic, Severance Corners will be well-poised to accommodate additional demands for smaller and more affordable units. With priority housing projects offering exemptions from the State’s Act 250 permitting process within the Severance Corners Growth Center, mixed-income housing is advantaged. Mixed-income housing consists of rentals affordable for those making

80% of median income and/or owned housing that does not exceed 85-90 percent of “the new construction, targeted area purchase price limits established and published annually by the Vermont Housing Finance Agency.” These owned limits are currently \$255,000 to \$270,000. The majority of owned units at Severance Corners fall under mixed-income limits.

With more multi-family and smaller units added in recent years, Colchester has made gains in affordability, despite a rebounding housing market with upward pressures on housing cost. New units and improvements to existing homes, along with low vacancy rates, can drive up housing costs and decrease affordability, making housing cost a barrier to a thriving workforce. Between 2011 and 2018, overall affordability of housing in Colchester increased by five percent. Changes during this time to zoning to allow greater infill development, especially moving to a form-based code for Severance Corners, likely assisted in these gains.

Colchester has a more than sufficient supply of residentially zoned land to sustain projected housing growth during the term of this plan. With smaller households, there will be greater demand for high-density residential zoning and less demand for moderate-density zoning (such as R1 and R2 district) as the need for smaller, more affordable dwellings, including multi-family units, increases. Colchester’s land use plan should be looked to for guidance in meeting the community’s residential needs. The Lands of Colchester Chapter of this plan denotes areas appropriate for additional residential growth: Growth Center, Suburban Residential, and Village planning areas. High-density residential development will be primarily accommodated within Severance Corners. As mentioned in the Lands



of Colchester Chapter, this growth center is anticipated to contain the majority of the Town's growth over its 20 year designation (2008-2028). Village planning areas may also be suited to provide additional residential opportunities; however, not all village areas are currently conducive to additional residential opportunities and additional development should not detract from the character of these areas. Suburban Residential planning areas will continue to be appropriate areas for residential infill.

## CHALLENGES

Several challenges exist to meeting existing and anticipated housing needs. These include a lack of permitted lots, a lack of centralized wastewater treatment capacity, the uncertainty of appeals in the permitting process, public perception of density and affordable housing, and infrastructure and design requirements. Smaller household sizes may see the average household having only one wage earner during the term of this plan. An aging population will increase the need for services and facilities for active seniors to age in place. An aging housing stock will increase the need for weatherization and other retrofits, including lead abatement. These challenges are further detailed in the 2017 Colchester Housing Needs Assessment, which also recommends opportunities for overcoming these obstacles to meeting housing needs.

As detailed in the Powering Colchester Chapter, the Town should capitalize on opportunities for promoting energy efficiency improvements and education. Partnerships with the Champlain Housing Trust and other housing providers should continue to leverage affordable housing, and improvements to affordable housing, within Colchester. Efforts to maintain and enhance mobile homes as

owned, affordable housing should be continued, such as partnering with financing agencies for energy-efficient replacement units. The growth center designation for Severance Corners will continue to promote mixed-income housing. Maintaining residential building codes and rental requirements will ensure safe and efficient homes.

Two specific housing needs that warrant further action are the need for affordable starter homes and senior housing. These two sectors have significant unmet needs in the community; however it is unclear how these sectors can be positively affected by the Town. Educating condominium associations on maintaining or acquiring Federal Housing Administration approvals for financing could improve first time purchasing options for many, and with little effort. The Town should continue to promote accessory apartments to help seniors age in place while making existing homes available to new families, as owners can choose to remain in the main house or move into a smaller apartment onsite. Universal design for occupancy during all stages of life and at all ability levels could be evaluated for incorporation into local code requirements to improve options for aging in place. Co-housing, home-shares, and other programs that provide support to first-time buyers and aging residents seeking to stay in the community should be promoted. Over the course of this plan, the Town should evaluate other possible initiatives and look to implement appropriate measures that will address the community's housing needs.









# POLICIES

1. Colchester's land use plan should continue to guide residential development.
2. Village planning areas may be suited to additional residential opportunities; however, not all village areas are currently conducive to additional residential opportunities and additional development should not detract from the character of these areas.
3. Infill residential development should continue within the Suburban Residential planning area.
4. The Town will continue to comply with the Vermont Fair Housing Act in its regulations.
5. Current programs such as the Town's building code program, on-site wastewater program, and health officer program, should be continued and enhanced, as these programs help to ensure the quality and safety of Colchester's homes.
6. The Town should promote energy efficiency improvements such as weatherization, efficient heating systems, and utilization of renewable energy sources.
7. The Town should continue to work with housing providers, regional and state entities, and other organizations to seek solutions for regional housing and leverage affordable housing and improvements into affordable housing within Colchester.
8. Co-housing, home-shares, and other programs that provide support to first-time buyers and aging residents should be promoted within Colchester.

# ACTIONS

1. During the term of this plan, the Town should maintain its growth center designation at Severance Corners as a means of promoting mixed income housing that accommodates regional need.
2. The Health Officer should continue to monitor the number of rental units and associated complaints annually and work with the Building Inspector to address necessary code improvements including, if warranted, a more proactive inspection process or program.
3. Possible violations of the Vermont Fair Housing Act reported to or discovered by the Health Officer will be reported to appropriate enforcement authorities, such as Vermont Legal Aid or the Vermont Attorney General's Office.
4. The Town should pursue partnerships with financing agencies for energy-efficient mobile home replacements to maintain and enhance mobile homes as affordable owned housing.
5. The Colchester Department of Planning and Zoning should investigate the requirements for Federal Housing Administration financing approvals for condominium associations during the term of the plan and, if found to be tenable, reach out to associations to promote receiving and maintaining such approvals.
6. Universal design for occupancy during all stages of life and at all ability levels should be evaluated during the term of this plan, as well as other code improvements.
7. During the term of this plan, Planning and Zoning Staff should work to evaluate the benefit of additional code requirements, to reduce energy and increase sustainability in construction while considering the need for affordability.



# POWERING COLCHESTER

Energy Sources

Energy for Our Future









## VISION

*The Town shall take the initiative to interact and collaborate regionally and locally to ensure that adequate, safe, sustainable, and affordable energy systems are available to all residents and businesses, and encourage the efficient use of energy.*

## GOAL

The Town of Colchester will provide a framework for the community, individuals, businesses, and organizations to implement the goals of the State of Vermont, as enumerated in their 2016 Comprehensive Energy Plan (CEP):

To obtain 90% of all energy across all sectors (transportation, heating, and electricity) from renewable sources by 2050, with the interim goals of 25% renewable by 2025 and 40% renewable by 2035, in which “renewable” means solar energy, wind energy, solid biomass, liquid biofuels, biogas (methane), and hydropower

To reduce total energy consumption per capita by 15% by 2025, and by more than one-third (1/3) by 2050

To weatherize 25% of homes by 2020

To reduce greenhouse gas emissions by 50% from 1990 levels by 2028 and 75% by 2050

## OBJECTIVE

Colchester has chosen to institute local actions to achieve the State’s goals by 2050. It is recognized that progress will only be achieved by the buy-in and actions of private individuals and entities. While the Town can educate and inform, it has limited power to effectuate these changes and will be reliant upon innovation in the private sector and other governmental entities to achieve these goals. By attaining substantial deference under Act 174, Colchester will be able to balance both state and local priorities regarding energy use and production with more localized needs and priorities.

## BACKGROUND

The Town of Colchester’s geography has historically limited its ability to produce power. The low lands of Colchester at the mouths of the Lamoille and Winooski Rivers have not allowed for local power production beyond that of one hydro dam in the gorge of the Winooski River shared with South Burlington and individual, small, residential-scale wind turbines. Within this plan, small-scale energy generation facilities shall be considered as producing 150 kW or less with large facilities producing more than 150 kW.



Kilowatts (kW) is the maximum instantaneous power that an energy-generating project can produce. This is also known as capacity. Kilowatt hours (kWh) are the total amount of electricity a solar project actually generate over a period of time. For example, a solar project rated at a power level of 10,000 kW capacity can potentially generate 10,000 kWh of energy over an hour of optimal conditions. Even though a solar or wind project may have the same capacity, the different technologies and environmental conditions can generate different amounts of electricity.

## ENERGY SOURCES

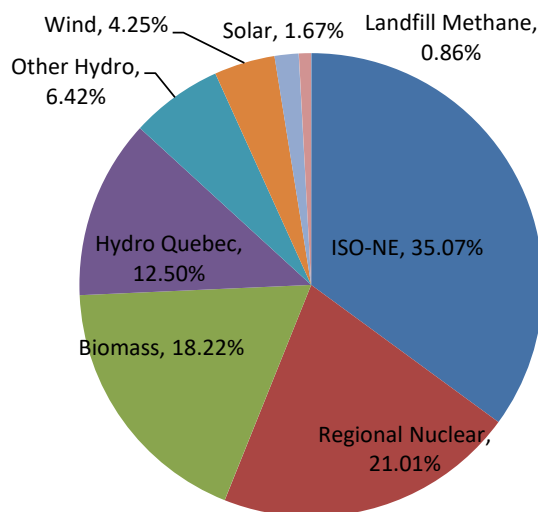
The Town of Colchester's energy history and outlook is very much tied to that of the State of Vermont. In 2016, the State of Vermont received 35.07% of electricity from regional non-renewable energy imports (ISO-NE), 21.01% from regional nuclear, 18.22% from biomass, 12.5% from Hydro-Quebec, 6.42% from other hydropower, 4.25% from wind, 1.67% from solar, and 0.86% from landfill methane. These sources are displayed in Figure 1. These sources dictate pricing throughout the state, with little variation.

As of 2016, Colchester was estimated to have a population of 17,319 people, using a total of 130,883,974 kWh (kilowatt hours) for electricity and 785,470 MMBtus (million British Thermal Units) of natural gas for thermal energy. Figure 1 outlines the sources of this energy as of 2016. This is the 4th highest consumption of energy in Chittenden County. In a state with a seven-month heating season, the cost of energy has a high impact on the overall cost of living and doing business. While Vermont historically has had high energy prices in the last two decades, since 2011 the rate of consumer price increases has been 3.1%, compared to 12.3% on average in New England. As of 2017, Colchester is served entirely by Green Mountain Power (GMP), with 9,696 customers. For residential customers, rates have increased slightly from \$0.15 per kWh in 2014 to \$0.15668 per kWh in 2018. For commercial and industrial customers, prices have increased more substantially from the range of \$0.069 - \$0.09 per kWh in 2014 to \$0.13981 - \$0.17164 per kWh in 2018. It must be noted that GMP is planning on consolidating legacy contracts under this commercial and industrial rate to one value of \$0.16020 per kWh by April 1st, 2020. Regarding Vermont Gas's 2018 prices,

residential and commercial rates have each increased 1.5% to \$0.4188 per ccf for residential, and \$0.4864 per ccf for commercial.

A variety of other energy sources are also utilized in the community, from gasoline to liquid propane to wood pellets. While an increasing number of residences are heated with biomass (18% of homes in Vermont), the major home heating sources in Colchester are natural gas and liquid propane. Appendices Map 14 Energy

## Vermont Energy Sources in 2016



Planning shows existing wood chip or pellet heat sites, as well as the natural gas service area for Colchester. Many of Colchester's most affordable homes and mobile homes have limited heating options due to their construction, and are often reliant upon some of the most expensive and volatile petroleum fuel sources (see Our Homes Chapter). Small scale residential wind turbines within Colchester continue to be viable; however, at this time Colchester's low level elevations, combined with



Green Mountain Power, Colchester's electricity provider, stated in its December 13th 2018 article that 90% of its power source is carbon free and 62% renewable. Half of GMP's power is provided by Hydro-Quebec with a contract that expires in 2038.

Vermont spends between two and three billion dollars a year for energy services, according to the Vermont Climate Action Commission. Locally generated renewable energy increases the amount of energy dollars that stay in our community and Vermont.

Moving energy generation away from fossil fuels such as oil, gasoline, kerosene, and natural gas will help guard against energy cost volatility and decrease carbon dioxide and other greenhouse gas emissions that impact climate change.



state and local constraints (see Map 15, Map 16, and Colchester Preferred Sites Scorecard), diminish the viability of commercial scale wind operations (see Appendices Map 14 Energy Planning for constructed wind sites). Solar currently produces 4 MW (Mega-watts) of power and 3,905 MWh (Mega-watt hours) of energy annually across the community, with significant expansion potential (see Appendices Map 14 Energy Planning for constructed solar sites). Saint Michael's College employs geothermal in their Dion Family Student Center and this thermal source continues to be incorporated into residential builds. Additionally, Colchester has several wood harvesting operations that serve residences. An opportunity for an energy-generating methane facility near Exit 16 has been explored in the past, but was found not viable, due to the design of the landfill cap. Alternative and renewable energy sources will continue to grow in importance as traditional energy sources become more limited and expensive. The Colchester Development Regulations should continue to encourage the use of solar modules and residential wind turbines, as well as other alternative energy sources such as geothermal.

Of Colchester's various dams, only one produces power: Green Mountain Power's Winooski Gorge 18 Hydroelectric Facility (see Appendices Map 14 Energy Planning for hydroelectric sites). This facility is located in the Lime Kiln Gorge and straddles the border with South Burlington. No changes are anticipated to the dam during the term of this plan. As the facility has the capability of producing 1.8 MW of power and generates 9,000 MWh annually from a renewable resource, the Town is supportive of its continued operation and improvements that may be made to it.



## Energy Distribution

There are currently fifteen gasoline service stations and two fuel distributors within the community. Vermont Gas Systems serves the majority of the Bay, Severance Corners, the Village, Exit 16, the Fort, Severance Road, and Malletts Bay Avenue by the Winooski Town Line. The main gas transmission line for Chittenden County runs through Colchester north to south, originating at the Canadian Border from the TransCanadian System, which brings natural gas from Alberta. This is one of three gas transmission lines in the community:

- 1) The first gas line originates in Burlington and crosses the Winooski River, terminating at Exit 16.
- 2) The second gas line originates in Winooski in the Exit 16 area and runs north along the Routes 2 & 7 corridor, then forking off to the Town of Essex along the Severance Road area, with the trunk line continuing on to the Milton Town Line at Exit 17.

- 3) The third gas line runs from Winooski along Route 15 into Essex.

A peak shaving facility at Exit 16 serves to boost supply, using storage tanks during hours of peak natural gas use. As of 2018, Vermont Gas has no plans to increase transmission lines in Colchester, but the Town should be mindful of this possibility going forward and work to ensure that such expansions occur within existing transportation or utility corridors to minimize community impacts.

With plans to incorporate net-metering and the predicted increase in electricity usage by 2050, it is important to understand how GMP distributes electricity in Colchester. GMP and VELCO use transmission lines to bring electricity from power-generating facilities into Colchester, and eventually electricity is distributed to residents through a combination of 3 Phase Power Lines (along main roads such as Route 7), 2 Phase Power lines, and Single Phase Power lines. Electricity is brought into Colchester by the following three transmission lines:

1) GMP's phase three line from Burlington, through Winooski, terminating at the substation on Bay Road

2) Vermont Electric Power Company (VELCO)'s first 115kV line from the Essex Station to Sandbar

3) VELCO's second 115kV line from the Essex Station to Georgia

Individually owned wind turbines and solar panels may use inverters to feed unused energy back into the grid on 3, 2, or single-phase power lines. This contribution is a step in the right direction, but more will need to be done in order to achieve the State's goals.

## Energy Conservation

According to the 2017 Housing Needs Assessment conducted by the Town of Colchester, an estimated 6,000 homes were built before 1998 (over 80% of current stock) and, based on their age, should be weatherized. The Town exempts most weatherization projects, such as door and window replacement, from permits. While this measure helps to lower barriers to weatherization projects, the lack of permit data makes it difficult to track improvement in this area. Given the high number of properties that could benefit from weatherization, it is recommended that the Town promote retrofits and other efficiency programs. In the CCRPC's 2018 ECOS Plan, it was noted that homes participating in government sponsored energy efficiency projects rose from 74 in 2014 to 197 in 2016.

From 2015-2017 the Town spent considerable effort working with Champlain Housing Trust to upgrade the 166 housing units that comprise Winchester Place in Fort Ethan Allen. \$5 million in non-local funding was spent in rehabilitation activities, which included replacing windows and exterior doors, replacing hot

water systems, and replacing heating systems. Additionally the Town provided Champlain Housing Trust with \$43,000 in Federal funds to upgrade the streetlights to low energy use models, which both reduced energy uses and helped make the property more affordable.

In 2014, the Town borrowed \$400,000 and replaced most of its street lights with high efficiency bulbs. The loan will be paid off by 2022 through savings in electric bills. Over the twenty year lifespan of the lights, after capital payback, the Town will save \$1.3 million, a 38% savings over using older lighting technology

In 2015, the Town conducted a Level 2 Energy Audit of municipal facilities. This audit provides a performance baseline and relative energy usage for 16 buildings, totaling 46,464 square feet. It is estimated that 97,865 kWh of electricity, 3,043 CCF (hundreds of cubic feet) of natural gas and 62.77 kGal (kilogallon) of water could be saved through efficiency projects. These improvements would cost an estimated \$750,000. The payback period on average is 33 years—longer than the life of most equipment and fixtures. So, an adaptive approach of replacing equipment and fixtures with more efficient equipment at end of life is more cost-effective for the Town. However, the more cost effective elements of the list may be targeted for within-lifespan replacement. When similar and adjacent systems are under replacement, and when opportunities exist to combine system improvements with energy improvements, they will be considered. For example, when the Burnham Library had two HVAC systems in need of replacement and another was marginal, a decision was made to replace all three, for reliability and energy efficiency. The Town will continue implementing these improvements over the term of the plan.

In all construction, the Town's localized building codes and inspection process creates higher standards for energy efficiency. Residential construction must meet the Residential Building Energy Standards (RBES) and the International Residential Code. All other construction must meet the Commercial Building Energy Standards (CBES) and Vermont Fire and Building Safety Code at a minimum with many projects also required to meet Act 250 Stretch Codes. These codes will lead to greater energy efficiency and energy conservation in the long run.

## ENERGY FOR OUR FUTURE

CCRPC developed a Long-Range Energy Alternatives Planning (LEAP) model for Chittenden County in 2018. This model serves to create a framework for public and private sectors to make progress toward 2025, 2035, and 2050 milestones. At the time of the development of this plan, suitable metrics for many of these milestones have not yet been identified. An example is that it is unknown how many homes are being weatherized. During the term of this plan, the Town should work with CCRPC to quantify progress.

## Heating, Cooling, and Sealing the Cracks

One of the best ways to increase energy efficiency is to seal our homes and prevent heat from escaping. In the preliminary town plan survey on energy, 57% of respondents had performed weatherization improvements. For the 41% of respondents who had not undertaken improvements, most cited mainly financial barriers and a lack of information. The Town should work to educate the community on weatherization programs and financial incentive programs to reduce thermal use and promote cost savings.



Examples of outreach include providing an energy clearinghouse in Planning and Zoning to inform applicants of existing efficiency programs and financial incentives, as well as continuing to partner with Champlain Housing Trust, Efficiency Vermont, GMP, and others to promote their weatherization programs.

Tables 1 and 2 outline possible improvements for residential, commercial, and industrial sectors in Colchester to reach 2025, 2035, and 2050 benchmarks. It is likely that weatherization improvements alone will not achieve these benchmarks. Improvements to local building codes may help increase efficiencies in thermal systems incrementally. During the term of this plan, Planning and Zoning Staff should evaluate the benefit of additional code requirements to improve energy efficiency, while considering affordability. Codes should not be barriers to new technologies, but encourage them. To this end, the Town should be supportive of Act 250 amendments to remove historic permit restrictions on electricity as a thermal source, provided it is efficient. Similarly, the production of biomass fuels from forestry activities (see Our Environment Chapter) could be an affordable way to increase the amount of renewable fuels and help meet targets. Bridge technologies that assist in reducing reliance on fuel oils and natural gas are needed. Unless the cost of current fuel sources increase dramatically, it is unlikely that significant progress will be made in the thermal sector during the term of this plan, even with increased weatherization efforts. Colchester will continue to work with regional and State partners to encourage the use of new thermal technologies, such as heat pumps and plants.

Projected Colchester Residential Thermal Energy Use			
	2025	2035	2050
<b>Total Residential Thermal Energy Use (MMBtus<sup>1</sup>)</b>	577,688	489,812	339,125
<b>Percent of Residences Weatherized by Target Year (%)</b>	14%	36%	100%
<b>Energy Saved by Weatherization by Target Year (MMBtus)</b>	26,966	73,656	230,543
<b>Percent of Residences using Heat Pumps (%)</b>	18%	37%	60%
<b>Residential Thermal Energy Use from Heat Pumps (MMBtus)</b>	37,442	77,032	112,939
<b>Residences Using Wood Heating (%)</b>	14%	14%	14%
<b>Residential Thermal Energy Use from Wood Heating (MMBtus)</b>	106,085	106,187	93,298

Table 1, Source: CCRPC LEAP Model, VT Department of Public Service

Projected Colchester Commercial & Industrial Thermal Energy Use			
	2025	2035	2050
<b>Total Commercial and Industrial Thermal Energy Use (MMBtu<sup>1</sup>)</b>	330,090	314,410	278,101
<b>Percent of Commercial and Industrial Establishments Weatherized by Target Year</b>	20%	22%	39%
<b>Energy Saved by Weatherization by Target Year (MMBtu)</b>	17,744	24,603	59,292
<b>Commercial and Industrial Establishments Using Heat Pumps (%)</b>	22%	35%	39%
<b>Commercial and Industrial Thermal Energy Use by Heat Pumps (MMBtu)</b>	26,766	52,911	79,056
<b>Commercial and Industrial Establishments Using Wood Heating (%)</b>	9%	10%	11%
<b>Commercial and Industrial Thermal Energy Use Attributable to Wood Heating (MMBtu)</b>	39,941	55,013	80,541

Table 2, Source: CCRPC LEAP Model, VT Department of Public Service, VT Department of Labor

1: MMBtu stands for One Million British Thermal Units. One Btu is the amount of heat necessary to raise one pound of water's temperature by one degree Fahrenheit.

Per capita energy consumption must be reduced 25% by 2030, and by one-third by 2050 (Tables 3 with industrial electric use and 4 without industrial) in order to reduce per capita energy usage up to 43% by 2050 and meet these statewide goals.



Projected Colchester Total Energy Use Per Capita (Including Industrial Electric Use), 2015-2050				
	2015	2025	2035	2050
<b>Total Energy Use (MMBtu)</b>	2,223,480	2,100,108	1,864,466	1,605,925
<b>Population</b>	17,383	17,953	18,296	19,119
<b>Total Energy Use per Capita (MMBtu)</b>	128	117	102	84
<b>Reduction in Total Energy Use per Capita from 2015 benchmark</b>	--	-9%	-20%	-34%

Table 3, Source: CCRPC LEAP Model

Projected Colchester Total Energy Use Per Capita (Excluding Industrial Electric Use), 2015-2050				
	2015	2025	2035	2050
<b>Total Energy Use (MMBtu)</b>	2,141,906	1,984,386	1,714,835	1,405,073
<b>Population</b>	17,383	17,953	18,296	19,119
<b>Total Energy Use per Capita (MMBtu)</b>	123	111	94	73
<b>Reduction in Total Energy Use per Capita from 2015 benchmark</b>	--	-14%	-27%	-43%

Table 4, Source: CCRPC LEAP Model

The LEAP model assumes that Colchester's population will continue to grow, but the total energy use will decline. Engagement and education of residents towards these goals will prove difficult until energy prices increase and trigger private action. In the interim, the Town can provide information and education, so that when individuals and businesses are making decisions to replace or invest in substantial repairs, they have the opportunity to make investments that will save them money, considering both the energy cost and equipment purchase.

## Electricity usage

As innovation in the transportation sector and home cooling and heating move these sectors toward greater electrical use, demands on the grid will increase. Unlike numbers in the previous thermal category, future demands on electricity are rising. By 2050, residents of Colchester can be expected to use 231,516 MWh<sup>2</sup> (Megawatt hours) of electricity, compared to 138,439 MWh in 2025. Greater efficiency could lead to 41,329 MWh being saved in 2050 (Table 5 below). The Town will continue to promote the Vermont Community Energy Dashboard to increase awareness of energy generation, as well as efficiency projects.



Projected Colchester Electrical Energy Use 2025-2050			
	2025	2035	2050
<b>Without Industrial (MWh<sup>2</sup>)</b>	104,523	133,222	172,649
<b>Industrial Only (MWh)</b>	33,916	43,855	58,867
<b>Total (MWh)</b>	138,439	177,077	231,516
<b>Total Electric Energy Saved (MWh)</b>	10,946	22,097	41,329
<b>Increased Residential Electric Efficiency (%)</b>	30%	58%	98%
<b>Increased Commercial and Industrial Establishments Electric Efficiency (%)</b>	30%	58%	98%

(Table 5, Source: CCRPC LEAP Model)

2: MWh stands for Megawatt-hours, a measure of power (megawatts) over time (hours). Residents may be more familiar with the Kilowatt-hour (kWh), which is the measure often associated with electric bills.

## Transportation Trends

Transportation continues to be a significant factor in Vermont's emissions. According to the 2017 Vermont Transportation Energy Profile, Vermonters averaged 11.68 thousand vehicle miles of travel (VMT) per capita, compared to the nationwide average of 9.63 thousand VMT per capita. As of 2018, there were 39 electric vehicles registered in Colchester not including hybrids. While electricity as a fuel source is becoming more common, great strides would need to be made to increase to 6% in 2025 and 89% of total fleet in 2050. A majority, 71.70%, of community members polled in the development of the Town Plan noted that they would be willing to buy a more efficient, possibly electric, car as well as bike and walk, to reduce their personal impacts from transportation.

The Town identified an additional park and ride facility with an electric vehicle charging station near Exit 16 and has been working with the State to this end, despite the loss of grand list revenue from this site. The park and ride opened in early 2019. The Town will continue to work with the State to investigate additional park and ride sites. The Town will also continue to work with other partners such as Green Mountain Transit to support mass transit options. Multiuse paths will continue to be implemented, through leveraging grants with the Capitol Transportation Plan, to increase opportunities for bike and pedestrian use. Electric car charging stations should be included into parking standards within the Development Regulations, and current transportation demand management incentives should be

Projected Colchester Transportation Energy Use, 2025-2050			
	2025	2035	2050
<b>Total Light Duty Transportation Energy Use (MMBtu)</b>	719,976	456,057	198,768
<b>Electricity Used for Light Duty Transportation (MMBtu)</b>	9,601	66,180	139,675
<b>Light Duty Electric Vehicles (% of Vehicle Fleet)</b>	6%	41%	89%
<b>Biofuel Blended* Energy Used for Light Duty Transportation (MMBtu)</b>	710,375	389,877	59,093
<b>Biofuel Blend*Light Duty Vehicles (% of Vehicle Fleet)</b>	94%	59%	11%
<b>Heavy-Duty Transportation Energy Use from Biodiesel (Percent of Total)</b>	33%	58%	96%
<b>Heavy-Duty Transportation Energy Use from Fossil Fuel (Percent of Total)</b>	67%	42%	4%

Table 6, Source: LEAP Model, VTrans

continued, such as closing businesses prior to peak times of traffic or bus passes for employees. The Getting There section of this plan includes many more specifics on energy in the transportation sector.

Addressing the desire to reduce transportation, the Town has encouraged concentrated growth in the Severance Corners neighborhood and its village areas. This cluster-type development aims to reduce vehicle miles driven while also building tight-knit communities. Many other energy savings through land use, such as clustering development, can be found in the Lands of Colchester section of this plan. Projections and necessary milestones can be found in Table 6 (on previous page).

## Greenhouse Gas Emissions

A byproduct of reducing energy use and fossil fuels is the reduction of greenhouse gas emissions. The Statewide goal to reduce these emissions 75% by 2050 can be advanced by reducing energy use. The Town has begun monitoring greenhouse gas (GHG) emissions in carbon dioxide equivalent (CO<sub>2</sub>e) from municipal operations, through a tool called ClearPath, created by Local Governments for Sustainability USA (ICLEI). The Town may consider joining ICLEI during the term of this plan to receive technical support for its energy efforts. By continuing to update this database, Colchester will be better able to make decisions regarding vehicle efficiency and implement strategies to reduce emissions.

The Town of Colchester sold off older vehicles in 2015 as a cost-saving measure, reducing the number of vehicles owned by the Town and saving money on ownership costs by moving to a mileage reimbursement system for Town travel that does not require a Town vehicle. This reduces costs borne directly by the Town and

reduces overall energy consumption, considering that fewer vehicles are required to meeting the Town's needs. The Town replaced its Police fleet of Chevy Tahoes with a mixed fleet of smaller vehicles: Ford Explorers and mid-sized Chevy Sedans. The Town is now replacing its highest mileage vehicles, the police patrol vehicles, every four years. This gives the Town both reliability and better mileage, where it matters the most. We also no longer continue to pass down vehicles in the Town, so our fleet is smaller, newer and more energy-efficient. The Town will continue to maintain information on the efficiency of its vehicles to continue to improve and optimize its fleet efficiency.

Other means of reducing GHG emissions include reducing food waste. Local agricultural productions should continue to be supported, to reduce energy costs in food production. The Food and Agriculture Organization of the United Nations estimates that one third of food produced for human consumption is wasted. The Colchester Food Shelf promotes gleaning, or taking food that would otherwise be wasted, and providing it to residents in need. This effort should be sustained, as it reduces both GHG from food production as well as decomposition, and benefits the community in many ways socially and economically.

## Renewable Energy

Renewable technologies have continued to become more cost-effective in recent years. Local renewable sources such as solar, wind, and biomass have the potential to help Colchester meet the State's goals. In 2018, 12,928 MWh of energy production in Colchester were energy generated from renewable resources. By 2050, LEAP estimates public and private sectors will need to generate between 54,276 MWh to 99,499 MWh from new renewable resources



in Colchester, in order to meet these goals.

CCRPC generated estimations of what energy production could be on possible solar and wind sites maps (see Map 14 Energy Planning). The documentation on solar and wind sites was split into two categories. "Prime" renewable energy showed locations where there were no constraints present on sites. "Base" renewable energy locations identified areas with a high potential, but possible constraints. These base and prime areas are shown on Appendices Map 14 Energy Planning. Using only "Prime" locations, the goals outlined in the ECOS Plan could be accomplished. The constraints outlined by the CCRPC (see Maps 15 & 16) are important to Colchester's natural landscape, and as such, the Town has chosen to focus all renewable energy generation in areas free of those constraints. The following sections provide more information on solar and wind applicability in Colchester:





## Solar

The CCRPC ECOS Plan notes that Colchester has 5,550 prime and base acres available for solar usage (not including rooftops), with a potential of 172 MW of capacity and an annual generation potential of 211,348 MWh. This meets both the low and high targets for renewable energy usage in the ECOS plan. Water Protection and Shoreland Overlay Districts will be a constraint on the potential to complete solar projects. It is worthwhile to explore the possibilities of rooftop solar on current buildings in the Town to meet this demand.

After carefully reviewing alternatives, including long-term power purchase agreements, private development on Town land, and Town development on Town land, the Selectboard chose to permit and develop their own solar generation facilities, in order to reap the maximum financial benefit. In 2018, the Town constructed two 150 kW solar photovoltaic generation facilities: one on Malletts Bay Avenue, which is expected to produce 242,000 kWh of energy, and one on Roosevelt Highway, which is expected to produce 237,734 kWh of energy. When complete, they will produce energy equivalent to 60% of the

Town's annual electricity use. The two facilities will produce savings of about \$1,000,000 over their 25 year expected life, after payback of all capital and operating expenses. During the term of this plan, the Town will seek another solar facility, to approach a goal of producing electrical energy close to the total amount consumed by the Town government.

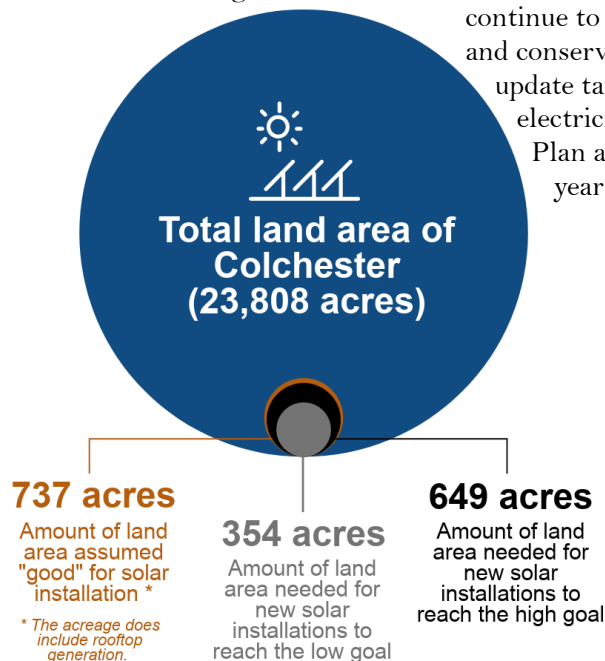
## Wind

The ECOS Plan notes that Colchester has 4,359 prime and base acres available for wind usage, with a

potential for 175 MW of capacity and an annual generation potential of 534,578 MWh. Using all available acreage would meet both the low and high targets for renewable energy usage in the ECOS plan. At this time, Colchester's low-level elevations combined, with state and local constraints (Maps 15 & 16) diminish the viability of commercial-scale wind operations. Single turbines to serve the immediate needs of a particular property will continue to be viable.

Several programs in Vermont provide residential and commercial renewable energy investment opportunities, including, but not limited to, Federal tax credit incentives for solar installation, Efficiency Vermont's incentive rebates for efficiency practices, and bank/credit union loans for weatherizing and installing renewable energy resources. Typically, homeowners can obtain reasonable interest rates on home improvements as they improve the value of their properties and are backed by the value of the property. Incentives that are available to residents of all financial backgrounds help to promote affordable energy and should be encouraged.

The Town of Colchester will continue to track energy production and conservation progress, and will update targets with population and electricity consumption in this Plan as it evolves to the target year 2050.



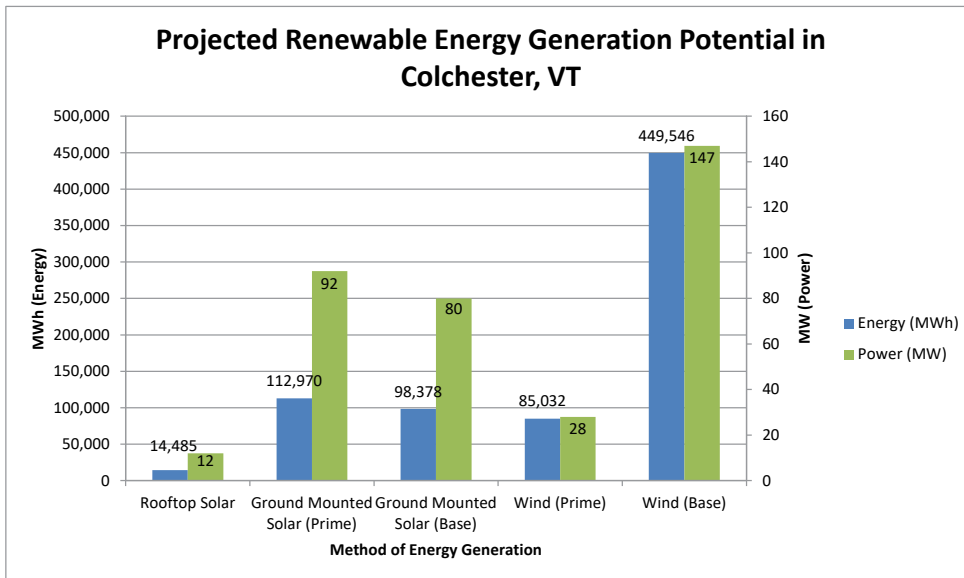


Figure 2, Source: CCRPC and Department of Public Service

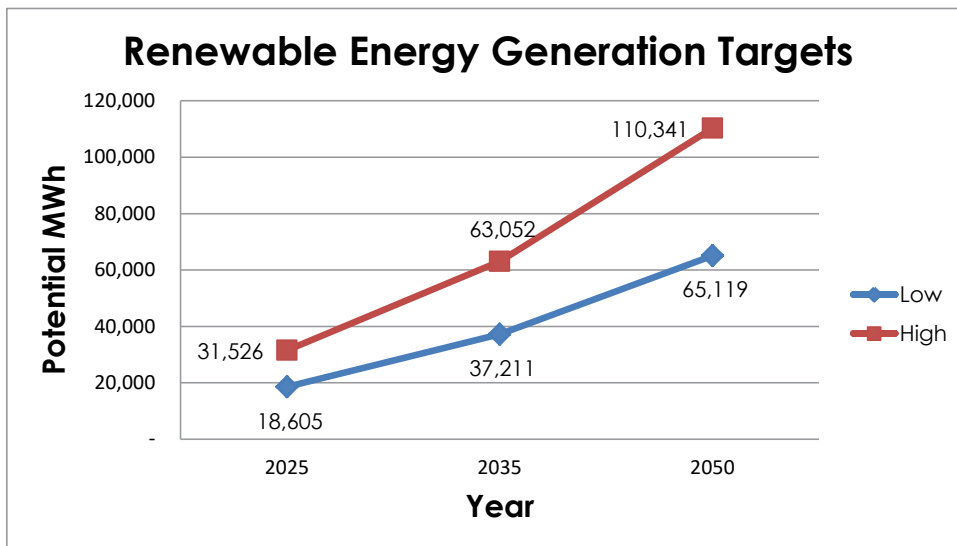


Figure 3, Source: CCRPC Modeling & LEAP Model

When identifying preferred sites for net-metering renewable energy generation, it should be noted that the State designates development in already-developed areas (on structures, in parking lots, on landfills, over sand-gravel pits, etc.) as preferred sites by right. Sites that are not designated by the State as by-right preferred sites may be designated by municipalities as preferred sites. On Appendices Map 14 Energy Planning, sites located in the “base” areas may be considered but ultimately discouraged in order to preserve the agricultural and natural aesthetic of the Town. Physical and visual impacts should be minimized when these areas are developed. As these lands are ecologically important, care should be taken to avoid development for energy generation in these areas. The Town should prioritize conservation of these areas and focus development in other, already developed, or non-constrained areas.

The Town of Colchester has developed the Preferred Site Scorecard to evaluate which sites should be given this status, as well as what projects conform to this plan. The Scorecard is hereby incorporated by reference into this plan and will be adopted simultaneously with the plan. This Scorecard may be amended by the Colchester

## Preferred Site Designation

As Vermont experienced a growth in renewable energy generation, Act 174 of 2016 was established to create the framework for a new set of municipal and regional energy planning standards. In accordance with rules established by the Public Utility Commission (PUC), net-metering renewable energy projects that are large enough to produce between 150 and 500 kilowatts must be built on “preferred sites.” While the PUC does not regulate non-net-metering developments over 500 kW, the PUC has given communities the ability to define what a preferred site may look like. The process of determining preferred sites must evaluate the constraints and the impact on the site itself, as well as the impact it has on the community and culture of the area.

**COLCHESTER**  
**PREFERRED SITE DESIGNATION SCORECARD**

**Before getting started**  
 Review the preferred site criteria & Town Plan.  
 Check parcel maps & CCRPC maps.  
 Review development regulations.  
 Estimate history of use.

The undersigned hereby applies for preferred site review to determine if site can be deemed eligible to receive "preferred site designation" for the Town of Colchester as described below. **Please submit this form to public@colchester.vt.gov.**

**Applicant**  
 Project Street Address: \_\_\_\_\_  
 Tax Map & Parcel No.: \_\_\_\_\_  
 Existing Uses on Property: \_\_\_\_\_  
 Proposed Solar Design on Property: \_\_\_\_\_

**Objective**  
 The Preferred Site Designation Scorecard is made up of 6 questions on areas that need to be addressed, evaluating aesthetic and environmental concerns. Complete the questions and take your score from each question of note of the status in a question made to your site that question receives a "0," if your score card reveals a "substantial" impact on the Town of Colchester.

**A. How much of the site is visible from adjacent residences?**  
 Site fully less than 20% screened \_\_\_\_\_ 5  
 Site fully less than 20% of the field of vision of a human eye (24 mm focal length) or will do so with screening \_\_\_\_\_ 4  
 Site fully less than 40% of the field of vision of a human eye (24 mm focal length) or will do so with screening \_\_\_\_\_ 3  
 Site fully greater than 50% \_\_\_\_\_ 2



Selectboard in consultation with the Planning Commission. Sites are deemed to be preferred sites if judged to have sufficient points by the Colchester Planning and Zoning staff. An affirmative determination by staff shall mean a preferred site designation by the community. If sites are deemed to be marginal or not sufficient by staff, based upon the point system, the applicant may request the Colchester Planning Commission consider the project. If the Colchester Planning Commission utilizes the Score Card to provide the project preferred site designation, the site will be designated as a preferred site by the Selectboard.

The Scorecard is a path to preferred sites for all alternative energy generation. While the card is designed primarily for solar, other facilities such as biomass, biogas, biofuel, and geothermal should be eligible, too. Sites located within areas of known constraints (shown on Maps 15 & 16) including or local known constraints such as slopes 20% or greater, floodplain, wetlands or surface water buffers, and the Shoreland District are not permissible sites (see Maps 10 & 11). Projects that are designated as preferred sites must also conform to this plan.









# POLICIES

1. The Transportation Capital Plan should be used to leverage funding for the continued implementation of multi-use paths throughout the community.
2. The Town should continue to partner with Green Mountain Transit to provide mass transit options for residents.
3. Infill and cluster development, such as PUDs, should continue to be encouraged through the Development Regulations in conjunction with the Village Mixed Use and Growth Center areas to reduce energy needs and support densities that could, long-term, support investments, such as heat plants.
4. The Town should promote weatherization and other sustainable energy investments by the community and continue to serve as a model, through implementing improvements and efficiencies to Town facilities.
5. The Town should consider joining ICLEI as a means of promoting sustainability and receiving technical support in its energy efforts.
6. Much of Colchester's economy has historically relied on agricultural production within the Town. The Town should continue to promote local food as a means to reduce carbon footprint associated with food production. Continued efforts by the Colchester Food Shelf to glean and reduce food waste should also continue to be supported, as about one third of the food produced for human consumption worldwide is wasted, increasing both carbon and methane gas from production and discard.
7. While Act 250 has helped to promote stretch energy codes, many existing properties in Colchester are subject to pre-existing Act 250 permits that specifically ban electric heat. The conversion of these properties to electric heating may require work with the District Commission. The Town should be supportive of such modifications as electricity becomes an affordable thermal source and assist property owners with navigating this process.
8. Building codes and development requirements should be continuously re-evaluated to include new technologies that improve efficiency and the use of renewable resources. Barriers to the installation of heat pumps and other bridge technologies, especially for thermal use, should be reduced or eliminated.
9. At the time of the development of this plan, suitable metrics for many of these milestones are not yet identified. During the term of this plan, the Town should work with CCRPC to quantify progress.

# ACTIONS

1. While Colchester's building codes have stringent requirements for enhancing energy efficiency in construction, additional standards, such as green construction or net zero requirements, could be added to further reduce energy use related to buildings. During the term of this plan, Planning and Zoning Staff should work to evaluate the benefit of additional code requirements to reduce energy and increase sustainability in construction while considering the need for affordability.
2. The Town should designate an energy ombudsperson within Planning and Zoning to direct community members to sources of information regarding weatherization and other energy efficiency opportunities within a year of adoption of this plan.
3. The Town should evaluate the designation of the Planning Commission as an official energy committee to promote and evaluate energy planning on the behalf of the Town, working with an ombudsperson in Planning and Zoning. The Town should partner with groups such as Button Up Vermont, Efficiency Vermont, GMP, the Champlain Office of Economic Opportunity (CVOEO), and pursue grants to promote information on weatherization and other energy improvements.
4. During the term of this plan, the Town should site another solar photo voltaic generation facility on Town land, so as to approach a goal of producing electrical energy close to the total amount consumed by the Town directly.
5. The Town should continue to work with organizations such as the Champlain Housing Trust to make existing properties more energy efficient and to provide other alternatives to home owners in our community through their programs.
6. The Development Regulations should be revised within three years to include standards for electric car charging stations and further incentives within the parking standards for transportation demand management, or other vehicle reductions.
7. The Town should continue to utilize ClearPath to monitor greenhouse gas emissions.
8. The Town should continue maintaining information on vehicle efficiency to improve the ClearPath model and inform decision-making regarding the purchase of newer, more efficient, vehicles including electric vehicles.
9. The Town will continue to utilize the Vermont Community Energy Dashboard and keep updated with information on solar panel permits and other energy efficiency measures (retrofitting electric systems, replacing windows, etc.).
10. The Town will implement a scorecard review process involving Planning and Zoning Staff and the Planning Commission, to objectively assess sites for possible "preferred site" designation.



# WHO WE ARE

Our Past

Our Community by the  
Numbers

Our Culture

Our Future







## WELCOME VILLAGE

This land has been designated as  
provide you and others with a safe,

### TO PROTECT YOUR PARK LAND THESE COMMON SENSE

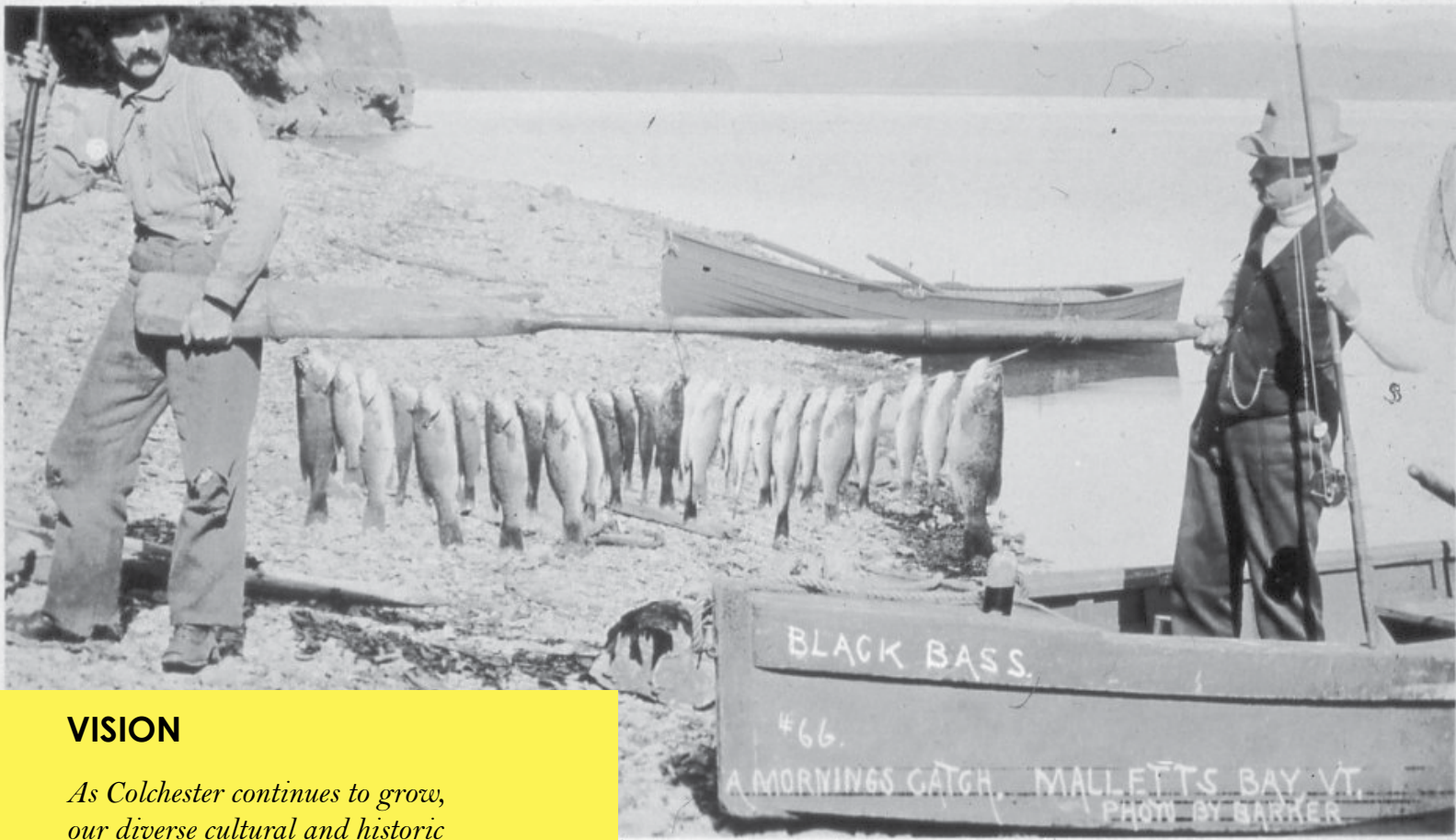
- PARK HOURS: Dawn to Dusk
- Dogs must be under the control of
- Please pick up after your pet and dispose
- All refuse shall be removed by visitors
- Motorized vehicles are not permitted
- No hunting is allowed
- No camping is allowed
- Glass containers are not permitted
- Horseback riding shall not be permitted

### DO YOUR PART TO ENSURE THIS PARK FOR YEARS

Thank you.

COLCHESTER PARKS AND RECREATION





## VISION

*As Colchester continues to grow, our diverse cultural and historic resources will continue to define our character as we welcome new residents, cultures and traditions into the community.*

## GOAL

Support, preserve, and expand Colchester's one-of-a-kind history and diverse culture while maintaining and improving our desirable community.

## OBJECTIVE

Ensure equity and involvement as Colchester while preserving our historic resources and growing our cultural assets.

## OVERVIEW

Colchester is a diverse community, rich in history, with a variety of cultural amenities. Our population and cultural assets help to define the Town's community and create a sense of place. Colchester will be challenged with preserving and enhancing these features while incorporating new resources and cultures in the future. The following is not meant to catalog Colchester, but rather to provide a context for the role these resources play in the current community and in planning for Colchester.

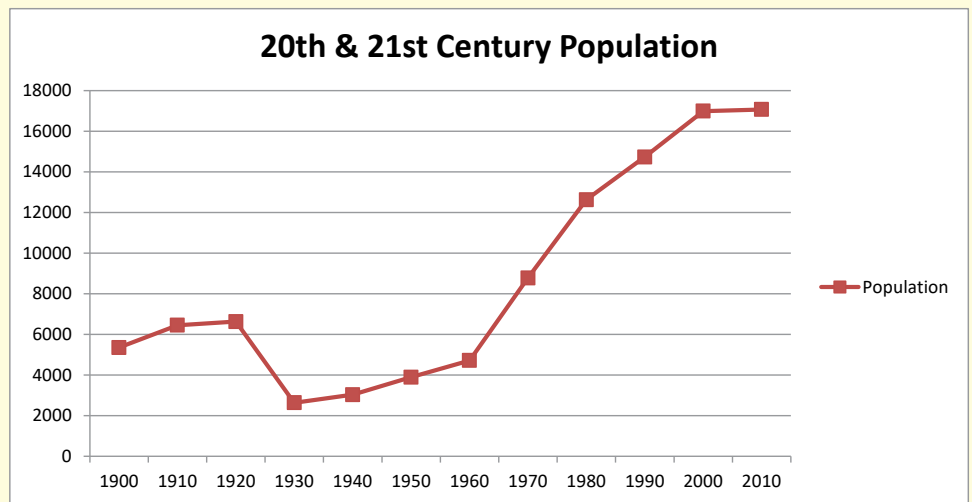
## OUR PAST

Colchester benefits from a well-documented historical record. The Town is fortunate to have an active Historical Society as a resource for researchers. An active steward of several of Colchester's historic buildings, the Historical Society maintains the Parsonage in the Village as a museum and meeting space and the School House at Airport Park as a seasonal interpretative museum and information center. The Society is a steward for Colchester's history, and its efforts to promote and educate local history should be supported. The Burnham Library is another local resource for historical research. Several books have been written on Colchester including: *Colchester, Vermont from Ice Cap to Interstate* by Dr. Ruth Wright, *Look Around Colchester and Milton, Vermont* prepared by the Chittenden County Historical Society, *Colchester Center the Evolution of a Village* by Kenneth Degree, and both *Images of America...Colchester* and *Chronicles of Colchester* by Inge Schaefer. A variety of other organizations

provide access to primary historical records, such as letters, maps, and deeds. These include the Colchester Town Clerk's Office, the University of Vermont Special Collections, St. Michael's College's archives, and the Vermont Historical Society. Known archaeological and historic sites are further detailed on Appendices Map 5.

Colchester's location has made it a desirable place for settlement since prehistoric times. Colchester was chartered in 1763 and was previously inhabited by native peoples. At the time the US Census was first taken in 1791, the Town's population numbered 137. Historic records lack information on demographics; however, it can be gleaned from the records that Colchester was a rural farming community, primarily settled by families of European descent born in southern New England.

Agricultural censuses performed during the mid-nineteenth century provide historical information on farming operations in Colchester, which includes family possessions, farm yields and acreage. These historic censuses can be found at the University of Vermont's Bailey-Howe



*Source: U.S. Census Bureau - Census of Population & Housing, 2010 Summary File*

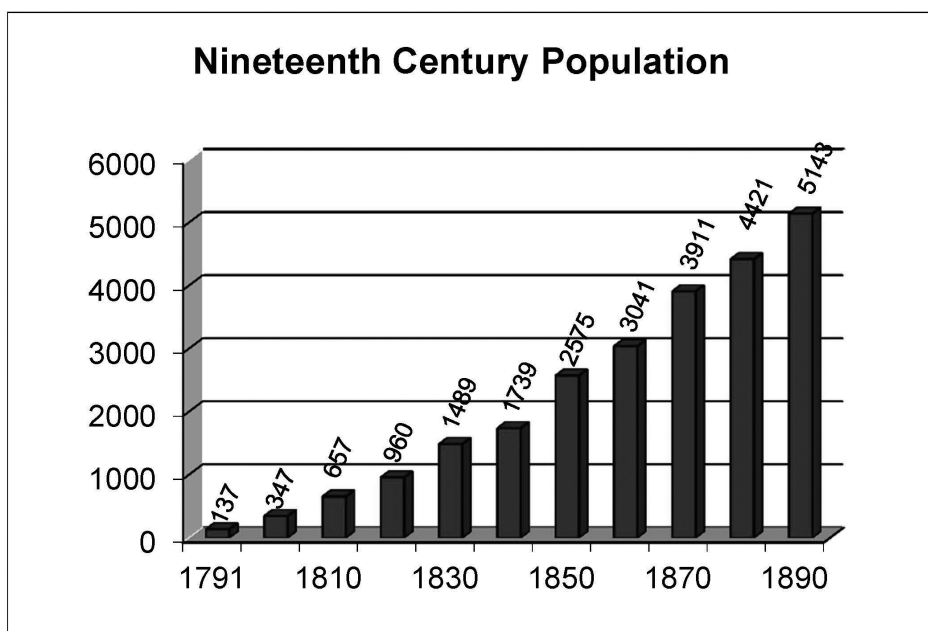
Library in Burlington and are online: <http://www.uvm.edu/~hp206/2010/Colchester/Colchester/census.html>. For the majority of the nineteenth century, Colchester's population saw a steady increase that mirrored statewide trends with the exception that Colchester did not see a significant decrease in population during the Civil War.

Colchester's population began to blossom in the late nineteenth century, as industrialization along the Winooski River brought mills and workers to Town. When the

urban center of Colchester, now known as the City of Winooski, separated from the rest of Colchester in 1922, it removed two-thirds of the community's population and its industry, as reflected in the 1930 Census. The "new" Colchester remained relatively rural and agrarian, in keeping with its historic character. During the early 1900s, the Town saw significant growth in its summer seasonal community, due to its lakeside location. This seasonal population growth is not reflected in the census; however, Colchester's year-round population continued to grow steadily through 1960.

Colchester's population nearly doubled in the 1960s, with the completion of Interstate 89 and the introduction of International Business Machines in the neighboring Town of Essex. This was the beginning of Colchester's suburbanization, as it quickly became a bedroom community for the greater Burlington area. The population increase seen during this decade was primarily from in-migration as residential developments surged and Colchester's natural amenities made it an attractive place to live. During the 1970s, the rate of population growth slowed only slightly.

During the 1980s and 1990s, the Town's population grew by an



*Source: U.S. Census Bureau - Census of Population & Housing, 2000 Summary File 1 Table P1*



average of 218 persons per year, compared with an average of 395 persons per year during the preceding 20-year period. Colchester's annual growth rate during this time period surpassed that of County and State. The Town accounted for 13% of the County's total population growth during the 1980s, and 15.2% during the 1990s—surpassed in that decade only by Williston. As of the 2010 Census, Colchester ranked fourth in the state in population, behind Burlington, Essex, and South Burlington.

The landscape of Colchester has changed significantly over the centuries. Remnants of Colchester's past have begun to disappear from the landscape. Gone are many of the prehistoric and early historic sites. Quickly vanishing from the landscape are structures and features associated with the agricultural history of the landscape. As new development takes place, Colchester's pre-European contact sites and historic buildings and structures should be preserved. Archaeological sites offer insights into the most distant past, for which historic records often do not exist, and also provide information about more recent people and activities that were not documented. As with archaeological sites, significant historic structures should be preserved, although some structures may not be worth preserving because of their condition or age (less than fifty years old). Preserving historic structures often requires repair or rehabilitation to provide continued use.

Pre-contact and historic period archaeological sites, along with historic buildings and structures, constitute Colchester's rich and diverse heritage resources (see Appendices Map 5). The State of Vermont Division of Historic Preservation has published a State Register of Historic Places that lists



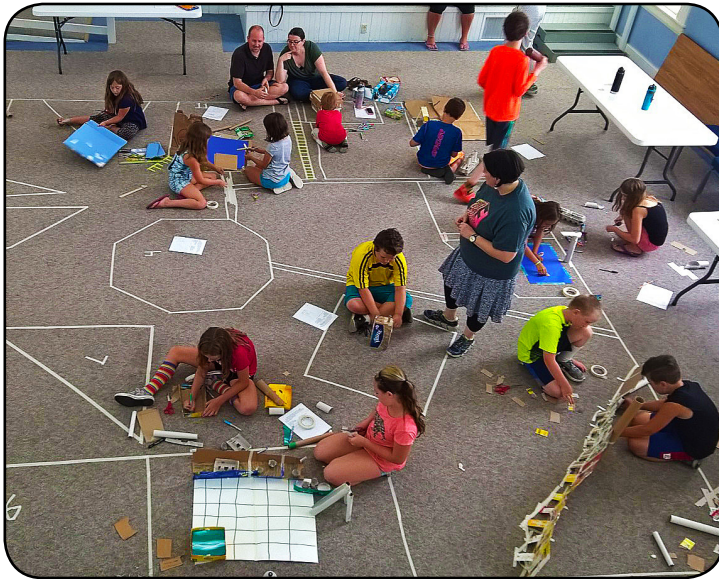
the historic structures and properties in the Town of Colchester. The list includes 40 properties, which range from large complexes such as Fanny Allen Hospital and Fort Ethan Allen, to historic houses, and even bridges. Fort Ethan Allen is the only National Register of Historic Places District in Colchester. The State also maintains a State Archaeological Inventory, which lists known archaeological sites in Colchester. The State developed a predictive model for archaeological sites that has helped identify potential sites. Identification and protection of historic sites is generally required as part of the State's Act 250 permitting system.

For certain eras of history, cultural resources may be the only clues to our past. Destroying cultural resources can therefore permanently destroy opportunities to understand and interpret our history. As Colchester's history continues to develop, cultural resources that represent the community's past should be recognized and preserved, even as we plan for the Town's future. The Town should encourage the preservation and rehabilitation of historic

structures in Colchester through its regulations, policies, and budget. Changes to historic structures should be sympathetic to the structure and consider the Secretary of Interior's Standards for the Treatment of Historic Properties. Development should be sensitive to Colchester's historic and archaeological sites and structures, as these serve as visible reminders of the community's past. The Town should explore potential opportunities for funding preservation projects with not-for-profit organizations, as well as State and Federal partners.

## OUR COMMUNITY BY THE NUMBERS

Colchester is 58.6 square miles with roughly 36 square miles of land, making it the 13th largest municipality by area and approximately fourth largest by population (considering the Town of Essex also includes the Village of Essex Junction) per ACS 2015 data. The 2016 US Census Bureau's estimated year-round population for Colchester was 17,319. Over



the past decade, Colchester has continued to see slight population gains, despite the state-wide trend toward population decrease. While Colchester's population has become more self-sustaining through natural rates of increase, the impacts of rapid population growth experienced during the late twentieth century will continue to have a significant impact on the demographics of the community. Colchester's population growth has stabilized with natural increases, or births, driving population gains, while migration becomes a negative factor, as out-migration has increased. Out-migration can be to a nearby community or, as people have been doing for decades around the country, moving where they find employment. We have an attractive community and school district, and as new properties are built and existing ones go on the market, we gain new and sometimes returning residents.

The Town accounts for approximately 10% of the county's population.

Colchester's population is aging, which mirrors state and national trends. The median age of Town residents in 2015 was estimated by the Census to be 34.2 years, younger than the County average of 36.3 and State average of 42.4. Local birth rates have been declining, and there

has been a decrease in the number of younger households. Colchester, like the rest of the state, has seen a decline in younger workers (20 to 34 years) between 2010 and 2015; however, regionally, these younger households are expected to grow by 8.5% through 2020. Colchester has seen a trend in recent years toward growth in two age groups: 20-24 and 55-plus. Retirement age individuals now make up more than 10% of the Town's population. The largest age group in Colchester continues to be 35-54, making up about 26% of the population. This age group represents family households that are more likely to buy up in the housing market and have children at home. Growth in the Town's senior population is expected to continue as the Baby Boom generation ages, suggesting the need for more in-home services to allow residents to age in place.

Colchester's population is gradually becoming more ethnically and racially diverse. In 2010, the Census estimated that 4% of the Town's population was nonwhite. This is due in part to the efforts of the Vermont Refugee Resettlement Center in Colchester. "Special needs" populations are persons that may require special living arrangements or housing, including the elderly,

disabled, and low-income. In 2015, 9.1% of the community was identified as living with a disability. Approximately 10% of residents lived below the poverty line in 2015. Given Colchester's aging population, the number of persons with mobility impairments and disabilities, as well as restricted incomes, is expected to increase during the term of this plan.

The average size of Colchester households has been decreasing since at least 1990, but remains slightly larger than that of the County and State. In 2015, the average size of all households in Town was 2.37 persons, with 66% of these households being family households. Between 2010 and 2015 the Town's household population grew by 5.5%, with estimated household growth (4.6%) exceeding population growth (1.5%). One and two person households and households with residents exceeding 65 years in age continue to grow, more than any other household types. The increase in renter households in recent years has impacted this trend to smaller households, because renter households have average sizes of 2.23 persons per household compared to owned units, with 2.4 persons.

Traditional households, those family households with two spouses and affiliated children, continue to decrease (25% in 2000 to 18.6% in 2010). Colchester has a higher percentage of minority households (4%) than most towns, but lower than the County average in 2010 of 5.3%. Also of note, in 2010 nearly 11% of Colchester's population lived in group quarters, including student housing residents at Saint Michael's College and the University of Vermont, as well as Green Mountain Nursing Home residents (who were omitted in the 2000 census, but included in the 2010 census count.). It should be noted that group quarters are not included in household population and the University of Vermont no



longer maintains groups quarters in Colchester.

A positive local trend is continued growth in Colchester's reported median household income, estimated in 2015 at \$67,803, as compared to the County median of \$65,350 and the State median of \$55,176 (Census). Since 1980, Colchester's reported median household income has consistently tracked higher than county and state medians. 2015 estimates suggest that the largest income growth locally occurred in higher income brackets (above \$100,000). With regard to the above mentioned, the median income reported for Colchester households is not representative of annual wages paid to Colchester workers.

A variety of trends in Colchester's population suggest it will continue to be a vibrant and dynamic community. The majority of Colchester's adult population has at least some college education. In 2010 it was estimated that nearly 50% of local residents possessed a college degree. While Colchester's population is growing at a more stable and self-sustaining rate, it remains dynamic and increasingly tied to regional, state, and even nationwide trends. The growing number of smaller households will continue to drive the need for more housing, with a projection of 40 to 50 new households a year. An aging population will impact the type of housing desired. As Colchester grows and transforms, the composition of the community will have a significant impact on the Town's future land use and development and what sort of community Colchester becomes.

## OUR CULTURE

Colchester's location has made it a desirable place for settlement since prehistoric times. Before Europeans first explored Vermont, the area was inhabited by native peoples. During the French and Indian War, the



lands that would become Colchester were disputed, with the French and British warring over the territory. When the war came to a close in 1763 the Town of Colchester was chartered by the British, and soldiers were compensated with land grants. Given its history, Vermont has a unique blend of European cultures, with English and Protestant roots as well as French and Catholic influences. Colchester is no exception to this, being home to many different religious institutions. Historic records lack information on demographics; however, it can be gleaned from the records that Colchester was a rural farming community primarily settled by families of European descent born in southern New England. This consistency would hold until the mid-twentieth century, with the immigration of the 1950's and 1960's seen post-World War II as the region boomed with the growth of the Essex International Business Machine facility.

The community has a variety of cultural facilities and active social groups. Cultural facilities range from theaters such as St. Michael's Playhouse and Colchester High School to private camps, such as Brown Ledge Camp or Camp Dudley. There are also a variety of community events, such as the

Winter Carnival, the Fourth of July Parade and fireworks, Green Up Day, and Town Meeting. In the Town Plan Survey, these events were the most highly attended Colchester functions, with the Parade surpassing all events. Social groups include formal facilities like the American Legion, with other groups like the Rotary and Lions Clubs meeting in a variety of places. The Burnham Memorial Library in Colchester Village is a town-owned cultural facility detailed in the Governance Chapter. The Library's Long-Range Plan directs the Library's services and provides guidance for its growth, including serving as a clearinghouse for information on arts, culture, and related events in Colchester.

A variety of private cultural centers and groups include Colchester's various religious organizations. These organizations include the Islamic Center at Fort Ethan Allen, Day Break Church, Jehovah's Witnesses Congregation, the United Church of Colchester, St. Andrew's Episcopal Church, Our Lady of Grace, Holy Cross Church, Chapel of Saint Michael the Archangel, and Catholic Charities. The Catholic Church has been one of the most active religious organizations, with a senior housing project on Church Road and several cemeteries. The Catholic Church also had a role in the establishment



of Fanny Allen Hospital and Saint Michael's College. These organizations engage in community-building by providing services, events, and contributing to charitable causes. Religious organizations also preserve and sustain cultural and ethnic traditions. As Colchester continues to grow more diverse, these organizations will be important in facilitating a sense of community while supporting cultural diversity.

The Vermont Refugee Resettlement Center operates out of the Fort neighborhood, while impacting the larger region. While refugees are settled in a variety of communities, mostly within the greater Burlington area, Colchester is the center for educational and outreach services for the diverse ethnic groups served by the Center. In 2016, approximately 400 refugees were resettled in Vermont through this program. The Pine Island Community Farm is a project of the Vermont Land Trust that supports New American farmers raising goats, chickens, and garden vegetables. This collaborative farm off Pine Island Road provides for individual farm enterprises, in which each owner runs the enterprise as a small business. Demand has outpaced supply, with about 60

families currently being served by the garden plots. As the Community Farm continues to grow and adapt, it is anticipated that there will be more events at the facility, such as the harvest festival hosted in 2018. The Vermont Council on World Affairs (VCWA) provides educational programs, as well as hosts delegates from around the world. Both the Town of Colchester and St. Michael's College are partners with the VCWA and have helped to host various visiting delegations. The future of Colchester is likely to be more culturally and ethnically diversified, and the work of organizations should be supported as providing exposure to and education on various cultures.

As the community becomes more diverse, the Town should look to preserve and expand upon its cultural facilities, in order to sustain and enhance the community's quality of life. Summer camps for children and seasonal cottages contribute to the Town's tourism economy and the community's sense of place as a lakeside community. The Fort area continues to evolve as a cultural center for the Town, with the Elley-Long Music Center serving as the home for the Vermont Youth

Symphony Orchestra. Private development of cultural facilities, including religious facilities, should continue to be encouraged. Cultural facilities should continue to be integrated into the existing fabric of the community and be incorporated in multi-use areas.

Colchester's historic and cultural properties are opportunities for economic development through expanded tourism and adaptive reuse of historic buildings. Historic buildings serve as attractions and destination places, as they create a unique sense of place. To the extent possible, State and Federal Programs, such as the Certified Local Government Program, should be tapped to assist in developing local tourism and reuse projects. A recent example of adaptive reuse is the Log School House, now located at Airport Park, serving as a seasonal interpretive museum and informational center. Efforts to encourage the adaptive reuse of historic properties should be continued. The current zoning for the Fort Ethan Allen area provides several exemptions for the renovation, reuse, and rehabilitation of historic properties, in exchange for preserving the historic fabric of the property. Similar zoning may be looked to for Colchester Village to incentivize the reuse of historic buildings. These historic resources help to define the landscape of Colchester and should continue to be utilized in defining the community's future.

## OUR FUTURE

With no accepted statewide population projections or standard predictive population models in place for Vermont towns, the best source of data for inter-census population estimates may be the U.S. Census Bureau. Statistical sampling associated with the American Community Survey of the U.S. Census continues to have larger margins of error for



Population Projections and Forecasts					
	Census	Projected Population			
	2010	2015	2020	2025	2030
<b>Logarithmic Projection/Census (2012)</b>	17,067	17,800	18,163	18,492	18,792
<b>VT ACCD (2013)</b>					
<b>Low (2000s in-migration rate)</b>	17,067	---	17,206	---	16,981
<b>High (1990s in-migration rate)</b>	17,067	---	17,621	---	17,901
<b>VT DHCD/Bowen/ESRI (2014)*</b>	17,067	17,297	17,799	---	---
<b>GreenPlay LLC/ESRI (2016)</b>	17,067	17,777	18,351	---	---
<b>Allen Brooks &amp; Minor/ESRI (2017)**</b>	17,067	17,736	18,291	---	---
<b>Colchester SD/McKibben (2017)</b>	17,067	17,540	17,880	18,030	---
<b>CCRPC/RSG/EPR (2017)</b>	17,067	17,383	17,703	17,953	18,125

*\*Based on Colchester's estimated 2015 share (10.7%) of projected county population.*

*\*\*As reported for 2016, 2021.*

smaller communities, such as Colchester. The Vermont Agency of Commerce and Community Development has a high and low projection for population from 2013, while Chittenden County Regional Planning has a 2017 projection. Locally, the Colchester School District produced a 2017 cohort-based population forecasts by McKibben Demographics and the Colchester Community Health and Wellness Center 2016 Needs Assessment used ESRI projections. Below is a summary of the various population projections.

The more recent and detailed McKibben 2017 and the CCRPC forecasts appear to best match current trends. According to these forecasts, the local population will reach 18,000 (an increase of 500 to 600 residents) around 2025. Population growth exceeded 1.5% annually in the 1990s and then slowed to .05% in the 2000s. During the term of this plan, population growth is anticipated to remain positive but hover around .03% within Colchester, and less than half a percent county-wide. Colchester's population will likely continue to follow county demographic trends over the next twenty years, more so than the state's, which may trend toward negative growth. While there may be minor room for Colchester to affect its composition, Colchester's population will continue to shift to an older demographic with fewer traditional households. Colchester's

population will continue to be dynamic, with higher percentages of non-native residents. If Colchester continues to hold its place as an employment center endowed with higher learning institutions, its population will also continue to be more highly educated and more affluent than the greater northwest Vermont region.

In looking to Colchester's future, it will be important to continue to address equity. Colchester's population is becoming more diverse and income inequities continue to exist. All members of our community should have access to and use of our economic, environmental, and social assets. Civic engagement, as detailed in the Governance Chapter, is essential to our Town and opportunities for engagement and outreach should continually be assessed and potential barriers addressed. To ensure that Colchester is welcoming to all, under-represented populations should be celebrated and measures taken to provide higher rates of inclusion. The Town's web page includes transition options to help facilitate such inclusion, and accessibility and translation tools or services for documents and meetings can be made available as necessary. As detailed in other sections of this plan, equitable access to education, transportation, services, and environmental and public health are important for all community members.









# POLICIES

1. To the extent possible, the Town should encourage that important archaeological sites be identified and avoided by development, thereby preserving the sites for future generations and reducing development costs.
2. Colchester's historic and cultural properties are opportunities for economic development through expanded tourism and adaptive reuse of historic buildings. The Town should encourage the preservation and rehabilitation of historic structures in Colchester through its regulations, policies, and budget. Changes to historic structures should be sympathetic to the structure and consider the Secretary of Interior's Standards for the Treatment of Historic Properties.
3. Community organizations, such as the Historical Society, that serve as stewards of the Town's historical and cultural resources are important community assets and should be sustained.
4. Private development of cultural facilities, including religious facilities, should continue to be encouraged, as they are important in facilitating a sense of community while supporting cultural diversity.
5. As the community becomes more diverse, the Town should look to preserve and expand upon its cultural facilities, including private facilities, in order to sustain and enhance the community's quality of life.
6. The work of organizations providing exposure to and education on various cultures should continue to be supported.
7. Cultural and historical events should continue to be celebrated, promoted, and expanded upon.
8. Opportunities for engagement and outreach should continually be assessed and potential barriers addressed.
9. Mobility impairments and other special needs will continue to be addressed and accommodated.

# ACTIONS

1. The Town should explore participating in the Certified Local Government program and other State or Federal historic preservation programs during the term of this plan.
2. The State Register and National Register listings for the Town should be used to assess the significance of historic buildings and structures. This inventory should be maintained and updated to provide accurate documentation of the Town's historic resources.
3. The Town's online presence should continue to be evaluated for accessibility and translation services for documents and meetings made available, as necessary.



# **SERVING COLCHESTER: Governance**

Town Government

Public Works

Library

Parks & Recreation

Police

Rescue

Fire Fighting & Prevention

Regional Government









## VISION

*The Town shall foster communication, citizens' trust, active participation, and cooperation in an efficient and effective form of government that addresses needs as they pertain to economic vitality, social and environmental responsibility, and prosperity in a dynamic future.*

## GOAL

Maintain high quality services and determine actions to sustain and enhance the services.

## OBJECTIVE

To build community capacity and provide ways to increase the contribution and participation of more people who live and work in Colchester.

## TOWN GOVERNMENT

Town government provides services that individuals and the private sector do not or cannot provide. In order to provide services, some form of governance is necessary. The Town of Colchester is governed by a Charter or local constitution, adopted by its voters and approved by the State Legislature. Town citizens vote to approve operating budgets, capital commitments that pledge property taxes as collateral, use of local option taxes and elect a Selectboard of five members. The approved budgets, as well as State and Federal grants, are used for the planned expenditures of the fiscal year, otherwise known as the Capital Budget Program. The estimated project cost for the 2019 fiscal year is \$3,347,601, roughly \$600,000 less than the previous fiscal year. It must be noted that the Capital Budget is typically volatile as projects slip behind a year, or grant funds cause other projects to move faster.

The Selectboard serves as the legislative and judicial branch of Town government. The Selectboard appoints the Planning Commission, Development Review Board, Recreation Advisory Board, Cemetery Advisory Committee, Board of Ethics, Governance Committee, and the Conservation Commission. The Burnham Memorial Library trustees, the Board of Listers, and



the Board of Civil Authority are elected. The Town has a Get Engaged program to include high school students on boards. This program and new internship opportunities have increased youth participation in Colchester's government. The Town runs on volunteerism: Volunteers assist the Town with everything from policy and budget development, acting as judicial boards for town ordinances appeals of property assessment, property tax abatement, election oversight, cemetery policy, library policy and programs, recreation programs and policy, review of ethical complaints, review of changes to the town charter, conservation issues and projects, long-term planning, development review, planning and staffing community events, such as the triathlon, fire, rescue, and technical rescue services, planting and maintaining community flower gardens, to community events such as Green Up Day.

The Selectboard hires a Town Manager who oversees Town services and supports the Selectboard in their legislative and judicial roles. The Selectboard has purview over questions to be put before the voters including the development of budgets, capital funding requiring voter approval, and changes to the Charter. The Selectboard also considers, develops, and approves a variety of policies for the Town Manager to implement, including the Town's annual budget. Services are delivered to the Town through 108 full and part-time employees who work for the town year-round. The Town Manager coordinates the activities of the 60 members of boards, commissions, and committees through Town staff. Major contracts and relationships with three fire departments and a volunteer technical rescue squad are the responsibility of the Town Manager. There are over 100 part-time employees, primarily in parks and recreation, as well as 70

volunteers in rescue and technical rescue. In 2017, the total expenditures for the Town services were \$12,190,870, an increase of \$525,898 from the previous year. The Town departments include the Manager, Assessor, Clerk/Treasurer, Economic Development, Planning/Zoning, Finance, Human Resources, Public Works, Library, Parks/Recreation, Police, and the Rescue Departments.

The Assessor, Clerk/Treasurer, Economic Development, Planning/Zoning Departments services include: property assessment; issuing of licenses, such as marriage, liquor and pet licenses; issuance of passports; operation of elections; recording property deeds, birth, and death certificates; tax collection; working to maintain and grow area businesses; comprehensive planning; and, the administration of local building codes, health and zoning regulations, wastewater permits and development review. In recent years, efforts have resulted in the digitization of many town records, including deeds, easements, survey plats, permits, board applications, and planning and zoning files. The Assessor's interactive webmap provides information on assessment cards, zoning, fire districts, floodplains and more. Most of these digitized records are now available online. Many applications, such as permits and parks and recreation registrations can now be completed and submitted online. Payment for property taxes and other services can also be submitted online.

## Public Works

The Colchester Public Works Department provides a variety of services to the community, including the planning, design, construction, maintenance and operation of the community's infrastructure. The administration and engineering divisions provide

oversight to the operations of the department and its various projects. Stormwater and wastewater are detailed in the Systems and Connections Chapter, while the Getting There Chapter details the highway system and other means of travel. The highway division is also responsible for the maintenance and improvement of the Town's roads and associated improvements, such as streetlights, street trees, and drainage. The equipment maintenance division keeps all of the Town's equipment and vehicles in working order. The buildings division is responsible for all of the Town's building facilities, which include the Bayside Activity Center, Burnham Memorial Library, the Town Meeting House, the Historical Society, the Town Offices, the Police Department, Colchester Rescue, Technical Rescue, and the Town Garage (see Appendices Map 13 Community Facilities). Funding of these services is a blend of utility funds (sewer and stormwater), general tax revenue, grants, and capital funds. The Capital Equipment and Facility Plan, the Capital Transportation





Program, Bridge Reserve Fund, and Public Safety Capital Plan help to pay for vehicles, equipment, and various projects and are often used to leverage grant funds. The Department is based in the Town offices, as well as the Town garage at 711 Blakely Road.

## Library

The Burnham Memorial Library is located in the Village, and recently overtook stewardship of the adjacent Town Meeting House for functions and events. The Library is overseen by the elected Library Board of Trustees in addition to the oversight provided by the Town Manager. The Friends of the Library conduct fundraisers, such as the annual used book sale, to raise money to sponsor programs and acquisitions. Library volunteers augment staff in shelving and book drops contributing over 2,000 hours of volunteer time annually. The Library maintains its Library Strategic Plan, a five year plan adopted in 2016 that governs its actions and services. In addition to the traditional book loan programs, the library also provides a variety of other amenities, including

public meeting space, computers and internet access, access to the Vermont Online Library and inter-library loan system, audiobooks, e-readers, videos, music, a space for local artists to display their work, and programs for all ages from tutoring to computer skills. Library staff often provide information for a variety of inquiries.

## Parks & Recreation

The Colchester Parks and Recreation Department provides year-round programs and events for residents of all ages. Programs are conducted in the fields of sports, arts and crafts, wellness, educational and cultural activities, and more. These programs range from highly-active ones, such as youth day camps, to more passive ones, like horticultural skill workshops. Examples of some popular events include the Winter Carnival, the Fourth of July Parade, and the Colchester Triathlon, which all benefit from volunteer assistance. The Department also provides oversight to all Town recreational facilities, staffs the Parks and Recreation Advisory Board (which provides policy and planning guidance), and runs the Colchester After-School Program.

The Department is responsible for the maintenance and management of the Town's parks, recreational facilities, and cemeteries (see Appendices Map 13 Community Facilities). The Recreation Advisory Board assists in coordinating major events and provides input on Recreation programming and events. Parks and natural areas are acquired by the Town through initiatives, donations, the development review process, and impact fees. Given the costs of stewardship, the Town should continue its current policy of prioritizing new acquisitions around the community's needs, rather than accepting land offered.



Colchester's six cemeteries are: The Village Cemetery, Munson Cemetery, Old Methodist Church Cemetery, Champlain Cemetery, Malletts Bay Cemetery and the Cemetery at Fort Ethan Allen. Interred alongside founders, farmers and families are veterans of every American conflict. Most notably, the graves at Fort Ethan Allen cemetery are the final resting place for the largest concentration of those who gave their lives in service to our country. In 2016, Robert and Holly Miller gifted land and a new fence to the Munson cemetery, adjacent to the Respite House on Roosevelt Highway. During the term of this plan, this cemetery will be the focus of planned expansion for traditional lots, a columbarium and meditation garden. The care of our cemeteries is a reflection of our reverence for our past. The Town is committed to work diligently and purposefully to ensure that all Town cemeteries are places of serenity, beauty and quiet tribute.

The Recreation Department maintains an enterprise fund for programming and a Capital Budget and Parks Plan to purchase and furnish new parks, while maintaining and improving the current park system. The Parks and Recreation Department is based in the Town Offices and Airport Park maintenance facility at 500 Colchester Point Road. Programming is offered at the Bayside Activity Center and Colchester Schools. The following is a general list of types and sizes of parks, in what circumstances they are recommended, and where they are found in Colchester's lands.





**Mini-Park:** Ranging between 2,500 square feet to one acre in size, these parks are generally used for passive recreation and include greens, flag lots, and dog parks.

•**Town's Flag Lot:** Corner of East Lakeshore Drive and Blakely Road.

•**Bonanza Park:** On Bonanza Park Road off of Heineberg Drive, this is a 0.6 acre park with a limited playground and all-purpose field.

•**Heritage Park:** Off Main Street on Heritage Drive in the Village, Heritage Park is one acre in size and holds a limited playground, tennis court, basketball court, and parking area.

•**Valleyfield Park:** Off Malletts Bay Avenue. It is 0.65 acres and has a limited playground and all-purpose field.

**Neighborhood Park:** These parks range from five to ten acres in size and serve an adjacent area encompassing  $\frac{1}{4}$  to one mile in distance. These parks generally focus on passive recreation and are usually connected to adjacent neighborhoods through paths or trails.

•**Fort Ethan Allen Parade Grounds:** Dalton Drive, Colchester owns 6.4 acres of this park. A shared property between Colchester and Essex, this park serves the needs of members from both communities.

•**(Heineberg) Billado Park:** This four acre park is owned jointly by the Town and the State. It provides access to the Winooski River off of Heineberg Drive.

**Community Park:** Providing access for regional use and ranging from 20 to 50 acres in size, these parks serve a broader purpose by providing recreation fields, play structures, game courts, passive use, and parking.

•**Airport Park:** This 64.5 acre park is located on Colchester Point Road and includes a 1.3 mile jogging and cross-country ski trail, picnic area, pavilion, playground, four ball fields,

two soccer fields, two sand volleyball courts, six horseshoe pits, two tennis courts, one basketball court, ice skating, restrooms, and offers parking for both Airport Park and Causeway Park.

•**Causeway Park:** This four-mile long, ten foot wide gravel path extends across Lake Champlain that connects to the original Rutland Railroad bed. This park includes a renovated gravel path suitable for walking, biking, and fishing access, as well as seasonal duck hunting. Additionally, Island Line Trail Bike Ferry is operated by Local Motion from June through October that provides access to South Hero.

•**Bayside Park:** This 22-acre park is located on both sides of West Lakeshore Drive, at the intersection of Blakely Road. This park provides a parking lot, restrooms, bathhouse, picnic area, pavilion, playground, skateboard park, swimming beach, activity center, two shuffleboard courts, four tennis courts, one basketball court, two sand volleyball courts, one small baseball field, one lighted softball field, and two horseshoe pits.

•**Village Park:** With 66 acres, this park was formally opened in 2018, with a one-mile-long trail that circumnavigates the parcel. Access to the park is in the Village off of Main Street behind Fire District Three.

**Natural Areas:** These are lands set aside for preservation of significant natural resources, open space, visual aesthetics, and buffering that may also include passive recreation, such as walking paths and canoe launches.





•***Rossetti Natural Area:*** 47

acres in size, Rossetti Natural area resides between Lake Champlain and the Lakeshore Drive/Holy Cross Road/Church Road Intersection. A boardwalk/trail with a swimming area and a 50-car parking lot serves the property.

•***Porter's Natural Area:*** This 56-acre parcel is located just south of the Colchester Causeway Park, and holds wetlands, floodplain forests, and important buffer lands adjacent to the Colchester Bog. Due to the ecological importance of the area, no formal trails have been cut.

•***Sunny Hollow Natural Area:*** Located off of Hercules Drive, this 80-acre diverse area has limited parking and three miles of mountain biking, walking and cross-country skiing trails.

•***Law Island:*** West of the Causeway off of Colchester Point, Law Island is 8.5 acres in size, owned by the State of Vermont, and managed by the Town of Colchester. The island is on the Vermont Paddlers trail and is not accessible by land. Camping is permitted and Duck hunting is allowed (in season).

The Town owns both Bayside Park (north and south of East/West Lakeshore and Blakely Intersection) and the Bayside Hazelett property, located on East Lakeshore Drive. These areas had a conceptual master plan developed and approved by the Select Board in 2018. The implementation of this plan will be done in phases and will depend on future funding.

During the Bayside Park Master Plan, which followed an earlier effort known as the Community Center Initiative, residents expressed interest in indoor recreation amenities including an indoor pool. The Bayside Hazlet and Bayside parcels must be developed to make room for the recreation center.



## Police

Established in 1967, the Colchester Police Department (CPD) provides 24/7 coverage to the community, with 39 employees, including 29 sworn officers, and eight public safety dispatchers. CPD provides community policing and traffic safety, a marine unit, a K-9 team, two school-based officers, four officers working as detectives, one of whom serves in the Chittenden County Unit for Special Investigations. The marine patrol unit provides seasonal coverage of Malletts Bay. CPD also provides many special programs to the public such as Rape Aggression Defense training, Boating Education, Hunter Education, Child Passenger Safety, Honor Guard, Bike patrols, Bike Camp, and Public Safety Awareness Camp. CPD responds to over 13,518 calls per year, with over 400 arrests for over 500 crimes. In recent years, the number of mental health-related calls and drug-related calls regionally have increased leading to a partnership with community outreach staff from the Howard Mental Health Center. The face of community policing is continually changing, and CPD continues to adapt to meet Colchester's needs.

## Rescue

The Colchester Rescue Squad began as a volunteer organization in 1961. The first paid staff began in 1998, to address the elevated level of service caused by increased calls and training requirements for EMTs, AEMTs, and paramedics. There are six career staff and 40 part time members and volunteers. Individual volunteers average over 60 hours of service a month. Based in Rescue facilities at 687 Blakely Road, the Squad responds to over 1,300 calls a year. The Squad provides training for the public such as in CPR and supports many events such as the Colchester Triathlon, blood drives, and an annual open house. St. Michael's College maintains a rescue squad that responds to calls on campus, the Fort neighborhood in Colchester, Winooski and many other communities.

Colchester Technical Rescue has about 30 volunteers, including a dive team, confined space response, structural collapse response, swift water rescue, trench rescue, and ropes. Technical Rescue operates throughout the state, providing the majority of their service outside of Colchester.



## FIRE FIGHTING AND PREVENTION

The community is served by fire fighting and prevention services consisting of the Malletts Bay Fire Department, Colchester Center Volunteer Fire Company, and Saint Michael's Fire, which is an independent organization but which serves as a battalion of Colchester Center. Colchester Center and Malletts Bay are part of Colchester Fire Districts 3 and Colchester Fire District 2 (see Appendices Map 13 Community Facilities). The fire districts are special purpose municipal organizations within the Town. The Town pays for the operating costs of the fire portion of the fire districts. Colchester Center maintains a station in the Colchester Village and Clay Point Road, while Malletts Bay maintains a station on Church Road in the Bay neighborhood. Saint Michael's Fire is based on Rt. 15 by their campus. In fiscal year 2018, Colchester Center, including Saint Michael's Fire, responded to over 600 calls, while Malletts Bay responded to 412 calls. Colchester provides and receives mutual aid to and from adjacent municipalities when support is needed. The fire departments rely upon about 90 volunteers to perform

critical, demanding and potentially dangerous services. Due to a lack of firefighters available during the work week, the Town is pursuing options to fund three positions to augment our volunteers.

In support of fire safety and prevention Colchester has adopted Chapter Seven of the Colchester Code of Ordinance fire protection standards, which often exceed State code requirements. For example, sprinklers are recommended and often required.

## REGIONAL GOVERNMENT

The Town of Colchester participates in and funds regional organizations, including: Chittenden County Regional Planning Commission, Champlain Water District, Winooski Valley Park District, Chittenden County Court System (which is funded by a County Tax but operated by the State), Lake Champlain

Chamber of Commerce, Greater Burlington Industrial Corporation, Local Motion, Green Mountain Transit (GMT), Special Services Transportation Agency (through GMT), Visiting Nurses Association, Steps to End Domestic Violence, Chittenden County Public Safety Authority (dispatch), Chittenden Solid Waste District, and the Chittenden Unit for Special Investigations.

The Winooski Valley Park District (WVPD) has regional park and natural areas in Colchester including:

- Macrae Farm Park: Operated by the WVPD, this 288 acre piece of land provides great opportunities for birding and usage of trails to residents of Colchester, Burlington, Winooski, and more.

- Wolcott Family Natural Area: This 61 acre parcel is located off of East Road and is adjacent to the Colchester Pond Park. A 1.5 mile park was constructed in 2018, including a primitive parking area.

- Delta Park: This 55-acre wetland is conserved and operated by the WVPD. It is a habitat for numerous birds and a nesting area for turtles. There is a half-mile long trail that exists on this property, but parking is limited.

- Colchester Pond: With 191.43 acres, this natural area is conserved to both protect wildlife and allow for some recreational opportunities. This natural area, operated by the WVPD, is home to a 3.5 mile trail that circles the pond.





# POLICIES

1. Increase participation in Town government and services.
2. Maintain a level of services and maintenance of Town assets, in accordance with the voter's ability to support and grow services as the Town grows.
3. Make improvements to Bayside-Hazlett property and Bayside Park, ultimately leading to the creation of an indoor recreation facility.
4. Provide a framework for safe development through ordinance and regulations.

# ACTIONS

1. Invite youth and others to attend public meetings.
2. Engage our boards and commissions with policy decisions.
3. Support and honor the volunteers providing services to the Town.
4. Continue adaptive management of Town services under a private sector approach, respecting that the Town belongs to the community as represented by the voters, Selectboard, and boards and commissions.
5. Continue and grow public safety collaborations to improve services and cost-effectiveness.
6. Work with organizations that assist the Town in maintaining the fabric of the community, providing specialized services and government fee-based utilities, and planning for the future of the Town within its greater regional community.
7. Advance the Bayside-Hazlett project as funding allows, and continue the recreation impact fee in support of the needs of a growing community.
8. Re-evaluate Chapter Seven of the Colchester Code of Ordinances, to promote the safety of those serving Colchester in emergency services.



# CULTIVATING COLCHESTER

Education

Recreation & Wellbeing











## VISION

*Colchester will provide opportunities for the community in life-long learning and recreation in a healthy environment.*

## GOAL

The community will have educated, adaptive, and engaged citizens who provide a skilled workforce. Colchester will continue to be a recreation destination with equitable access for all, making it a healthy community to achieve physical, mental, and social wellbeing.

## OBJECTIVE

Partner with the School District and the community to educate residents to become engaged and productive citizens who lead successful, balanced, and healthy lives.



## OVERVIEW

Colchester is a desirable place to live because of the wide-ranging educational and recreational opportunities available. The Colchester School District delivers elementary and secondary education via its five school facilities, with a total capacity of 2,600 students. Saint Michael's College is a small, private, Catholic, residential liberal arts college located within the Fort Ethan Allen neighborhood, with an estimated student population of approximately 1,700 undergraduate students and 250 graduate students. The University of Vermont and Albany College of Pharmacy influence Colchester with facilities in the Exit 16 neighborhood. Colchester is impacted by the numerous students of these institutions and the economy these institutions create as major employers.

Colchester is home to many passive or non-structured recreational opportunities that allow residents and visitors to enjoy the outdoors on their own time and at their own speed. As detailed in the Governance Chapter, the Town of Colchester provides diverse recreational opportunities, including many partnered with or housed at its schools. Our physical location and many natural areas provide passive recreational activities such as hiking, walking, bicycling, and swimming. With 27 miles of

shoreline, Lake Champlain has one of the most profound impacts on the community. It offers recreational opportunities, such as boating, fishing, swimming, birding, ice skating, and other winter sports. Many private recreational opportunities are also provided through community organizations, fitness clubs, studios, and schools. With both abundant educational and recreational offerings, Colchester is well-poised to thrive as a healthy community. In looking to our future, significant resources will help to address the mental and physical health of our community.

## EDUCATION

### Colchester School District

Colchester historically had a variety of independent school districts, in addition to shared facilities with Winooski. School standards implemented in the early 1900s created the first consolidation of these facilities, as more modern facilities were required. The Log School House, located now at Airport Park, was an early school constructed in 1815 to serve Colchester's South Beach #14 District on West Lakeshore Drive. The Log School House, which was moved in 2006,

serves as an educational facility for the interpretation of Colchester's educational and historical past. In 1972, the Colchester School District was formed, combining many of these districts. In 1975, Colchester High School opened, ending the need to send high school students to other municipalities.

The Colchester School District is an independent governmental body, politically separate from the Town of Colchester. The District is governed by an elected School Board. There are five school facilities in Colchester, as shown on Map 12 Community Facilities: Union Memorial (Gr.K-2), Porters Point (Gr.K-2), Malletts Bay (Gr.3-5), Colchester Middle School (Gr.6-8), and Colchester High School (Gr.9-12). The District has over 430 employees and is one of the largest employers in Colchester.

A recent proposed shift in the roles and responsibilities of VT public schools demonstrates the continuing evolution and adaptation of public education in our State. The vision of a cradle-to-career pathway is being explored by leaders in education, government and business. Recent state-wide focus on early education for pre-kindergarten students has

increased the number of students in early essential education. Many of these children attend private non-school based programs. Colchester has twelve child care centers and nine registered homes (see Appendices Map 13 Community Facilities and Transportation Infrastructure for childcare facilities) that provide a range of services from early education to full and part-time daycare for infants to teenagers. Even with a diversity of facilities, vacancy rates in are in single digits, with slight improvements for school-aged slots at 14% in 2018. As the State of Vermont looks to increase focus on early childhood education, new and expanded child care centers and registered homes should be encouraged.

In 2017, a study conducted by McKibben Demographic for the School District found that elementary enrollment will begin to stabilize after the 2020-21 school year. The District anticipates seeking a 14 student, or 0.7%, decline between 2016 and 2022, and a 19 student, or 0.9% decline between 2021 and 2027. However, the district has not yet seen this decline as of the 2018-2019 school year. These projections do not take into account students who are tuitioned to Colchester from other districts or school choice. At this time, retention of students is high with Colchester, which receives more students than it sends out. This relatively minor adjustment in population is not statistically significant, especially when compared to larger decline in students seen throughout Vermont. These projections will also assist the District in planning for classroom sizes.

Colchester's school facilities range in date from 1956 to renovations in 2015. The School District has begun evaluating options to best meet the needs of our youngest students (age three through second grade). These

SCHOOL ENROLLMENT					
School	Capacity	Actual 1997-98	Actual 2006-07	Actual 2017-18	Current 2018-19
Union Memorial	320	343	247	244	248
Porters Point	304	284	254	247	241
PK	24	22	33	254	264
Malletts Bay	650	532	495	502	482
<b>Total Elem.</b>	<b>1298</b>	<b>1181</b>	<b>1029</b>	<b>1247</b>	<b>1235</b>
Middle School	572	585	562	462	498
High School	761	742	795	641	631
<b>Total Secondary</b>	<b>1333</b>	<b>1327</b>	<b>1357</b>	<b>1103</b>	<b>1129</b>
<b>Total Schools</b>	<b>2631</b>	<b>2508</b>	<b>2386</b>	<b>2350</b>	<b>2364</b>

Source: Colchester School District and VT Agency of Education and includes Act 166 students who do not attend school in the district.



options include renovations to the current elementary schools or a new building to serve preschool to Grade Two. It is anticipated that the School District will address these needs during the term of this plan.

While the School District has begun its new strategic planning process, it is anticipated that its focus will continue to be on its current goals of high-quality instruction, strong support services, equity, and accountability. The District will continue to rise to the challenge of do more with limited funding. Under current state-wide school funding requirements, public school funding is based, in part, upon how many students a school has, in an attempt to provide educational equity. As student population goes down, so does a community's public school funding. The school's operational cost is partially dependent upon the cost of utilities, supplies, personnel, and benefits and does not generally decrease proportionally as the student population decreases. Utilities and benefits have seen steady increases in recent years. With school quality standards and new initiatives, schools are asked to do more with less.

Despite these challenges, Colchester students rank in the top quarter of schools in the county based on statewide assessment exams. In 2016, the Vermont Agency of Education recognized Colchester for being a low-spending district with high performance.

During the term of this plan, the Town will continue to work with the School District to preserve and enhance public school educational opportunities within the community, with the continued sharing of resources as is feasible. A good example of this is the School Maintenance Facility operated out of the Town's Department of Public Works Facility. Other examples are a grant to provide students in



the Colchester Park and Recreation summer programs with free lunch (approximately 31% of Colchester students receive free or reduced-cost lunch).

Education and our schools will continue to be dynamic during the term of this plan, and the anticipated 2019 Strategic Plan will provide a road map for the Colchester School District. New requirements, such as the Flexible Pathways required in Act 77, will allow early or dual college enrollment for high school students, increased virtual or blended learning opportunities, more access to career and technical education, personalized learning plans, and adult diploma programs. An estimated 93% of Colchester High School students currently graduate, with

approximately 60% of these students then attending college and 40% entering a trade school, the military or finding employment.

## Higher Education Opportunities

Colchester's higher educational institutions provide the area with a trained and educated workforce, which that, in turn, enables the creation and attraction of business to Colchester. Lifelong learning in the community is an educational priority for our community. Also benefiting the community is its close proximity to half a dozen other higher educational institutions in the Burlington area. Many other opportunities are available online or



through workplaces. An example is the University of Southern New Hampshire, which maintains its Vermont offices within the Exit 16 area to support a variety of graduate educational programs provided at local schools throughout the state. During the term of this plan, it is anticipated that higher education will continue to become more diversified, and delivery of education will happen in a more dispersed way.

### **Saint Michael's College**

Saint Michael's College was founded by Edmundite priests in 1904 as an Institute. It has grown from just over thirty students to approximately 2,000 within the span of its first 100 years. It has over 580 full-time employees, including 132 faculty members, and occupies over 440 acres within Colchester. Traditionally, the school was male, with women being admitted as students only beginning in 1970. Now the school's student population is 55% female and enrollment has stabilized. The mission of Saint Michael's College is to contribute, through higher

education, to the enhancement of the human person and to the advancement of human culture in light of the Catholic faith. This mission has made the College a strong member of the community, with many students and faculty volunteering to serve within the community of Colchester in various capacities, from rescue squads to hosting forums in conjunction with the Vermont Council on World Affairs.

### **Albany College of Pharmacy and Health Sciences**

In 2009, Albany College opened a satellite campus on Water Tower Hill at Exit 16. Founded in the 1880s in the New York State capital region, the College provides both undergraduate and graduate degrees in pharmacy, pharmaceutical sciences and the health sciences, and is engaged in research in drug discovery, disease state management and health outcomes. The Vermont Campus of Albany College began with a Doctorate of Pharmacy (Pharm D.) degree, the first such program

in Vermont, and added a Master's Degree in Pharmaceutical Sciences shortly thereafter. Enrollment has stabilized at approximately 250 students. The campus helps to fill a larger regional need for pharmacists, as well as fostering synergy with other medical opportunities within the Exit 16 area. While the College does not provide dormitory housing, it has established a relationship with Severance Village to place many of its students in rental units within the growth center. The College will continue to enrich Colchester with its students and staff.

### **University of Vermont**

The University of Vermont has a presence in Colchester at its research facilities located at Exit 16. Located on South Park Drive since 2001, the Robert Larner, M.D. College of Medicine took over the entire 75,000 sq. ft. facility in 2008. The UVM Colchester Research Facility provides research laboratories, offices and conference rooms. The Vermont Department of Public Health new laboratory building was constructed in 2014, adjacent to the Research Facility. These two facilities were subsequently connected and currently maintain cooperative arrangements for specialized lab facilities.

### **RECREATION & WELLBEING**

Colchester's parks, natural areas, and open lands offer a wide range of passive recreation. Residents and visitors alike are drawn to the many opportunities provided by Colchester's natural resources. Hiking, snowmobiling, four-wheeling, mountain biking, and cross country skiing trails span both public and private lands. These forms of recreation are unstructured, and can be enjoyed by many of varying mobility. Hiking or trail walking is a free activity that can be enjoyed



anytime for any duration. Outdoor recreation not only offers physical fitness, but mental benefits, as well. More time spent in parks and green spaces can decrease depression, stress, and anxiety, according to the National Recreation and Park Association. With 27 miles of shoreline, as detailed in the Natural Heritage Chapter, Lake Champlain is a main resource for recreation. Through current Development Regulations, most residential developments are required to provide at least passive recreational opportunities. Continuing to make use of our natural beauty available for residents to enjoy will improve and sustain our quality of life.

Community organizations and clubs such as VAST and the Fellowship of the Wheel work to maintain and improve trails for snowmobiling and mountain biking. Colchester will continue to work with these organizations, to optimize trails and possibly expand existing networks. A variety of private industries in Colchester also provide opportunities for fitness. Gyms, fitness clubs, studios, and schools provide training and equipment to improve health.

A gym and two fitness studios are located in Colchester as well as two martial arts studios, two dance studios, and a sailing school. Pools, racquetball courts, climbing walls, and other expanded services are lacking in the community. The Colchester Parks and Recreation Department, as detailed in the Governance Chapter, provides many programs and events, with a range of multigenerational activities. The Bayside Park Master Plan proposes to provide a public community center with fitness amenities. The Master Plan will be implemented incrementally, over the term of this plan and future plans.

Expanded fitness and sporting opportunities, such as indoor ice rinks, are available within the larger Burlington area. Saint Michael's College and the University of Vermont provide other recreational opportunities, through the use of private venues for sporting and cultural events. These may be enjoyed by the residents of Colchester and the greater community. The Saint Michael's Ross Sports Center is a significant venue for private events. The Colchester Schools also provide venues for sporting and cultural

events.

Contributing to the well-being of our community are a variety of medical facilities. Colchester is home to the UVM Laboratory for Clinical Biochemistry Research (which includes cardiovascular research) and the Albany College of Pharmacy's Vermont Campus, which has approximately 250 graduate pharmacy students. There are a wide array of health facilities in our community, including the UVM Medical Center's Fanny Allen Campus, the UVM Home Health and Hospice Center, the Vermont's Health Lab, the UVM Medical Center Family Medicine Clinic, a surgical center, a fertility clinic, a cosmetic surgery center, and several private practice doctors and dentists. Over the term of this plan, the medical industry and offerings are expected to expand within Colchester, to serve our residents and the larger community.

Health care will be an important component of maintaining the well-being of our community, especially as our population ages; however, this is only one aspect of health. The rising cost of providing health care and services can be countered by improving healthy behaviors. The Chittenden County Regional Planning Commission's 2018 ECOS Plan states that 50% of the deaths in Vermont occur as a result of four chronic diseases: cancer, heart disease and stroke, Type 2 diabetes, and lung disease. Addressing health behaviors such as tobacco use, lack of physical activity, and poor nutrition can decrease the risk of chronic diseases. Continuing to improve access to recreational opportunities will serve our town well. Access to healthy food and other basic needs, including education, improves well-being. In the Natural Heritage Chapter, the importance of our agricultural operations in providing local fresh food is highlighted. Markets,





community-sustained agriculture, and other partnerships to increase food options and access should continue to be encouraged.

The physical and mental health issues facing our community are not unique to Colchester. The national opioid epidemic has resulted from increased substance abuse across all demographics. The impact of substance abuse goes well beyond the immediate user to family and workplaces. Crimes associated with substance abuse are up statewide. Treatment and recovery programs and related services are necessary to address this epidemic, and should be accommodated wherever feasible. Mental illness and disease are also recognized as impacting our community more significantly, as isolation increases and access to services is limited by few options and long waits. While recognizing and treating both substance abuse

and mental illness is important and should be destigmatized, prevention is needed. Providing more spaces and opportunities for social connectedness reduces isolation, depression and loneliness. These are often risk factors for substance abuse, as well as mental illness. By continuing to provide inclusive recreational programming, informal spaces such as parks, and community events such as Winter Festival and the Fourth of July, Colchester can sustain and grow a collective connectedness. Over the term of this plan, new options for improving connectedness should be evaluated, including dog parks, caregiver support, free arts and cultural events.

Colchester's quality of life and the opportunities offered in our community draw people to our town, often to stay. Our schools, parks, natural areas, and recreational opportunities contribute to our

physical, mental, and social well-being. While Colchester must rise to face many of the health challenges our state and country face, our community has many existing resources to draw from and build upon to adapt.



# POLICIES

1. The Town should seek opportunities for mutually beneficial sharing of services, facilities and personnel with the School District.
2. Lifelong learning in the community must be an educational priority.
3. The Colchester School District Vision/Strategic Plan will provide the goals for the school district and the community with regard to K-12 education during the term of this plan.
4. Higher educational facilities, such as St. Michael's College and the Albany College of Pharmacy, are an asset to the community and should continue to be supported by the community.
5. The Development Regulations should continue to promote passive recreation and connectivity of trail networks.
6. Opportunities for new and expanded medical uses should be allowed within the village mixed-use, business, and growth center districts.
7. Markets, community sustained agriculture, and other partnerships to increase food options and access should continue to be encouraged.
8. Increased public gathering spaces and opportunities for social connectedness, such as events and programming, should be encouraged through development review and Town programming.
9. Health care partnerships should be created and encouraged.
10. As the State of Vermont looks to increase focus on early childhood education, new and expanded child care centers and registered homes should be encouraged.

# ACTIONS

1. A comprehensive plan for elementary educational facilities in Colchester is expected to be advanced during the term of this plan. At such time as the School District requests, the Planning Commission should become engaged in reviewing any regulatory barriers to necessary school improvements.
2. As higher education continues to become more diversified and delivery of education more dispersed, the Development Regulations should be examined during the term of the plan, to ensure that these uses are widely allowed.
3. During the term of this plan, the first phases of the Bayside Park Master Plan are anticipated to be implemented, resulting in increased recreational offerings benefiting the community.
4. Health and fitness clubs should continue to be widely allowed in the Development Regulations, as these regulations are re-evaluated over the term of this plan.
5. Changes to the Development Regulations should be evaluated for community health impacts. Rezoning and other changes that would result in negative health impacts should not be permitted.
6. Over the term of this plan, new options for improving social connectedness should be evaluated, including dog parks, caregiver support, free arts and cultural events.



# OUR PLACE IN VERMONT

South Hero

Milton

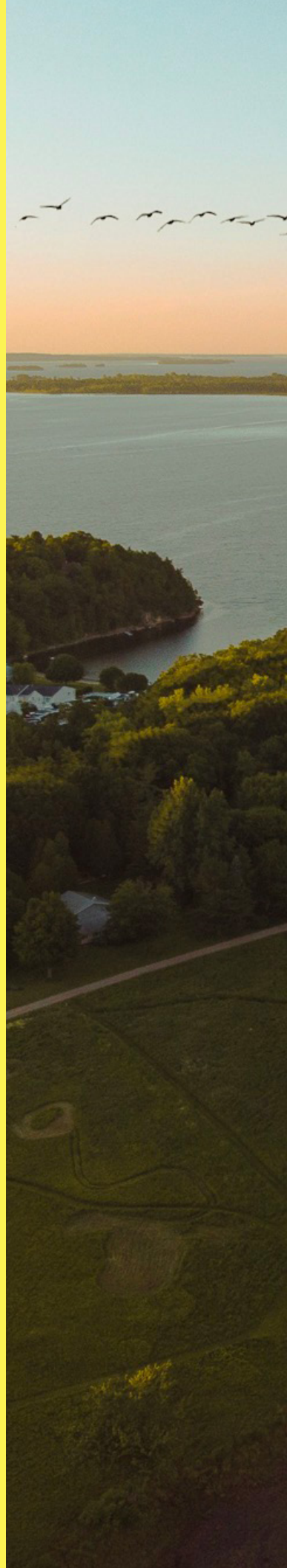
Westford

Essex Town

South Burlington

Winooski

Burlington









## VISION

*The Town of Colchester seeks to work with other municipalities and the Chittenden County Regional Planning Commission, in order to achieve the vision and policies called for in this plan and assist other municipalities and the Regional Planning Commission in meeting their goals.*

## BACKGROUND

The Town of Colchester is a member of the Chittenden County Regional Planning Commission (CCRPC) and actively participates in policy-making within this organization that affects the land use of Colchester, as well as other municipalities. This plan has been developed so as to be in accordance with the 2018 ECOS Plan, although there are instances noted in this plan where the Town's plan varies slightly from the Regional Plan. The Town also recognizes that implementation of its land use goals impacts adjacent communities, and it

strives to maintain open dialogue with these communities. The following details the communities abutting Colchester and anticipated impact of this plan upon these communities.

### SOUTH HERO

The 2015 Town Plan for South Hero notes the areas adjacent to Colchester as Shoreland and Residential, with two pockets of conservation areas. Colchester abuts South Hero along the Colchester Causeway, which originates within the Suburban Residential Future Land Use area of Colchester. The designations are compatible as they both encourage residential development. South Hero's Shoreland designation is similar to Colchester's Shoreland District which also lines the shoreline of

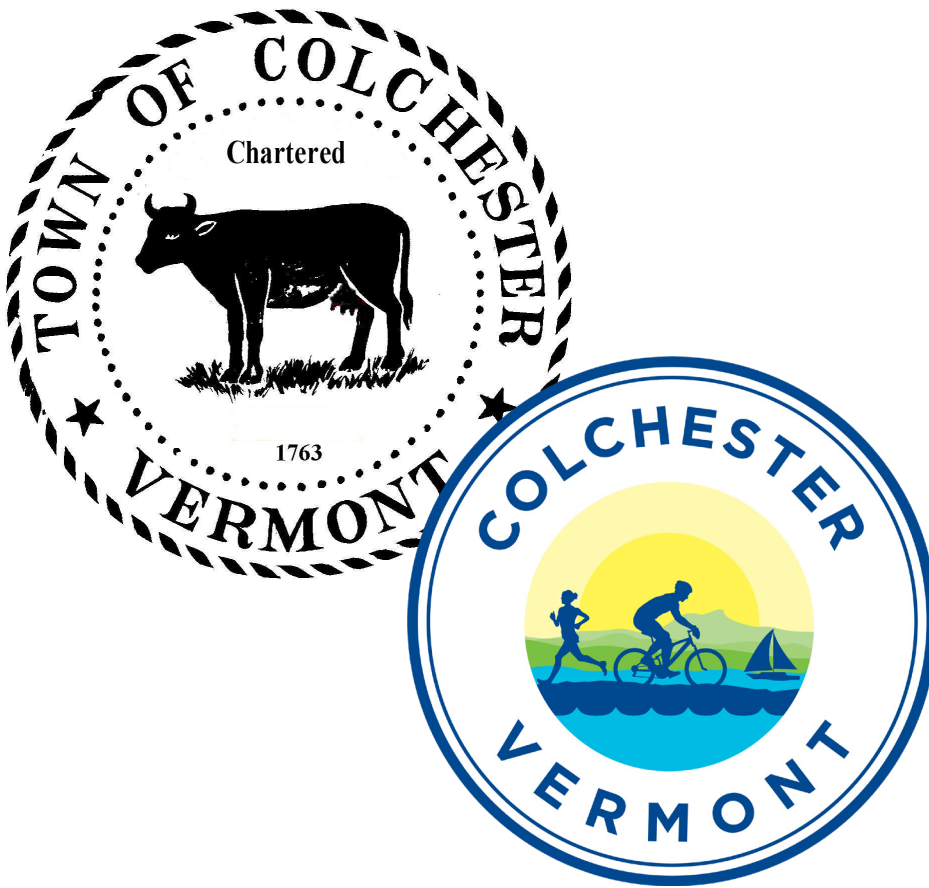
Lake Champlain. These districts both encourage a protective buffer around the Lake. Colchester will continue to work with surrounding municipalities to link multi-use paths, such as the Causeway. Page 60 of South Hero's Town Plan states: "The South Hero Town Plan supports the creation and maintenance of town trails and coordinating with regional trail projects." This point is emphasized four times in the plan as part of the Special Environment of the Islands, Transportation Plans, Community Assets, and Regional Cooperation.

### MILTON

The Milton border stretches along the Town of Colchester's northern edge, from the Lamoille River to the eastern boundary of the Town with Westford. This area includes a range of Future Land Use areas







within Colchester, but predominantly consists of Agricultural/ Rural Residential Future Land Use areas. The Northeast Quadrant of Colchester borders Milton from the Westford line to the Exit 17 vicinity. This quadrant is designated as Rural. "Agricultural uses and low density residential uses are compatible land uses within these areas that often include significant natural resources, prime agricultural soils, and other characteristics that generally make these areas unsuitable for development." The 2018 Comprehensive Plan for the Town of Milton designates the adjacent land in Milton as Agricultural/ Rural Residential and Flood Hazard. These areas are described in the East Milton and Cobble Hill Planning Areas. The Cobble Hill Planning Area "encourages a diversity of agricultural uses" and "encourages low density well-planned residential development which enhances the character of the area" as detailed on page 124 of the plan. The East

Milton area also states the same intended goals on page 131 of the plan, while also mentioning the possibility of creating recreational facilities. Colchester's Rural Future Land Use designation is compatible with the proposed future land use areas of Milton within this vicinity.

The Exit 17 vicinity of Colchester is designated as Village Mixed Use in Colchester's Future Land Use plans. The future land use areas in Milton, which abut the Village Mixed Use area, include General Industrial and Low Density Residential. These areas are detailed in the Catamount Planning Area on pages 123-124 of Milton's Plan. The goals for this area are to: "encourage high quality industrial development in a subregional growth center, which will provide greater employment opportunities and broaden tax base" and to "ensure an aesthetically pleasing approach into Milton." The Milton Plan continues to state that they plan to explore the

creation of a multi-use path to utilize the Park-and-Ride lot present in Colchester at Exit 17. The Exit 17 neighborhood planning area within Colchester is classified as Village Mixed Use although it will need additional infrastructure to support its development, which provides for a range of uses including light industrial and residential. In this manner, the proposed uses in Colchester and Milton are in keeping with one another. The current zoning employed at Exit 17, will be re-examined during the duration of this plan; however, currently includes design review elements that also seek to ensure high quality designs and site development within this area.

West of Interstate 89 to the Lamoille River, the lands bordering Milton are designated as Rural and Suburban Residential within Colchester's Future Land Use plans. These areas abut future land use areas that the Town of Milton designates as Agricultural/ Rural Residential and Flood Hazard within the Lamoille Planning Area. This area "encourages innovative neighborhood planning concepts" including "medium and low density planned residential developments" as detailed on page 129 of Milton's plan. This is in keeping with Colchester's intended low-residential densities of the Rural Future Land Use area and the medium-residential densities of the Suburban Residential Area.

Along the Lamoille River, Colchester has designated the area abutting Milton as Rural. These areas are designated as Agricultural/ Rural Residential and Flood Hazard in Milton and are located within the West Milton Planning Area. The goals for this area in Milton "encourages a diversity of agricultural uses" and "encourages low-density well-planned residential development which enhances the character of the area" as detailed on pages 129-130 of Milton's plan.



This is in keeping with the intent of Colchester's Rural Future Land Use area.

The 2018 Comprehensive Plan for the Town of Milton recognizes the need for multi-use paths and connections within Milton, and it is hoped that the on-going efforts of the Long Range Access and Mobility Committee will eventually look to linkages with adjacent municipalities. Colchester has designated path corridors in accordance with the Alternative Transportation Plan developed by the CCRPC, which include linkages to Milton within the Exit 17 vicinity. Colchester will continue to participate in regional dialogues to link its proposed pedestrian and bicycle corridors to adjacent communities.

## WESTFORD

Westford abuts Colchester at its most northeastern corner. The area that abuts Colchester is designated as Agricultural, Forestry, and Residential I (ten acre minimum lot size) in Westford's 2015 Town Plan. This area is very similar to Colchester's Rural Future Land Use area (25 acre minimum lot size), which it abuts. Both districts promote agricultural uses and are appropriate for low-density residential development. The area of Colchester that abuts Westford lacks public infrastructure including roads and trails.

## ESSEX TOWN

Colchester is bounded on the east by the Town of Essex. The area ranges from the Rural areas of Colchester's Northeast Quadrant to Village-designated areas along Routes 2A and 15 to Suburban Residential along Severance Road and a small portion of Commercial Industrial along the rail corridor. The majority of the lands

bordering Colchester are designated as Conservation, Agricultural/Residential, Industrial, and Open Recreation in Essex. This area, north of Route 2A and south of the Westford border, includes the natural area of Indian Brook Reservoir. On the Colchester side of the boundary, this area is designated as Rural and includes the Colchester Pond Natural Area. The designations are compatible, as both seek to maintain low densities that are appropriate for the stewardship of the natural areas within this vicinity. The presence of the Open Recreation and Conservation areas in Essex and the Colchester Pond area provide an opportunity to facilitate primitive path connections and environmental stewardship within the greater area.

Within the vicinity of Route 2A south to the Fort, Essex has designated land as medium-density residential and industrial. The medium-density residential abuts Rural-designated lands within Colchester. The medium-density residential area is a small pocket of land that is not likely to have an adverse impact on the Rural

lands of Colchester. The majority of the land from Route 2A to the Fort is categorized in Essex as industrial. In Colchester, some of this land is categorized as Commercial/Industrial, which is compatible with Essex's industrial classification. The remainder of the land is either Village or Rural in previous plans. Colchester's Village designation includes light Commercial and Residential, which may conflict with more heavy industrial uses. The lands south of the Village and north of the proposed Circumferential Highway right-of-way are classified as Rural, which conflicts with Essex's industrial classification. South of the Circ, Colchester has designated the land abutting Essex as Suburban Residential along Severance Road, as in previous plans. As this road transitions to Kellogg Road in Essex, it is designated as Industrial. The Residential and Industrial within this area are mostly preexisting and do not generate substantial conflict at this time. As Essex looks to build out its industrial area, Colchester should continue its dialogue with the Town, to minimize potential impacts



to its Rural, Village, and Suburban Residential areas.

In the vicinity of Fort Ethan Allen, Essex has designated the area a combination of Retail Business, Industrial, Open Recreation, and Historic Preservation. Colchester's designation of this area as Village Mixed-Use includes all of these various uses, from residential to commercial to light industrial. The current zoning for this area, GD2, which is not expected to change during the duration of this plan, includes design control elements for the historic Fort area. During discussions between the Towns' Planning Commissions, there was generally support for a multi-use path in the Fort between Colchester and Essex. The Parade Grounds, split between the two communities, make up an important recreation area for the vicinity, and should be tied into existing development. Concerns exist regarding the development of vehicular connections within this area. The Town of Colchester will continue to work with the Chittenden County Regional Planning Commission, as

well as the Town of Essex, to address needed improvements to the Route 15 corridor, which bridges this area. During the term of this plan, the Town should continue dialogues with Essex and the CCRPC on improvements to Route 15, as well as stewardship of the Fort Ethan Allen area.

The Town of Colchester should continue to work with the Town of Essex, as well as other Circumferential Highway communities to ensure that viable alternatives to the highway are developed and implemented to reduce the unintended consequences of a partially-completed highway that increases traffic volumes on Route 2A, as well as Severance Road and Route 15.

It should also be noted that the southernmost area of Essex abutting Colchester is designated as Flood Plain. The abutting area of Colchester is designated as Village Mixed Use. Future plans for Essex also include expanded bike and pedestrian paths and trails along

roads shared with Colchester. Some of these roads include Route 15, Kellogg Road, Colchester Road, the Circumferential Highway, and Lost Nation Road.

## **SOUTH BURLINGTON**

The City of South Burlington abuts Colchester along the Fort Ethan Allen neighborhood in the very southeastern tip of Colchester. The Fort neighborhood area is designated as the Future Land Use designation Village Mixed Use. The 2016 South Burlington Comprehensive Plan designated the area abutting Colchester, which South Burlington refers to as the "Northeast Quadrant," as primarily Mixed Industrial and Commercial. On pages 3-22 of the South Burlington Plan, it states: "Future use of land in developed areas should continue to focus on employers and ancillary services. It should also continue to emphasize uses that are less critical within the core of the City. In addition, future redevelopment should make use of improved transit services." While the Fort neighborhood includes light Commercial, the area directly abutting South Burlington is predominantly Institutional in character. The natural ravine of the Winooski River, which separates Colchester from South Burlington, the South Burlington side being zoned for open space, provides a significant natural buffer between these somewhat differing land uses.

## **WINOOSKI**

The City of Winooski borders Colchester at its southern tip. The 2014 Winooski Municipal Development Plan notes that the majority of the lands bordering Colchester are being designated Residential and Open Space. These lands abut the Suburban Residential area of Malletts Bay Avenue and are compatible uses. Within the Exit 16 area of Colchester, Winooski abuts





Colchester's Business Future Land Use area. The Winooski Municipal Development Plan notes the area abutting Exit 16 as a combination of industrial, public, and park. A small portion of residentially designated land abuts the Commercial/Industrial lands of the pre-existing quarry operation. This is an existing situation that will not be made worse by the proposed plan. The industrial area of Winooski is compatible with the Commercial/Industrial area of Colchester and shares the same types of uses. Through its zoning, Colchester has sought to mitigate any negative impacts to the public lands in Winooski by prohibiting new drive-up businesses within 300 feet of a school, library, or hospital. Should the public use in Winooski be altered, Colchester will likely consider lifting these conditions from current zoning. The City and the Town should work together to ensure that any changes within this area are compatible and conflicts are minimized. On pages 26 and 27 of their plan, Winooski outlines the importance of creating pedestrian-scale mixed development outside of the downtown core, which abuts Colchester's Business and Suburban Residential Future Land Use Areas. While this mixed-use development may not be compatible with current business, industrial, and residential uses entirely, Winooski is seeking to create a gateway to welcome visitors, which may create the needed differentiation between the City and Town.

Along the eastern edge of Winooski, Saint Michael's College Campus occupies most of the border area in Colchester within the Village Mixed Use area at Fort Ethan Allen. A combination of Park and Residential future land use areas, including a small portion of Industrial, exist in Winooski, as it abuts this Village Mixed Use area. These future land use areas are compatible with Village Mixed Use as they include all of these

land uses. Saint Michael's College is an existing presence, as it abuts Winooski's residential area. There are no plans to expand the campus westward and care has been taken to mitigate the impact of the existing campus on adjacent residential areas. For these reasons, Colchester's proposed future land use plans are compatible with Winooski's.

It should be noted that Winooski has a proposed cycleway network that will implement a city-wide system of bicycle paths and signage that will connect to bike routes in Burlington and Colchester. Colchester should continue to work with the Chittenden County Regional Planning Commission and the City of Winooski to ensure that its planned pedestrian ways and multi-use paths tie into Winooski's plans and the larger regional network.

## BURLINGTON

The City of Burlington lies across the Winooski River, and its floodplain from Colchester. Within Colchester, two future land use areas border Burlington: Agricultural Mixed Use and Suburban Residential. Agricultural Mixed Use runs from the Winooski border to the end of Macrae Road. This area borders farmland and a park in Burlington that are within the Greenspaces designation of its 2014 Municipal Development Plan's future land use plan and are compatible with Colchester's Agricultural Mixed Use designation that seeks to balance continued agricultural practices with commercial and low-density residential opportunities.

Macrae Road to the mouth of the Winooski River is designated as Suburban Residential on the Colchester side of the river. Burlington has designated the abutting area as a combination of Greenspaces and Residential. The Greenspaces area is in proximity

to the Winooski River and follows the floodplain on the Colchester side. Beyond the floodplain on the Burlington side is the New North End and on the Colchester side are the Porters Point and Bean/Macrae neighborhoods. These areas are already significantly developed, compatible, residential neighborhoods where little change is expected during the term of this plan.

Colchester will continue to work with Burlington to ensure that issues such as traffic congestion, connectivity of multi-use paths, and water quality are adequately addressed. While Colchester's Village Mixed Use area designated along the Route 127 corridor has the potential to impact traffic in Burlington, background traffic from commuters from the north end of Burlington heading north has drastically increased in recent years, and will continue to be a problem until the Circ Alternatives are completed. The bike bridge over the Winooski River linking Colchester's Causeway to the Burlington Bike Path has become a popular route for cyclists, and more opportunities like this should be sought in order to provide alternative transportation routes and recreational opportunities for persons from both communities.









# OUR ECONOMY

History of our Economy

Present

Future











## VISION

*We will continue to strengthen the diverse local economy while preserving our natural resources and quality of life.*

## GOALS

Provide long term financial viability and sustainability in our community by making strategic decisions and investments in our physical and social infrastructure. This will enable us to compete regionally and globally while enhancing our economic base.

## OBJECTIVES

Colchester will support current and future economic drivers, provide the necessary physical and social infrastructure, and leverage our assets and resources while preserving our natural assets and quality of life.

## HISTORY OF OUR ECONOMY

Colchester's economic beginnings were grounded in agriculture, with smaller sectors such as milling, quarrying, maritime trade, and retail contributing to the agricultural economy. As the twentieth century approached, industrialization flourished along the Winooski River, as woolen mills were constructed in the Town's urban core of Winooski. In 1922, the City of Winooski separated from the rest of Colchester, removing industry and converting the Town of Colchester back to an agrarian community. During the mid-twentieth century, Colchester became home to a significant summer seasonal cottage community, as the Town's natural relationship with Lake Champlain became a source of tourism. This summer seasonal influx increased the service economy of Colchester. With the introduction of International Business Machines in the neighboring Town of Essex in the 1960's, Colchester transitioned to a suburban bedroom community for the greater Burlington area. Colchester remained without a significant commercial or industrial base well into the 1980s.

The 1980s saw the development of Exit 16 as a commercial and industrial center. Since that time, Colchester has transitioned from a bedroom community to an employment center. The number of jobs per capita increased from 0.15 in 1980 to 0.33 in 1990, to 0.50 in 2000, sustaining into 2010 indicating that Colchester is now a significant part of the employment center of Chittenden County. In 2018, the number of jobs per capita is projected to be .56, a slight increase, with 1.5 jobs per household in Colchester. The majority of job growth was within the private sector with the trade, transportation, and utility sector excelling, in addition to education/health and manufacturing. In the early

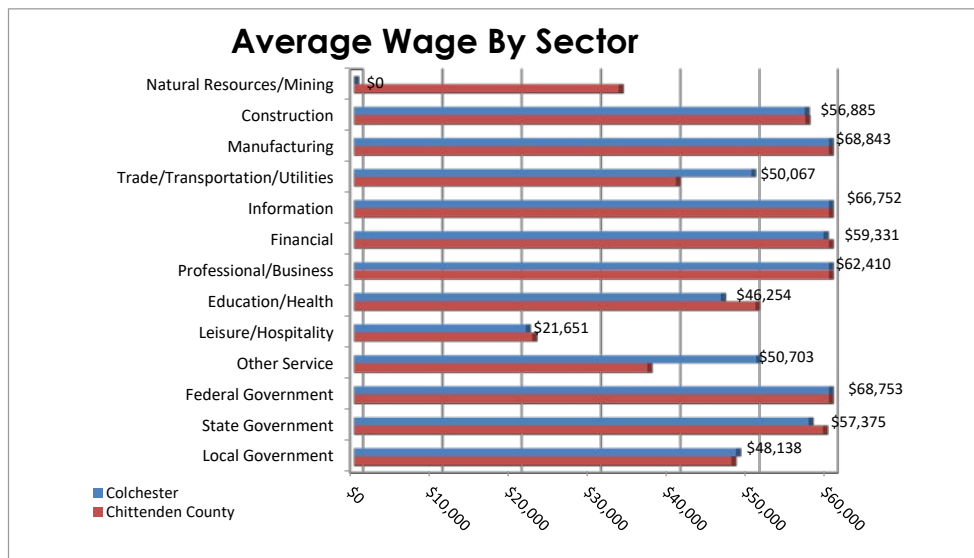
twenty-first century, job growth increased in every sector except manufacturing, which saw a decline. The trade, transportation, utility, and the education/health sectors nearly doubled between 1990 and 2006. The local economy during this time reflected regional and national trends toward decreases in manufacturing and increases in service sector jobs.

In 2005 the Town participated in the Chittenden County Comprehensive Economic Development Strategy (CEDS) planning process, which identified county-wide opportunities and challenges for economic development. The Town should continue to participate in such regional and state-wide conversations about economic development as it exists within these larger markets. The Town's economic development will be dependent upon the trends and health of these larger markets.

## PRESENT

Recently, local job growth has stabilized, with continuing trends toward increases in services and decreases in manufacturing. It should be noted that the service sector includes medical services, such as those provided by the UVM Health Network, as well as retail and personal service jobs. The Town currently has 9,999 jobs or 9.7% of the County's total employment. Employment growth has outpaced population growth for the past decade, with current projections indicating this trend will continue.

Historically, jobs within Colchester paid less than average for Chittenden County, with the 1978 wage 84.7% of the County's average. As of 2017, the average wage in Colchester was \$51,522 or 98% of the County's average wage. As the Town continues to grow, the quantity and quality of jobs should be enhanced. The development of well-paying, livable



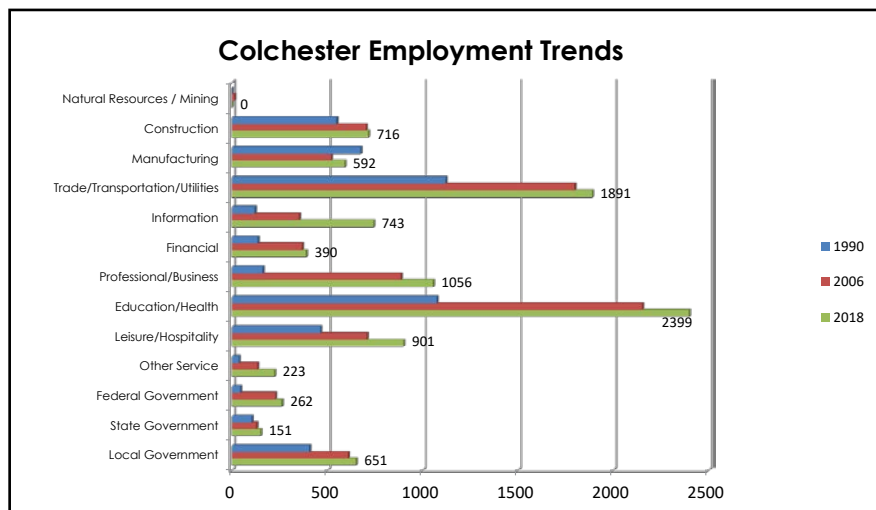
Source: Vermont Department of Labor and Industry

wage jobs should be encouraged.

The Town of Colchester encourages sustainable and diverse economic growth that creates well-paying, livable wage jobs. The community's attributes should be utilized to foster economic development through the use of such tools as tourism and recreation. Colchester's land use planning should shape appropriate areas for economic development, with diverse opportunities including agri-tourism in rural areas and opportunities for high-tech industry in appropriately infrastructured areas such as Exit 16. To this end,

the community should continue to be supportive of small business development and foster the growth of emerging technologies.

With the majority of Colchester's business located between the Winooski border, Exit 16 and Severance Corners, this planned growth has become essential to Colchester's sustainable growth. Medical, manufacturing and education continue to be the top industries in Colchester, with service industries well represented in our largest employers. Colchester's largest employers currently are: Green



Source: Vermont Department of Labor and Industry and includes part-time, temporary, seasonal, and full-time positions.





## Colchester by the Numbers

	2017 stats	Change from 2016
<b>Businesses in Town</b>	666	+ .9%
<b>Private Ownership</b>	96.2%	+ 1.2%
<b>Employees in Businesses</b>	9,908	+ 1.2%
<b>Average Wage</b>	\$51,552	+ 2.4%
<b>Total Wage</b>	\$510,483,238	+3.7%

Mountain Power, UVM Medical Center, VNA, St. Michael's College, Colchester School District, Vermont Information Processing, Engelberth, Hazelett Strip Casting and Champlain Cable.

## FUTURE

As we look to our future, it is recognized that Colchester's markets will reflect the Chittenden County economy, and, to a lesser extent, the State's. While Colchester can distinguish our community within the County and State with our cost, location, and quality of life, we are subject to the larger market forces of the area. It is anticipated that Colchester will continue to see incremental but positive growth during the term of this plan. Unlike other market areas, Colchester enjoys a slow and steady pace of growth without major ebbs and flows. By continuing to support regulatory strategies that encourage flexibility and multi-use sites, the Town will encourage small business and new enterprise growth without the need for large scale infrastructure modifications. As existing micro and small businesses need to expand,

the Town has identified expansion sites that allow these businesses to grow within Colchester. An analysis of Colchester has concluded that there are sufficient sites, zoned appropriately, to sustain this planned economic growth over the term of the plan and into the future. Infill sites will drive most of the expected growth.

Colchester's economic development should continue to be focused within its existing commercial/industrial area at Exit 16 and its growth center at Severance Corners. These areas have been designated for commercial growth, benefit from municipal infrastructure, and should be where

growth continues to be focused. Village areas such as the Fort, Colchester Village, Inner Bay, Prim/Warner's Corners/Heineberg Drive, and Exit 17 should continue to focus on the development of both small businesses with broader markets and neighborhood scale services. The Fort is a cultural and media center for Colchester, with a variety of television and radio stations. The Inner Bay, given its location, has the potential for increased recreation and tourism opportunities. These village locations provide opportunities to create individualized business districts specializing in aspects of economic development that may not be suited to the larger Exit 16 commercial/industrial center or the mixed use of the growth center.

Within our rural and agricultural mixed-use areas, agricultural is anticipated to become more diversified with on-the-farm production and agri-tourism. Agri-tourism combines tourism and education specifically relating to agricultural operations. This includes, among other activities, corn-mazes, sugaring open houses, and pick-your-own operations. Colchester will continue to be supportive of agriculture as a community asset that is fundamental to our character and recognizes the continually changing need of agriculture to adapt to market changes and demands.



## Heritage Project & Economic Development Action Plan

In 2012 and 2013 Colchester staff and citizens developed the Heritage Project, a Community Strategic Plan and the Economic Development Action Plan. These two reports are ongoing barometers used today to gauge and steer Colchester into the future.

In evaluating specific economic development issues of the Heritage Project, the following have been accomplished:

- Increase non-residential Tax Base to reduce property taxes: 2019 tax rate is lower than 2012. Non-residential grown from 41% to 46% of grand list since 2012.
- Economic Development: \$20M in improvements to Severance Corners; Vermont Nut Free Chocolates; Green Mountain Surgery Center.

The ten initiatives of the Economic Development Action Plan have been addressed as follows:

- 1. Colchester Branding Program and Market Niche Development** – The branding campaign launched in 2013, and is a continual project for the Economic Development Department.
- 2. Economic Development Communications Plan** – Communications are essential to our marketing and market niche efforts. Focusing on social media has had the most effective results. Our communications plan is an integral part of the Town's efforts.
- 3. Economic Development Team-Building Program** – The efforts of team-building are evident in the inter-departmental approach used at the Town, as well as partnerships with local, regional and state organizations.
- 4. Colchester Business Association** – The Economic Development office works in conjunction with the Colchester Community Development Corporation (CCDC) and meets with them at their regularly scheduled bi-monthly meetings. As CCDC is utilized as an advisory board by the Director of Economic Development, there is no need to create another entity.
- 5. Business Retention and Expansion Program** – A fundamental service of our Economic Development Department is the retention and expansion of existing businesses and the recruitment of new business. This service has been in place and will continue to be a cornerstone of the Town's effort.
- 6. Available Properties Inventory** - the Economic Development Department has an ongoing inventory of available buildings, vacant spaces and land. A website with this information is anticipated in 2019.
- 7. Annual Business Survey** – The Colchester Community Development Corporation holds an annual meeting and also as meets with local legislators and the business community. The Economic Development Department is continually in contact with businesses, providing the opportunity to directly communicate concerns, impediments and issues facing their businesses. An annual survey is not justified at this time.
- 8. Business Prospect Tours** – Business Prospect tours are handled directly through the Economic Development Office. These tours are not limited to prospects, but also are given to “partners and organizations” involved in the economic development process who may be instrumental in highlighting Colchester as a place for investment.
- 9. Malletts Bay Development Plan** – This is part of the Malletts Bay Initiative that began with a land use plan and rezonings along West Lakeshore Drive to allow for infill and redevelopment that reinforces the character of the area. This was completed in 2015. However, during the term of this plan, road, sewer, and the Bayside Park Master Plan will move forward, reinforcing the Initiative and creating a more comprehensive implementation plan.
- 10. Package Treatment Plant Study** – The prohibitive cost of Colchester constructing our own wastewater treatment facility has resulted in a proposal for utilizing capacity already designated to our community and distributing it to the inner bay area.

Colchester is effectively branded as a great place to work, play and live. Colchester was the only municipality in Vermont to be named in 2015, 2017, and 2018 to Money Magazine's “Best Places to Live in America.” In the 2013 Economic Development Action Plan, the first initiative was to develop a Branding Program and Market Niche Development. Over the last five years, the town has launched a successful branding campaign that has incorporated almost every aspect of our marketing initiatives. Understanding that this is ongoing effort, the town will continually re-evaluate our marketing approaches and systems of delivery.



## What is Branding?

Brand is the image people have in mind when thinking about specific products, services and organizations, both in a practical and emotional way.

It is not just the physical features that create a brand, but also the feelings that consumers develop towards the organization. This combination of physical and emotional cues is triggered when exposed to the name, the logo, the visual identity and the message, communicated on a regular basis over an extended period of time.



During the term of this plan, the need for industrial space is anticipated to remain strong. Increasing e-commerce will continue to decrease pressure on retail and office space growth. The need for smaller and more flexible work spaces, including co-working or shared office spaces, will increase. Continuing education and training opportunities will be necessary, as well as additional work force housing. Colchester's diversified housing market and strong educational opportunities will serve our community well in attracting and retaining businesses.

Colchester has a history of supporting small business development, which should be continued. Historically, the area businesses benefited from a small business loan program administered by the Colchester Community Development Corporation. The Town should take measures to ensure that small businesses have access to similar services, as it seeks to encourage continued economic development. There is a community desire to maintain and enhance neighborhood commercial services and amenities such as restaurants. Small "mom and pop" stores should be maintained and new ones encouraged, respecting the online retail changes that have occurred and will continue to occur. Home offices should be encouraged, as these contribute to an expanded and diversified employment base without the detractions of added traffic, and therefore are community assets. It should be emphasized that telecommunications is an important infrastructure needed to support and sustain growth of home offices, as many of these offices rely upon high-speed internet to conduct business.

Colchester's economic future will build upon its past successes and current efforts. It is recognized that planning and development are ongoing processes. Understanding that economic development and



The top sectors for growth over the term of this plan as identified in the 2018 ADG Colchester Market Analysis are anticipated to be:

1. Information (NAICS 333-334)\*
2. Food Processing (NAISC 311) \*
3. Biopharmaceuticals (NAICS 325)\*
4. Lighting and Electrical Equipment (NAICS 335) \*
5. Production Tech and Heavy Machinery
6. Medical Devices
7. Upstream Metal Manufacturing

*\* includes multiple 3-digit NAISC codes*

infrastructure investments take decades to realize completely, Colchester will continue to work strategically on initiatives that will support our economy in future decades.

The Heritage Plan and Economic Development Action Plan will continue to be used as a metric to gauge and guide economic development planning in Colchester.

Colchester supports the continually changing needs of agriculture.

The Town should continue to participate in such regional and state-wide conversations about economic development as it exists within these larger markets.





# POLICIES

1. The Town of Colchester encourages sustainable and diverse economic growth that creates well-paying, livable wage jobs.
2. The community's attributes should be utilized to foster economic development through the use of such tools as tourism and recreation.
3. Colchester's land use planning should shape appropriate areas for economic development with diverse opportunities.
4. The Town will maintain and foster partnerships with organizations that can assist in the promotion of Colchester through efforts such as prospect tours.
5. Infill development is to be encouraged, and efforts made to retain and expand existing businesses within the community.
6. The Colchester Economic Development Department will continue to assess marketing approaches and systems of delivery as part of its branding program and market niche development.
7. Colchester's economic development should continue to be focused within its existing commercial/industrial area at Exit 16 and its growth center at Severance Corners.
8. Village areas should continue to focus on the development of small businesses with broader markets and neighborhood scale services.

# ACTIONS

1. Home offices and similar uses should continue to be permissible and encouraged.
2. The Town will implement an on-line inventory of available commercial/industrial sites within a year of adoption of the plan.
3. As Development Regulations are amended, these regulations should be evaluated to ensure that new commercial and industrial uses are incorporated, with no unnecessary barriers to growing sectors.



# GETTING THERE: Transportation in Colchester

History of the  
Transportation System

Maintaining the System

Planning for the Future of  
the System

Energy & Transportation









## VISION

*The Town shall plan for, provide, and maintain a safe and efficient transportation network that implements its land use planning goals.*

## GOAL

Create a Colchester transportation plan and a set of protocols that aim to reduce congestion, improve roadway safety, and reduce energy consumption. The plan will enhance access to business and recreation areas of the Town for residents of Colchester and neighboring regions. Consider both conventional and alternative transportation modalities during planning. Strive for walkable and livable community features in all planning.

## OBJECTIVE

Transportation systems are among the most important considerations as the Town works to manage its future. In the past two decades, vast improvements have been made in Colchester's transportation system that further the Town's land use planning goals with projects, such as retrofitting existing roadways with pedestrian facilities and new bike paths, adding capacity, addressing public safety issues, and advancing stormwater pollution control projects to mitigate runoff from the transportation system. In the future, as the Town looks to create and serve sustainable development, this link between planning and infrastructure will become of increasing importance.



## HISTORY OF THE TRANSPORTATION SYSTEM

The Town of Colchester was historically served by boat along its waterfront and foot or horse transportation throughout the rest of the Town. There is train service in the northeastern and southeastern corners of Colchester. A small airport existed in the mid-twentieth century at Airport Park. While there is no formal airstrip in Colchester now, the Bay is often used by planes fitted with water-landing equipment. The Town has, over the past sixty years, transitioned from a rural community to a suburb with heavy automobile use of its roads. With the introduction of Interstate 89 in the 1960s and improvements to Route 2 in the 1970s, Colchester has also become a through route for travel, especially for freight trucking and commuters.

Many of Colchester's existing roads were developed without pedestrian or bicycle facilities, and often followed historic routes, such as Roosevelt Highway. Bringing these existing roads up to current standards that include sidewalks, stormwater facilities, and acceptable geometries and grades can be challenging. The Campus Connector Road was completed in 2012 to address several of these concerns along the Route 15 corridor.

## MAINTAINING THE SYSTEM

Current deficiencies need to be dealt with, as the projected rate of growth and development will increase the demand placed on transportation systems. Maintenance and improvement of transportation infrastructure is one of the more costly services provided by the Town and has a tremendous effect on public health and safety. To this end, the Town developed a five-year Capital Plan in 1993 to maintain and improve transportation



infrastructure, as well as various maintenance programs. One of the biggest challenges facing the Town is maintaining a safe and efficient transportation network as cost effectively and environmentally sound as possible (see Appendices Map 1 Base Map and Map 13 Community Facilities and Transportation Infrastructure).

The automobile will continue to be the primary means of transportation in Colchester for the foreseeable future; however, Colchester has also begun to provide for alternate transportation modes, such as park and rides, bicycle routes, sidewalks and bus pull-offs. Approximately 25 miles of bicycle routes and sidewalks have been added over the past 25 years. Modes of transportation other than the private automobile include walking, bicycling, ride-sharing, buses, and other public transportation. There are benefits associated with alternative transportation modes, including reduced traffic, reduced air and water pollution, less land required for parking, energy conservation and promoting healthy lifestyles. The community is served by two through

bus routes, one along Roosevelt Highway (Routes 2 & 7) and one along College Parkway (Route 15). Special Services Transportation Authority (SSTA) provides transportation services for the elderly and disabled throughout Colchester. Safe and efficient transportation alternatives are limited at this time and face several barriers such as a lack of sufficient density to provide low-cost, diversified solutions.

## PLANNING FOR THE FUTURE OF THE SYSTEM

Over the past two decades, the Town has taken a much more active role in planning for its infrastructure. In 1993 a comprehensive alternative transportation path plan was developed for the community by the Chittenden County Regional Planning Commission (CCRPC). In 2002, the Town developed an Official Map that shows proposed multi-modal paths, roads, and other public facilities. Future roads include east/west road connections in the Northeast Quadrant and preservation of the Circumferential

Highway right of way. In 2011, the planned Circumferential Highway was abandoned after many years of planning and partial land acquisition. A Circ Alternative Task Force was formed that included all of the Circ communities, interested parties, and the CCRPC to develop and forward for funding a list of projects that would replicate the Circ's effects. This Task Force developed prioritized lists for three phases and advanced them to the Legislature for funding, thus concluding its work with the 2014 legislative session. The Exit 16 area was identified and funded as a Phase I project and the Severance Corners intersection as a Phase II project. Both of these projects are currently under design and are advancing toward construction. Some Phase III projects have also received funding and are moving toward construction. These include the intersection of Prim Road and West Lakeshore Drive, and the intersection of Blakely Road and Laker Lane. Other Phase III projects have yet to be funded, and must compete with all other transportation projects around Vermont for State and Federal funding. The Vermont Agency of Transportation has also begun efforts to rebuild Exit 17. These improvements funded thus far are required to further commercial development of the Exit 16 area and Severance Corners growth center, and address capacity and safety issues, all of which are a priority for the Town.

The Official Map draws from the Alternative Transportation Path Plan, but is more specific and creates an opportunity to preserve rights-of-way. It should be noted that generally all roads are planned to have sidewalks, although the Capital Plan provides a specific list of Town sidewalk implementation projects planned in the short term. There are also several other important planning connections within the Town's various Departments and Town



standards that directly influence the transportation network and how it relates to land use. The Public Works Specifications and Standards require sidewalks and/or multi-use paths along new roads. The Town's Traffic Calming Manual potentially impacts improvements to existing roads. The Town has a variety of policies, regulations, and departments that affect land use planning and infrastructure, and care must be taken to achieve coordination among these.

## Regional Transportation System

In its planning efforts for transportation infrastructure, the Town is a member of the Chittendown County Regional Planning Commission. The CCRPC maintains a 20-year Metropolitan Transportation Plan for the County that provides goals and objectives, analysis of regional trends and planned improvement projects throughout the county in all modes of transportation. The CCRPC assists municipalities with transportation planning and provides a forum for interagency cooperation and public input into funding decisions. The CCRPC maintains a three-year Transportation Improvement Program (TIP) that prioritizes funding to various transportation projects throughout the County. Several Colchester projects are included in the TIP: The reconstruction of Blakely Road and Laker Lane Intersection, the Exit 16 Interchange, the Exit 16 Park and Ride, the Exit 17 Improvements, Mountain View Drive Sidewalks, Prim Road and West Lakeshore Drive Intersection, Severance Corners Intersection, Severance Road bikepath, VT2A improvements, Route 15 Bikepath, and the West Lakeshore Drive Bikepath project. Colchester has several projects listed within the TIP that currently expires in 2022. This is one of the primary sources of funding transportation

projects that often exceed local funding capacity and have regional impacts. There has been a shift at the State level to prioritize maintenance, rehabilitation, and repair of existing transportation infrastructure. Colchester will continue to work with the CCRPC to ensure that these projects, as well as important new construction projects such as the Exit 16 reconstruction project, are completed to provide critically needed capacity to the Town's infrastructure. The funding of new projects will become increasingly dependent upon combining local, state, and federal funding sources.

## Public Roads

The existing highway network is shown on Appendices Maps 1 and Map 13 Community Facilities and Transportation Infrastructure. The Town has 114.90 miles of public roads, 22.9 miles of which are State Highways. There are also approximately eight miles of Federal Highway: Interstate 89.

The Town has adopted a Capital Transportation Plan, partially in an effort to preserve the Town's public transportation system, with an estimated replacement value of approximately \$200 million. The Town's sustained effort of rehabilitation has been effective in avoiding more costly complete

reconstruction costs and preserving the community's investment within the transportation system. While the Town authorizes funding of the Capital Transportation Plan every six years, local tax dollars are used to leverage State and Federal funding.

The Capital Transportation Plan includes, but is not limited to, various paving, bike/pedestrian, and intersection projects including the West Lakeshore Drive Bikepath, Blakely Road and Laker Lane Intersection and the West Lakeshore Drive and Prim Road Intersection.

The Town's Public Works Standards and Specifications provide specific requirements for transportation infrastructure design and construction. These standards provide different designs for road widths, based upon a variety of factors including function, average traffic, and land uses served. Pedestrian, street lighting, and stormwater options are also included in these standards. These regulations provide standards for traffic studies that are often required as part of the Development Regulations review. Sometimes, as a result of these processes, a development may be required to help implement improvements to the transportation infrastructure, in order to offset adverse impacts caused by the development or facilitate full build-out of the project.





The Town has limited curb cuts for new developments through Chapter Fourteen of the Colchester Code of Ordinances and requires the connection of roads wherever possible. While the Town does not have a formal regulation limiting curb cuts, as long as sight distances are met, limiting curb cuts is part of good access management practice. Roadway connectivity eliminates redundancies in maintenance and integrates neighborhoods. Roads should be connected wherever possible; however, and rights-of-way for new roads should extend fully to the outbound property line of a project, to facilitate future road connections.

**Arterial Roads:** Arterial roadways carry traffic through an area to destinations outside the immediate neighborhood or community. Direct access to property should not be a function of arterial roadways, although in Colchester these roadways also carry local traffic and provide the only means of access to large areas of developed and undeveloped land.

The conflict between arterial and local road functions is especially pronounced for Route 127, which serves as a regional arterial highway although it is not designed or constructed to meet the standards of such a highway. This route also serves as the local road for very densely-developed residential and commercial areas. An increase in local road functions will accompany the development of Severance Corners. The Route 127 Corridor Study provides direction for improving this corridor's design, including bicycles and pedestrian improvements; however, this plan has not been implemented, due to a lack of funding (although a portion of the Route 127 Corridor project has been listed in the current TIP). The Town recently completed a sidewalk installation along the Prim and Heineberg Road Corridor to address immediate pedestrian needs within the Route 127 Corridor. The improvements of the Route 127 Corridor Study would result in improving the safety of the corridor; however, they do not address capacity. It is the Town's desire to decrease traffic and the

need for capacity on this local road. Since 1964, the Town has recognized the need for a new east-west arterial route, and the Circumferential Highway right of way should be preserved for future consideration of this use.

**Collector Roads:** Collector roads provide land access, movement within neighborhoods, and a link between local and arterial roads.

**Local Roads:** Local roads serve primarily for land access, with links to collector and arterial roadways, including streets within subdivisions as well as roads in more remote areas. Design speeds are typically 25 mph. The existing local streets have been largely developed in conjunction with residential subdivisions. The local road system is not well interconnected, creating problems with maintenance, efficient traffic flow and public safety. Designs of local roads vary from less than 22 feet wide to 30 feet to accommodate the Town's various land use plans. A number of local roads are unpaved. While unpaved roads help areas retain their rural character, maintenance expenses for unpaved roads are much greater than those for paved roads.

State requirements for permitting existing stormwater facilities on local streets have identified a host of maintenance and responsibility issues for the Town and homeowners throughout the community. The Town is working to resolve these permitting and stormwater issues and to develop long-term maintenance and responsibility plans for existing stormwater facilities. Stormwater treatment for all impervious surfaces, including parking lots, is a good practice to preserve and enhance water quality.



**Private Roads:** Private roads are common in several areas, especially the points of land into the Lake. These roads are typically unpaved, of substandard width and have poor drainage. Some private roads serve a significant number of residences. The Town often receives applications to develop existing lots on private roads.

Problems associated with private roads include substandard design, unreliable maintenance, lack of emergency access, poor traffic safety, and property disputes among owners. Private owners are often unable or unwilling to fund improvements or maintenance. Current Subdivision Regulations require minimum frontage on a Public Road to subdivide. Current Public Works Specifications and Standards require access to be a public road if it serves more than five dwelling units. Chapter Seven of the Colchester Code of Ordinance (Fire Regulations) specifies necessary improvements to private roads for year-round access on proposed camp conversions. The current policies combine to ensure that existing situations are not made worse or repeated.

While new private roads should generally be discouraged, the Town should be afforded the opportunity to consider the use of private transportation infrastructure to facilitate sustainable development patterns or innovative development, such as high density new urbanism development.

**Intersections:** Road intersections must be properly designed and controlled, in order to ensure safe and efficient traffic flow and pedestrian crossing. Improvements are needed at a number of intersections; however, many of these are State intersections and therefore dependent upon State approval and funding for upgrades. Intersection improvements in the current TIP include Route 2A and



Routes 2/7. The Circ Alternative Process identified and funded the intersection improvements for the Exit 16 area as the County's highest priority project. Similarly, the Severance Corners intersection is the second-highest ranked project and will also be funded by this process. Other intersections funding by the Circ Alternative Process include improvements to the Blakely Road and Laker Lane intersection, as well as the Prim Road and West Lakeshore Drive intersection. As background traffic in Colchester continues to grow and development continues, it is certain that additional intersections will need to be addressed. The Town should continue to work with the CCRPC and the State to develop solutions for these intersections before large problems develop.

The Town should continue working to implement Intelligent Transportation System (ITS) Architecture whenever feasible. ITS is the application of advanced technology to address transportation needs and includes everything from timing of lights to pre-emption of

lights for emergency vehicles. As intersections are improved and roads upgraded, the Town should utilize ITS to the greatest degree possible, to promote local and regional efficiencies.

**Bridges:** The Town has six bridges, such as Lime Kiln Bridge, that are an integral part of its transportation infrastructure. The Town participates in Vermont's Highway Bridge Program to assist in funding projects. At this time, all six bridges have undergone varying levels of replacement or rehabilitation and are in good condition.

**Sidewalks:** Sidewalks provide for safe pedestrian circulation and are especially important in a residential community like Colchester. A sidewalk network is useful for transportation purposes only when it connects between residential, public, and commercial destinations. Sidewalks are important, even in remote areas, considering the School policy that children may be expected to walk up to 1/2 mile to a bus stop.

With few exceptions, sidewalks are currently located mostly on local residential streets, having been installed by developers when subdivisions were built. Sidewalks continue to be built along our collector and arterial roadways. Over the past decade, the Capital Transportation Plan has substantially expanded the Town's network of sidewalks, with new sidewalks being added to West Lakeshore Drive, Blakely Road, and Malletts Bay Avenue, as well as others. Additionally, new developments are required to include sidewalks and/or multiuse paths, as well as to provide easements for future pedestrian connections. These requirements are found in the Development Regulations and Public Works Standards and Specifications.

**Multiuse Paths:** Multiuse paths support alternative modes of transportation, which are encouraged. The Town has envisioned an east-to-west trunk-line multiuse path from Colchester Pond to Airport Park, and, similarly, a north-to-south route from Milton to Winooski. These routes, as well as various other feeder multiuse paths, are designated on the Town's Official Map.

There are several classes of multiuse paths; Class I are fully separated from roads, Class II paths are striped lanes along roads, Class III paths are roadways that are signed, but otherwise not improved for bicycle travel. Roadway improvements that accommodate bicycle use are important for public safety, as many long-distance-bicyclists, touring bicyclists, and bike-commuters will utilize roads to avoid slower moving recreational users on multiuse paths. The Town of Colchester is part of the Lake Champlain Bikeways network that uses a majority of on-road routes to link with adjacent communities throughout the Lake Champlain Basin.

Class I and II multiuse paths exist along Porters Point Road, between Bayside Park and Creek Road, from Delta Park to the Causeway, along Colchester Point Road, along Holy Cross Road, and along Creek Farm Road. The extent of Class II paths has been significantly increased through the Capital Transportation Plan. Sections of Lakeshore Drive and Blakely Road are signed as Class III multiuse paths, but are generally unsuitable for bicycle travel due to the heavy volume of traffic and

turning movements. Many arterial and collector roads, including Route 15, Route 2A, Lakeshore Drive, and Routes 2 & 7 at Exit 16 are not uniformly constructed to accommodate bicycle travel. To the greatest extent possible, all areas of Colchester should connect its multiuse paths and tie into the paths of adjacent Towns.

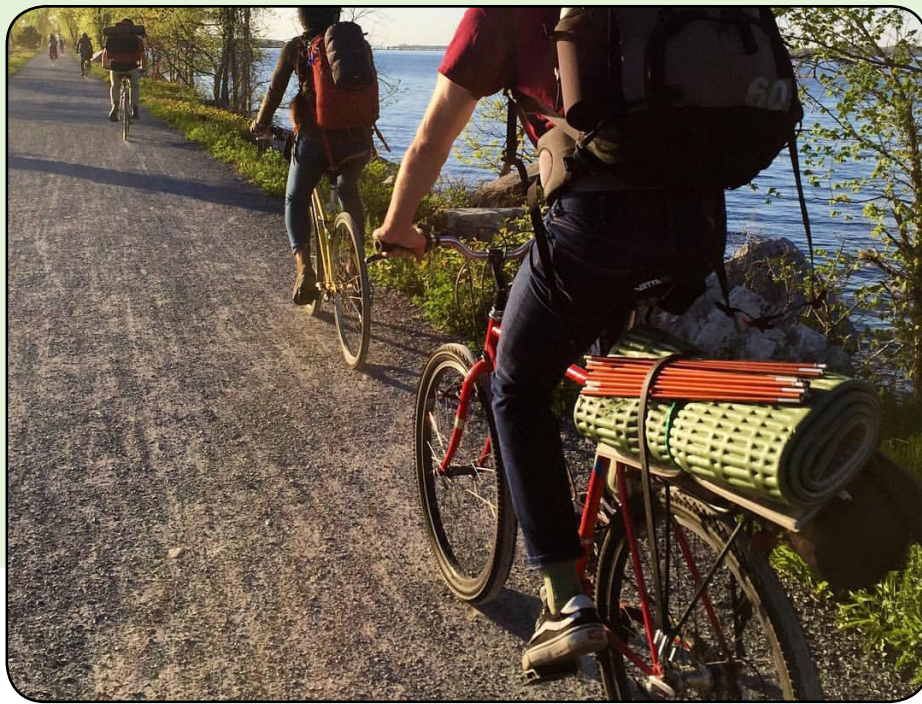
Planned Multiuse paths include those shown on the Official Map linking Severance Corners to the Bay and Exit 16. The Town has undertaken several sections of the trunk-line from Colchester Pond to Airport Park, and plans to construct more components of this route through the Capital Transportation Plan and the TIP. Another project likely to be completed within the near term is the first phase of the Exit 16 Pedestrian and Landscape Project along Roosevelt Highway.

### **Public Transportation:**

Existing public transit consists of bus service provided by Green Mountain Transit along the College Parkway (Route 15) corridor and the Roosevelt Highway Corridor (Routes 2 & 7). In 2013 the Town of Colchester entered into an agreement with CCTA (now GMT) to provide service along the Roosevelt Highway Corridor (Routes 2 and 7). The major areas of growth in Colchester are served and linked including the growth center at Severance Corners and commercial development at Exit 16. Since the last Town plan was completed, the Town began paying its share of the Burlington/Winooski/Colchester/Essex bus route, which runs along route 15 and has the longest span and highest frequency of public transportation service in the State. Additionally, the Town is paying for its share of the Burlington/Winooski/Colchester/Milton Route, which stops at Exit 16, Severance Corners, Creek Farm Plaza, and Exit 17.







The Bay area could also benefit from public transportation linking the surrounding neighborhoods to the north end of Burlington. During the term of this plan, grants to evaluate public transportation options should be pursued to determine if there is a cost effective service that could provide reasonable service time to Burlington from the Bay.

The Special Services Transportation Agency provides accessible and affordable door-to-door transportation for senior citizens and persons with disabilities. The demand for this service will continue to increase as the community's population ages and distances to services from residences increase. The Town partially funds this service.

**Ridesharing:** There are park and ride lots at Exit 17 and at Exit 16, as well as others identified by the recent RPC Park & Ride Plan. Go! Vermont is a ridesharing program administered by VTrans that includes guaranteed rides home. Demand exists for additional rideshare opportunities. The Town has incorporated future

park and ride facilities into the Town's Official Map and will continue to work with VTrans and regional partners to consider additional opportunities to improve ridesharing.

The Vermont Agency of Transportation is responsible for education and information on alternative transportation, including: carpool matching; vanpool matching and startups; bike commuter information; and transit system information. This information, marketed as "Go! Vermont," is available at: <https://www.connectingcommuters.org/>.

Trends in alternative transportation include current ridesharing initiatives and the prospect of autonomous vehicles. While many residents own cars, services such as CarShare Vermont allow residents without cars to rent them when needed. Mobile applications such as Uber and Lyft may also allow residents without cars to get around, although it is not known to what extent these apps reduce emissions. Services such as Wheeli attempt to cut down on

single-occupancy vehicle trips by allowing users to post destinations and times of travel. Advances in transportation technology may reduce parking demands and allow for the reduction in parking minimums listed in the Development Standards.

**Rail:** The Town of Colchester has two sections of rail, with one in the Northeast Quadrant and one along Route 15. Both of these sections are designed to support heavy rail. Although light rail could function on the existing tracks, current design does not allow for the faster speeds usually associated with commuter rail.

The section of rail along Route 15 leads from Essex through Winooski to Burlington. In the past, this section has been studied for commuter rail, with the possibility of a multi-modal facility in Colchester along Route 15. Preliminary analysis of the corridor has indicated that current densities would not support a commuter rail line in this vicinity; however, as traffic continues to increase on Route 15, commuter rail may become economically viable.

The northern section of rail travels from Milton into a station in Essex Junction. Within Colchester, the tracks pass through a relatively removed and rural portion of the Town. As the rail track approaches Route 2A, there are a few industrial properties fronting on Route 2A that have the benefit of spurs or the potential for rail spurs. These properties are adjacent to residences, and care has been taken to ensure that these uses are well-screened and unobtrusive to the residential uses, as much as practical. While there has been discussion in the past about relocating Burlington's rail yard to this area of Colchester, this concept is no longer feasible, due to the encroachment of suburban residential use and the establishment of substantial horse farming operations.

The northeast quadrant and village neighborhood areas are ill-suited to further expansion of industrial uses or rail tracks.

## ENERGY & TRANSPORTATION

Transportation makes up Vermont's largest emitting sector, contributing up to 47% of the State's overall greenhouse gas emissions. Under the Vermont Comprehensive Energy Plan (CEP), the State has set forth goals to generate more renewable energy and decrease energy usage through improved efficiency. In order to gain substantial deference under Section 248, the Town is planning to fulfill these goals on a local level (see the Powering Colchester section).

Colchester has already made several improvements to the efficiency of its transportation infrastructure. During the term of the previous plan, the Town replaced more than 900 of its street lights with LEDs. This has resulted in a 50% reduction in the energy costs associated with street lights. Smart technology traffic controls continue to be deployed throughout the community as intersection improvements are made, reducing congestion and improving pedestrian access.

Conservation in the transportation sector will be difficult for Colchester to achieve through its own actions. Nationwide, improvements in vehicle efficiency result in more vehicle miles traveled, not fewer. Unless transportation costs drastically increase on a national scale, reducing vehicle miles traveled will not be feasible at the local level. While Colchester can promote ride sharing, bus service, and alternative transportation options, these efforts are not likely to significantly impact conservation in the transportation sector alone. Continued efforts to promote density in Colchester's land use plans (see the Lands of Colchester Chapter) will help to limit the future growth of vehicle miles traveled.

During the term of this plan, it is anticipated that the majority of the transportation sector will still rely heavily on gasoline and diesel fuel sources. Demands on electricity and the grid will increase as improvements in transportation technology result in more electric vehicles (as seen in Table 1). This electrification of the transportation sector will provide opportunities for renewable resources as fuel sources. Electric vehicles will require additional infrastructure, such as charging facilities. The Town will

evaluate including requirements for charging stations in parking lots in its Development Regulations and will encourage other improvements that help make this transition to a cleaner and more sustainable fuel source for the transportation sector.

Other technological advances likely to impact the community during the term of the plan include autonomous vehicles. The deployment of autonomous vehicles may increase opportunities for ridesharing and fleet reductions. This may also require improvements in infrastructure communications. While some efficiency may occur through self-driving technology, autonomous vehicles may actually create an increased strain on the transportation system. The increasing reliance of residents on the delivery of goods to their residences and businesses may be made worse by automation, with more delivery vehicles dispersed through the community. Barring new State or Federal requirements, Colchester does not foresee making additional improvements to its transportation system to accommodate autonomous vehicles during the term of this plan.

Projected Transportation Energy Use, 2025-2050			
	2025	2035	2050
<b>Total Light Duty Transportation Energy Use (MMBtu)</b>	719,976	456,057	198,768
<b>Electricity Used for Light Duty Transportation (MMBtu)</b>	9,601	66,180	139,675
<b>Light Duty Electric Vehicles (% of Vehicle Fleet)</b>	6%	41%	89%
<b>Biofuel Blended* Energy Used for Light Duty Transportation (MMBtu)</b>	710,375	389,877	59,093
<b>Biofuel Blend*Light Duty Vehicles (% of Vehicle Fleet)</b>	94%	59%	11%
<b>Heavy-Duty Transportation Energy Use from Biodiesel (Percent of Total)</b>	33%	58%	96%
<b>Heavy-Duty Transportation Energy Use from Fossil Fuel (Percent of Total)</b>	67%	42%	4%

(Table 1, Source; VTRANS, CCRPC LEAP Model, in Powering Colchester chapter)



# POLICIES

1. The Transportation Capital Plan provides a continual source of funding for projects that can be used to leverage additional money to complete significant projects within Colchester and should be sustained.
2. Developments, road projects, and all other plans shall take into consideration the Official Map, and should implement the proposed improvements to the greatest extent possible.
3. Traffic studies that address both capacity and safety issues shall continue to be required as part of the development review process. Where necessary, improvement to the transportation infrastructure will be required as part of development projects.
4. New curb-cuts to arterial roadways should be avoided, with shared curb-cuts and side streets utilized for access wherever possible. The Town should maintain its access management restrictions.
5. While passenger rail expansion is encouraged, expansion of freight rail should be limited to existing rail corridors with the creation of rail yards being prohibited.
6. Colchester will continue to support the development of park and ride facilities that promote ride sharing, bus service, transportation demand management and alternative transportation options that have the potential to decrease vehicle miles traveled.
7. The Town will consider bicycle path improvements in designing, scheduling and constructing roadway improvement projects. Where possible and practical, the Town will strive to provide Class I paths along arterial and collector roadways and improve on-road facilities.
8. Sidewalks should be implemented per land use plans. The need for sidewalks is particularly important on roads carrying heavy traffic volumes through developed areas, including Exit 16. Easements for future sidewalks should continue to be required through the development review process to support land use plans.
9. While new private roads should generally be discouraged, the Town should be afforded the opportunity to consider the use of private transportation infrastructure to facilitate sustainable development patterns, or innovative development such as high-density new urbanism.
10. The CCRPC's Transportation Improvement Plan and other State and Federal funds are important sources of funding for transportation infrastructure, and Colchester should continue to take advantage of these opportunities to bolster local funding for improvements to the transportation network. As non-local funding sources diminish or priorities shift, it will become increasingly important for the Town to develop creative solutions for funding projects that are more self-reliant.
11. Interconnectivity between developments shall be required, to the greatest extent feasible. The creation of cul de sacs should be discouraged. New cul de sacs should be designed to be temporary and to provide future connections whenever possible. Future connections between neighborhoods shall be addressed by all development projects.
12. The Public Works Standards and Specifications provide diversified standards based, in part, on land use. These Standards shall be updated as needed, to reflect changes in land use planning and evolving technologies.
13. The Lake Champlain Byways program should continue to be supported for its importance in promoting alternative transportation and tourism.

14. The Town shall continue to partner with the Vermont Highway Bridge Program to maintain its infrastructure.

15. Intelligent Transportation Systems Architecture shall be utilized to the greatest degree possible to promote local and regional efficiencies and reduce congestion.

16. Roadway safety should continue to be improved and the Colchester Traffic Calming Manual deployed as needed through the cooperative efforts of the Colchester Police and Public Works Departments.

## ACTIONS

1. The Exit 16 improvements and Severance Corners Intersection improvements are top priorities for the community, replicating the goals of the Circ Highway through alternative forms of delivery, now that the highway project has been terminated. As these projects have been funded and listed as high priorities in this process, construction should progress as expediently as feasible, and is expected during the term of this plan.

2. A new arterial roadway connecting Hercules Drive and Rte. 15 would decrease travel time, increase efficiency, and reduce traffic volumes in the Exit 16 area and in Winooski's central business district. This is a project with regional significance, and should be pursued in conjunction with the Regional Planning Commission and the U.S. Army Administration for when the Camp Johnson facility transitions to another use.

3. A bicycle path between Colchester Pond and Airport Park shall be the priority bicycle path for Colchester to complete. This route shall act as a trunk-line that all other bicycle routes shall strive to tie into. The Town shall strive to integrate this trunk-line and other bicycle paths with bicycle routes of adjacent communities and acquire easements as opportunities present during the term of this plan.

4. The efforts of the SSTA to provide transportation services for the disabled and the elderly should be sustained; however, efficiencies should be looked to as demand and costs continue to escalate.

5. Roadway construction and reconstruction projects will address stormwater treatment and should preserve and enhance water quality.

6. Right of way for an east-west corridor providing access to the Inner Bay and Bay Neighborhoods should have easements acquired, as opportunities present.

7. The Development regulations should continue to promote bicycle parking and shared parking concepts, and be reviewed as necessary to include electric charging facility standards and other technologies as new opportunities in the transportation sector continue to evolve.

8. During the term of this plan, public transportation options should be evaluated to determine if there is a cost-effective service that could provide reasonable service time to Burlington from the Bay.



# SYSTEMS & CONNECTIONS

Sewage

Potable Water

Solid Waste

Stormwater

Telecommunications











## VISION

*Plan for the maintenance, management, and development of critical infrastructure to optimize quality of life, while nurturing responsible and sustainable residential, business, and community growth. The Town will demonstrate leadership in environmental stewardship and infrastructure resilience for the benefit and safety of all, so that Colchester can thrive in a rapidly changing world. Critical infrastructure encompasses clean water, wastewater, energy, transportation, storm water, and communications systems.*

## GOAL

Utilities should support and enable the Town's land use plans.

## OBJECTIVE

The Town supports improvements to communication infrastructure so that all residents, government services, businesses, and the like can take advantage of existing and developing technologies. The Town should take the initiative to interact and collaborate regionally for improved critical infrastructure.

## SEWAGE

Colchester relies upon on-site wastewater disposal systems to serve the majority of its development, with municipal sewer only available within the higher density and targeted growth areas of Exit 16, Severance Corners, and Fort Ethan Allen (Route 15) neighborhoods. Breezy Acres and Hillcrest mobile home parks on Roosevelt and the Creek Farm Plaza are served by municipal sewer through private funding to provide environmental remediation. This collection system is owned and maintained by the Town of Colchester. A historic portion of Fort Ethan Allen flows to the tri-town sewage treatment plant in Essex and the Morehouse Drive area that is served by the City of Winooski. Appendices Map 7 details the sewer system service area.

Over 5,400 individual onsite wastewater systems exist within the Town. A functioning, fully complying, onsite system can provide suitable sewage treatment when properly maintained. This Town, therefore, has an interest in ensuring that these onsite systems are kept in good shape.

In the past a sewage treatment plant within Colchester was operated on the Winooski River by Fire District One until the 1980s, when it was converted into a pump station serving just the Fort neighborhood. An agreement was reached with the City of South Burlington to provide 650,000 gallons per day (g.p.d.) of wastewater treatment capacity for Colchester, with 340,000 gallons of this allocation controlled by the Town and 310,000 controlled by Fire District One. The old plant provided limited

capacity, and the South Burlington agreement was seen as the most cost-effective solution to providing the Town with additional wastewater capacity. In the 1990s, several properties within the Exit 16 area that flowed to the Winooski sewage treatment plant were converted to flow into the Town's system.

Fire District One has approximately 130,000 g.p.d. surplus capacity; however, this capacity is restricted to the geographic area of the District, which encompasses the Winooski Park area of Colchester (Route 15 area minus the historic Fort Ethan Allen area). The Town obtained 350,000 additional g.p.d. allocation from South Burlington in 2012, and subsequently restructured the sewer ordinance to prioritize wastewater allocation based on land use goals.

In 2005 the Town of Colchester became the first community in the State of Vermont to take over the administration of State wastewater permits, providing the Town with additional authority over wastewater systems and offering the community one-stop-shopping for State and local wastewater permits. It should be duly noted though, that the design and construction standards for

onsite wastewater are dictated by the State of Vermont and the Town has limited ability to specify additional requirements. Following the completion of the 2013 Integrated Water Resources Management Plan, and EPA funded grants to evaluate water quality town-wide. The Town investigated the concept of additional onsite management, including requirements for operating permits. State regulations do not allow for additional operating permits to ensure continual care of these systems, particularly in high-risk areas. Until the State changes its regulatory model for onsite wastewater regulation, the Town can take little additional action to ensure the continued care and safe operation of onsite wastewater, other than outreach and education.

The Integrated Water Resources Management Plan called for evaluating sewer service for the Malletts Bay area, stating "Central sewers are recommended to meet the long-term wastewater needs of Goodsell Point and East Lakeshore Drive... West Lakeshore Drive has build-out capacity that can only be met with central sewers." At the time of the IWRMP, there were over 1,100 wastewater systems in the Malletts Bay area labeled as

medium- or high-risk, for reasons ranging from depth of groundwater, soil suitability, presence of ledge, and ability to conform to State permitting requirements. Since the 1978 Town Plan, a municipal sewer has been discussed in the community as a solution to achieve multiple goals: improve water quality in Malletts Bay by eliminating wastewater systems performing marginally, while still allowing development and re-development in the Bay area in accordance with land use planning for the area, and in ways that retain the existing character and scale of the neighborhood.

With East Lakeshore and Goodsell Point residences experiencing repeated system failures, and with high E.coli counts seen in water quality samples, it is apparent that the existing on-site wastewater infrastructure is not adequate for existing needs, and central sewers in this area remain the best option to address these issues. While centralized sewers are generally a catalyst for development, this Plan calls for existing density along East Lakeshore Drive to remain, as it already exceeds the density allowed under the current zoning. The Lakeshore 1 and Lakeshore 2 Districts were developed after years of land use study and community input and call for the Inner Bay neighborhood to remain a Village Mixed-Use area into the future, with central sewers allowing for redevelopment of existing sites, with slight increases in density possible if environmental and resource protection mechanisms allow.

In 2018, the Town continued the work of Fire District Two in evaluating a sewer service area for the Inner Bay: the Malletts Bay Sewer Project. The project is proposed to serve West Lakeshore Drive from the corner of Prim Road to Blakely Road and East Lakeshore Drive through to Goodsell Point,





via a force main extension from the Town's existing sewer service area at Severance Corners. This is a high priority-project for the Town of Colchester, and is expected to be brought before the voters in March 2019. If approved, this project would be implemented during the term of this plan and address many of these historic high-risk areas along Lake Champlain.

With this significant project to serve the Inner Bay, the Town's limited sewer service will be further constrained. While the Exit 17 area was previously noted as a future sewer service area, after the 2002 Exit 17 Wastewater Study showed little onsite potential, the Exit 17 area is highly unlikely to be served by sewer and will not be during the term of this plan or the subsequent plan. Community wastewater systems may be looked to as cost-effective solutions to serve the neighborhood in the near term.

As the Town continues to develop and evaluate its options for providing a cost-efficient and environmentally sound method of treating wastewater, it should promote regional discussions regarding wastewater. The challenges Colchester faces are not unique and are shared by other growing communities, such as Williston, that also lack a wastewater treatment facility. While Colchester should consider constructing its own wastewater treatment facility if the need and opportunity arise, the Town should evaluate whether this is the most cost-effective solution for the community. Phosphorus caps on wastewater plant discharges severely limit the potential for new wastewater treatment facilities, thereby necessitating a regional dialogue on how best to make use of current wastewater resources. Regionalization of wastewater treatment may prove to be the most environmentally sound and cost-effective long-term solution for the majority of communities



within the greater Burlington area. To this end, Colchester should call upon organizations such as the Chittenden County Regional Planning Commission to analyze the feasibility of regional utilities.

## POTABLE WATER

The Town of Colchester has a variety of potable water sources that range from private dug wells to fire district water distribution systems. These diverse solutions are a result of the Town's geographically diverse areas and scattered development. While many properties are located within a fire district that provides water, these districts have many areas that are not served by water infrastructure and are reliant upon wells. It should be noted that the Town Government does not currently provide potable water, but relies upon independently-operated fire districts to provide this service, as further detailed on Appendices Map 6 Water System Service Area.

While the largest concentration of properties served by private potable water systems are within the Town's

rural areas, there are also a variety of properties scattered throughout Colchester that rely upon pumping water from Lake Champlain or other means of private water service. Private water systems can be compromised by inadequate or aging onsite septic systems, seasonal fluctuations in water supply, and, in some areas, the presence of naturally occurring radioactive properties in bedrock. Plans for growth need to consider access to private water supplies or fire district water supply systems.

Municipal water is distributed by five water systems: Colchester Fire District #1, Colchester Fire District #2, Colchester Fire District #3, the Town of Essex (for a small portion of the Fort), and the Champlain Water District. The Champlain Water District (CWD), a regional water utility based in South Burlington. All of the regions own their distribution systems and purchase water from other companies. Champlain Water District provides water to all of the water systems except Fire District #2, which purchases water from the





City of Burlington. The fire districts are each independent, self-governing, municipal organizations. While the Town of Colchester does not currently manage water utilities, it does have authority over water supply and design through its administration of local building and zoning codes, as well as the State water and wastewater permits and its Public Works Standards and Specifications.

Due to the diversity of water systems, it has also been difficult to undertake comprehensive water needs planning for the community. This has come to light in recent years, with the need for improvements to water storage and lines. During the term of this plan, an additional water line will

be constructed to improve service in the Fire District Three area serving Severance Corners. As the Town continues to grow and looks to expand municipal water infrastructure and opportunities, the efficiency of scale of fire districts should be examined. The Town should take appropriate actions to ensure adequate water supply for the implementation of its land use goals.

## SOLID WASTE

Colchester is a member community of the Chittenden Solid Waste District, which disposes of the county's trash and oversees recycling, waste reduction, and recently instituted composting program.

While Colchester once had an active landfill within the Exit 16 vicinity, Colchester now exports its waste and recycling via the District. Recycling is mandatory for all communities within the Solid Waste District. Waste and recycling curbside pickup is provided within Colchester by private companies. District drop-off centers are available to those wishing to self-haul waste, compost, and recycling. Drop-off facilities are located in the adjacent communities of Essex, Milton, South Burlington, and Burlington. Rover pick-ups for household hazardous waste are available from time to time; however, permanent hazardous waste drop-off services are available at the South Burlington Environmental Depot. Each May, Colchester participates in Green Up Day and holds a collection at the Town Offices. This event helps to stem the tide of illegal dumping in Colchester, and should continue to be supported by the Town and the District.

## STORMWATER

The Town of Colchester has many great assets, with the more prominent features being Malletts Bay, the lake and its many streams. Protection of the water's quality has become a prominent goal community-wide. Stormwater has been identified as posing a threat to water quality, as various community land uses can result in erosion, flooding, and a reduction of the time available for adequate treatment of stormwater runoff and can cause unacceptable levels of contamination of surface waters. Stormwater is a serious problem that should be examined under all planning and development activities.

Colchester is a MS4 community that is designated by the Environmental Protection Agency for stormwater-impaired watersheds. The Town has collaborated with several other



communities to form the Chittenden County Regional Stormwater Education program, in an effort to educate the greater community about stormwater runoff. The Town has developed several action plans regarding stormwater, including a stormwater management plan, an illicit discharge detection plan, and a stormwater outfall assessment plan. Some of the various on-going actions the Town has taken to ensure against stormwater becoming a threat to public health, the environment, and the economy of the community include water quality monitoring, a water quality hotline for anonymous reporting of pollution issues, storm drain stenciling, the implementation of various ordinances, and, most recently, a stormwater utility.

The Town's stormwater utility, formed in 2017, is a key component of the Town's overall Clean Water Initiative. In 2009, the Town received a \$1.5 million federal grant to study water quality issues in Colchester. This four-year study, known as the Integrated Water Resources Management Plan, included sixteen public meetings and produced several key recommendations. One of those recommendations was to create

and adopt a Stormwater Utility as outlined in the Stormwater Utility Feasibility Study. The utility takes care of the community's stormwater system, and charges all properties a user fee based upon the amount of stormwater they create. The amount of stormwater created is based on how much impervious surface there is on a property, though all properties pay a fee, even if vacant. The stormwater utility will assist in identifying stormwater improvements throughout the community, as well as improving maintenance and tracking of these facilities. In 2018, the Town began a town-wide condition assessment of its stormwater infrastructure. It is anticipated that this assessment will provide information for the development of a capital funding program for future stormwater investments during the term of this plan.

The Town has adopted Chapter 18 of the Colchester Code of Ordinance regulating stormwater. This regulation ensures that projects which can impact water quality but do not trigger State review are reviewed at the local level for stormwater management and erosion control. New stormwater treatment

facilities that treat runoff from public infrastructure constructed as a part of developments are required to enter into co-applicant agreements with the Town to define responsibilities, ownership, and permitting obligations. The Town is continually seeking methods to effectively and efficiently treat stormwater. To this extent, environmentally friendly and less harmful alternatives to pesticides, herbicides, and fertilizers should be used wherever practical in maintenance of town-owned properties and roadways.

## TELECOMMUNICATIONS

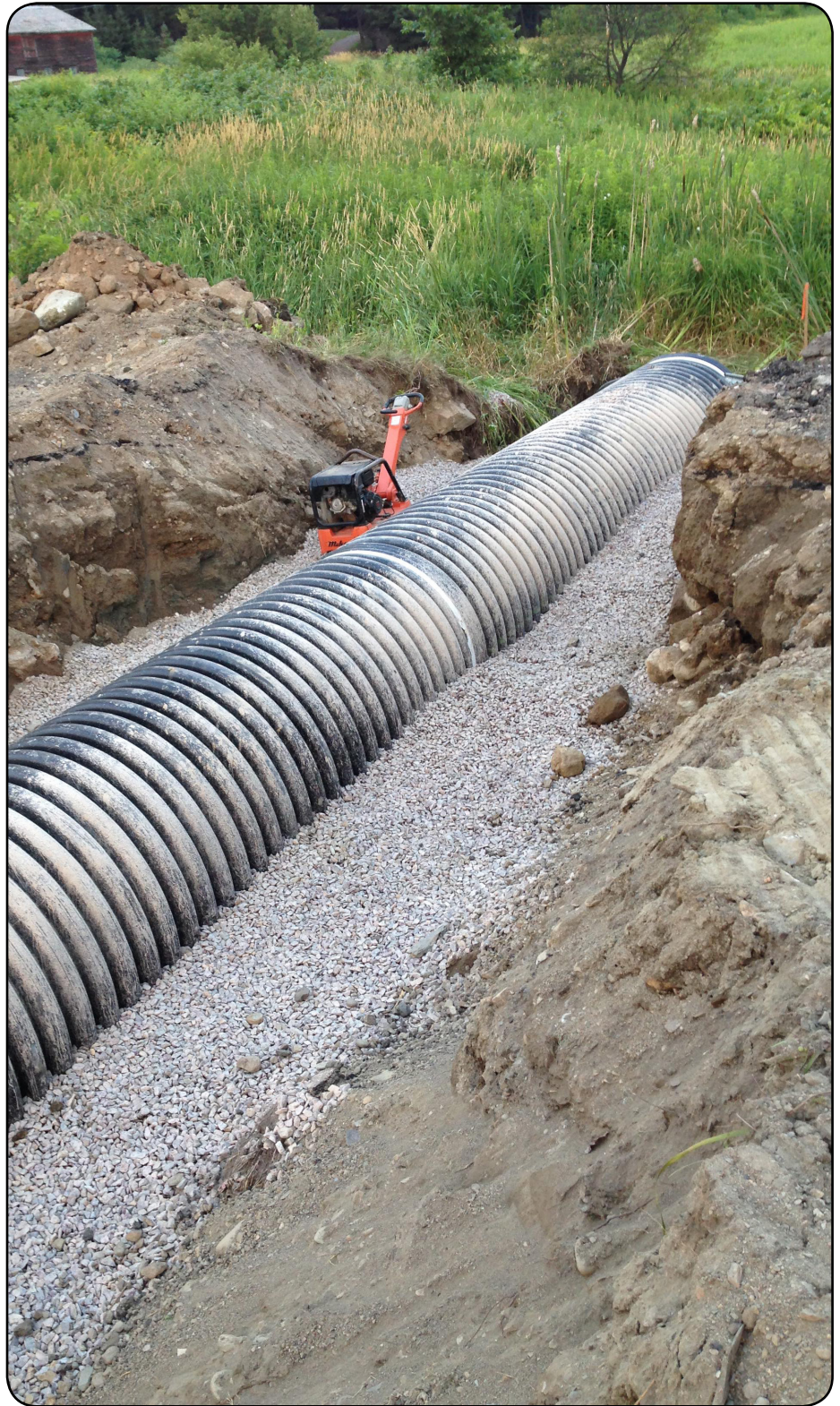
Telecommunications facilities in Colchester include Consolidated Communications copper phone lines, Consolidated Communications Digital Subscriber Loop (DSL), Comcast Cable TV and internet, satellite television and radio, various wireless (cellular) service antennas, and shortwave radio frequencies operated by amateur operators and emergency services. There are also radio and television broadcasting facilities within Colchester that broadcast on both AM and FM frequencies and use microwave communications as well as larger broadcast towers. Appendices Map 8 Utilities details the locations of these facilities and DSL coverage.

As telecommunications continue to become a vital part of everyday functions, both at home and at work, pressures to increase the speed, reliability, and affordability of these networks will continue to escalate. Northwest Vermont is currently served by one internet transmission line originating to the south. On a local level, there are several isolated pockets of Colchester that are currently not served by high-speed internet, cellular, or other wireless service. The Town has advocated for service for the entire community and continues to support improvements to the communication infrastructure,





so that all residents, government services, businesses, and the like can take advantage of existing and developing technologies. Reliable high-speed internet access is a priority for Colchester to be a leader in the emerging global creative economy. However this should not come at the expense of the character of Colchester. In recent years, the State of Vermont has exempted the location of telecommunication facilities from local land use regulations. It is anticipated that this exemption will sunset in 2019 and the Town will be able to apply its Development Regulations to such facilities. If the State provides a more permanent exemption, the Development Regulations should be revised accordingly. If local reviews are allowed again, this section of the Regulations should continue to be revisited, to ensure that new advances in equipment can be accommodated in Colchester, in balance with our land use plans.





# POLICIES

1. The Malletts Bay Sewer Project is a high priority to implement during the term of this plan, to address high-risk septic areas and water quality in Lake Champlain.
2. The Town should continue to work with the State to successfully administer the State's water and wastewater permitting program.
3. The Town should continue to encourage upgrades and new technologies that improve the environmental soundness of onsite systems.
4. The Town's Sewage Ordinance should continue to prioritize wastewater allocation based on land use goals.
5. The Town should take appropriate actions to ensure adequate water supply for the implementation of its land use goals. During the term of this plan, the Town should work to implement, in conjunction with the Fire Districts, the recommendations of the current 20-year water needs analysis project.
6. The efficiency of scale of municipal fire districts should be examined.
7. The Town should continue to work with the Chittenden Solid Waste District to consider a drop-off center to better meet the Town's needs.
8. The Town Stormwater Utility will continue to advance stormwater improvements within the community and advance the Colchester Clean Water Initiative.
9. The Town will continue to foster a variety of telecommunications infrastructures. To this end, the Town will encourage solutions that minimize conflicts that might arise from these varied sources. Emergency broadcasting capabilities should be preserved, first and foremost.
10. The Town shall continue to encourage a comprehensive, fast, and reliable telecommunications network for the community that does not diminish the character of the area or create conflict with the planned future land use.
11. The Town will continue to promote co-location of telecommunication facilities and appropriate siting and screening of these facilities, from larger towers to smaller residential dishes.

# ACTIONS

1. Onsite wastewater education and outreach should continue and State Wastewater Permits shall include requirements for maintenance, as feasible and practicable.
2. The Malletts Bay Sewer Project should be implemented during the term of this plan within the Inner Bay neighborhood area.
3. The waterline serving Severance Corners should be built within the first year of this plan, to maintain adequate water pressure to serve the growth center.
4. A capital funding program for future stormwater investments should be considered during the term of this plan.
5. If local oversight of telecommunications facilities is reinstituted by the State during the term of this plan, the Development Regulations should be revisited, to ensure that new advances in equipment can be accommodated in Colchester to balance with our land use plans.
6. The Town should encourage regional discussions regarding services and utilities, such as wastewater, and continue efforts to work with staff and boards of adjacent communities to find efficiencies and improve services.



# APPENDICES

1. BASE MAP
2. EXISTING LAND USE
3. FUTURE LAND USE
4. NEIGHBORHOODS
5. ARCHEOLOGICAL & HISTORIC SITES
6. WATER SYSTEM SERVICE AREA
7. SEWER SYSTEM SERVICE AREA
8. UTILITIES
9. PUBLIC & CONSERVATION LAND
10. NATURAL FEATURES
11. HYDROLOGIC FEATURES
12. SOILS
13. COMMUNITY FACILITIES & TRANSPORTATION  
INFRASTRUCTURE
14. ENERGY PLANNING
15. STATE KNOWN CONSTRAINTS — ENERGY PLANNING
16. STATE POSSIBLE CONSTRAINTS — ENERGY PLANNING
- PHOTO CREDITS

# Map 1 2019 Town Plan

## Base Map

Colchester, Vermont

### Legend

#### Functional Classification

- Interstate
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Road
- Private
- Railroad
- Stream Centerline
- Water Body



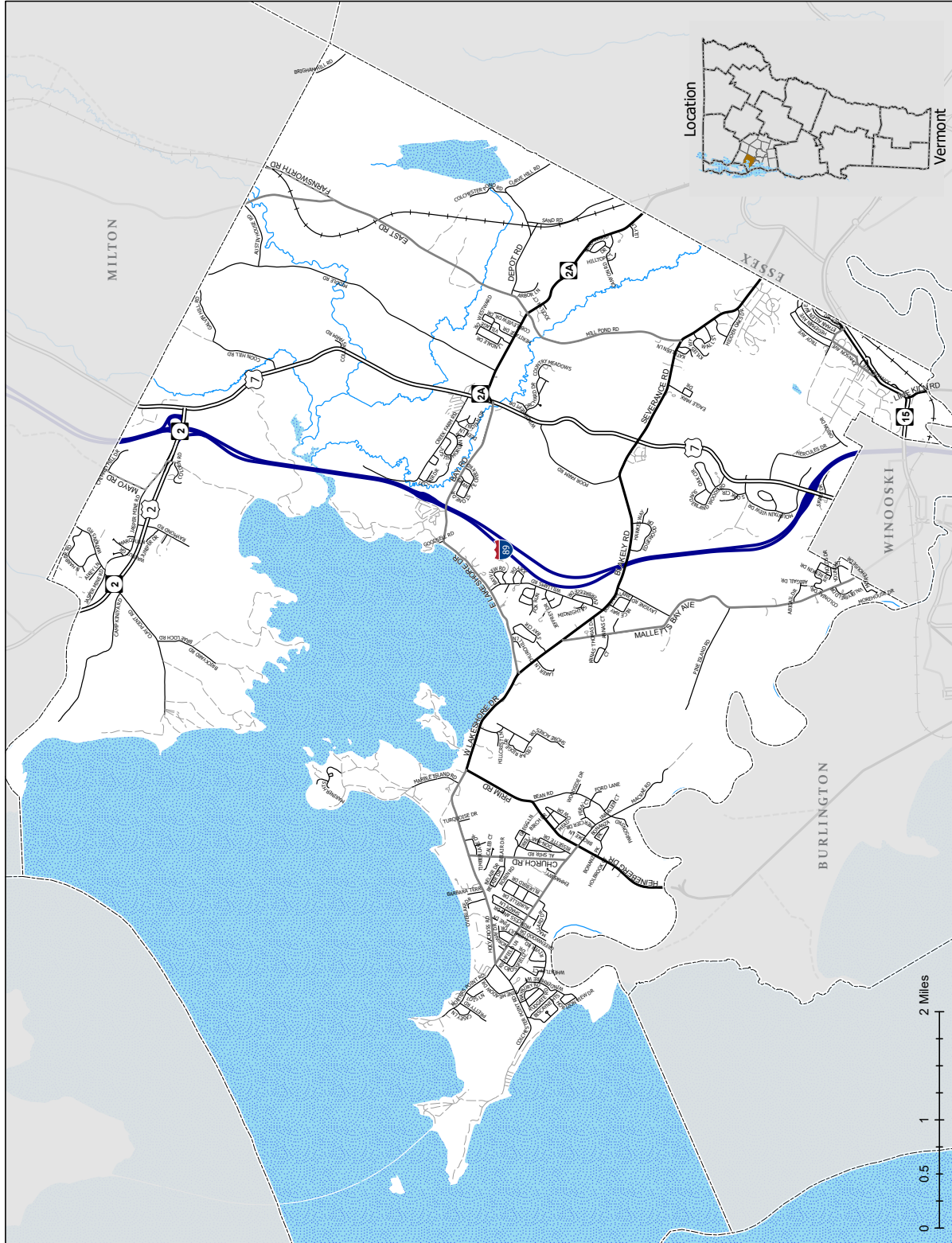
Source:  
Functional Road Classification - VTrans, 2017  
Surface Water - INWHIP, 2011

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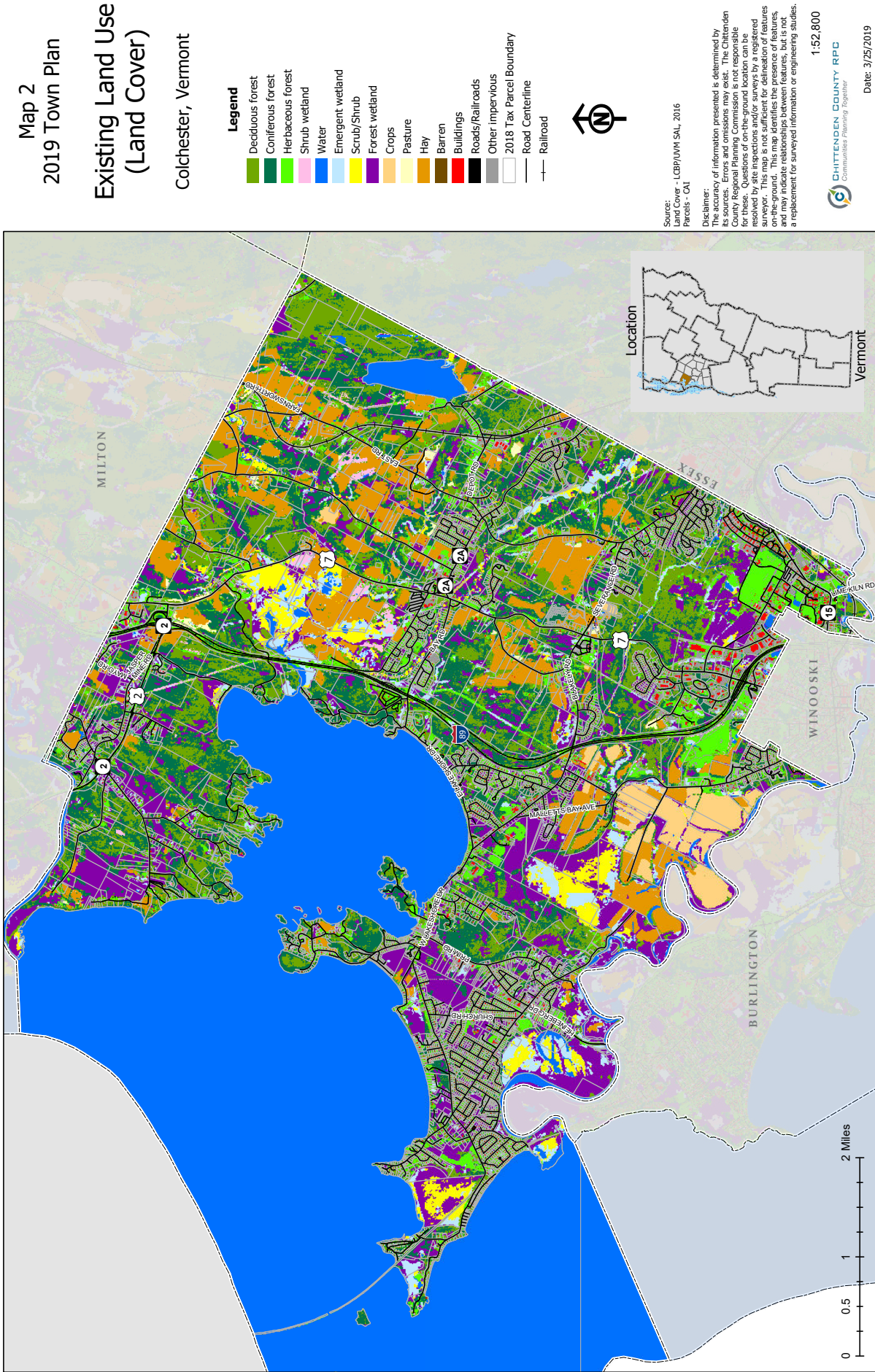
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Date: 3/25/2019







# Map 3 2019 Town Plan

## Future Land Use

Colchester, Vermont

- Legend**
- Land Use Category**
- Growth Center
  - Village Mixed Use
  - Suburban Residential
  - Agricultural Mixed Use
  - Rural
  - Business
- Road Centerline**
- Interstate
  - US or State Route
  - Class 2 - 4 Road
  - Private Road
  - Railroad
  - Stream Centerline
  - Water Body



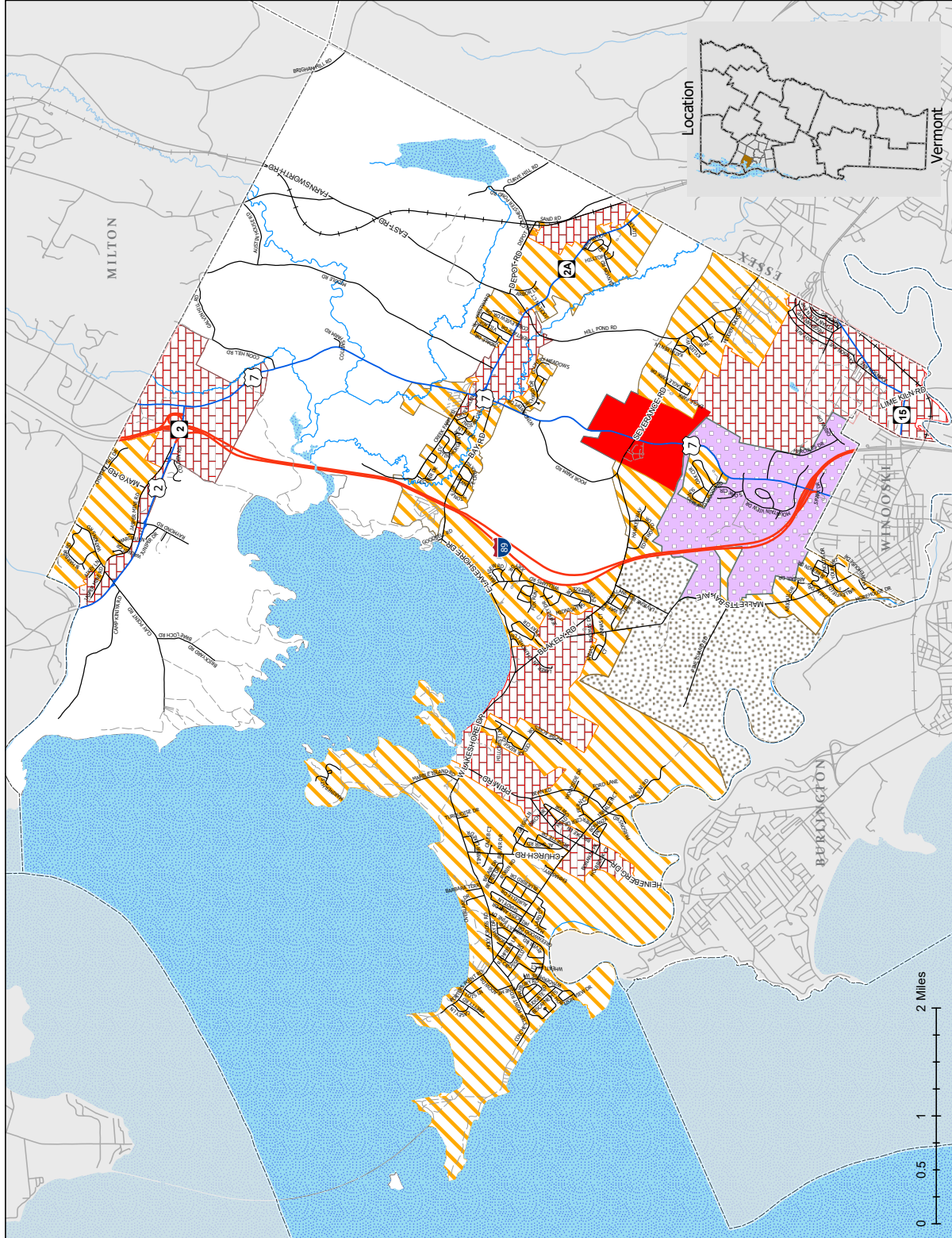
Source:  
Future Land Use - Updated 2018, CCRPC  
Surface Water - TWMP, 2011  
Road Centerline - CCRPC guidance from town, 2018

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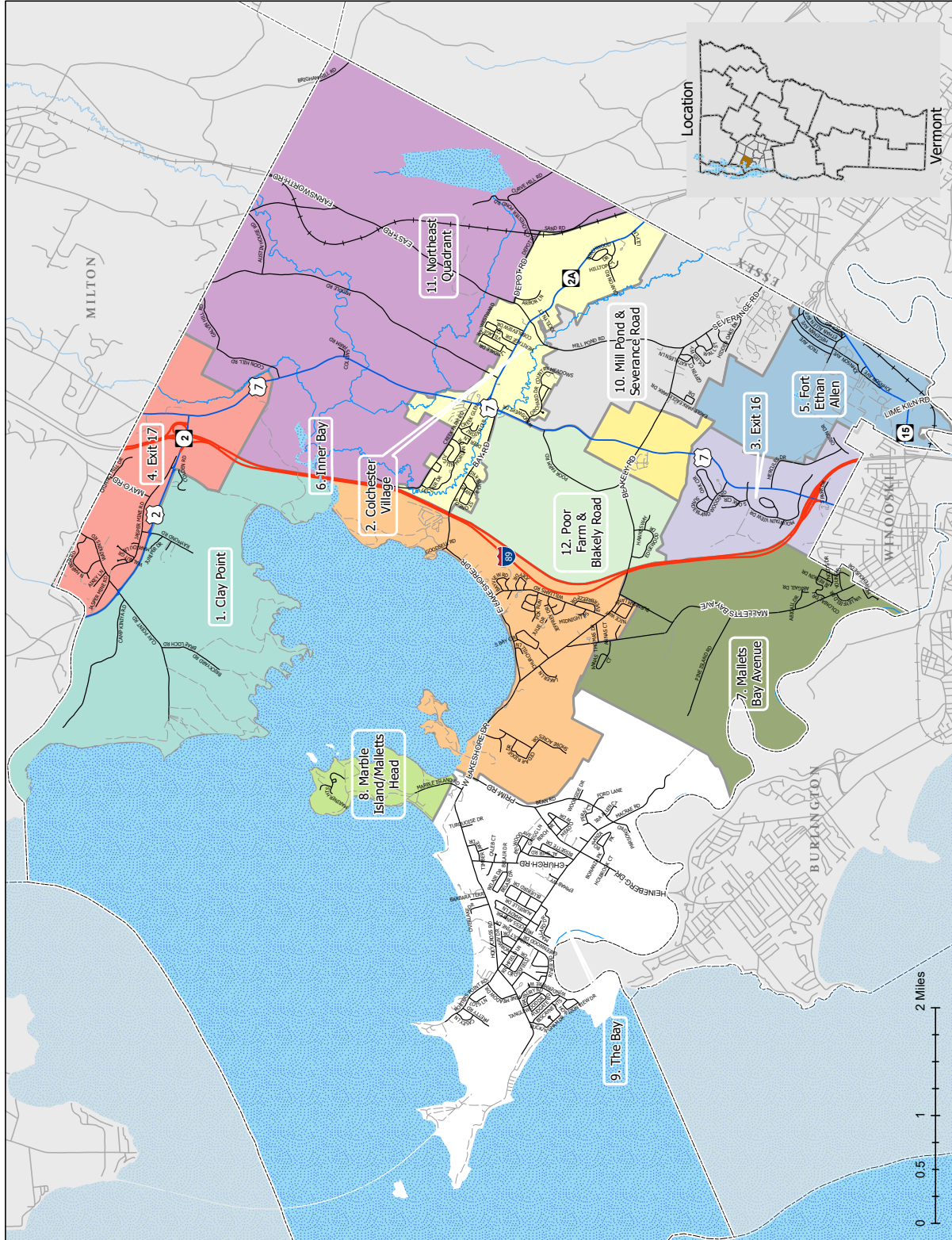




# Map 4 2019 Town Plan

## Neighborhoods

Colchester, Vermont



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# Map 5 2019 Town Plan Archeological and Historic Sites

Colchester, Vermont

## Legend

- National Historic Site
- State Historic Site
- State Historic District - Includes State Historic Sites
- National Historic District - Includes National Historic Sites
- Type of Archaeological Site\*
  - Historic
  - Precontact
  - Precontact & Historic
- Interstate
- US or State Route
- Class 2 - 4 Road
- Private Road
- Railroad
- Stream Centerline
- Water Body

**\*All locations are approximate.**



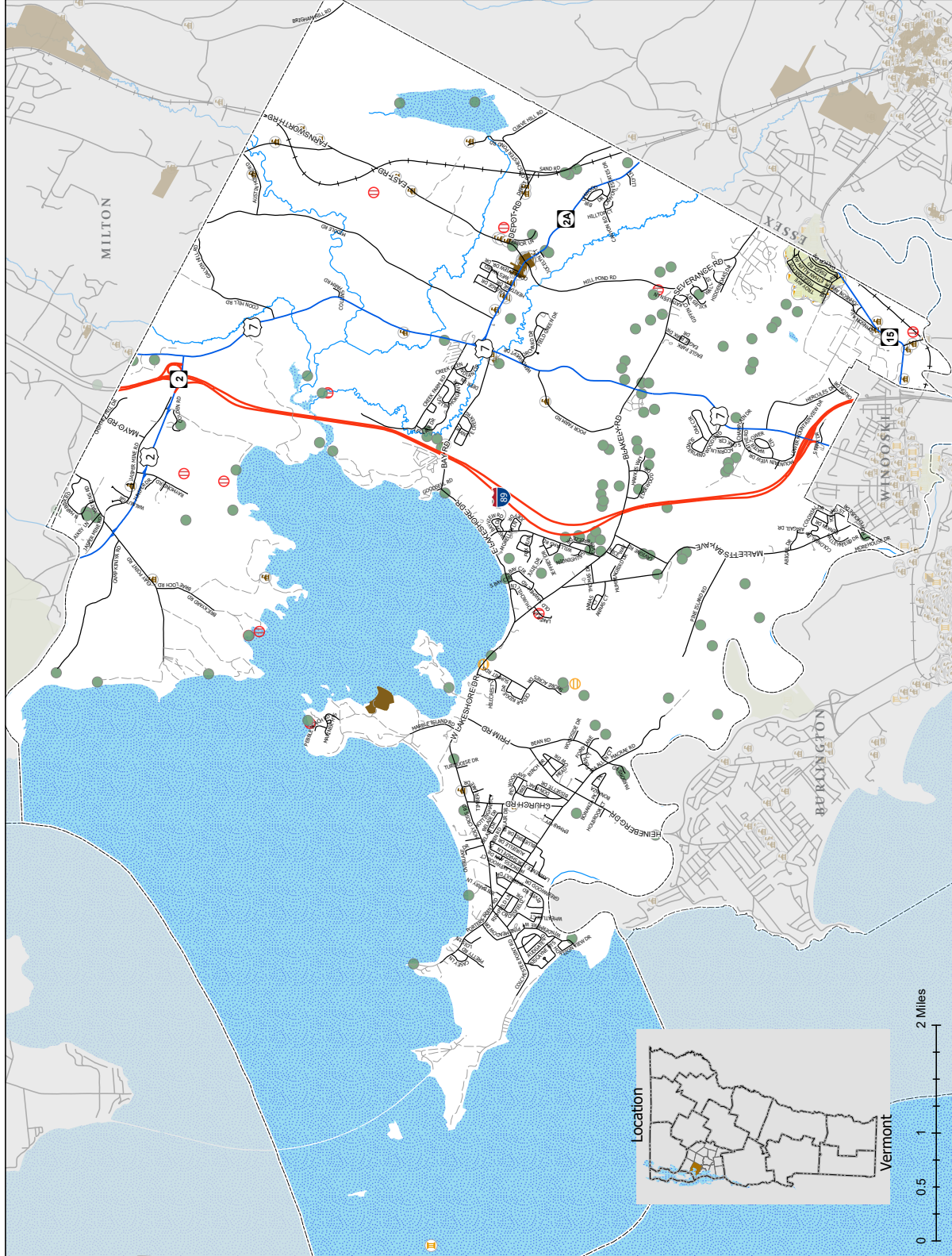
Source:  
Historic Data - CCRPC updated 2017  
Surface Water - TWBWP, 2011  
Road Centerline - CCRPC w/guidance from town, 2018

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# Map 6 2019 Town Plan

## Water System Service Area

Colchester, Vermont

### Legend

- Fire District Boundary
- Water District Service Area**
- Fire District #1
- Fire District #2
- Fire District #3
- Champlain Water District
- Essex
- Interstate
- US or State Route
- Class 2 - 4 Road
- Private Road
- Railroad
- Stream Centerline
- Water Body



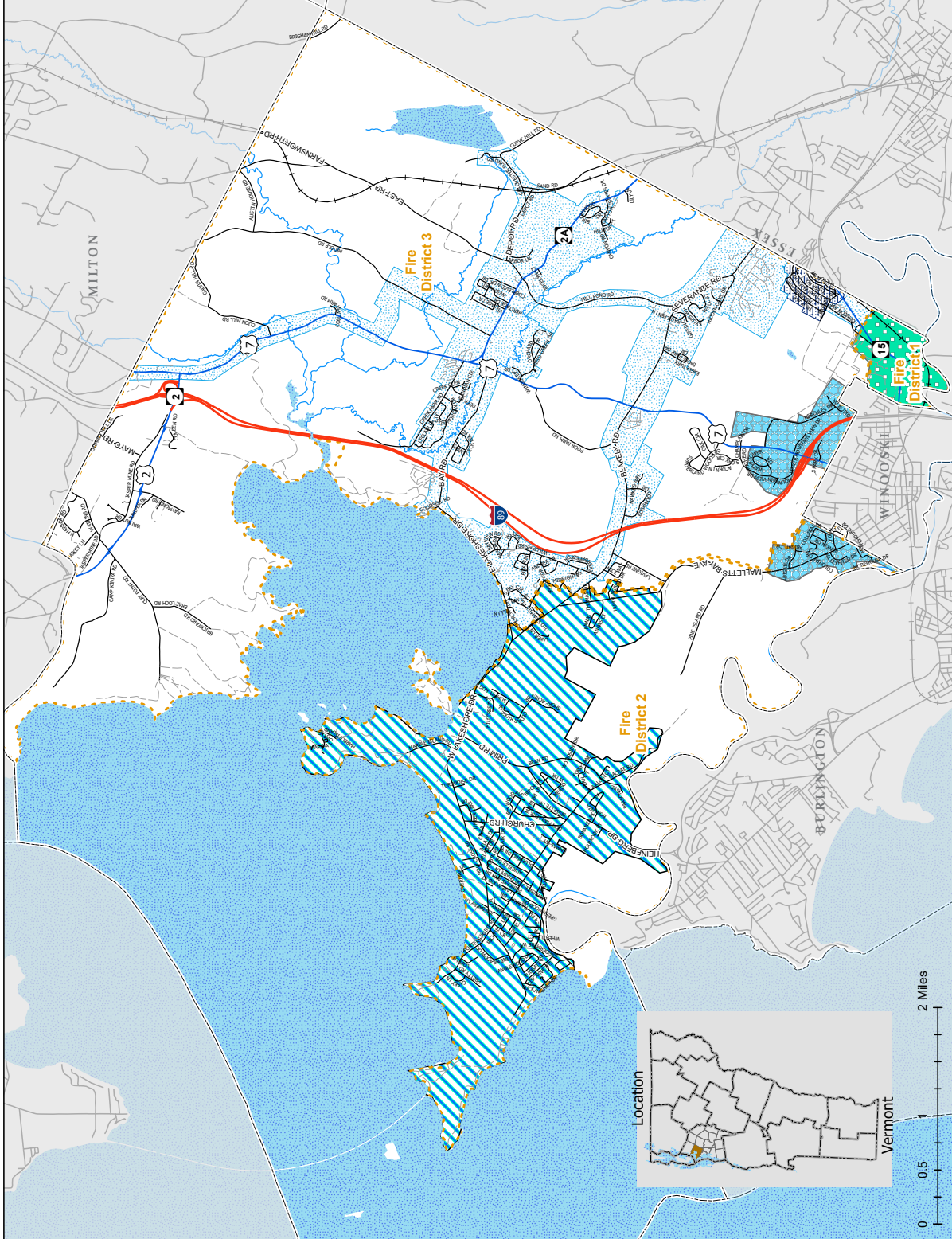
Source:  
Fire District - CCRC updated 2018  
Water SSA - CCRC updated 2012  
Surface Water - IWMMP, 2011  
Road Centerline - CCRC vigilance from town, 2018

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# Map 7 2019 Town Plan

## Sewer System Service Area

Colchester, Vermont

### Legend

#### Sewer Service Area

- Town of Colchester - Constructed
- Town of Essex
- Town of Colchester - Not Constructed
- Interstate
- US or State Route
- Class 2 - 4 Road
- Private Road
- Railroad
- Stream Centerline
- Water Body



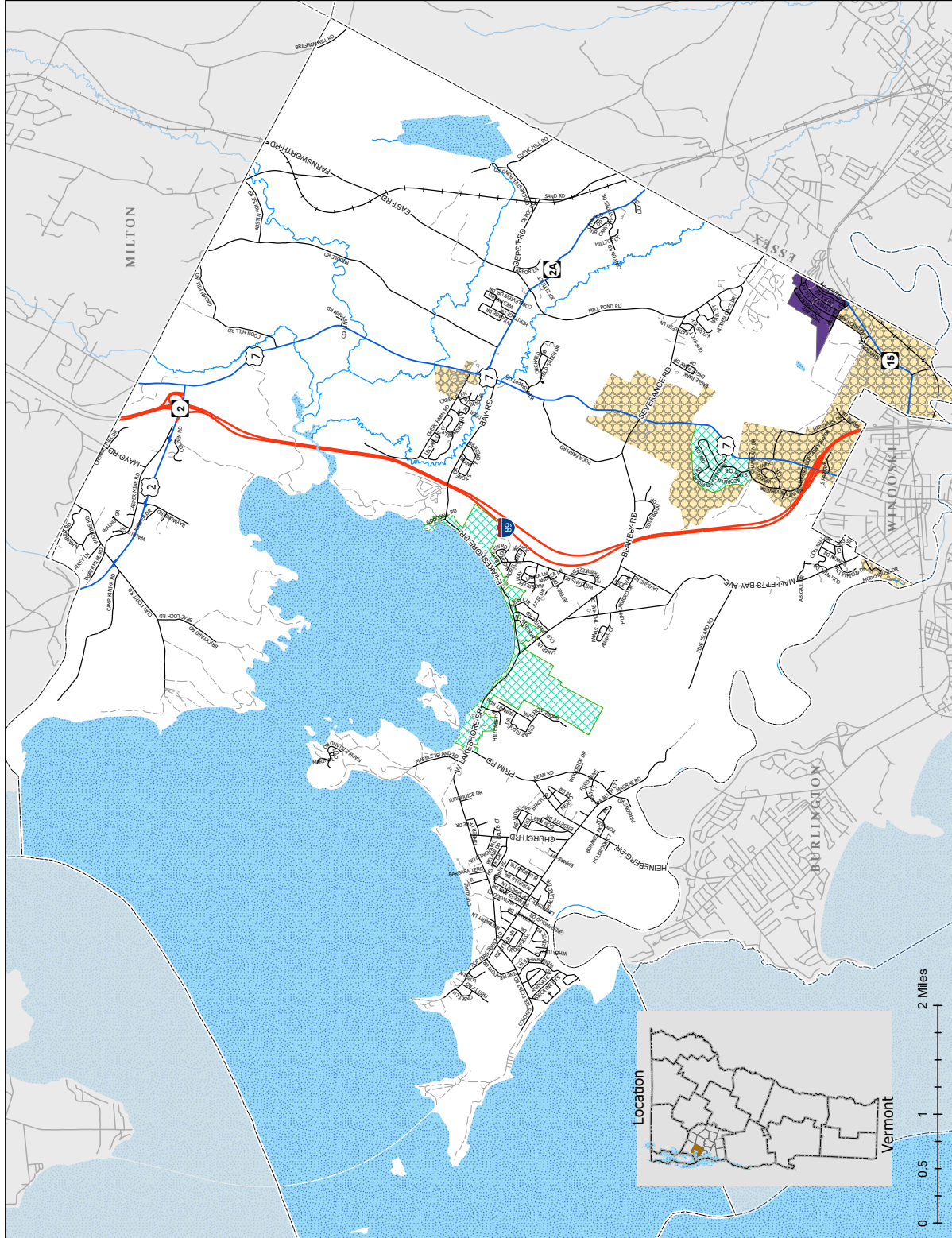
Source:  
Sewer SSA - CCRPC updated 2018  
Surface Water - IWMMP, 2011  
Road Centerline - CCRPC, 2018

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# Map 8 2019 Town Plan

## Utilities

Colchester, Vermont

### Legend

- Telecommunication
- Antenna or Tower
- Broadband - Cable
- Vermont Gas Service Area
- Interstate
- US or State Route
- Class 2 - 4 Road
- Private Road
- Railroad
- Stream Centerline
- Water Body

### Percent DSL Availability per buildings by Census Block

- ≤25%
- ≤50%
- ≤75%
- ≤100%



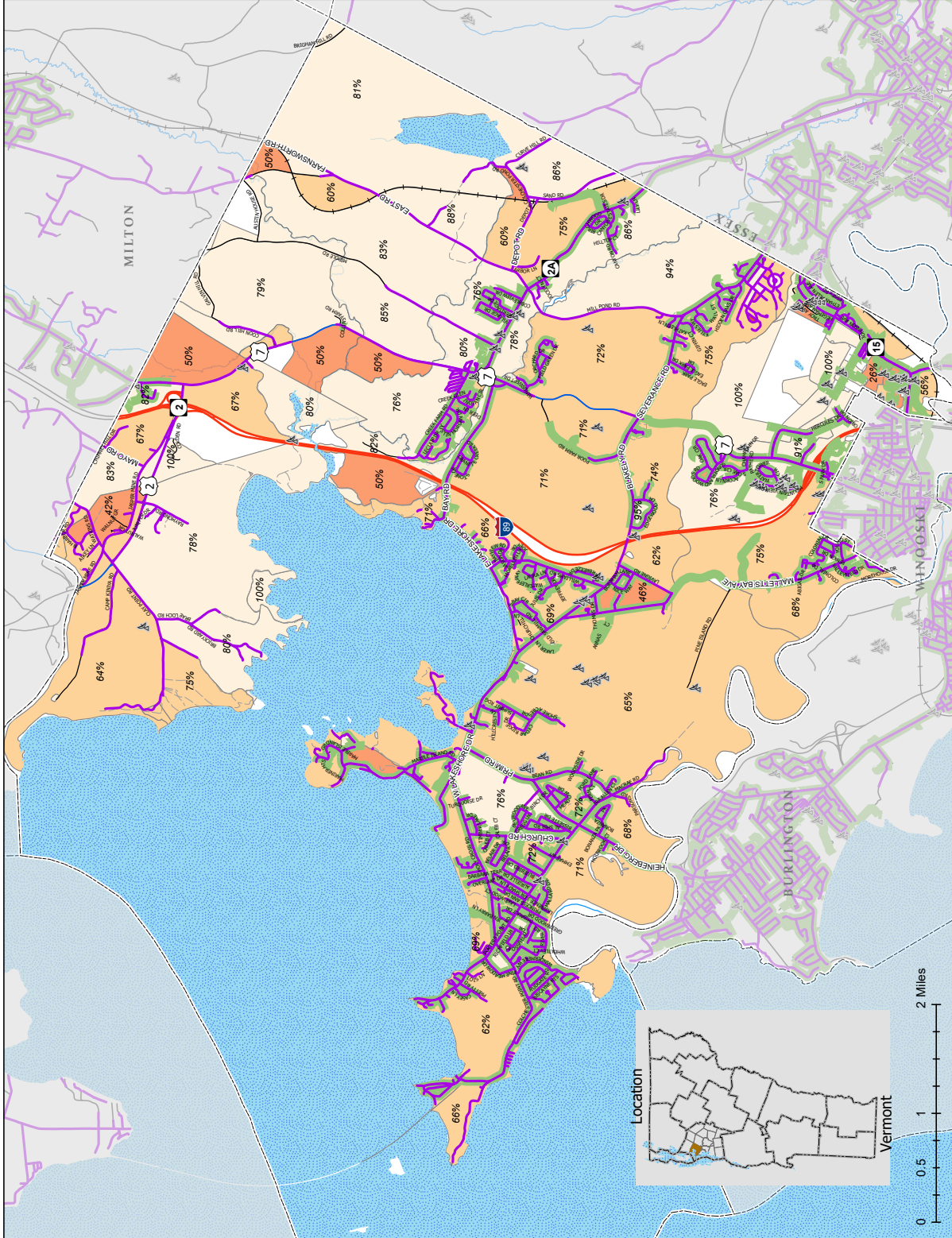
Source:  
Telecommunication - VT Environmental Board, 2014  
Broadband - 2013  
Surface Water - WRMP, 2011  
Road Centerline - CORC, guidance from town, 2018

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# Map 9 2019 Town Plan

## Public and Conservation Land

### Colchester, Vermont

- Legend**
- Park
  - Conserved Land
  - Conserved Land - Limited Access
  - Privately Conserved - No Public Access
  - Agricultural & Managed Forest - Land Use Value Program
  - Interstate
  - US or State Route
  - Class 2 - 4 Road
  - Private Road
  - Railroad
  - Stream Centerline
  - Water Body



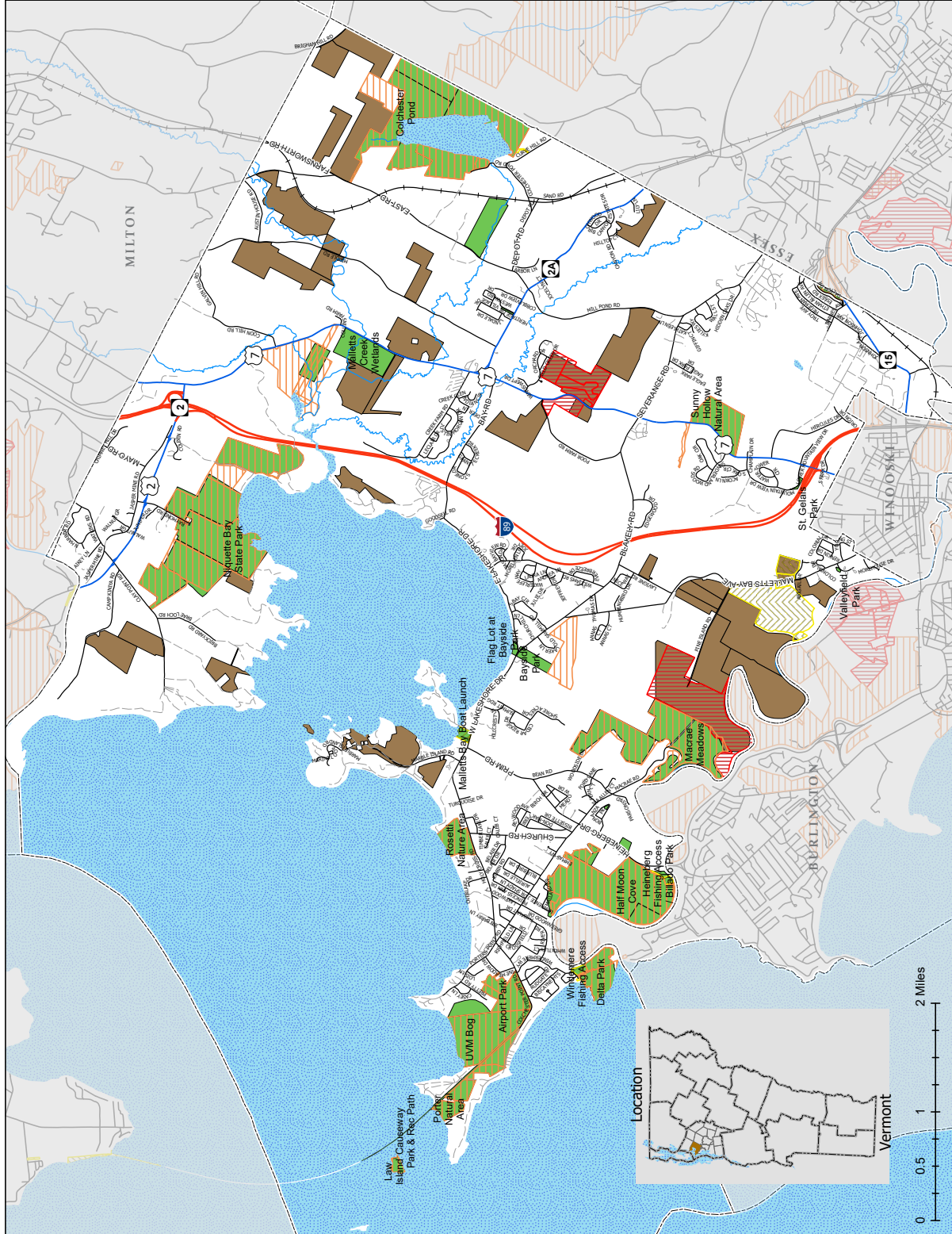
Source:  
Conserved - VT Protected Lands Database - 2017  
Park - Colchester  
2017 Use Value Program - Developed from VT Dept of Taxes  
Surface Water - 1989/91, 2011  
Road Centerline - CORPC, guidance from town, 2018

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







# Map 10 2019 Town Plan Natural Features

Colchester, Vermont

## Legend

-  Deer Wintering Areas
  -  Threatened or Endangered Species
  -  Rare Species
  -  Significant Natural Communities
  -  Steep Slope in Non-Residential Zoning Districts
  -  Slope Greater Than 20%
  -  Interstate
  -  US or State Route
  -  Class 2 - 4 Road
  -  Private Road
  -  Railroad
  -  Stream Centerline
  -  Water Body
- 
- Vermont Conservation Design - Landscape Scale Components**
  -  HIGHEST PRIORITY
  -  PRIORITY
  - Species and Community Scale**
  -  HIGHEST PRIORITY
  -  PRIORITY



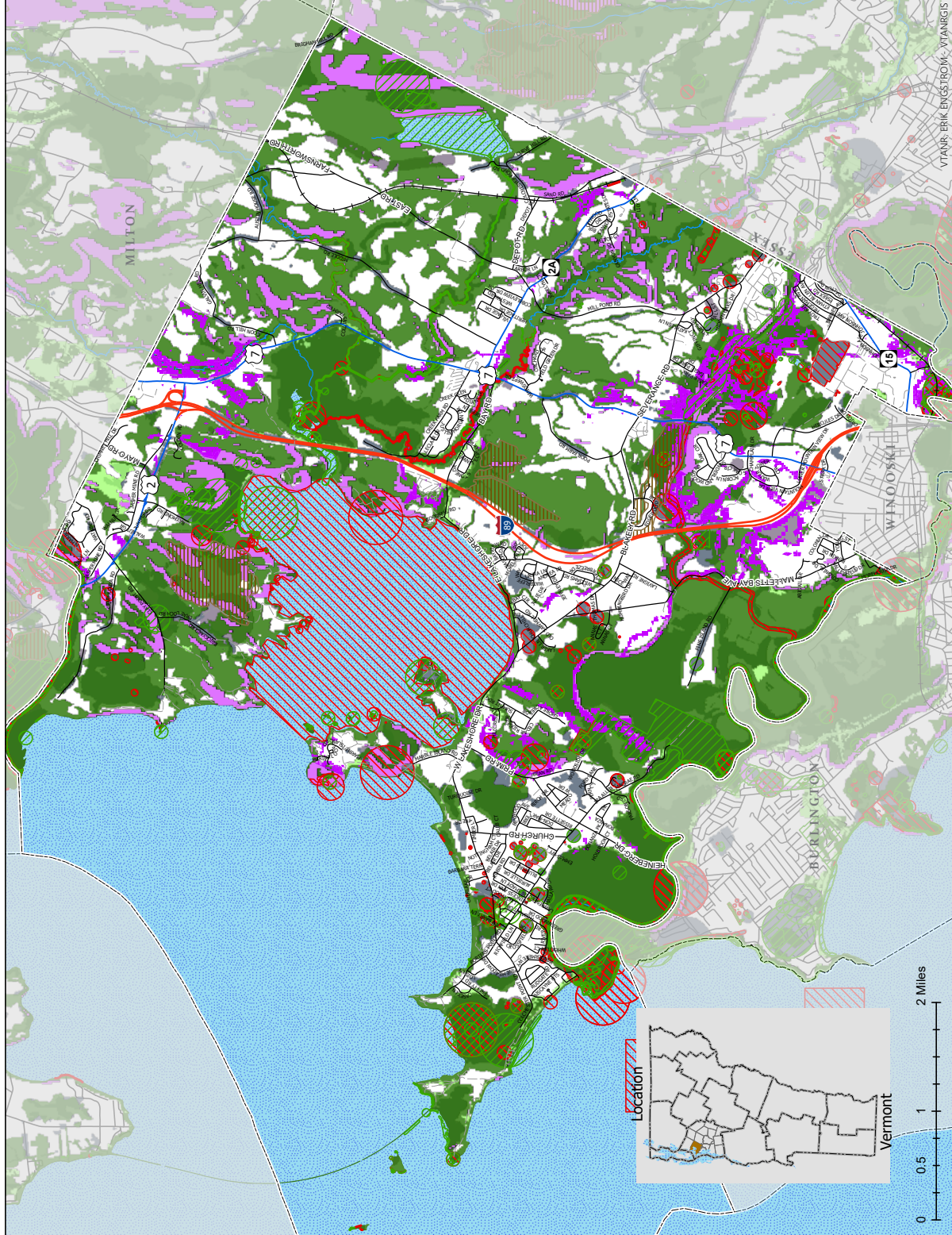
Source:  
Surface Water - TWBWP, 2011  
Road Centerline - CDRP - guidance from town, 2018

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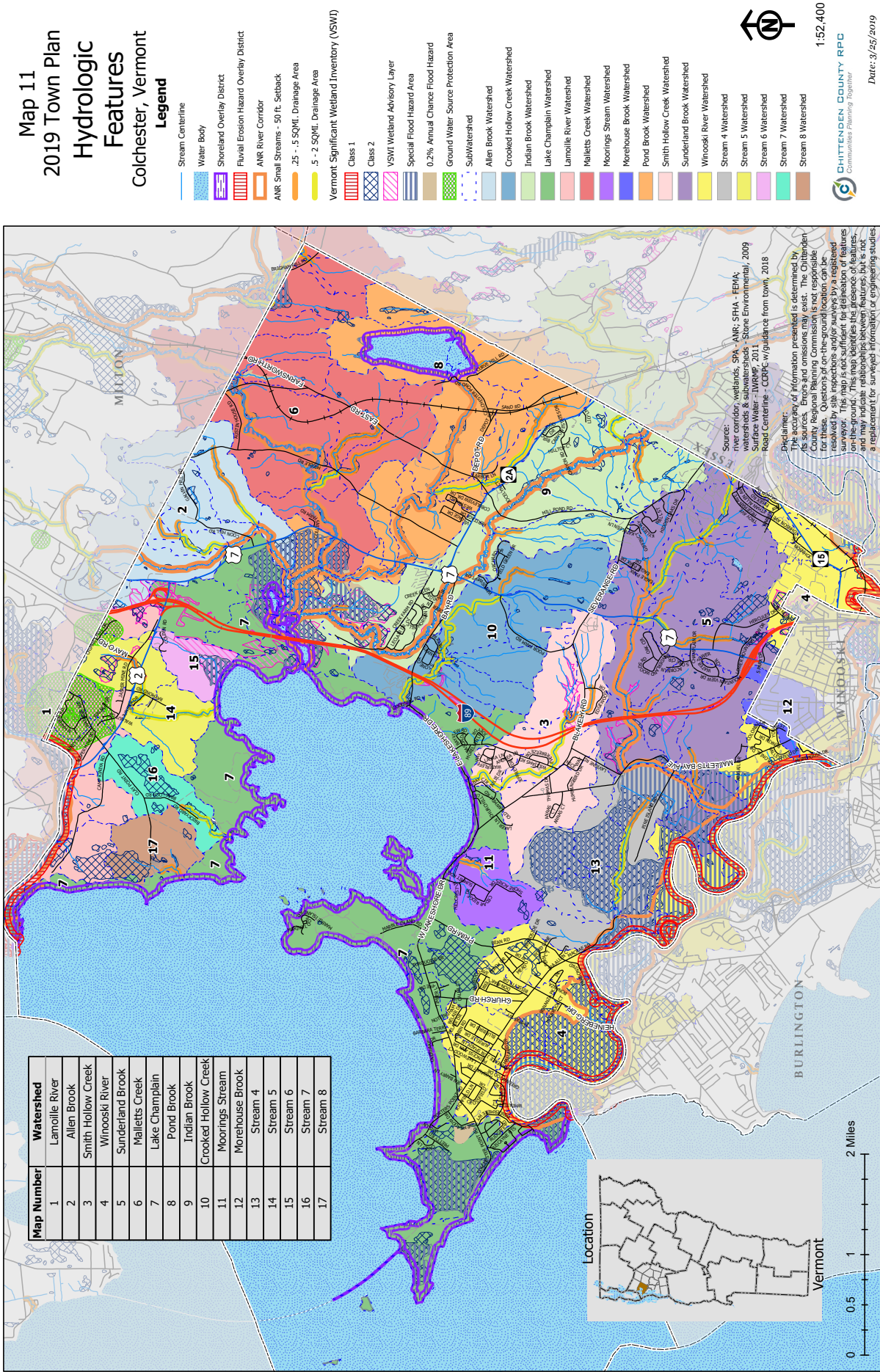
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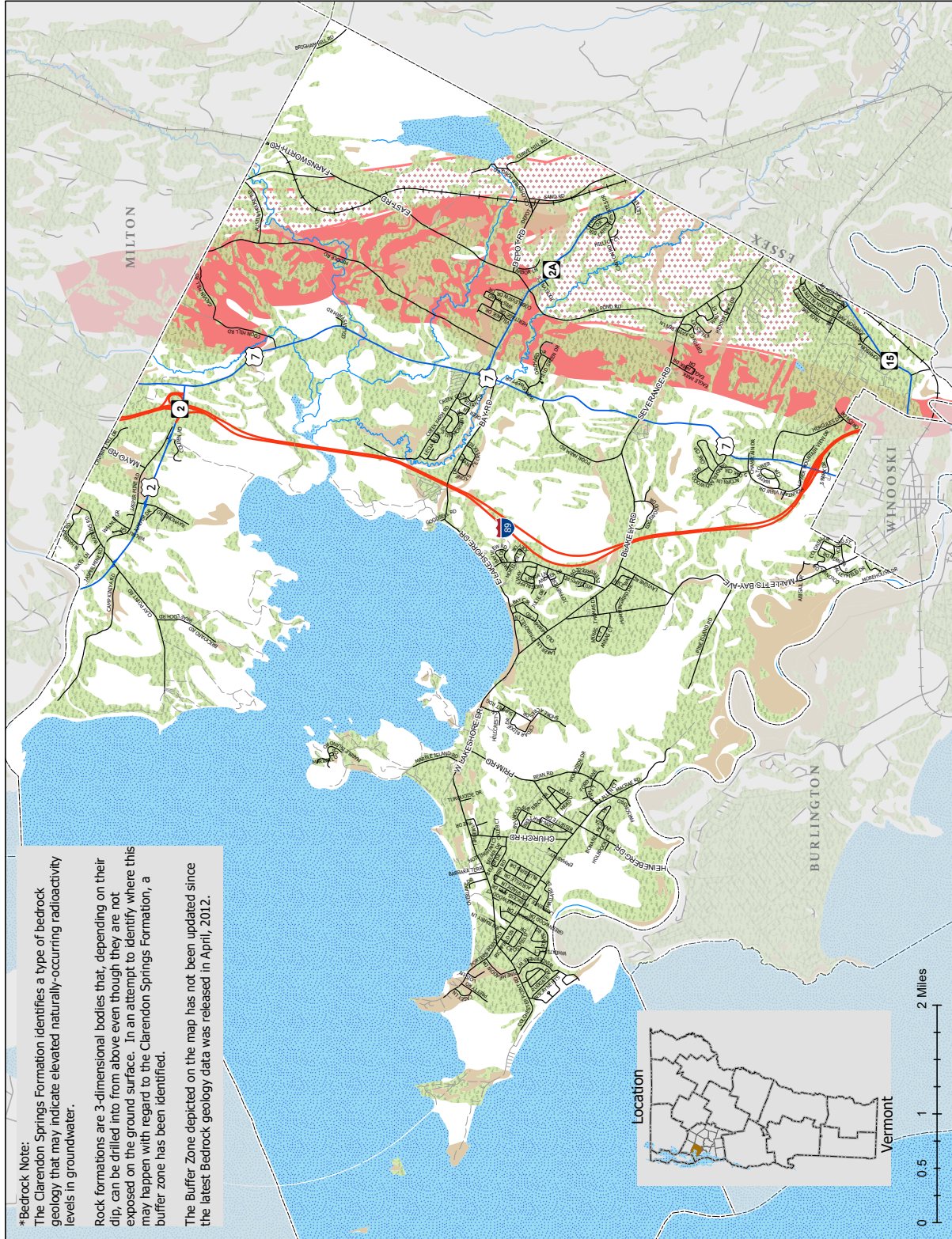




# Map 12 2019 Town Plan Soils

Colchester, Vermont

- Legend**
- Prime Agricultural Soil
  - Statewide Agricultural Soil
  - Bedrock\*
  - Clarendon Springs Formation
  - Buffer Zone
  - Interstate
  - US or State Route
  - Class 2 - 4 Road
  - Private Road
  - Railroad
  - Stream Centerline
  - Water Body



# Map 13 2019 Town Plan Community Facilities and Transportation Infrastructure Colchester, Vermont

## Legend

- P Existing Park & Ride
- ▲ Proposed Park & Ride
- Town Offices/Police Station
- Town Building
- Fire Station
- Rescue Squad
- Hospital
- Town Garage
- School
- College
- Library
- Post Office
- Cemetery
- Child Care Facility
- Existing Sidewalk
- Existing Multi-Use Path
- Striped Roadway
- Proposed Sidewalk
- Proposed Multi-Use Path
- Designated New Town Center
- Colchester Center Volunteer Fire Company
- Malletts Bay Fire Department
- Interstate
- US or State Route
- Class 2 - 4 Road
- Private Road
- Railroad
- Stream Centerline
- Water Body

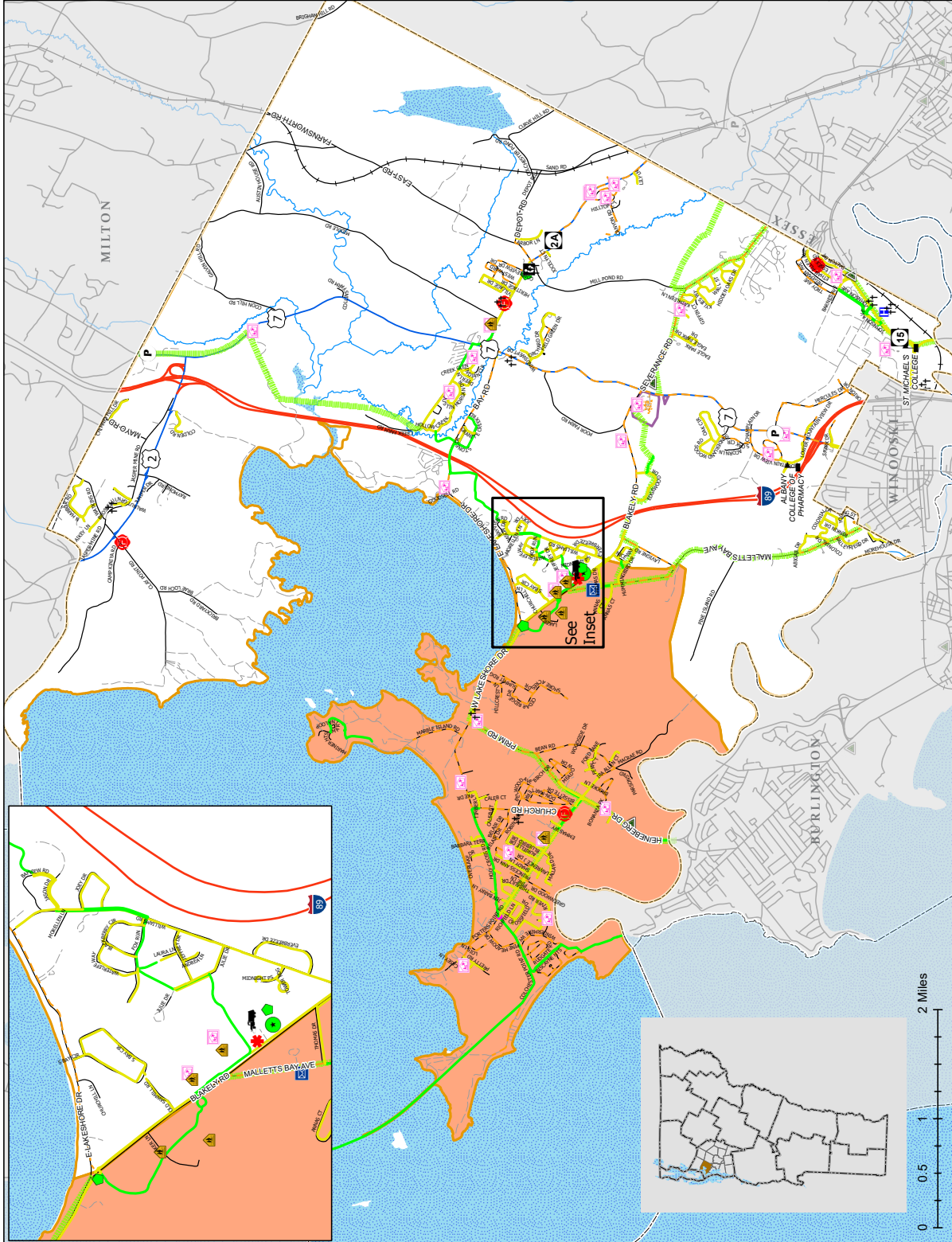
Source:  
Facilities - updated w/guidance from town  
Colchester Center Volunteer Fire Company, 2011  
Fire Department - updated by CCRPC, 2018  
Surface Water - IWRMP, 2011  
Road Centerline - CCRPC w/guidance from town; 2012

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# Map 14 2019 Town Plan Energy Planning

Colchester, Vermont

## Legend

Existing Renewable Energy Site as of 11/19/2018

★ Wind Site

■ Hydropower

● Wood Chip or Pellet Heat

● Solar Site

■ Preferred Renewable Energy Site - Parking Lot

■ Prime Solar: Areas with high solar energy potential and no state/local known or possible constraints

■ Base Solar: Areas with high solar energy potential and a presence of state/local possible constraints

■ Prime Wind: Areas with high wind energy potential and no state/local known or possible constraints

■ Base Wind: Areas with high wind energy potential and a presence of state/local possible constraints



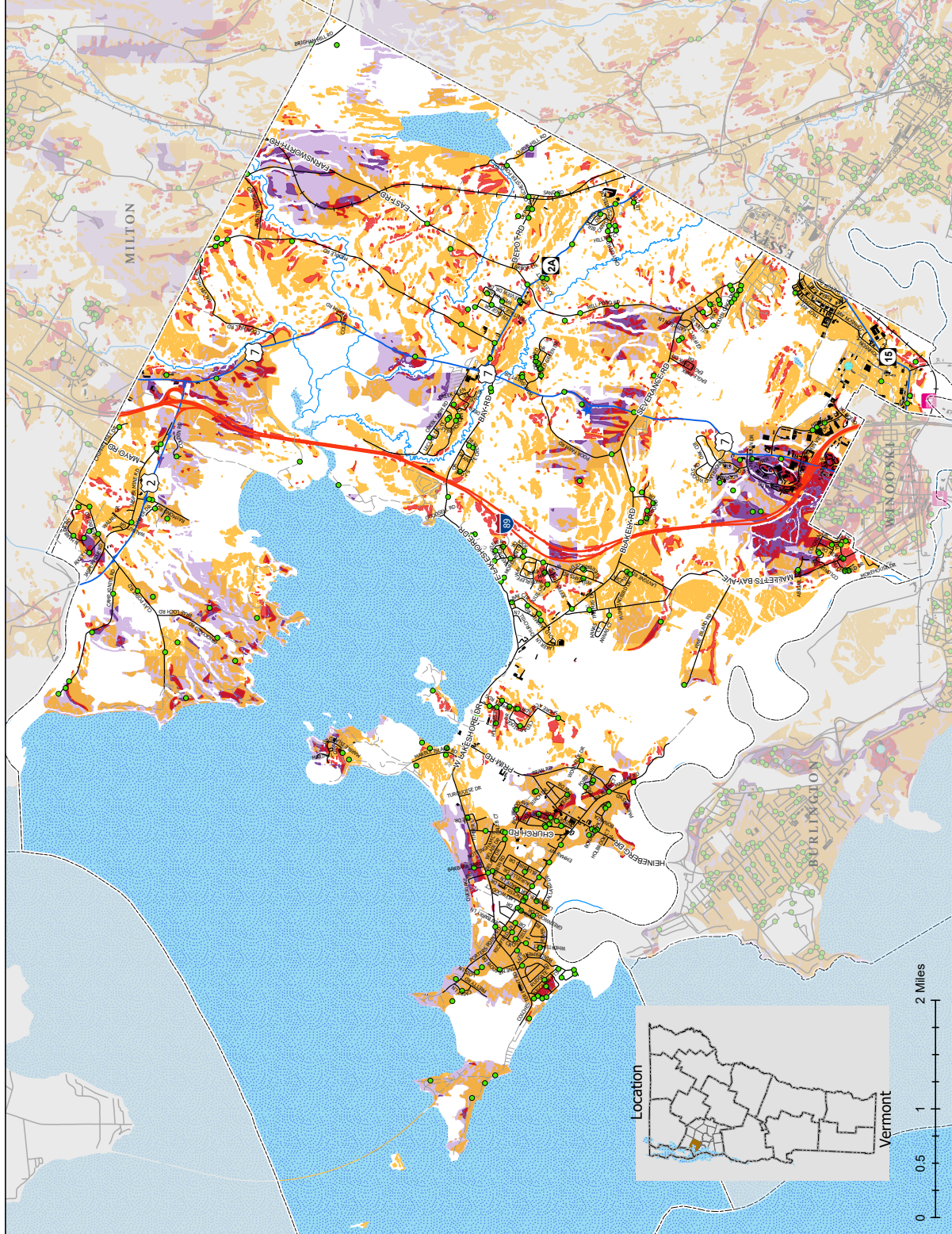
Source:  
Energy - ECOS plan 2018  
Surface Water - IVMP, 2011  
Road Centerline - CCRC, guidance from town, 2018

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Map 15  
2019 Town Plan  
State Known Constraints  
Energy Planning

Colchester, Vermont

Legend

- Stream Centerline
- Vernal Pools (Confirmed and Unconfirmed)
- VSWI + Advisory Wetlands
- DFIRM Floodways
- River Corridor (Jan 2015)
- Rare, Threatened, Endangered and Natural Communities
- Water Body



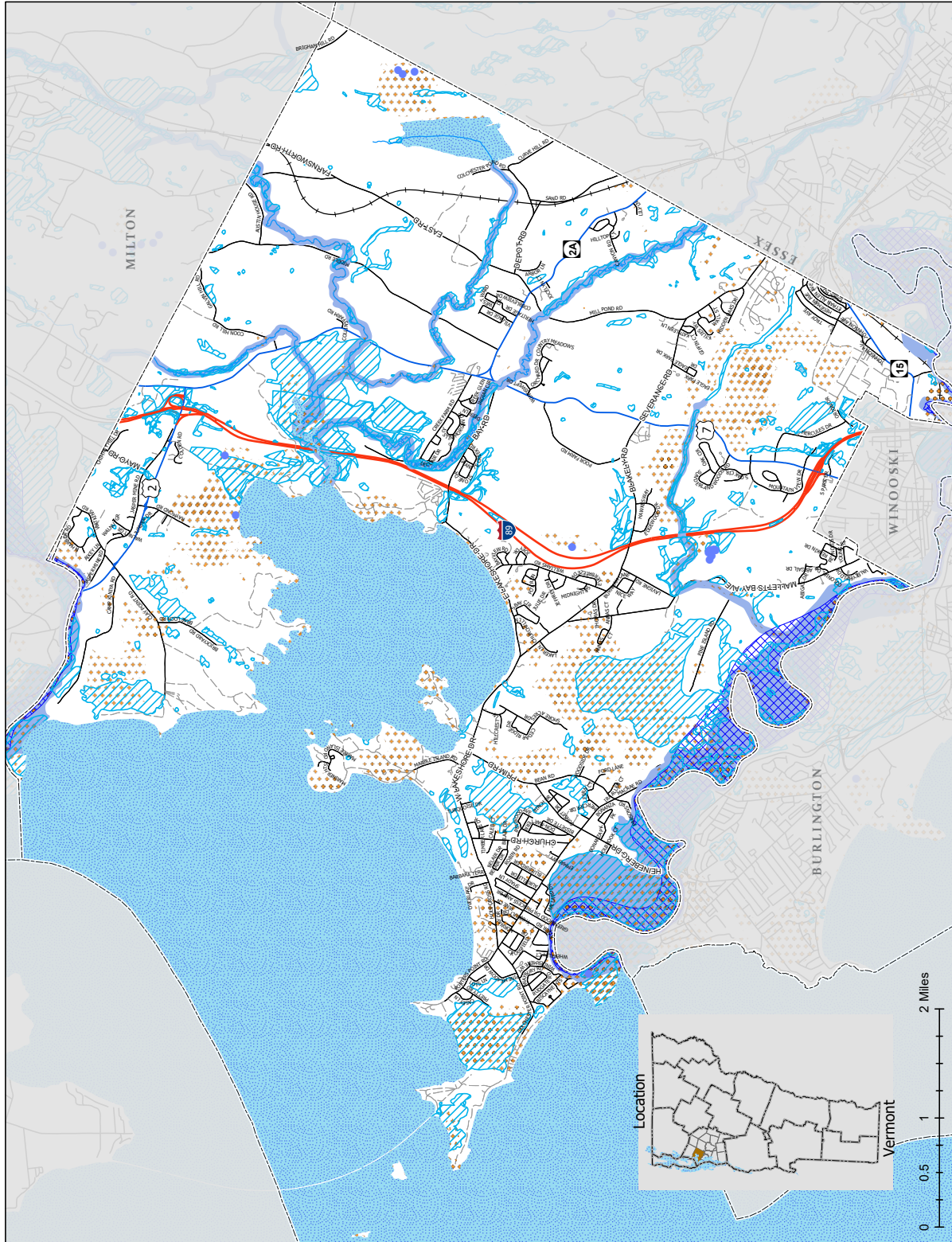
Source:  
State Known Constraint Layers-AWR

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Map 16  
2019 Town Plan  
State Possible Constraints  
Energy Planning

Colchester, Vermont

Legend

-  Water Body
-  Stream Centerline
-  Special Flood Hazard Area
-  Hydric Soils
-  Protected Land
-  Act 250 Soil Mitigation Areas

ANR's Conservation  
Design Highest Priority  
Forest Blocks

-  Highest Priority Forest Blocks (Physical)
-  Landscapes, Interior Blocks, or Connectivity
-  Deer Wintering Areas
-  Prime Agricultural Soil
-  Statewide Agricultural Soil

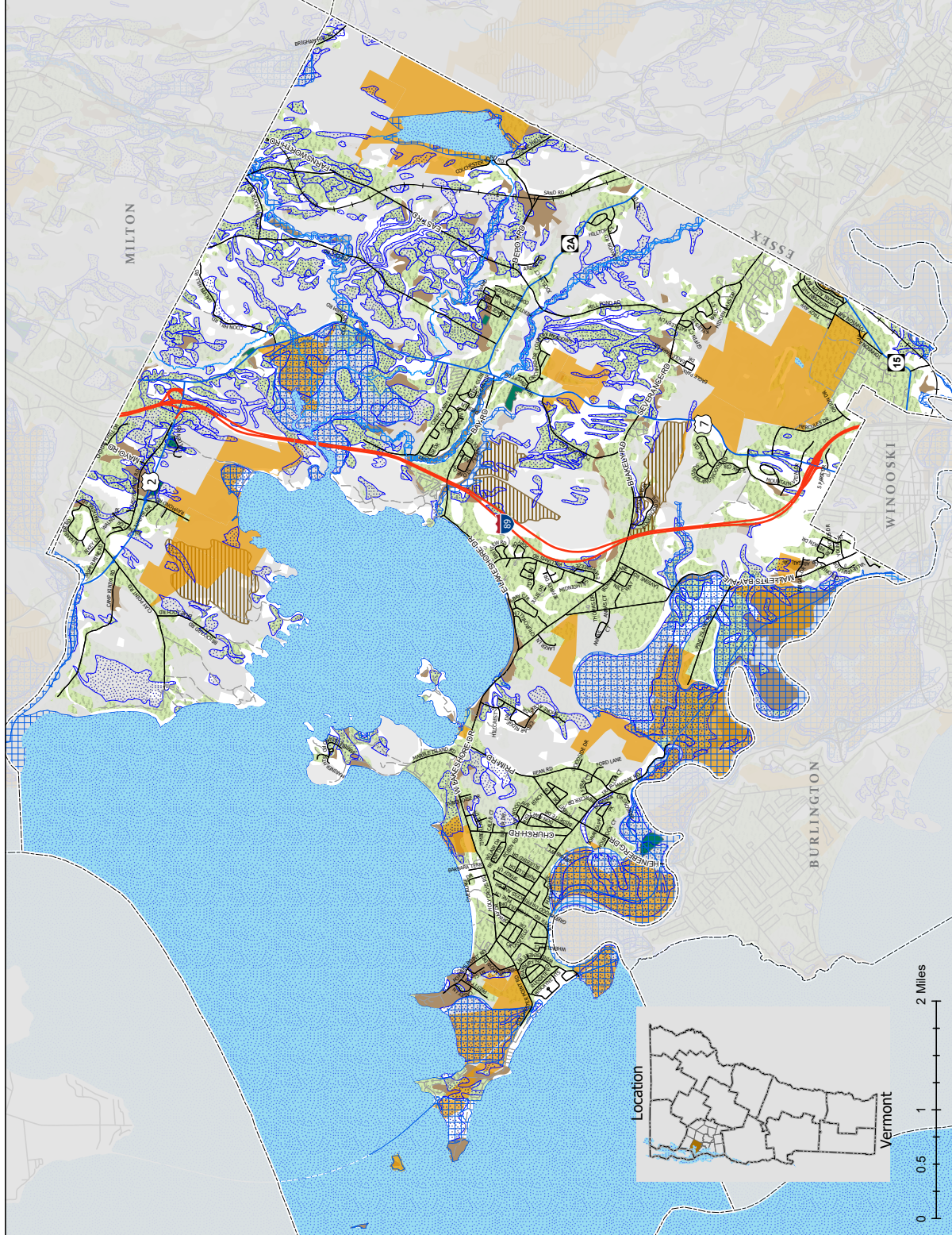


Source:  
State Possible Constraint Layers-ANR

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# Colchester

VERMONT

**2019**

**TOWN**

**PLAN**



# Colchester



What do you  
want to do  
today?

