
2013

ecos

Annual Report

The State of Chittenden County

First Edition



A NOTE FROM THE ECOS PARTNERSHIP

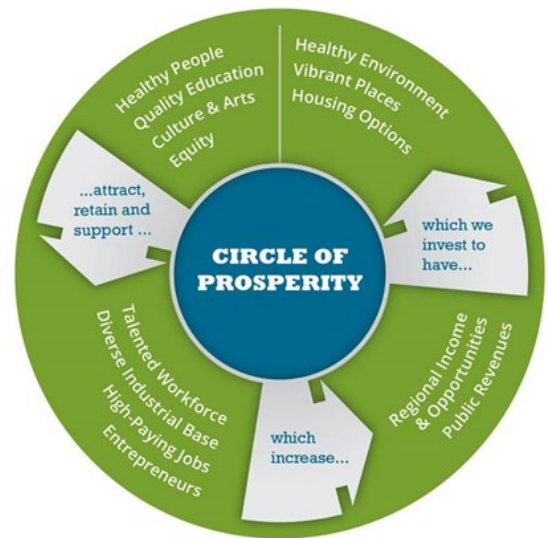
The ECOS Plan adoption in June, 2013 culminated efforts of over 60 organizations in Chittenden County, including all of the municipalities, working together. The ECOS Plan addresses the challenges facing the County and includes strategies to improve our community and achieve our shared vision for a healthy, inclusive and prosperous Chittenden County.

The ECOS Partnership formed to keep the focus on implementing the plan. The Partnership includes the Chittenden County Regional Planning Commission (CCRPC), the City of Burlington, Fletcher Allen Health Care, Greater Burlington Industrial Corporation, Lake Champlain Regional Chamber of Commerce, United Way of Chittenden County, University of Vermont, and the Vermont Department of Health. The Partners remain committed to working together to build upon our collaborative successes and address areas of concern, using principles known as **collective impact**, to meet ECOS' goals.

Collective impact results from the commitment of a group of people representing different sectors to a common agenda for solving a specific problem. This approach is collective, as diverse partners participate, having recognized that no one piece will bring success without the others. For example, we cannot achieve greater mobility, accessibility, affordability and health without concentrating development in planned growth areas. Further, we cannot concentrate growth without providing adequate infrastructure. Visually, these collective interrelationships are described in the Circle of Prosperity. Only by effective collaboration can we achieve improved outcomes without additional public expenditures. The ECOS Project will meet its goals through collective impact.

This full **2013 ECOS Annual Report** compiles accomplishments and indicators depicting progress toward our goals. The Report indicators are drawn from the most reliable statistics, objectively based on substantial research, and intended to be understood by broad audiences.

The summary that follows represents some of the most interesting trends, accomplishments, and actions needed to address the most pressing issues in our community. As we work collectively toward achieving our goals for a healthy, inclusive and prosperous Chittenden County, this Annual Report will serve as a tool to help track our progress and guide our actions. This work would not be possible without the help of our partners: the public and public representatives (federal, state, municipal and regional), and the business and non-profit sectors. We thank everyone who contributed to the first edition of this Report, which we hope will be a valuable tool.



The Circle of Prosperity reflects the interdependence of our efforts and results.

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DEMOGRAPHICS

- From 2010 to 2012, Chittenden County's population increased by 1.3%, or about 2,000 people. For comparison, the population of the state of Vermont has remained relatively unchanged.
- The percent of our population over the age of 65 increased by 2%, and those under age 18 decreased by 2%. For comparison, 12.1% of Chittenden County's population is 65 and over, compared to 15.7% for Vermont and 13.7% for the US.
- Chittenden County is more diverse when compared to the state of Vermont as a whole. From 2007 to 2012, the non-White or Hispanic population grew from 11,362 to 14,877 people, or from 7.4% to 9.4% of the total population. In comparison, Vermont's non-White or Hispanic population grew from 4.8% to 6%. This is an increase of 25+% for both the State and County.
- Refugee resettlement is contributing to population increases, with over 50 languages spoken.
- The number of Black or African Americans in Chittenden County has increased by 60% since 2007. In 2007, the Black or African American population was 2,409 and grew to 3,806 in 2012.

ECONOMY

Trends & Issues

- The number of businesses in Chittenden County is increasing and has surpassed 2008 levels, which indicates recovery from the economic downturn. Chittenden County saw a decrease of 1.5% (87 businesses) in the number of registered businesses between 2008 and 2010. 2012 was the first year since 2008 where the number of registered businesses exceeded the 2008 number. Chittenden County gained 130 new businesses in 2012.
- Since 2009, Chittenden County and Vermont's unemployment rates have decreased. In 2012, Chittenden County's average unemployment rate was 4%; statewide it was 5% and nationally it was 8%.
- We continue to experience tight labor supply in the following sectors: professional/technical, production/technical, and computer and mathematical.
- After a 2-year decline from 2008-2010, median household income has risen the past two years to \$64,000 and has now exceeded the 2008 peak. US median income was \$53,046. Vermont median household income was \$54,168.
- Household incomes for Black/African American and Asians are about 1/3 lower than for Whites.

Notable Accomplishments

- In terms of business growth, Dealer.com, Green Mountain Coffee Roasters, All Earth Renewables, ASIC North, Vermont Energy Investment Corporation, MicroStrain, and Competitive Computing were in the top ten for fastest five-year sales and employment growth. However, this was partially offset by layoffs at IBM.
- The Lake Champlain Regional Chamber of Commerce, through its Young Professionals Division, hosted the first annual Launch VT Business Pitch Competition.
- The ECOS Plan was adopted by the Chittenden County Regional Planning Commission as the Regional Plan and the Metropolitan Transportation Plan, and by the Greater Burlington Industrial Corporation as the Comprehensive Economic Development Strategy. The ECOS Plan is the culmination of extensive work from over 60 partners and hundreds of participants. This is the first time each organization's plans have been combined into a single plan.

High Priority Actions

- The Greater Burlington Industrial Corporation (GBIC) is partnering with the Vermont Technology Council to create a Web site portal to match Vermont technology companies with open internships with students in higher education seeking experience in the field.
- GBIC is working with IBM to get additional sites available for manufacturing uses.
- More targeted workforce development is needed to meet the needs of technology and manufacturing employers with a focus on science, technology, engineering, and math to further the growth of our knowledge-based economy. These technical skills are supplemented by the presence of a strong arts and creative community. More work is needed to identify opportunities to provide training to the existing workforce that don't yet have the skills needed for the 21st century workplace.
- Support is needed to improve the effectiveness of workforce development programs and relations between the Workforce Development Council, Agency of Human Services, the Departments of Education, Labor, and Economic Development.
- Retention-based incentives for strategic, high value added employers are needed.

ENVIRONMENT

Trends & Issues

- To address clean water goals, the 2012 draft Lake Champlain Total Maximum Daily Load (TMDL) will require the reduction of 190 tons per year (this means a 36% reduction) of phosphorous flowing into Lake Champlain and its streams and rivers.
- Significant work is needed to reduce energy consumption and fossil fuel usage to achieve the state's goals of 90% renewables by 2050 and a 50% reduction of greenhouse gas emissions by 2028.

Notable Accomplishments

- Progress is being made by Chittenden County's urban municipalities to establish flow restoration plans to improve the water quality of streams impacted by stormwater run-off.
- 575 renewable energy projects have been installed in Chittenden County, generating 97,333kW. Between 2011 and 2013, electricity generated from renewable energy generation sites in Chittenden County increased by 5%. The number of solar photovoltaic sites in Chittenden County increased by 78%.
- Efficiency Vermont's Home Energy Challenge resulted in 178 or .3% of homes weatherized in participating Chittenden County towns.
- Total energy consumption in Chittenden County has been decreasing from a high of 40 trillion BTU in 2003/4 to 37 trillion BTU in 2010, a 7.5% decrease.
- The Vermont Energy Investment Corporation (VEIC) and the Chittenden County Regional Planning Commission (CCRPC) completed an electric vehicle (EV) charging station planning analysis to determine the most appropriate locations for future charging facilities in the County.
- Numerous projects increasing transportation options were implemented, including:
 - Commuter transit to Milton and Colchester, operating six times a day;
 - Williston mid-day transit service;
 - Installation of nine transit shelters with solar lighting in Colchester and Williston;
 - New Park & Ride lot established at the Sawmill site in Underhill Flats;
 - The formation of an Employee Transportation Coordinator Network, with 15 local businesses currently enrolled;

- New sidewalks with multiuse paths in Colchester, Essex Junction, Burlington, Milton and implementation of Safe Routes to Schools in Jericho.

High Priority Actions

- Significant efforts will be needed by all parties to meet clean water standards for Lake Champlain. Prioritizing and funding these investments will be a substantial challenge, and an opportunity to improve our community and the health of Lake Champlain.
- More energy conservation and renewable energy investments are needed to help the state reach the goals of reducing energy consumption by weatherizing 25% of its housing stock by 2025 and generating 90% of its total energy from renewable sources.
- Installation of three Level 3 charging stations and EV enhancements for municipal plans and bylaws;
- More investments in efficient transportation projects are needed. Projects for 2014 include:
 - VT15 Footbridge and Browns Trace Multiuse Path, Jericho;
 - Meadow Run to Alliance Church Multiuse Path and So. Brownell Road Sidewalk, Williston;
 - Installation of five transit shelters with solar lighting in Essex and Williston;
 - Richmond Park & Ride completion, including signalization of I-89 southbound off ramp.

QUALITY OF PLACE

Trends & Issues

- 86% or 508 units of new housing development occurred in areas planned for growth by the municipalities, exceeding the goal of 80% for the second year in a row.
- The vacancy rate for rental units in Burlington and Winooski remains at about 1%, which is causing high rents and negatively impacting the overall housing market (a healthy rate is 3-5%). The rate has remained steadily below 2% since 2009 which indicates municipalities may need to increase the emphasis on constructing market rate housing alongside affordable housing initiatives.
- The recent downward trend in vehicle miles of travel seems to have ended. Total vehicle miles traveled per person in 2012 was the highest since 2007 and increased 2% over 2011.
- There are 776 at-risk structures (1.3% of the total) in flood and/or erosion hazard zones. Slightly over half of these structures are single family homes.

Notable Accomplishments

- Chittenden County municipalities are succeeding in encouraging redevelopment and development in areas planned for growth. Some specific highlights include:
 - Hinesburg Cheese Plant redevelopment;
 - Colchester's adoption of form-based code zoning for the Severance Corners Growth Center. Form-based code is a tool used to regulate new development in a fashion that fosters predictable built results (by using illustrations more easily understood by developers and the public) and a high-quality physical form appropriate for Vermont's landscape.
 - Burlington's adoption of PlanBTV, a land use and development plan for Burlington's Downtown and Waterfront.

- With support from the Department of Housing and Community Development, the 2013 Vermont Legislature amended the Neighborhood Development designation process to encourage development around designated villages and downtowns.
- In Spring 2013, United Way of Chittenden County launched Neighbor Rides, a strategic initiative that brings together transportation and service providers to advance the health and well-being of seniors and persons with disabilities by expanding limited transportation dollars more efficiently through the use of volunteer drivers.
- Transportation System Improvements included:
 - VT117/Sand Hill Road intersection in Essex Junction;
 - VT2A/VT289 Intersection Adaptive Signal Control in Essex;
 - Checkered House Bridge in Richmond;
 - Quinlan Covered Bridge in Charlotte;
 - Paving of US2 (Colchester and Bolton), VT128 (Essex to Westford), US7 (Charlotte to South Burlington), VT116 (Hinesburg).
- Vermont enacted flood resiliency legislative changes in May, 2013. Act 16 addresses municipal and regional planning and flood resilience and creates planning goals to reduce future flood damage.

High Priority Actions

- Form-based code efforts initiated in Burlington, South Burlington, Shelburne, Westford, Jericho, and Winowski.
- Improvements to Vermont's growth center designation process by the Legislature and ACCD.
- Progress on transportation projects, including:
 - Construction of US2/Exit 14 improvements—Staples Lane;
 - Commencement of 3-year I-89 bridge replacement over Lamoille River, Milton;
 - Paving of US2 (South Burlington to Williston) and VT2A (Williston).
- Seek hazard mitigation funding from FEMA for property owners with structures in hazard zones.

COMMUNITY

Trends & Issues

- Based on the Opportunity Index, which looks at pre-school enrollment, high school graduation, post-secondary education, access to healthy foods, access to healthcare, and engagement in civic life, Vermont ranks first among the states, with Chittenden County ranking first among Vermont counties for having the highest opportunity index score.
- In the 2012/2013 school year, only 51% of 11th grade students in Chittenden County were proficient in math and only 44% were proficient in science. These percentages are significantly worse for English language learners and low income students.
- On average, low income and Non-White residents in Chittenden County have significantly worse outcomes related to health and education. For example, residents with incomes below 250% of the federal poverty level are three times more likely to be diagnosed with diabetes, cardiovascular disease, and asthma, and are twice as likely to be diagnosed with depression.
- Substance abuse remains an issue in Chittenden County and has many negative consequences. While alcohol consumption is the most prevalent form of substance abuse in Chittenden County, there is also an increasing concern about opiate abuse. Abuse of alcohol and illicit drugs strains families, communities, medical and social service systems, and public safety.

Notable Accomplishments

- The Flexible Pathways bill was passed in 2013, which increases learning opportunities for Vermont students. Included in the legislation is the expansion of the statewide Dual Enrollment Program, Early College Programs, work-based learning, the use of Personalized Learning Plans and virtual/blended learning.
- The Partnership for Change was initiated in Burlington and Winooski school districts to engage students, teachers, parents and community members in remodeling the public high school system to align with what all young people need to thrive in a complex global society.
- UVM has initiated a Sustainable Entrepreneurship MBA program.
- The Howard Center opened a regional opioid treatment center in South Burlington to expand access to therapy for those with opioid dependence.
- In 2013, a new law made Vermont the first state in the nation to provide school meals — breakfast and lunch — at no charge for all students qualifying for the federal reduced-price meals program.
- The City of Burlington sponsored the “We All Belong” program, and the Chittenden County RPC sponsored “People of Color Leadership Development” training to create more inclusive work places and support leadership development in our diversifying community.

High Priority Actions

- Decrease health disparities by addressing the recommendations in the Health Disparities of Vermonters Report by the Vermont Department of Health, found at: <http://healthvermont.gov/pubs/healthdisparities/recommendations.pdf>
- Take additional actions to meet the increasing opiate crisis including actions for prevention, treatment and recovery.
- Support public schools and higher education efforts to increase the quality and quantity of STEM graduates to make sure that graduates have the skills and competencies they need for the 21st century workplace.
- Strengthen career development and experiential programs at institutions of higher education to prepare graduates for jobs in the County.
- Explore the development of efforts to advance equity in our organizations and the region.

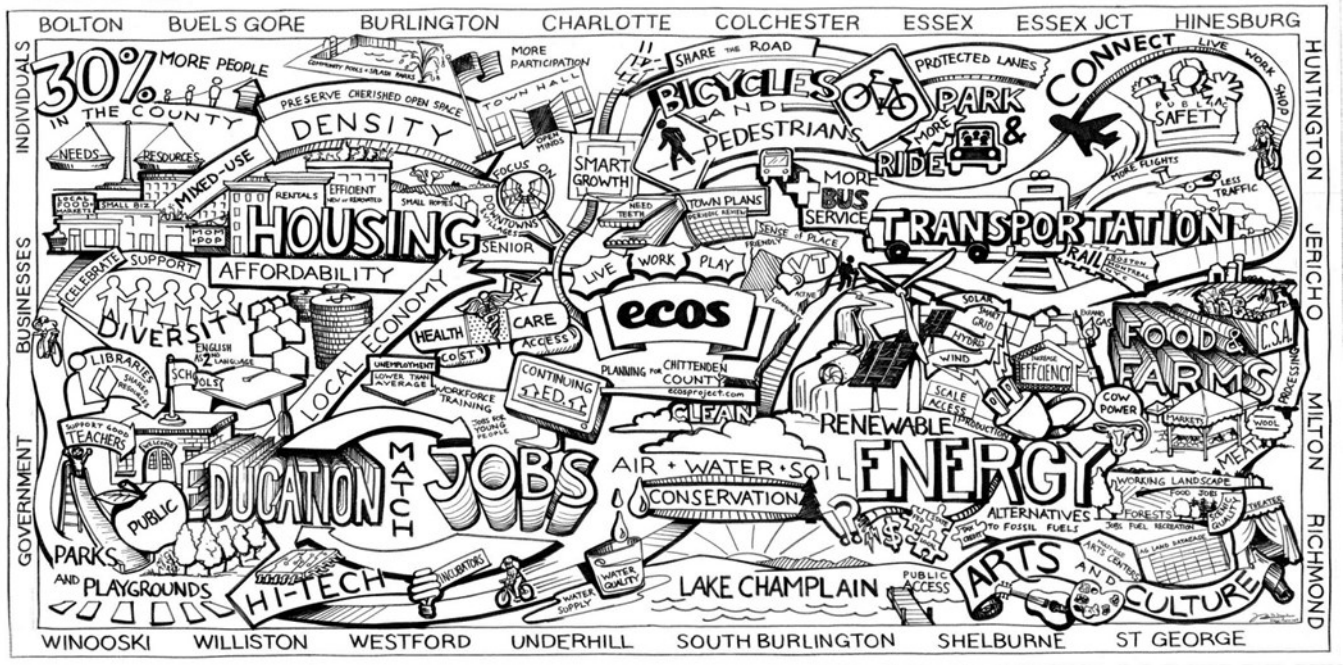
BACKGROUND

Starting in 2010, 65 organizations came together in partnership to support the implementation of a regional plan for sustainable development in Chittenden County called ECOS (Environment, Community, Opportunity and Sustainability). These partners included all 19 municipalities, state agencies and multiple organizations representing business, regional agencies, and non-profits. The ECOS project culminated with the adoption of the 2013 Chittenden County ECOS Plan in June, 2013. The ECOS Plan combines the Regional Plan, the Metropolitan Transportation Plan (MTP), and the Comprehensive Economic Strategy (CEDS) into one integrated plan.

At the crux of the ECOS Plan are goals for Chittenden County, which are representative of the common values that Chittenden County residents share. The ECOS Plan underscores the understanding that when decision-making is localized and accountability is shared across planning organizations, agencies and stakeholders have a greater likelihood of achieving our goals. The ECOS Plan provides a whole system perspective that connects actions taken to address one issue which effects other topic areas.

This document, the 2013 ECOS Annual Report, is an update and refinement to Chapter 2 of the ECOS Plan. The ECOS Annual Report shows us how we are doing relative to our ECOS goals. Evaluating our progress toward our goals will allow us to focus resources on those areas that most need additional attention to achieve a healthy, inclusive and prosperous community.

The development of the ECOS Plan and its indicators was guided by the ECOS Steering Committee, CEDS Committee, CCRPC's Long Range Planning Committee and sub-committees (Natural Systems, Transportation, Social Community, Health, Education, Climate, Economic Development, Energy, and Housing). The set of indicators in this Report reflect the work and decisions of these committees.



Mural by Matt Heywood, The Image Farm

2013 INDICATOR INDEX

Indicator	Trend	Page	Indicator	Trend	Page
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<u>Ecological Systems: Land Cover Losses</u>	○	27	<u>Health: Smoking Prevalence</u>	●	48
<u>Ecological Systems: Streams and Rivers Water Quality</u>	○	28	<u>Health: Substance Abuse</u>	●	49
<u>Ecological Systems: Lake Champlain Water Quality</u>	●	29	<u>Public Safety, Criminal Justice, & Hazard Mitigation: Violent Crime Rate</u>	●	50
<u>Impervious Area by Watershed</u>	○	30	<u>Public Safety, Criminal Justice, & Hazard Mitigation: Non-Violent Crime Rate</u>	●	51
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<u>Scenic, Recreational, & Historic Resources: Scenic Resources</u>	○	34	<u>Public Safety, Criminal Justice, & Hazard Mitigation: Transportation Safety</u>	●	55
<u>Climate Change: Greenhouse Gas Emissions</u>	●	35	<u>Social Connectedness: Racial Integration</u>	●	56
<u>Climate Change: Major Disaster Declarations</u>	●	36	<u>Social Connectedness: Social Service Transport</u>	●	57
<u>Climate Change: Vegetated Landscapes</u>	○	37	<u>Civic Engagement: Voter Rate</u>	●	58
<u>Climate Change: Heat Stress Hospitalizations</u>	●	38	<u>Civic Engagement: Youth Engagement</u>	●	59
<u>Climate Change: Vector Borne Illness</u>	●	39	<u>Social Community: Opportunity Index</u>		60
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<u>Education, Knowledge and Skills: School Readiness</u>	○	41	<u>Economy: Job Growth</u>	●	62
<u>Education, Knowledge, and Skills: Student Proficiency (NECAP)</u>	○	42	<u>Economy: Unemployment Rate</u>	●	63
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Legend

- = positive trend over previous year or meeting specific target
- = negative over previous year or not meeting a specific target
- = difficult to judge the trend or no change in trend
- = trend data not shown or not available

2013 INDICATOR INDEX

Indicator	Trend	Page	Indicator	Trend	Page
Economy: Wages by Sector	●	64	Infrastructure & Facilities: Current Water Capacity	○	84
Household Financial Security: Household Income	●	65	Infrastructure & Facilities: Current Waste-Water Capacity	○	85
Household Financial Security: Income by Race	○	66	Infrastructure & Facilities: Storm Water Management	○	86
Household Financial Security: Income Below Poverty	●	67	Infrastructure & Facilities: Solid Waste	●	87
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WHAT IS AN INDICATOR REPORT?

This indicator report provides a shared lens to track the progress of Chittenden County against the ECOS goals related to the Natural Systems, Built Environment, Economy and Social Community. Evaluating the progress toward our goals will allow us to focus resources on those areas that most need additional attention to achieve a healthy, inclusive and prosperous community.

The ECOS Partnership is committed to annually preparing an indicator report. The partnership to produce the Annual Indicator Report includes both the **ECOS Data Partner Committee** and **ECOS Leadership Committee**. The committees consist of staff from the Center for Rural Studies, United Way of Chittenden County, Vermont Agency of Education, Vermont Department of Health, Vermont Agency of Natural Resources, Greater Burlington Industrial Corporation, University of Vermont, Fletcher Allen Health Care, Vermont Housing Finance Agency, Chittenden County Regional Planning Commission, the City of Burlington, and the Lake Champlain Regional Chamber of Commerce.

In total, the ECOS Annual Report includes over 80 indicators. For this report, approximately 60 indicators were updated. The indicators that were updated are stamped with **NEW**.

Indicators are quantitative measures that the region will use to measure our success in attaining our goals. They are tools that are designed to alert us to the condition of our system. They allow us to reflect on where we have been, where we are now, and what critical areas need our attention if we are to achieve our goals.

Indicators:

- Tell us if we are moving toward our goals
- Simplify complex systems
- Identify priorities
- Alert us to issues that need attention and analysis
- Assist in decision-making
- Help us tell the story



It is important to remember that indicators are powerful, important and necessary tools, but they still need people behind them to make our community sustainable.

Legend

- Positive trend over the previous year or meeting specific target
- Negative trend over the previous year or not meeting a specific target
- Difficult to determine a trend
- Trend data is not available or not shown

Symbols are used in the indicator index (pages 9-10) to more easily determine those indicators that are trending in a positive direction or are trending in the wrong direction and need attention. By clearly identifying the indicators that need attention, we can evaluate current efforts and assist decision-makers in revising actions to reverse the negative trend.

ECOS ACCOMPLISHMENTS: INTRODUCTION

In an effort to highlight the many ECOS-related accomplishments made by our partners, the public (federal, state, municipal and regional), business and non-profit sectors, we've compiled a summary from the last year. These accomplishments are organized around the **8 ECOS Strategies**:



1. Improve and strengthen the economic systems of our region to increase opportunities for Vermont employers and employees.



2. Strive for 80% of new development in areas planned for growth, which amounts to 15% of our land area.



3. Improve the safety, water quality, and habitat of our rivers, streams, wetlands and lakes in each watershed.



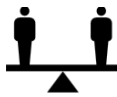
4. Increase investment in and decrease subdivision of working lands and significant habitats, and support local food systems.



5. Increase opportunity for every person in our community to achieve optimal health and personal safety.



6. Equip our residents with the education and skills they need to thrive.



7. Develop financing and governance systems to make the most efficient use of taxpayer dollars and reduce costs.



8. Ensure that the projects and actions in all ECOS strategies assess equity impacts, and that the design and development of programs are inclusive of all and engage underrepresented populations.

STRATEGY 1: ECONOMY & WORK FORCE



Improve and strengthen the economic systems of our region to increase opportunities for Vermont employers and employees.

Accomplishments:

a. Large Increase in Internship Grants from the State of Vermont | There was a significant increase in the number of internship grants offered from the State of Vermont in Chittenden County between FY2010 and FY2011, resulting in greater workforce development opportunities. In FY2010, 185 internship grants were offered; in FY2011, this number increased to 463.

b. Chittenden County After School Aspirations Program (ASAP) Launched | ASAP, launched in 2012, is a replicable and sustainable after-school curriculum for at-risk youth in grades 8-12 that assesses their interests and skill levels, raises post-secondary education aspirations, exposes them to the fields of science, technology, engineering and math (STEM), and prepares them for viable careers in Chittenden County. | *Partners: Lake Champlain Regional Chamber of Commerce, Lake Champlain Workforce Investment Board, Community College of Vermont, Boys and Girls Club of Burlington, Linking Learning to Life, King Street Center, Sara Holbrook Community Center.*

c. Business Support and Development: Burlington's Community Economic Development Office (CEDO) provided technical assistance to 171 business owners and entrepreneurs, resulting in the start-up of 3 new businesses, the expansion of 2 businesses and the creation of 28 new permanent full-time job equivalents.

d. Business Relocations to Vermont: The Greater Burlington Industrial Corporation worked with four significant prospects for business relocations to Vermont and all are at various stages in the recruitment process.

e. Industrial Park Expansions: The Greater Burlington Industrial Corporation completed an initial review of industrial park expansion opportunities in Chittenden County and is proceeding with engineering review of a specific site.

f. New Web Site Portal for Vermont Internships: The Greater Burlington Industrial Corporation partnered with the Vermont Technology Council to create a Web site portal to match Vermont technology companies with open internships with students in higher education seeking experience in the field. | www.vermont.internships.com

g. Vermont Flight Academy Technical Training: Burlington's CEDO assisted the Vermont Flight Academy in obtaining 501c3 status and helped the Academy develop and implement an accredited 4-year degree Pilot Training Program through Vermont Technical College. A total of 8.5 full time job equivalents were created and/or retained.

h. Launch VT Business Pitch Competition: The Chamber, through its Young Professionals Division, hosted the first annual Business Pitch Competition. Over 60 young entrepreneurs applied, the field was narrowed to 6 and those 6 went through a three month planning and development phase. Each start-up was assigned a mentor and a final pitch competition was held in May, 2013. The winners received \$20,000 in cash and \$30,000 in in-kind services (including office space) to grow their start-up.

i. College Student Mentoring: The Burlington Young Professionals teamed up with the Vermont Technology Council to offer college students mentors within the students' age demographic as they began to transition from college to the work world. The idea was to give the students a true understanding of the job market; make them aware that the Chittenden County area had jobs available to them and; to assist with their professional networking.

j. Online Education Platform: The Chamber launched its online asynchronous education platform in collaboration with Global Classroom. The purpose of the platform is to give business owners and employees the ability to access critical business training on their schedule.

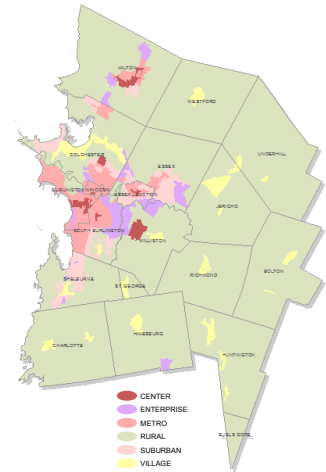
STRATEGY 2: INVESTING IN OUR COMMUNITIES



Strive for 80% of new development in areas planned for growth, which amounts to 15% of our land area.

Accomplishments:

- a. Town of Colchester** | Scoping studies initiated for amenities to create a walkable village in Colchester Center and transportation improvements for Exit 17 to address safety and congestion issues.
- b. Town of Colchester** | Completed an economic development action plan, hired an Economic Development Director to implement the plan and dedicated \$100,000 for a scoping study of a community center in Mallets Bay.
- c. Town of Colchester** | Passed a bond issue to assist landowner with funding a wastewater upgrade for a mobile home park that provides housing for low income families.
- d. Town of Colchester** | Entered into a 3-year pilot project with the Chittenden County Transit Authority (CTTA) and the Town of Milton for transit service along Route 7 and Water Tower Hill to Milton.
- e. Transportation Funding** | The Chittenden County Regional Planning Commission shifted their funding to finance transportation-related land-based changes.
- f. Town of Shelburne** | Harbor Road was reconstructed along an area that was sliding toward Shelburne Bay. The project involved the installation of drainage and cooperation with a land owner along the Bay to install stone ballast to stabilize the Road and shoulders toward the Lake.
- g. Town of Shelburne** | Route 7 was paved from just north of Shelburne Village through Charlotte. A sidewalk and various safety measures were installed on Harbor Road from the railroad tracks to just west of the Community School. Solar powered pedestrian-activated flashing lights were installed at the crosswalks; a solar powered speed indicator, as well as polymer material raised crosswalks were installed.
- h. PlanBTV Approved:** In Fall 2010, Burlington was awarded a Sustainable Communities Challenge Grant by the U.S. Housing and Urban Development (HUD), providing the City a unique opportunity to conduct a comprehensive public engagement and planning process about how to advance Burlington's place as one of America's most livable and sustainable communities. Known as PlanBTV, the Plan (approved by the City Council in June, 2013) captured innovative and creative ways on how to address complex urban challenges (including transportation, housing, environmental sustainability, and economic development) in the downtown and waterfront area. | <http://www.burlingtonvt.gov/PlanBTV/>
- i. City Hall Park Planning:** With the advent of community buy-in and support, Burlington City Arts completed an arts-focused public engagement process ("Imagine City Hall Park") including the completion of concept drawings for Burlington's Master Plan. | http://www.burlingtoncityarts.org/Imagine_City_Hall_Park/
- j. CATMA Business Membership Expansion:** The Campus Area Transportation Management Association (CATMA) expanded business membership to employers in Chittenden County who are seeking a managed comprehensive commuter program. The City of Burlington joined CATMA as an Associate (dues-paying) Member effective 7/1/13.
- k. Burlington's South Meadow Apartments Preserved** | The Champlain Housing Trust purchased and preserved 148 apartments in Burlington's south end, increasing rental affordability and providing opportunity for homeownership.



(Continued)

STRATEGY 2: INVESTING IN OUR COMMUNITIES

Accomplishments (Continued):

- I. CIRC Highway Alternatives Task Force Projects Coming to a Close** | Upon Governor Shumlin's announcement that the Circumferential Highway—as originally conceived—would not be built, the CCRPC has been leading the CIRC Highway Alternatives Task Force. The Task Force has agreed on a final set of projects, including the Crescent Connector in Essex, and Exit 16 in Colchester. | <http://www.ccrpcvt.org/transportation/corridors/circ-alternatives-task-force>
- m. Transportation Demand Management Improvements Made** | The CCRPC, along with regional and state partners, launched *Go! Chittenden County*, a one-stop shop for information and advice about our region's transportation resources to help people reduce single occupant vehicle trips. In addition, the CCRPC sponsored and participated in the 10th annual *Way to Go! Commuter Challenge* during the week of May 13-17, 2013 to encourage use of other transportation options (non-single occupant vehicle travel) and demonstrate the environmental and financial benefits. Work also began on updating the regional Intelligent Transportation System Plan, which describes how to best use telecommunications and computing technology to boost the efficiency of roadway, transit and emergency and maintenance vehicle response systems, and provide timely information on travel options. | <http://gochittendencounty.org>
- n. Electric Vehicle Charging Station Planning Analysis** | The Vermont Energy Investment Corporation and the Chittenden County Regional Planning Commission completed an Electric Vehicle Charging Station Planning Analysis to determine the most appropriate locations for future EV charging facilities in Chittenden County.
- o. Vermont Housing Finance Agency (VHFA) Worked to Create Affordable Housing** | VHFA worked with South Burlington, Williston, and Essex Junction to analyze their local needs and suggest improved bylaws and programs to create more affordable housing and increase housing choice.
- p. Residential Development** | Chittenden County exceeded its growth target for residential development in 2012. 86% of new housing units were constructed in areas planned for growth.
- q. Vermont Home Energy Challenge Launched** | In January 2013, Efficiency Vermont, in partnership with Vermont Energy and Climate Action Network and other organizations, launched the Vermont Home Energy Challenge, a year-long contest to weatherize 3% of the homes within participating communities.
- r. Cheese Plant Redevelopment in Hinesburg** | The Hinesburg community crafted a new vision for the fire-damaged Cheese Plant that had been shut down since 2008 — a redevelopment opportunity designed to attract like-minded developers and local businesses. After several years of hard work, and thanks to many public/private partnerships, the Cheese Plant was reborn in 2013 with a mix of local businesses, including value-added agriculture, technology, and a successful community-supported restaurant.
- s. IBM Employee Transportation Questionnaire:** The Campus Area Transportation Management Association (CATMA) conducted the first-ever Employee Transportation Questionnaire at IBM, providing baseline data and analyses of their employees' commuting behavior, needs and feedback. This data and insight will be valuable to IBM and GCC as IBM continues to evaluate and improve Transportation Demand Management at IBM-Burlington site/Innovation Technology Business Park.
- t. Business Toolkit Development for Go! Chittenden County:** The Campus Area Transportation Management Association (CATMA) developed a one-stop resource for information about Chittenden County's robust transportation offerings, partners and service providers, including an overview of specific resources, services and tools to assist businesses with exploring or enhancing transportation options at their worksite.

(Continued)

STRATEGY 2: INVESTING IN OUR COMMUNITIES

Accomplishments (Continued):

- u. Town of Milton:** Milton completed the Hobbs Road Sidewalk Connection to increase and improve its walkability network with the Town Core and surrounding neighborhoods.
- v. Town of Milton:** Milton selected a preferred alternative on the intersection redesign for the Railroad Street/Middle Road/Route 7 Intersection.
- w. Town of Milton:** Milton completed its 3.7 million dollar village core sewer system expansion in its Town Core Tax Increment Financing District.
- x. Employee Transportation Coordinator Network:** The Campus Area Transportation Management Association (CATMA) designed the structure of its Employee Transportation Coordinator Network. This network is a forum for employers to receive support, education and tools to enhance or implement mobility incentives, programs or strategies that work best for their worksite, along with encouragement to participate in statewide events (i.e. Way To Go, National Bike Challenge, Bike To Work Week, etc.).
- y. Path to Affordability:** South Burlington initiated and completed the “Path to Affordability” 2013 Affordable Housing Report with assistance from ECOS partners and under direction of a multi-disciplinary steering committee. In FY 2014, recommendations are being incorporated into the draft Comprehensive Plan and the Land Development Regulations, and a smaller study group is exploring implementation of additional recommendations.
- z. Complete Streets:** South Burlington performed a trial and ultimately made permanent a complete streets plan for Williston Road between Cottage Grove Ave and Aviation Ave.
- a1. Form Based Codes:** South Burlington initiated a project to develop Form Based Code-style regulations for the City Center area and overhaul regulations city-wide.
- b1. Form Based Codes:** Colchester adopted Form Based Code in Severance Corners.
- c1. Solar Generation:** South Burlington established a public-private partnership contract to develop net metering renewable energy generation projects and installed a solar array at Dorset Park under the contract.
- d1. City Neighborhoods Project:** Work was completed on the City Neighborhoods project, including refinancing and major rehabilitation of 40 scattered site affordable rental units. All units are now occupied by income-qualified households. The Thayer Commons Project, for example, resulted in 36 units for seniors. The Champlain Housing Trust (CHT) purchased South Meadow in the fall of 2012 and will result in 64 affordable apartments; 52 “market rate” apartments; and 32 condos for homeownership, some “market rate” and some permanently affordable with resale restrictions through CHT’s signature shared equity program. | www.burlingtonvt.gov/WorkArea/LinkIT.aspx?itemID=13769

STRATEGY 3: WATER QUALITY & SAFETY



Improve the safety, water quality, and habitat of our rivers, streams, wetlands and lakes in each watershed.

Accomplishments:

a. Connecting the Drops Highlights Water Quality Issues | In summer 2013, the Connecting the Drops project aimed to continue public awareness of water quality issues with a call to action, including a public art and education display in downtown Burlington, where art, public participation, science education, and environmental stewardship highlighted stormwater's impact on Lake health and the steps we can each take to improve it. | *Partners: Winooski Natural Resources Conservation District, ECHO Lake Aquarium & Science Center, Church St. Marketplace, ArtsRiot.* | <http://letitrain.org/connecting-the-drops>

b. Flood Resiliency Legislative Changes | In 2013, Vermont enacted Act 16, entitled "An act relating to municipal and regional planning and flood resilience," to create a new state planning goal and a new element for regional and town plans with the purpose of helping to reduce flood damage.

c. Stormwater Planning in Burlington: The City of Burlington launched its Stormwater Green Infrastructure Retrofit planning study for the College Street area and completed implementation of a suite of projects related to Blanchard Beach Stormwater improvement, including swale stabilization, swirl separator and wetland restoration. | <http://www.burlingtonvt.gov/DPW/Stormwater/Stormwater-Management/>

STRATEGY 4: RURAL LANDS & BUSINESS



Increase investment in and decrease subdivision of working lands and significant habitats, and support local food systems.

Accomplishments:

a. Shelburne Nature Trail Finished | The Town of Shelburne completed relocating or rebuilding about 1 mile of nature trail including 7 bridges and a memorial stone overlook at Shelburne Falls.

b. UVM Real Food Challenge | The University of Vermont has committed to purchasing 20% "Real Food" by 2020 as part of the Real Food Challenge, solidifying the institution's support for the development of a sustainable, local, fair and humane food system. | <http://www.realfoodchallenge.org>

c. Sustainable Agriculture / Food Security Plan: South Burlington initiated and completed the "Sustainable Agriculture / Food Security Action Plan." In FY 2014, recommendations are being incorporated into the draft Comprehensive Plan and the Land Development Regulations, and a smaller study group is exploring implementation of additional recommendations.

STRATEGY 5: HEALTH & PERSONAL SAFETY



Increase opportunity for every person in our community to achieve optimal health and personal safety.

Accomplishments:

- a. Free & Reduced Priced Meal Program** | In 2013, a new law made Vermont the first state in the nation to provide school meals — breakfast and lunch — at no charge for all students qualifying for the federal reduced-price meals program.
- b. Neighbor Rides Launched** | In spring 2013, United Way of Chittenden County launched Neighbor Rides, a strategic initiative that brings together transportation and service providers to advance the health and well-being of seniors and persons with disabilities by expending limited transportation dollars more efficiently through the use of volunteer drivers. Between April and September of 2013, Neighbor Rides volunteers provided 722 rides to seniors and persons with disabilities, the vast majority of which were for critical care and other medical appointments. | *Partners: Chittenden County Transportation Authority (CCTA); CVAA; Fanny Allen Corporation; Fletcher Allen Community Benefit Fund; Special Services Transportation Agency (SSTA); University of Vermont Center on Aging; Chittenden County Regional Planning Commission; ECOS.*
- c. Public Health Leadership** | In 2013, leaders from United Way of Chittenden County, the Health Department's Burlington District Office, Fletcher Allen Community Health Improvement, and the Chittenden County Regional Planning Commission / ECOS participated in a cross-sectoral leadership development fellowship offered by the CDC's National Leadership Academy for the Public's Health. The goal of the fellowship is to develop capacity within and among key local organizational for cross-sectoral leadership in addressing public health priorities. In addition to participating in the leadership development curriculum, the Chittenden County team is developing local messaging around the problem of food insecurity — and its cause and consequences — in our community, and the ways in which various sectors must play a role in solving this problem.
- d. Regional Opioid Treatment Center** | The HowardCenter opened a regional opioid treatment center in South Burlington to expand access to therapy for those with opioid dependence. State's Attorney TJ Donovan remarked, "the clinic is good for the public, and the greater public safety threat, in my opinion, is not expanding the capacity for treatment."
- e. Milton Farmers' Market Accessibility & Let's Move! Recognition** | The Healthy Community Design Task Force in Milton coordinated the relocation of the Town's struggling farmers' market to a location accessible by a range of transport options in order to stimulate market expansion and increase access to local foods. Earlier in the year, the Milton School District was also recognized by First Lady Michelle Obama's *Let's Move!* campaign for its food service model which makes use of local fresh produce and actively engages the student population.
- f. Penny for Parks:** With an annual budget of approximately \$350,000, the Penny for Parks (PFP) program, in the City of Burlington, was approved by voters in 2008 as a parks improvement fund supported by a dedicated tax. Eligible projects include the repair, renovation, replacement, or expansion of existing park facilities as well as the construction of new facilities in existing parks. Since 2012, as part of the Mayor's plan to catch up on the backlog of important community parks projects, various activities including those that impact families and children throughout the City have come to fruition. For example, the new Appletree Park playground was recently completed, representing one of this year's several PFP-funded projects. | <http://www.enjoyburlington.com/Projects/PennyforParks.cfm>

(Continued)

STRATEGY 5: HEALTH & PERSONAL SAFETY



Increase opportunity for every person in our community to achieve optimal health and personal safety.

Accomplishments (Continued):

g. Lead Abatement: The Burlington Lead Program completed testing for Lead-Based Paint hazards on 60 housing units, performed Lead Hazard Control activities on 48 housing units, trained 341 individuals on the VT Essential Maintenance Practices Lead Law (EMP), trained 7 low income Section 3 individuals as lead workers, 3 program staff in lead Inspector/Risk Assessors and 1 staff member in lead Project Designer, and conducted 86 Outreach and Education events that reached over 1,106 individuals. | <http://www.burlingtonvt.gov/CEDO/LeadProgram/Lead-Poisoning/>

h. Health and Safety on Burlington Roads: Completed a redesign of a key 1/2-mile section of Colchester Avenue in accordance with the City's Complete Streets policy. The redesign makes the roadway safer for drivers, walkers and bicyclists by reducing the number of travel lanes in order to add a center turn lane, bike lanes and better crosswalks.

STRATEGY 6: EDUCATION



Equip our residents with the education and skills they need to thrive.

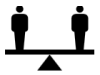
Accomplishments:

a. Flexible Pathways Bill Passed | In 2013, the Flexible Pathways bill was passed, which increases learning opportunities for Vermont students. Included in the legislation is the expansion of the statewide Dual Enrollment Program, Early College Programs, work-based learning, the use of Personalized Learning Plans and virtual/blended learning.

b. Personalized Learning Plans to be Implemented | The Vermont Legislature voted in October, 2013 that all grade 7-12 students engage in Personalized Learning Plans (PLPs) beginning in the 2014-15 school year. PLPs are projects for which students define lines of inquiry that are then pursued with the support of an advisor.

c. Partnership for Change Established | The Partnership for Change, established in 2012, seeks to remodel public education in Winooski and Burlington, Vermont in order to better prepare young people for success in today's complex and rapidly changing world. | <http://partnershipvt.org>

STRATEGY 7: FINANCING & GOVERNANCE



Develop financing and governance systems to make the most efficient use of taxpayer dollars and reduce costs.

Accomplishments:

a. ECOS Plan Adopted | The ECOS Plan was adopted by the Chittenden County Regional Planning Commission as the Regional Plan and the Metropolitan Transportation Plan, and by the Greater Burlington Industrial Corporation as the Comprehensive Economic Development Strategy. | <http://www.ecosproject.com>

b. Fiscal Stability Bond: In November 2012, Burlington voters approved a \$9 million “Fiscal Stability Bond,” allowing the City to avoid additional short-term debt with less expansive long-term debt. Replacing the short-term borrowing with the Fiscal Stability Bond is the rough municipal equivalent of an individual refinancing a large amount of rolling credit card debt with a stable mortgage at a time of historically low long-term interest rates.

STRATEGY 8: EQUITY



Ensure that the projects and actions in all ECOS strategies assess equity impacts, and that the design and development of programs are inclusive of all and engage underrepresented populations.

Accomplishments:

a. Town of Colchester Taking Steps to Encourage Citizen Participation in Government | The Town of Colchester entered into a partnership with school district and local newspaper to print a monthly edition of community news to encourage citizen participation in government.

b. Collaborative Social Community Planning | In October 2012, the CCRPC Executive Director and three other staff members from United Way of Chittenden County (UWCC) participated in a Collective Impact conference along with other Chittenden County partners representing state agencies, funders, and community organizations. Following the conference, UWCC has convened local stakeholders for discussion and planning around two areas of common interest: ensuring all Chittenden County children and adults have the education, skills, and opportunities necessary to meet their full economic and social potential and well-being; and removing barriers to health care for seniors, children, New Americans and other Vermonters adversely impacted by the social determinants of health. They are working together to explore collaborative investments and strategies to achieve collective impact.

c. Diversity & Equity Training | The Chittenden County Regional Planning Commission’s AmeriCorps Vista staff developed and hosted “Leadership for People of Color,” a leadership development program designed to prepare participants to become more actively involved in the decisions that impact the community.

(Continued)

STRATEGY 8: EQUITY



Ensure that the projects and actions in all ECOS strategies assess equity impacts, and that the design and development of programs are inclusive of all and engage underrepresented populations.

Accomplishments (Continued):

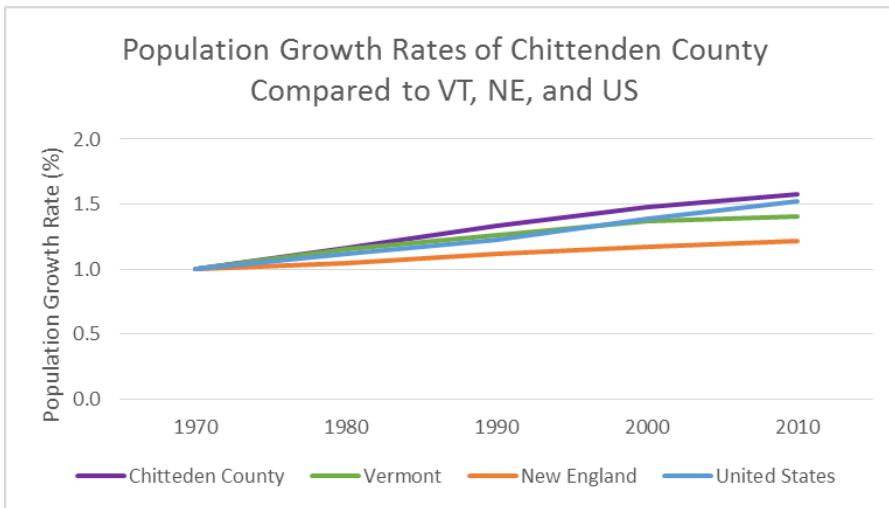
d. We All Belong: Burlington's We All Belong Program works with area non-profits, schools and City departments to create more inclusive workplaces and effectively serve our diversifying community. Over the last year, the program partnered with 15 organizations, including schools and City departments, and provided professional development to 100 leaders and 12 AmeriCorps members working to forward equity-related work. | <http://www.burlingtonvt.gov/CEDO/AmeriCorps/Diversity--Inclusion/>

e. Support to Area Non-Profits: Four Burlington-based agencies were supported with Community Development Block Grant (CDBG) funds to assist in the provision of high quality early care and education for 113 children from working families. | <http://www.burlingtonvt.gov/CEDO/CDBG-Program-Overview/>

REGIONAL CONTEXT

Introduction

Chittenden County is located in northwestern Vermont between Lake Champlain and the highest peaks of the Green Mountains. The County’s nearly 350,000 total acres have a rich diversity of landscapes: forests, farms, water bodies, small cities, suburban areas, and villages. Founded in 1787, Chittenden County is estimated to be home to 158,500 residents living in 19 municipalities that range in size from 30 to approximately 42,000 residents (*American Community Survey, 1-Year Estimates, 2012*). The county is home to Vermont’s largest higher education institution, health care facility and private sector employer; it has also been nationally recognized as having an outstanding quality of life for its residents.



Source: US Census Bureau, Decennial Census (1990-2010)

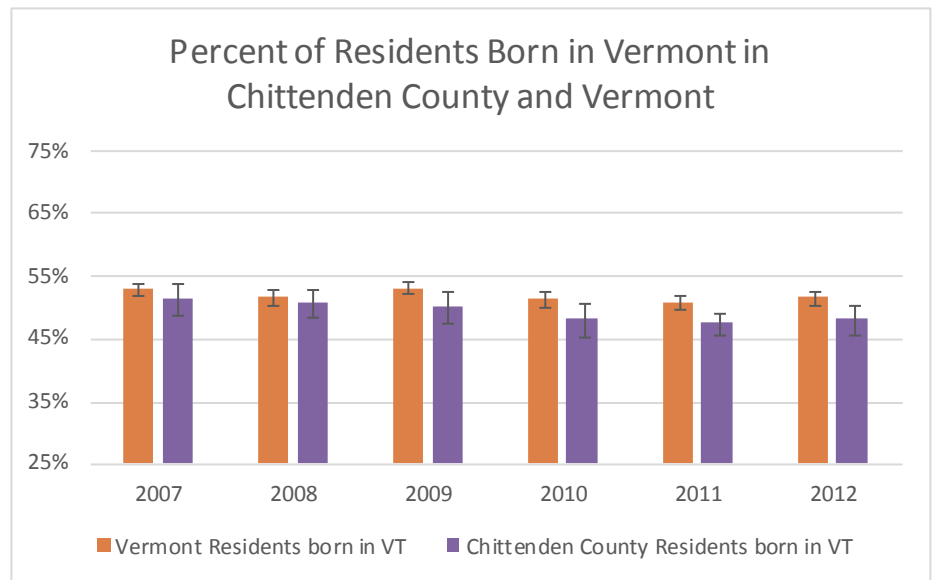
Population Growth

Unlike many rural regions across the United States, Chittenden County has experienced significant population growth over the past 30 years—growing at a faster rate than the state of Vermont and New England.

Migration

The percent of Vermont-born residents in Chittenden County has consistently been less than the state as a whole.

The County’s population growth is attributed to in-migration, which has been key to the economic growth with the County.

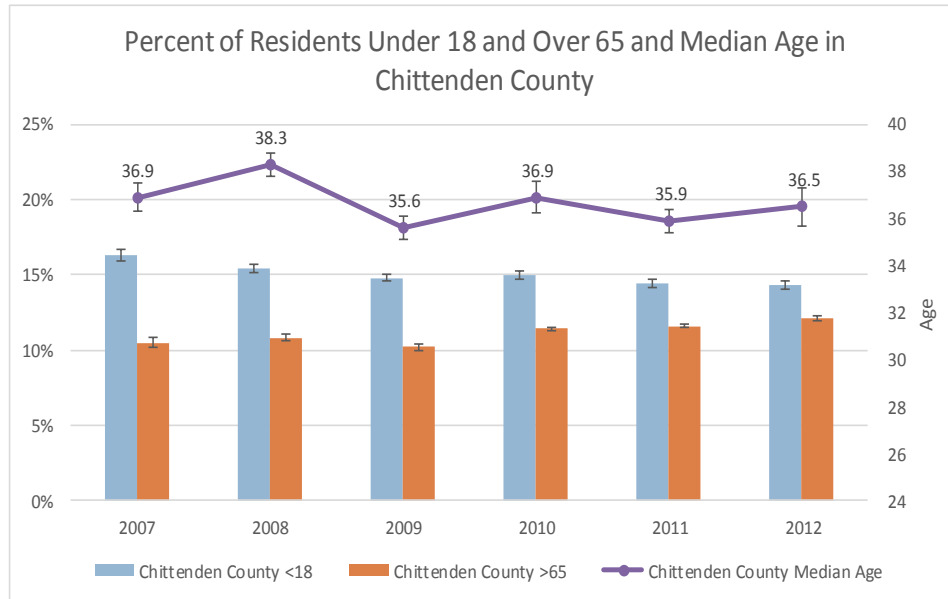


Source: American Community Survey 1 Year Estimates, (2007—2012)

REGIONAL CONTEXT

Understanding our Community

Information about the people living in Chittenden County helps us understand the nature of our community and how we are changing over time. Such information can help decision-makers anticipate potential pressures on the wider social, economic, and physical environments. Factors such as age, ethnicity, migration and household composition are often key determinants of conditions across a whole range of issues affecting quality of life. It is important to note that the US Census Bureau includes college students.



Age Composition

Since 2007, there has been a slight increase in the percentage of residents over 65 years of age while the percentage of residents under 18 years of age has remained fairly flat at approximately 15% of the county's total population.

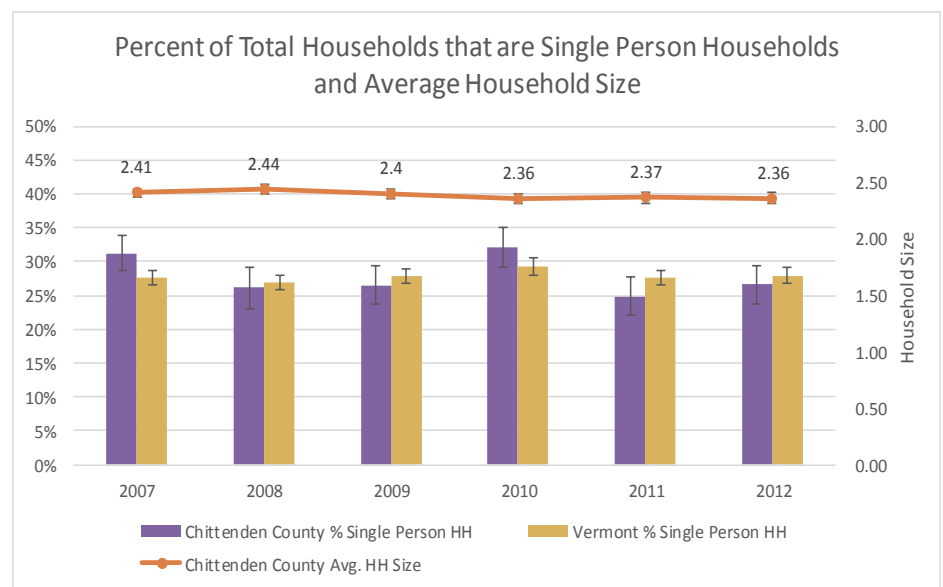
The county's median age in 2012 was 36.5 years, lower than the state's median age of 42.4 years of age.

Source: American Community Survey 1 Year Estimates, (2007—2012)

Household Composition

The median age of residents within Chittenden County has been slightly decreasing since 2007.

The percent of single-person households in Chittenden County is largely similar to the percentage statewide since 2007.

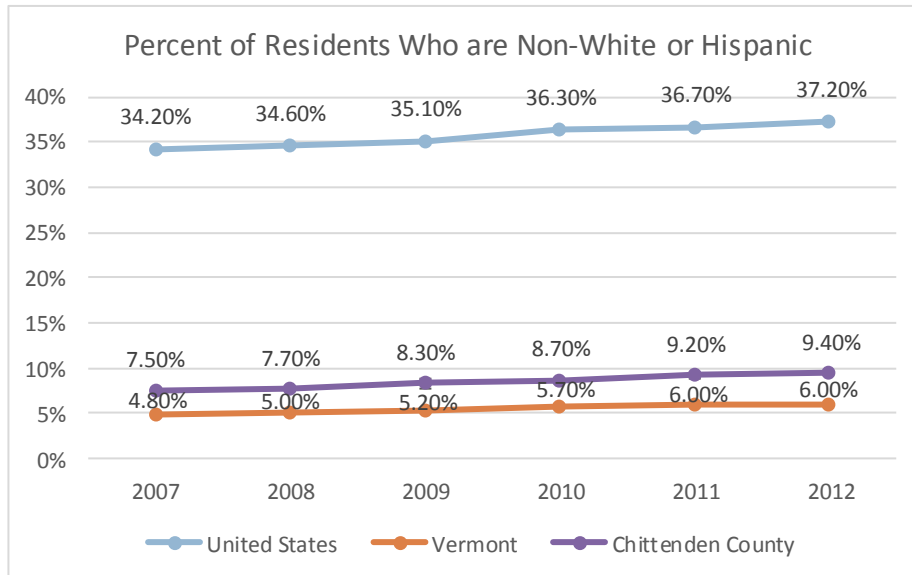


Source: American Community Survey 1 Year Estimates, (2007—2012)

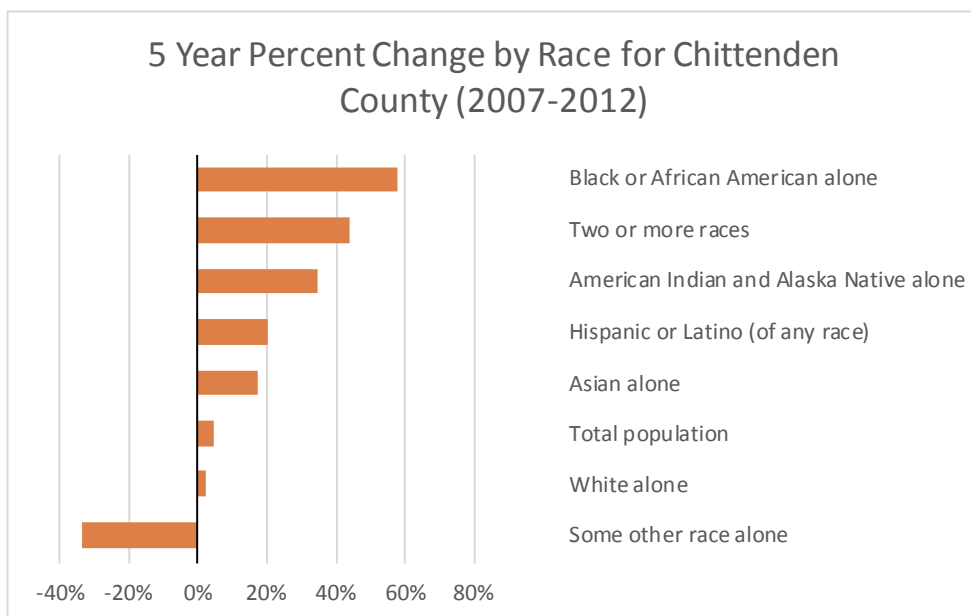
REGIONAL CONTEXT

Race & Ethnicity

Chittenden County is more diverse and culturally enriched when compared to the state of Vermont as a whole. While the majority of Chittenden County residents are white (90.6% in 2012), there is increasing diversity within the County over time. The population of black or African American residents is increasing at a faster rate as well as residents identifying with two or more races over between 2007 and 2012.



Source: American Community Survey 1 Year Estimates, (2007—2012)

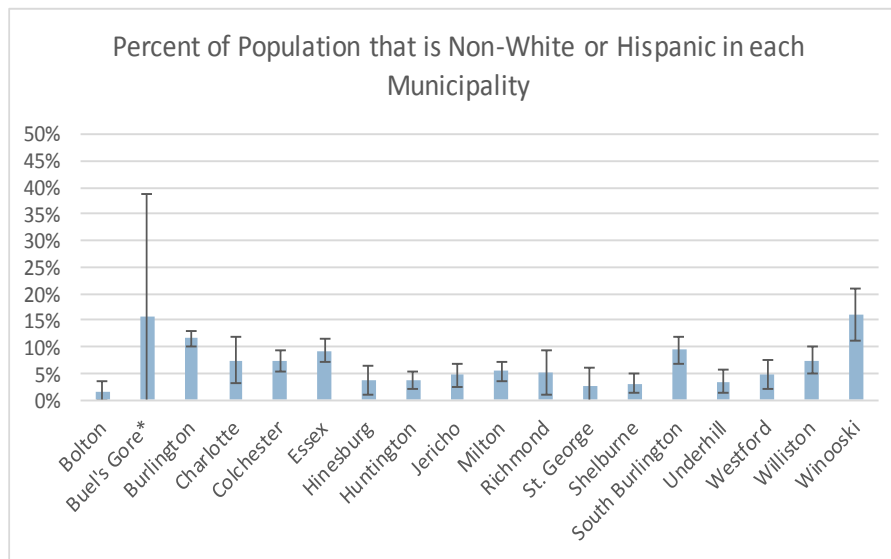


Source: American Community Survey 1 Year Estimates, (2007—2012)

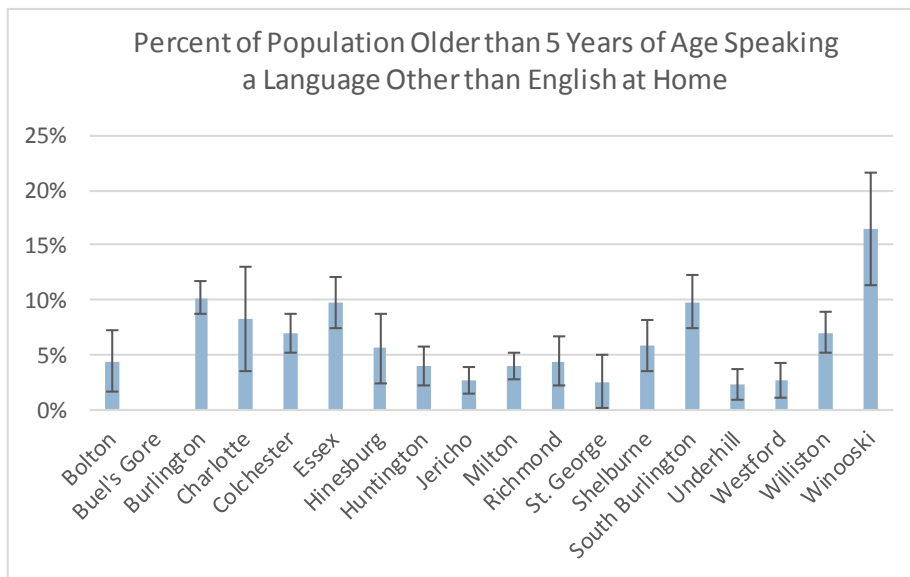
REGIONAL CONTEXT

Diversity within our Communities

The diversity amongst the 19 municipalities throughout Chittenden County varies community by community. The cities of Winooski, Burlington, South Burlington, and Essex have the largest percentages of non-white or Hispanic residents as well as population over five years of age speaking a language other than English at home.



Source: American Community Survey 5 Year Estimates, (2007—2011)



Source: American Community Survey 5 Year Estimates, (2007—2011)

*Note: This percentage is high because there are very few residents in Buel's Gore

NATURAL SYSTEMS

Our goal for preserving Natural Systems is to design and maintain a strategically planned and managed green infrastructure network of natural areas, working lands, wildlife habitat, scenic views and air quality that helps to conserve ecosystem values and functions (including climate change adaptation and mitigation), and provide associated benefits for our community.

How are we doing?

Good News

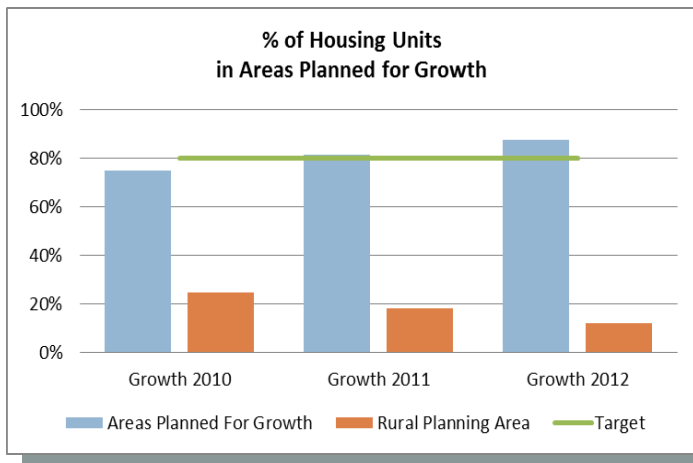
The good news for Natural Systems comes from a built environment indicator that monitors where development is happening in the County. Since 2005, we are starting to see a reversal in the development patterns of the previous 60 years that resulted in shifting growth away from metropolitan areas around Burlington to more suburban and rural locales, resulting in large amounts of land consumed. Through many avenues we are collectively working toward maintaining this reversal by making it easier to develop in the areas planned for growth. In order to reach the Natural Systems goals, this trend will need to contin-

Needs Improvement

Concentrating growth in the areas planned for growth is not the only solution, and it can result in challenges that we see in our environment today. We must properly manage stormwater in these more dense areas to decrease the impairments to our water bodies. We must maintain and grow the vegetative cover in these areas to sequester carbon as our climate continues to change. In addition, there will always be some development in the rural areas and this must be done in such a way that our wildlife habitat, scenic resources and working lands are retained.

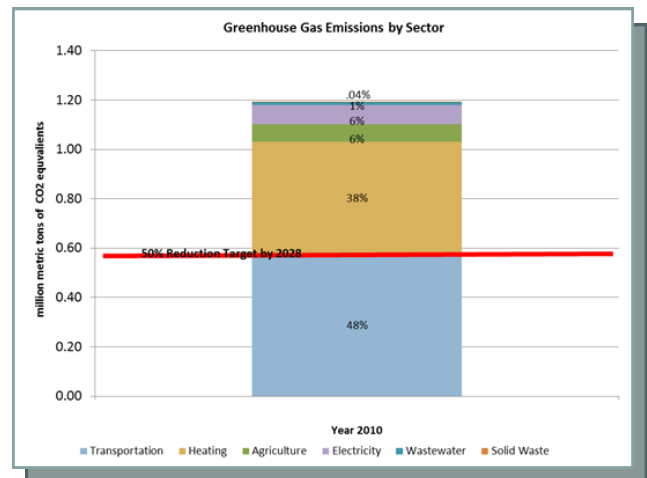
Indicator Snapshot

RESIDENTIAL DEVELOPMENT IS DECREASING IN RURAL AREAS



Source: CCRPC

GREENHOUSE GAS EMISSIONS THREATEN OUR NATURAL ENVIRONMENT



Source: CCRPC

ECOLOGICAL SYSTEMS: LAND COVER LOSSES

Goal *Conserve, protect and improve the health of native species habitats, water quality and quantity, and air quality.*

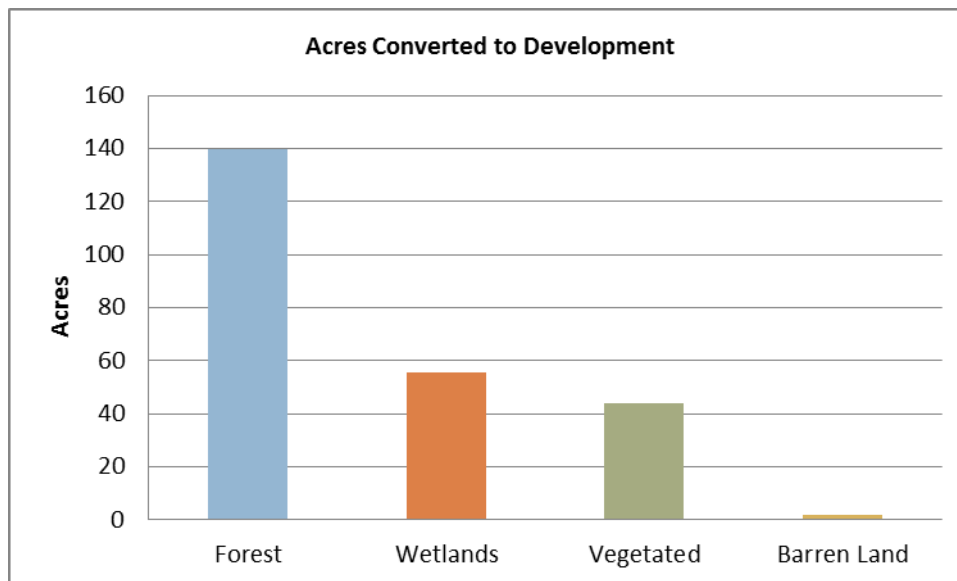
Indicator Acres of wildlife habitat lost to development

Description This indicator measures the total acreage and percent of wildlife habitat (barren land, deciduous forest, evergreen forest, mixed forest, shrub, grassland, woody wetlands, and emergent herbaceous wetlands) converted to development. These land cover categories are being used as a surrogate for wildlife habitat.

Significance Wetlands, forests, and grassland are important habitats to maintain biodiversity, improve water quality, sequester carbon dioxide, and offer a high quality of life for those who live in Chittenden County.

Source United States Geological Survey, National Land Cover Data, 2001 and 2006

BETWEEN 2001-2006, 241 ACRES OR .11% OF WILDLIFE HABITAT WERE CONVERTED TO DEVELOPMENT.



ECOLOGICAL SYSTEMS: STREAMS AND RIVERS - WATER QUALITY

- Goal** *Conserve, protect and improve the health of native species habitats, water quality and quantity, and air quality.*
- Indicator** Number and length of degraded rivers/streams
- Description** This indicator measures the lakes and ponds and the total number of stream/river miles that are either impaired, stressed, or altered with a pollutant that causes a violation of the Vermont Water Quality Standards and the Clean Water Act.
- Significance** Water bodies continue to face mounting pressures from development, farm, and forest activities. Cumulative impacts from these land use activities have degraded water quality, aquatic habitat, and altered the stability of river corridors and lakeshores. Issues that pre dominate in the County include steady high pollutant loads (mainly from nonpoint sources such as unmanaged stormwater), that result in nutrient enrichment and sedimentation, as well as other impairments. In addition, aquatic nuisance species continue to enter our water ways, contributing to the degradation of both habitat and recreational opportunities.
- Source** Vermont Agency of Natural Resources, 303 d List Part A (August 2012) 2012 Vermont List of Priority Surface Waters

IN 2012, 14% OF ALL STREAM MILES ARE IMPAIRED, IN ADDITION TO SOME OF OUR LAKES AND PONDS

Impairment Level	Stream Miles	% of total	Lakes/Ponds
Impaired based on the Clean Water Act Standards and in need of Total Maximum Daily Load Assessment(TMDL)	8	0	Shelburne Pond, and Lake Champlain (Malletts Bay, Northeast Arm, Shelburne Bay, and Burlington Bay)
Impaired and do not require development of a total maximum daily load (TMDL) because attainment is expected in a reasonable time	8	1%	Burlington Bay
In need of further study to confirm the presence of a violation of one or more criteria of the Vermont Water Quality Standards	26	0	
Completed and approved TMDLs in place, though they are not meeting water quality standards	93	6%	Lake Champlain (Burlington Bay, Malletts Bay, and Shelburne Bay) and Arrowhead Mountain Lake
Altered by invasive aquatic species	41	3%	Lake Champlain (Burlington Bay, Malletts Bay, and Shelburne Bay), Arrowhead Mountain Lake, and Lake Iroquois
Altered by flow regulation	15	1%	
Total	190	14%	

ECOLOGICAL SYSTEMS: LAKE CHAMPLAIN

WATER QUALITY

- Goal** *Conserve, protect and improve the health of native species habitats, water quality and quantity, and air quality.*
- Indicator** Phosphorous level concentrations in Lake Champlain's Main Lake and Mallets Bay
- Description** Phosphorous level concentrations in the Main Lake and Mallets Bay (partial watershed is in Chittenden County).
- Significance** Lake Champlain is an important ecological, cultural, and economic resource for Chittenden County that is threatened by excessive phosphorous levels which negatively affect the health of Lake Champlain by promoting too much plant and algae growth and depleting available oxygen in the water.
- Source** State of the Lake and Ecosystem Indicators Report 2012, Lake Champlain Basin Program

PHOSPOROUS LEVEL CONCENTRATIONS IN SEVERAL AREAS OF LAKE CHAMPLAIN HAVE REMAINED RELATIVELY STEADY SINCE 2007; HOWEVER, THE NON-POINT LOADS ARE CONSISTENTLY ABOVE THE TARGET LEVELS FOR THE MAIN LAKE AND MALLETS BAY. IT IS IMPORTANT TO NOTE THAT THE LAMOILLE RIVER DRAINS TO MALLETS BAY AND IS LARGELY LOCATED OUTSIDE OF CHITTENDEN COUNTY.

Lake Segment	Load (metric tons)	Target (metric tons)
Lake Champlain	391	166
Main Lake	170.2	51.3
Mallets Bay	54.1	25.4

ECOLOGICAL SYSTEMS: IMPERVIOUS AREA BY WATERSHED

Goal *Conserve, protect and improve the health of native species habitats, water quality and quantity, and air quality.*

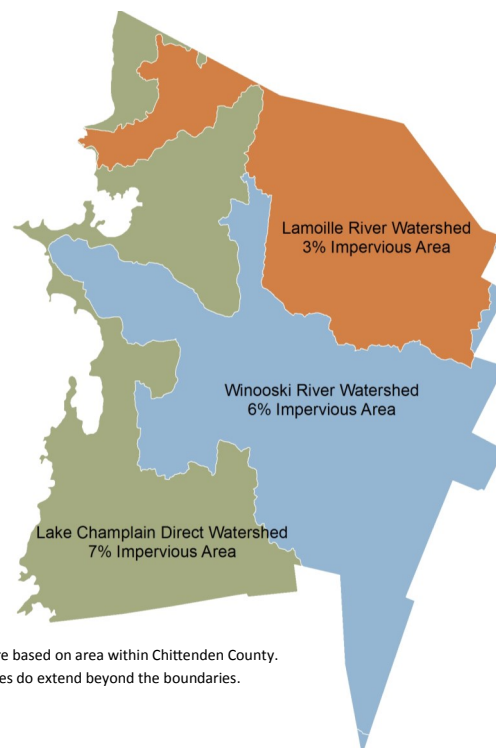
Indicator Percent of impervious area per watershed

Description This indicator measures the amount of land area that is covered by impenetrable materials that impede rainwater infiltration and natural groundwater recharge. Impervious surfaces include roads, sidewalks, driveways, parking lots, and buildings. When rainwater is not being absorbed into the ground, it is running off impervious surfaces and collecting debris and pollutants that enter the waterways within the watershed. A watershed is an area of land where all water travels to the lowest point which is typically a river, stream, or lake.

Significance Cumulative impacts from runoff within our watersheds degrade water quality, aquatic habitat, and altered stability of river corridors and lakeshores.

Source Vermont Agency of Natural Resources Maps and GIS, 2008

THE LAKE CHAMPLAIN WATERSHED HAS THE HIGHEST PERCENTAGE OF IMPERVIOUS AREA



Note: Percentages are based on area within Chittenden County. Watershed boundaries do extend beyond the boundaries.

AIR QUALITY: PARTICULATE MATTER

Goal *Conserve, protect and improve the health of native species habitats, water quality and quantity, and air quality.*

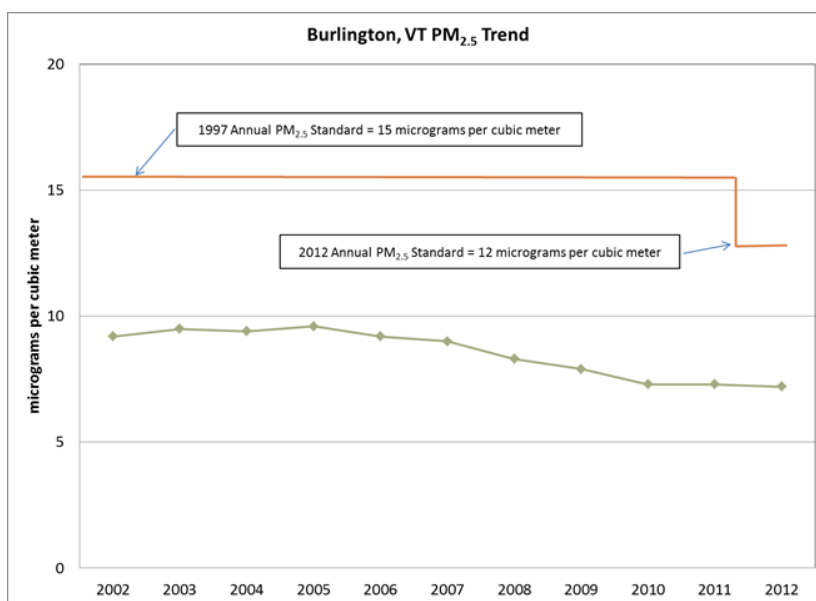
Indicator Quantity of particulate matter (PM_{2.5}) in the air

Description This indicator measures particulate matter or fine particles in the air that are a mixture of solids and liquid droplets that are less than 2.5 micrometers in diameter. These particles are so small they can be detected only with an electron microscope. Sources of fine particles include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. Particulate matter is measured using the 3-year average PM_{2.5} concentration and the final year of the 3-year period is plotted. The 3-year average PM_{2.5} concentration is compared to the annual PM_{2.5} standard to determine attainment.

Significance Outdoor air pollution in significant concentrations can raise aesthetic and nuisance issues such as impairment of scenic visibility; unpleasant smoke or odors; and can also cause human health problems, especially for more sensitive populations like children, asthma sufferers, and the elderly.

Source VT Department of Environmental Conservation, Air Quality and Climate Division

CHITTENDEN COUNTY MEETS NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)



AIR QUALITY: OZONE

Goal *Conserve, protect and improve the health of native species habitats, water quality and quantity, and air quality.*

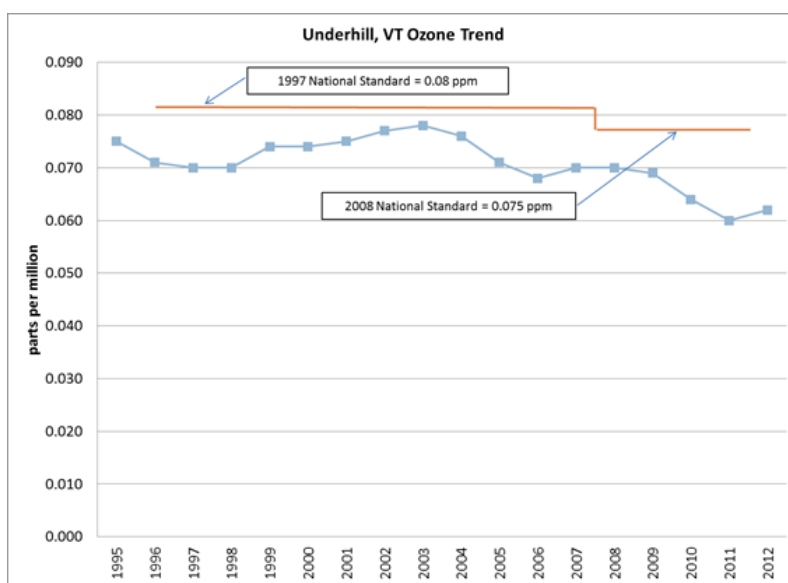
Indicator Quantity of ozone in the air

Description This indicator measures tropospheric, or ground level ozone. Ozone is formed when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight. Ozone at ground level is a harmful air pollutant. Ozone is likely to reach unhealthy levels on hot sunny days in urban environments. Ozone can also be transported long distances by wind. Ozone is measured using the 3-year average ozone concentration and the final year of the 3-year period is plotted. The 3-year average ozone concentration is compared to the National Ambient Air Quality Standards (NAAQS) 3-year average of the 4th highest daily maximum 8-hour concentration in a year to determine attainment.

Significance Ground-level ozone can make it harder to breathe, especially during the summer. People with lung disease, children, older adults, and people who are active outdoors may be particularly sensitive to ozone. Ozone also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges and wilderness areas.

Source Vermont Department of Environmental Conservation, Environmental Protection Agency

OZONE LEVELS ARE BELOW AIR QUALITY STANDARDS



SCENIC, RECREATIONAL, AND HISTORIC RESOURCES: CONSERVED LAND

- Goal** *Conserve, protect and improve valued scenic, recreational, and historic resources and opportunities.*
- Indicator** Acres and percent area of land conserved
- Description** This indicator measures the amount of acres and the percent of land area in Chittenden County that is conserved by The Nature Conservancy, The Vermont Land Trust, Vermont Housing Conservation Board, State of Vermont, Federal Government, municipalities, and private land owners. The activity on these conserved lands range from agricultural to recreational to natural areas management.
- Significance** These conserved lands provide residents a place to relax, play, gather, learn, and contribute to the local food system. They also provide important ecological functions including wildlife habitat, and water and air quality protection. As we work toward encouraging future development in areas planned for growth to maintain VT’s historic settlement pattern, access to and conservation of our rural areas is very important.
- Source** The Nature Conservancy, The VT Land Trust, Vermont Housing Conservation Board, UVM Spatial Analysis Lab

15% OF CHITTENDEN COUNTY’S LAND AREA IS PROTECTED FROM DEVELOPMENT

Year	Acres	Percent
2010	50,789	15

SCENIC, RECREATIONAL, AND HISTORIC RESOURCES: SCENIC RESOURCES

- Goal** *Conserve, protect and improve valued scenic, recreational, and historic resources and opportunities.*
- Indicator** Percent of municipal zoning regulations that provide specific standards and guidelines for protecting scenic resources
- Description** This indicator tracks the level of regulatory protection of scenic resources. Currently, there is low compatibility between municipal plan recommendations for protection of natural and scenic resources and the implementation of those recommendations through zoning bylaws and subdivision regulation.
- Significance** It will be difficult to attain this goal without increased regulatory protection of these resources.
- Source** Chittenden County Regional Planning Commission and member municipalities

WHILE THE GOAL OF PROTECTING SCENIC RESOURCES IS PREVALENT, THE REGULATORY TOOLS NEEDED TO PROTECT THE RESOURCES ARE NOT.

Percent of Towns	Type of Zoning Standards and Guidelines for Protecting Identified Scenic Resources
16%	include specific standards and guidelines for protecting identified scenic resources.
68%	generally recommend protection for scenic resources (e.g., views and landscapes along scenic roads should be protected)
16%	reference scenic resources but provide no goals, standards, guidelines, or recommendations.
57%	identify scenic resources as roads or view from roads
74%	reference scenic resources in relation to their value as open space.
42%	recognize that woodlands provide scenic as well as ecological value
40%	consider historic structures and settlement patterns a scenic resource.
21%	include scenic overlay/preservation district.

CLIMATE CHANGE: GREENHOUSE GAS EMISSIONS

Goal *Reduce greenhouse gas emissions contributing to climate change and adapt to become more resilient to a changing climate.*

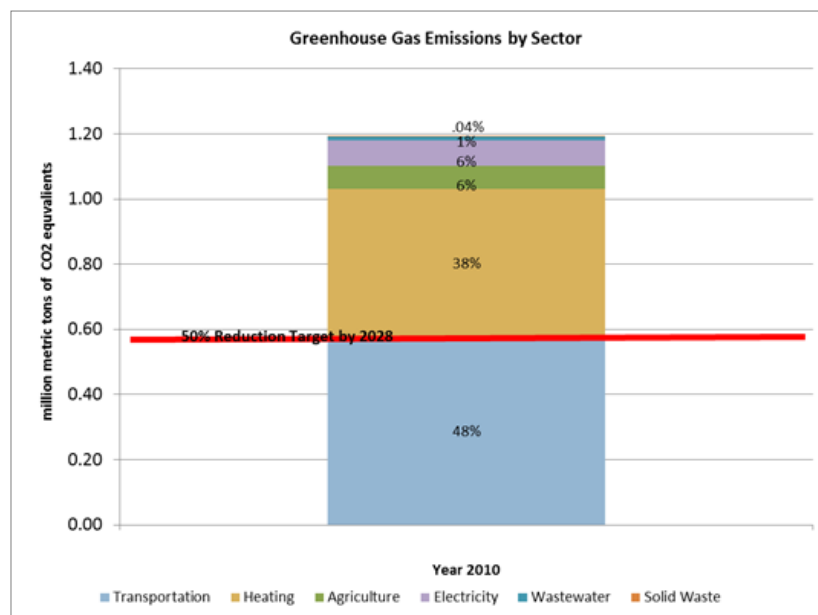
Indicator Million metric tons of green house gas emissions by sector

Description This indicator measures the amount of carbon dioxide, methane, and nitrous oxide emissions from solid waste decomposition, wastewater processing, electricity use, agricultural practices, space heating, and transportation.

Significance Although Chittenden County may be a small part of global greenhouse gas emissions, it is important that Chittenden County do its part to help reduce emissions: Specifically, do what we can to help the State reach the goal of reducing 50% of greenhouse gas emissions from the 1990 baseline by 2028.

Source Chittenden County Regional Planning Commission, 2010

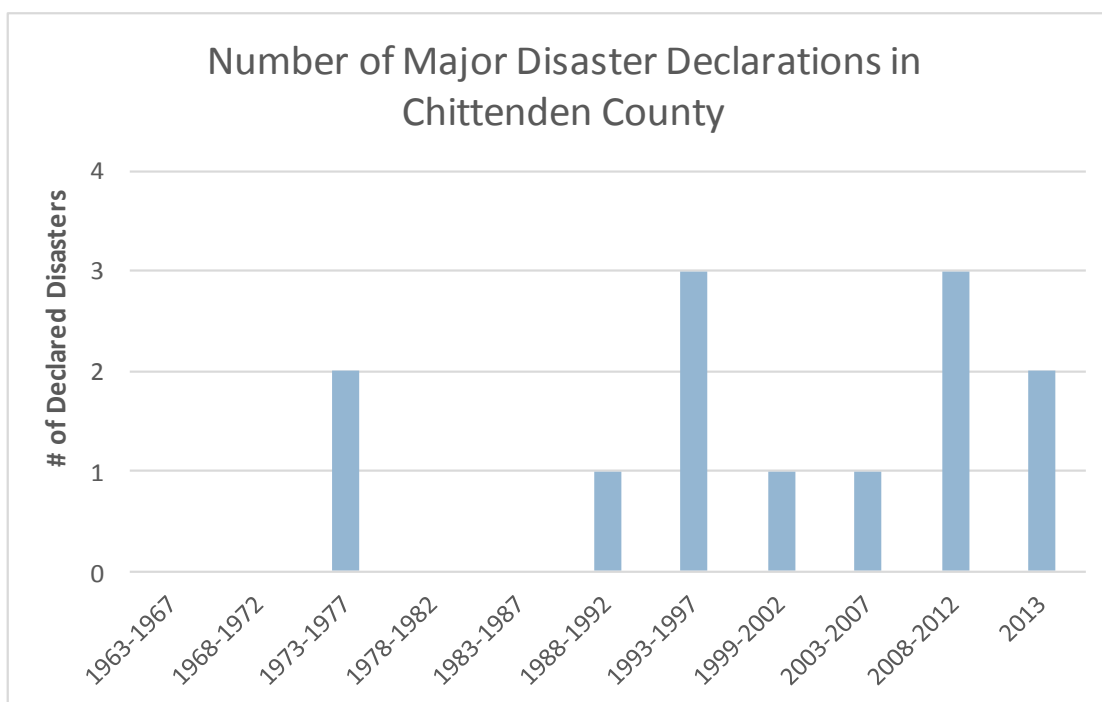
GHG EMISSIONS FROM TRANSPORTATION CONTRIBUTE THE HIGHEST PERCENTAGE OF CHITTENDEN COUNTY'S EMISSIONS.



CLIMATE CHANGE: MAJOR DISASTER DECLARATIONS

- Goal** Reduce greenhouse gas emissions contributing to climate change and adapt to become more resilient to a changing climate.
- Indicator** Number of major disaster declarations
- Description** This key indicator of climate adaptation outcomes measures the number of federally-declared natural disasters in Chittenden County.
- Significance** Major disaster declarations are made for natural events causing damage so severe that it is beyond the combined capabilities of state and local governments to respond.
- Source** Federal Emergency Management Agency, 2013

WITHIN THE PAST TEN YEARS CHITTENDEN COUNTY HAS EXPERIENCED SIX FEDERALLY DECLARED DISASTERS, INCLUDING THE LAKE CHAMPLAIN FLOODING AND TROPICAL STORM IRENE IN 2011. THE INCREASING FREQUENCY OF THESE EVENTS IS OF GREAT CONCERN TO THE REGION.



CLIMATE CHANGE: VEGETATED LANDSCAPES

- Goal** *Reduce greenhouse gas emissions contributing to climate change and adapt to become more resilient to a changing climate.*
- Indicator** Amount of carbon sequestered by vegetation
- Description** This indicator measures the amount of carbon that is removed from the atmosphere and stored in biomass and soils — a process called carbon sequestration. In 2006, Chittenden County was 95% vegetated, approximately equal to the vegetated area in 2001.
- Significance** Vegetated landscapes are needed for both climate mitigation and climate adaptation. Maintaining forests, wetlands, agricultural lands and vegetated spaces in developed areas is important for ensuring current and future carbon sequestration.
- Source** University of Vermont, National Land Cover Data (2001)

CARBON SEQUESTRATION PLAYS AN IMPORTANT ROLE IN REDUCING GREENHOUSE GAS EMISSIONS.

Year	Carbon Sequestration
2001	761,000 MTCO ₂ e

CLIMATE CHANGE: HEAT STRESS HOSPITALIZATIONS

Goal *Reduce greenhouse gas emissions contributing to climate change and adapt to become more resilient to a changing climate.*

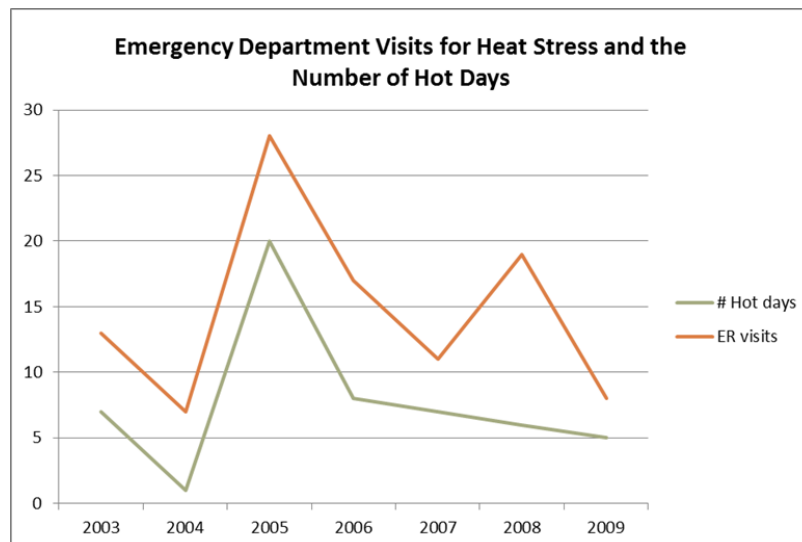
Indicator Number of heat stress hospital visits among Chittenden County residents

Description This indicator measures the number of Chittenden County residents who visit an emergency department May-September of each year because of heat stress illnesses such as heat exhaustion, heat stroke, or heat cramps. This indicator includes the number of hot days (defined as having a maximum temperature in the top 5% of all recorded temperatures over a decade) as a comparison.

Significance As our climate changes, we may experience more days with high maximum temperatures. Heat waves can cause death and serious illness and can pose a burden for emergency responders. Heat stress hospital visits are one way to measure the health impact of a changing climate. Communities with tree cover, heat alert communication plans, and access to public cooling sites such as pools, beaches, schools, and libraries, have fewer health emergencies during heat events.

Source Vermont Uniform Hospital Discharge Data Set (VUHDDS). For more information visit: <https://webmail.vdh.state.vt.us/IAS/querytool?Topic=Climate>

THE NUMBER OF HEAT STRESS ILLNESSES IS CLOSELY RELATED TO THE NUMBER OF VERY HOT DAYS, BUT COMMUNITY ORGANIZATIONS, HEALTH OFFICIALS, AND TRANSPORTATION AUTHORITIES CAN WORK TOGETHER TO PREVENT AN INCREASE IN HEAT STRESS ILLNESSES EVEN IF THE NUMBER AND SEVERITY OF HOT DAYS INCREASES.



CLIMATE CHANGE: CLIMATE RELATED INFECTIOUS DISEASE

Goal *Reduce greenhouse gas emissions contributing to climate change and adapt to become more resilient to a changing climate.*

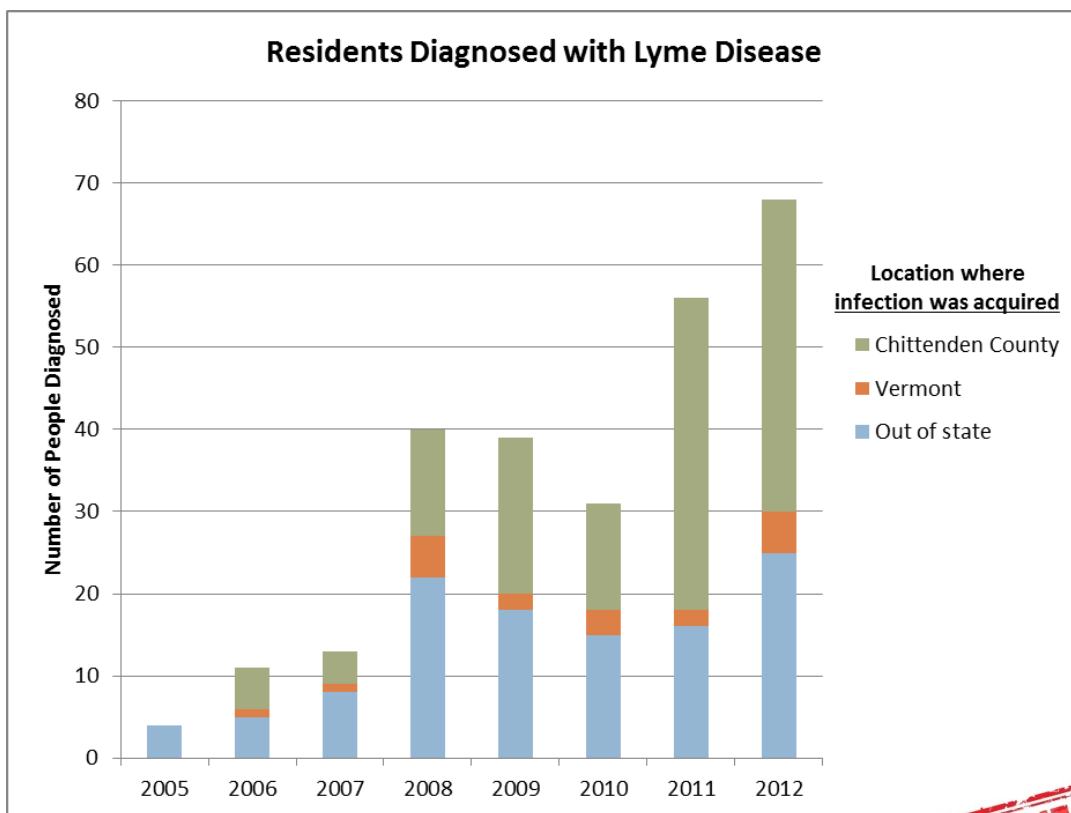
Indicator Number of confirmed and probable Lyme disease cases among Chittenden County residents

Description This indicator measures the number of new Lyme disease cases among Chittenden County residents each year. Lyme disease is caused when an infected tick bites a person.

Significance The dynamics of Lyme disease are influenced by a range of factors, including land use, populations of mouse and deer hosts, the number of infected ticks, and climate. Warming temperatures are thought to increase tick abundance while also lengthening their seasonal period of activity. Beyond Lyme disease, a warmer climate may allow other vectors of disease, such as Lone Star ticks, to expand their ranges into Vermont.

Source Vermont Department of Health: Lyme Disease Surveillance, 2005-2012. For more information visit: http://healthvermont.gov/prevent/lyme/surveillance_data.aspx#more

LYME DISEASE ACQUIRED IN CHITTENDEN COUNTY IS INCREASING.



SOCIAL COMMUNITY

Our goal for promoting Social Community is for all community members to have the skills, resources, and assurances needed to participate in the workforce and in the family, civic, and cultural life within and among neighborhoods and in the larger community.

How are we doing?

Good News:

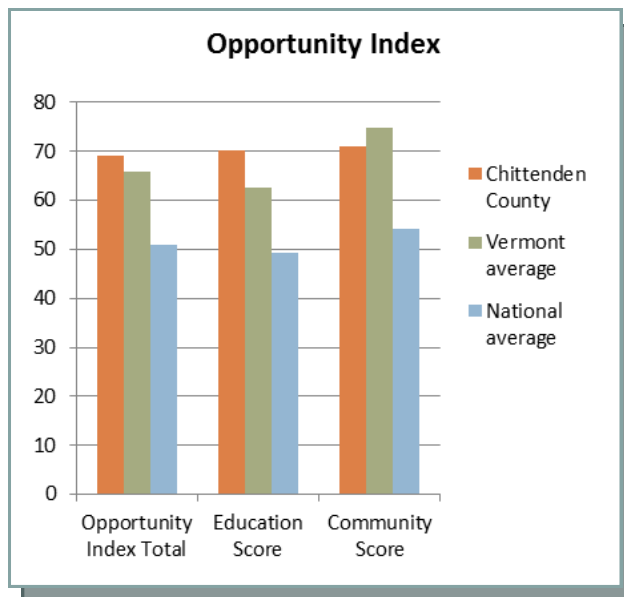
Compared to other areas of the state and country, Chittenden County as a whole is doing well on a number of key indicators related to social community, with relatively high rates of pre-school enrollment, high school graduation, post-secondary education, access to healthy foods, access to healthcare, and engagement in civic life. This overall social well-being is reflected in the Opportunity Index, a composite measure of well-being and access (Chittenden County is the highest-ranked in Vermont, and Vermont is the highest-ranked nationally) and in a number of indicators reported on the following pages. Though relatively better on such measures, Chittenden County must do more to ensure that all residents are able to lead healthy, substance-free lives and achieve their educational and career potential.

Needs Improvement:

Despite overall high levels of health and education, there are large disparities across the county. For example, across Chittenden County school districts, kindergarten readiness ranges from 42%-81%, while high school drop-out rates are even more exaggerated, ranging from 2%-26%. Similarly, economic disparities exist in health; those with lower incomes are disproportionately affected by chronic disease. Vermont has among the highest rates in the nation for several measures of substance abuse, including high rates of marijuana use, other illicit drug use, under-age drinking, and binge drinking.

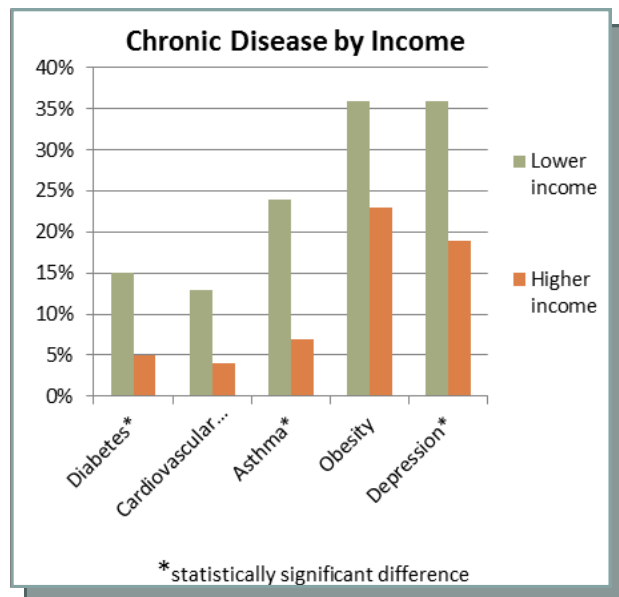
Indicator Snapshot

CHITTENDEN COUNTY RECEIVED AN A- FOR OVERALL OPPORTUNITY



Source: Measure of American and Opportunity Nation, 2013

INCOME HAS AN IMPACT ON THE HEALTH OF INDIVIDUALS



Behavioral Risk Factor Surveillance System, 2012

EDUCATION, KNOWLEDGE, AND SKILLS: SCHOOL READINESS

- Goal** *All Chittenden County children and adults have the education, skills and opportunities necessary to meet their full economic and social potential and well-being.*
- Indicator** Percent of children entering kindergarten ready by domain
- Description** Children were rated by kindergarten teachers 4-6 weeks into the school year on five domains of school readiness: approaches to learning, cognitive development/general knowledge, communication, socio-emotional development, and health.
- Significance** Early childhood development is critical to a child's lifelong development and research has shown the larger the gap at school entry, the harder it is to close later on.
- Source** Vermont Agency of Education, 2013. (Compiled by United Way of Chittenden County)

THERE IS VARIATION IN THE LEVELS OF SCHOOL READINESS ACROSS THE CHILDREN ENTERING KINDERGARTEN IN COMMUNITIES WITHIN CHITTENDEN COUNTY WHILE CHITTENDEN COUNTY STUDENTS IN TOTAL ARE CONSISTENTLY MORE READY ACROSS THE FIVE DOMAINS.

	Total Number of Kindergarten Students	PERCENT OF STUDENTS READY BY DOMAIN				
		Approaches to Learning	Cognitive Development & General Knowledge	Communication	Socio-emotional Development	Health
State of Vermont	6507	81%	77%	85%	81%	85%
Chittenden County	1552	86%	84%	89%	84%	91%
Colchester	187	74%	76%	86%	76%	78%
Burlington	296	88%	78%	86%	83%	91%
Chittenden Central	121	93%	89%	93%	89%	88%
Chittenden East	191	93%	93%	96%	91%	92%
Chittenden South	270	92%	87%	92%	90%	95%
Essex Town	145	89%	91%	91%	89%	93%
Milton	120	72%	71%	77%	62%	82%
South Burlington	157	85%	91%	91%	85%	88%
Winooski	65	68%	55%	73%	68%	87%



EDUCATION, KNOWLEDGE, AND SKILLS: STUDENT PROFICIENCY (NECAP)

- Goal** *All Chittenden County children and adults have the education, skills and opportunities necessary to meet their full economic and social potential and well-being.*
- Indicator** Percent of students scoring proficient or above on the New England Common Assessment Program (NECAP) test
- Description** Percent of students considered proficient or above disaggregated by gender, language status, and race/ethnicity on the 2012-2013 NECAP. Approximately 1,475 4th graders, 1,520 8th graders, and 1,600 11th graders in Chittenden County completed the NECAP.
- Significance** Examining the percent of students scoring proficient or above across grade levels and subject areas by gender, language status, and race/ethnicity provides important insight into student performance in Chittenden County.
- Source** Vermont Agency of Education, 2013.

SIGNIFICANTLY FEWER ENGLISH LANGUAGE LEARNERS, AFRICAN AMERICAN STUDENTS AND STUDENTS WITH FREE OR REDUCED LUNCH STATUS ARE CONSIDERED TO BE PROFICIENT OR ABOVE ACROSS THE GRADE LEVELS AND SUBJECT AREAS RELATIVE TO ALL STUDENTS IN CHITTENDEN COUNTY.

PERCENT OF STUDENTS PROFICIENT OR ABOVE 2012-2013 NECAP							
	Math Grade 4	Math Grade 8	Math Grade 11	Reading Grade 4	Reading Grade 8	Reading Grade 11	Science Grade 11
All Students	70%	75%	51%	73%	86%	83%	44%
Female	73%	76%	50%	78%	91%	85%	46%
Male	67%	73%	52%	67%	82%	80%	43%
English Language Learners	42%	11%	6%	43%	29%	6%	3%
Non-English Language Learners	73%	77%	53%	75%	88%	85%	46%
Students with Free or Reduced Lunch Status	50%	48%	21%	52%	68%	60%	14%
Students without Free or Reduced Lunch Status	80%	84%	60%	83%	92%	89%	53%
Asian	66%	72%	50%	67%	85%	67%	39%
Black or African American	30%	37%	15%	35%	58%	36%	11%
Hispanic	*	*	*	*	*	*	44%
White	73%	77%	53%	76%	87%	86%	46%

* notes where data has been suppressed due to small numbers of students



EDUCATION, KNOWLEDGE, AND SKILLS: STUDENT PROFICIENCY (VTAAP)

- Goal** *All Chittenden County children and adults have the education, skills and opportunities necessary to meet their full economic and social potential and well-being.*
- Indicator** Percent of students scoring proficient or above on the Vermont Alternate Assessment Portfolio (VTAAP)
- Description** Percent of students considered proficient or above disaggregated by gender, language status, and race/ethnicity on the 2012-2013 VTAAP.
- Significance** The VTAAP allows students with significant cognitive disabilities to demonstrate their knowledge and skills in math, reading, and science in a portfolio format during the 3rd, 7th, 10th, and 11th grade years. Approximately 500 students statewide take this alternative assessment a year.
- Source** Vermont Agency of Education, 2013

THE PERCENTAGE OF STUDENTS CONSIDERED TO BE PROFICIENT OR ABOVE DECREASES DRAMATICALLY FROM ELEMENTARY TO MIDDLE LEVEL, KEEPING IN MIND THE SMALL NUMBER OF STUDENTS REPRESENTED.

PERCENT OF STUDENTS PROFICIENT OR ABOVE 2012-2013 VTAAP						
Math Grade 3	Math Grade 7	Math Grade 10	Reading Grade 3	Reading Grade 7	Reading Grade 10	Science Grade 11
71%	25%	12%	62%	13%	12%	20%
67%	50%	14%	100%	50%	29%	29%
73%	17%	10%	50%	*	*	13%
*	*	*	*	*	*	*
71%	25%	12%	62%	13%	12%	20%
67%	33%	*	67%	*	*	*
75%	20%	17%	57%	20%	17%	*
71%	29%	12%	62%	14%	12%	20%

* notes where data has been suppressed due to small numbers of students



EDUCATION, KNOWLEDGE, AND SKILLS: DROP-OUT RATE

- Goal** *All Chittenden County children and adults have the education, skills and opportunities necessary to meet their full economic and social potential and well-being.*
- Indicator** Percent of students who leave school permanently at any time during the six-year period
- Description** Percent of students who exited high school at any time during the six-year period prior to receiving a regular diploma for graduating classes of 2010, 2011, and 2012.
- Significance** It is important to measure high school drop-out rates as individuals who drop out are more likely to have more limited social and economic opportunities within their communities.
- Source** Vermont Agency of Education, 2013

DROP-OUT RATES VARY ACROSS HIGH SCHOOLS IN CHITTENDEN COUNTY.

	2010	2011	2012
Chittenden County	7.7%	5.5%	5.6%
Burlington Senior High School	9.7%	10.2%	8.7%
Champlain Valley Union High School #15	5.4%	3.2%	1.8%
Colchester High School	10.1%	7.5%	6.5%
Essex High School	5.8%	5.1%	4.3%
Milton High School	13.3%	4.3%	5.0%
Mt. Mansfield High School	5.2%	2.2%	3.8%
South Burlington High School	6.2%	1.3%	4.0%
Winooski High School	18.8%	19.6%	26.4%



EDUCATION, KNOWLEDGE, AND SKILLS: EDUCATION ATTAINMENT

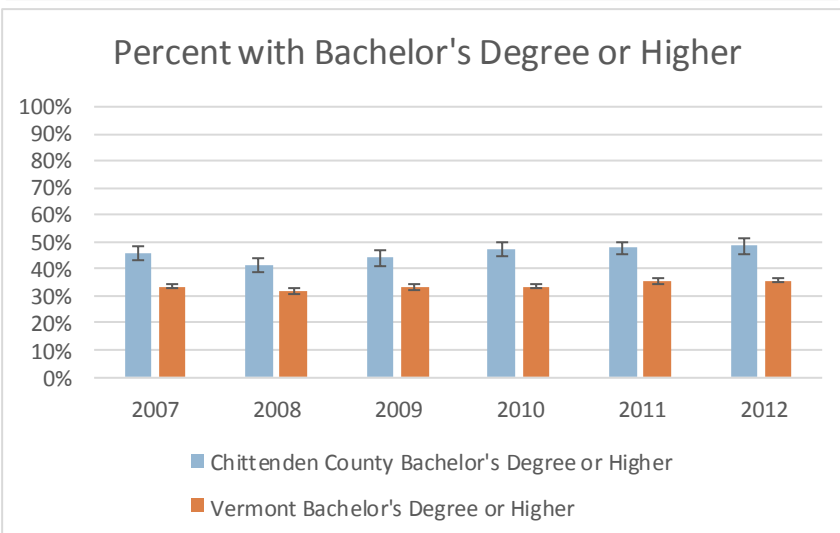
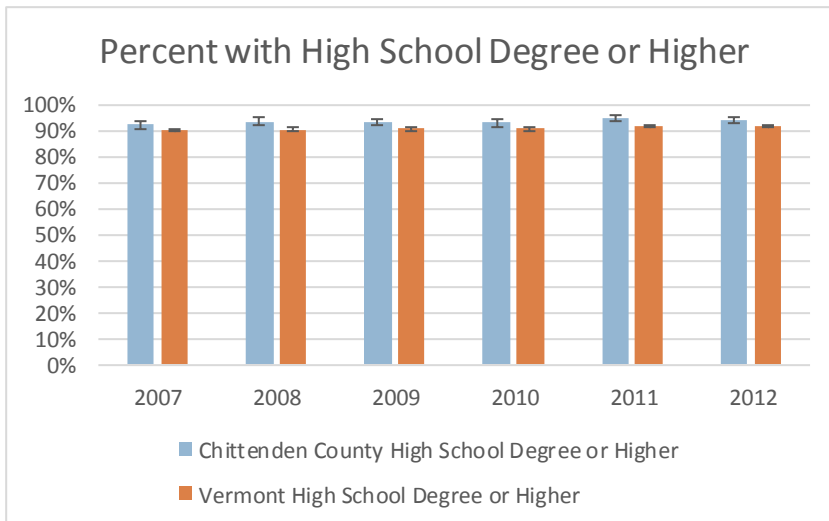
Goal *All Chittenden County children and adults have the education, skills and opportunities necessary to meet their full economic and social potential and well-being.*

Indicator Percent of residents who achieve the highest level of education attained for those 25 and over

Description This indicator measures the percent of Chittenden County residents age 25 or older with high school degrees or higher and percent of Chittenden County residents with bachelor's degree or higher compared to Vermont.

Significance Educational attainment is significant for the social and economic vitality of the region.

Source American Community Survey, 1-Year Estimates, 2007-2012



CHITTENDEN COUNTY RESIDENTS CONTINUE TO HAVE HIGHER LEVELS OF EDUCATIONAL ATTAINMENT COMPARED TO THE WHOLE STATE OF VERMONT, ESPECIALLY WHEN CONSIDERING THE PERCENT OF RESIDENTS OBTAINING BACHELOR'S OR POSTGRADUATE DEGREES.



HEALTH: OVERWEIGHT AND OBESITY

Goal All Chittenden County residents are healthy.

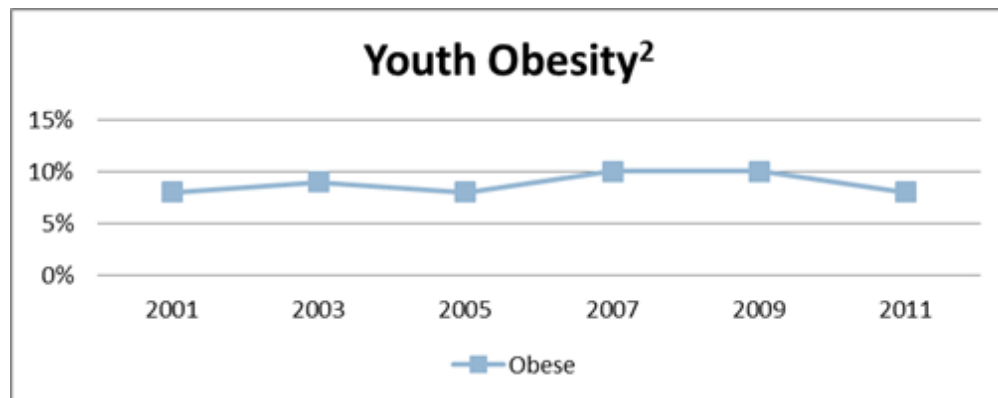
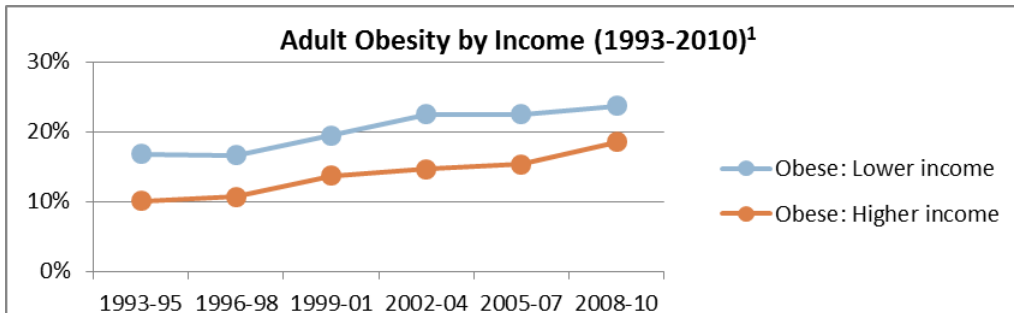
Indicator % of adults who are overweight or obese by income, % of youth who are overweight or obese by income

Description This indicator measures the percentage students in grades 9-12 and adults who are obese (BMI ≥ 30). Obesity is a separate and more severe condition than overweight. However, it's important to understand the broader context of unhealthy weight in Chittenden County: 61% of adults and 20% of students in grades 9-12 are either overweight or obese.

Significance Obesity increases an individual's risk of developing serious health problems such as heart disease, diabetes, stroke, cancer, and arthritis. Healthy community design can improve people's health by increasing physical activity and access to healthy foods.

Source Vermont Department of Health: ¹Behavioral Risk Factor Surveillance System, 1993-2012. Age adjusted to US Population. Weight data is limited to adults aged 20 years and older. Changes in methodology limit the ability to compare results since 2011 to previous years. The most recent data is in the table below. ²Youth Risk Behavior Survey, 2001-2011. *Indicates statistically significant difference between the two income levels. For more information visit: <http://healthvermont.gov/hv2020/>

OVERALL AND FOR THOSE WITH HIGHER INCOMES, OBESITY HAS INCREASED SIGNIFICANTLY OVER THE PAST 20 YEARS. THOUGH NOT STATISTICALLY SIGNIFICANT, COUNTY DATA FOLLOW THE STATEWIDE PATTERN THAT LOW INCOME INDIVIDUALS ARE MORE LIKELY TO BE OBESE AND LESS LIKELY TO BE A HEALTHY WEIGHT



Special points of interest:

In 2011-2012,

- 80% of adults whose income is less than 250% of the federal poverty level are not eating 5+ fruits and vegetables/day, compared to 76% of adults whose income is greater than 250% of the federal poverty level.
- 48% of adults whose income is less than 250% of the federal poverty level are not getting 30 minutes of physical activity a day 5 day/wk, compared to 36% of adults whose income is greater than 250% of the federal poverty level.

HEALTH: CHRONIC DISEASE

Goal All Chittenden County residents are healthy.

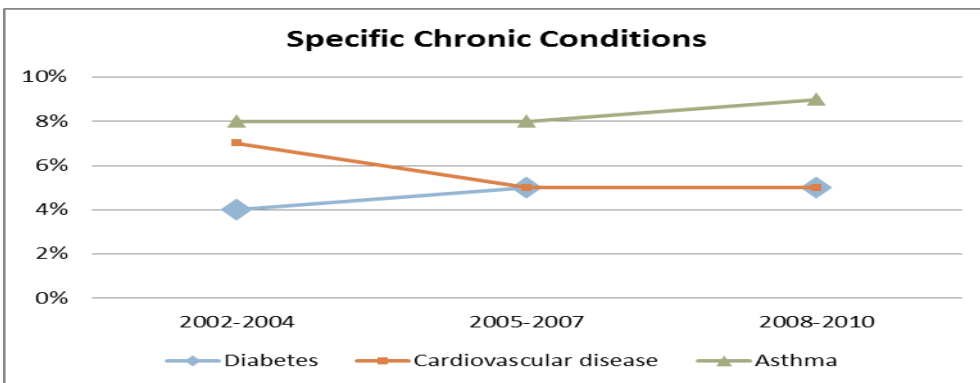
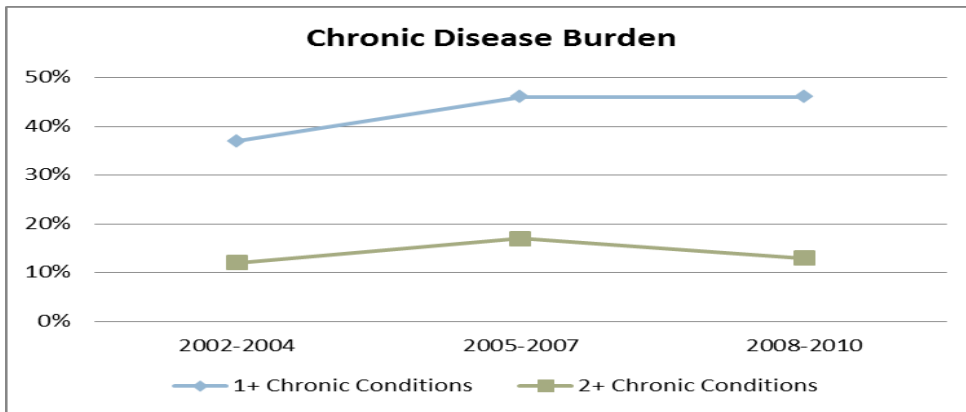
Indicator % of Chittenden County Residents with chronic disease

Description This indicator measures the percentage of adults in the Burlington Health Service Area with one or more chronic diseases. Chronic diseases are persistent, life-changing conditions that can be controlled but not cured, such as heart disease, asthma, or diabetes.

Significance Living in a community where clean air, safe streets, healthy foods, and recreation opportunities are available to all residents may impact the rates of chronic disease. Residents with incomes below 250% of the federal poverty level are three times more likely to be diagnosed with diabetes, cardiovascular disease, and asthma and are twice as likely to be diagnosed with depression.

Source Vermont Department of Health: Behavioral Risk Factor Surveillance System, 2002-2012. Data is age adjusted to US Population. Changes in methodology limit the ability to compare results since 2011 to previous years, so historic data appear in graph while the most recent data is in a table below. *Indicates statistically significant difference between the two income levels. For more information visit: <http://healthvermont.gov/hv2020/>

RESIDENTS WITH INCOMES BELOW 250% OF THE FEDERAL POVERTY LEVEL ARE THREE TIMES MORE LIKELY TO BE DIAGNOSED WITH DIABETES, CARDIOVASCULAR DISEASE AND ASTHMA, AND ARE TWICE AS LIKELY BE DIAGNOSED WITH DEPRESSION.



Special points of interest:

In 2012,

- 15% of adults whose income is less than 250% of the federal poverty level have diabetes, compared to 5% of adults whose income is more than 250% of the federal poverty level.
- 13% of adults whose income is less than 250% of the federal poverty level have cardiovascular disease, compared to 4% of adults whose income is more than 250% of the federal poverty level.
- 24% of adults whose income is less than 250% of the federal poverty level have asthma, compared to 7% of adults whose income is more than 250% of the federal poverty level.
- 36% of adults whose income is less than 250% of the federal poverty level suffer from depression, compared to 19% of adults whose income is more than 250% of the federal poverty level.



HEALTH: SMOKING PREVALENCE

Goal All Chittenden County residents are healthy.

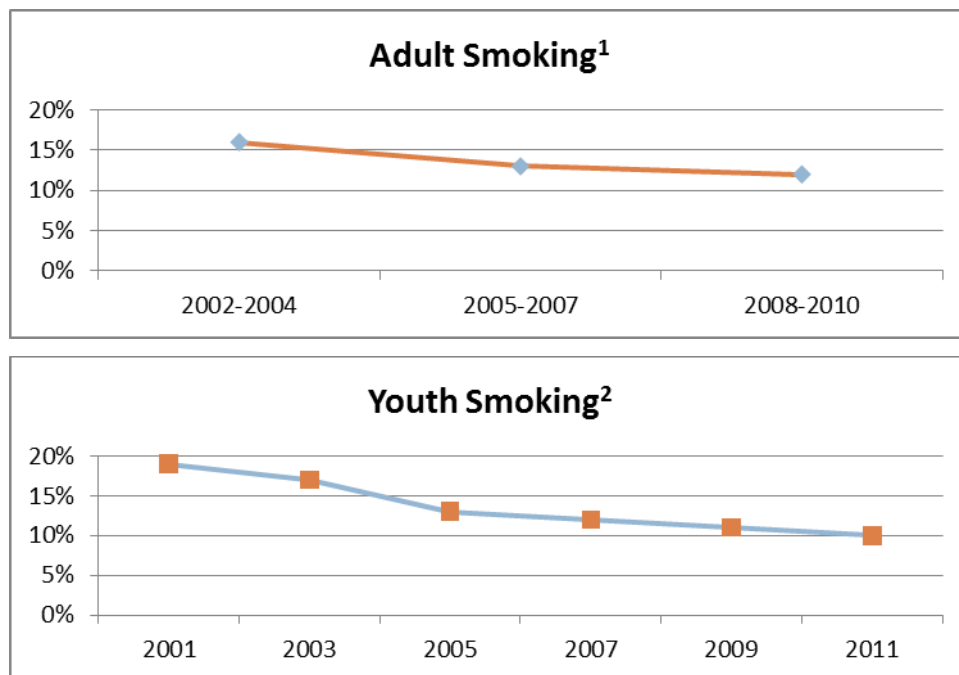
Indicator Percent of adults and youths who smoke

Description This indicator measures the percentage of adults who are current smokers and youths (students in grades 9-12) who smoked tobacco in the past 30 days.

Significance Tobacco use is the leading cause of preventable deaths in the United States. Though smoking rates are falling, adults with incomes below 250% of the federal poverty level are four times more likely to be current smokers. Healthy community design can improve everyone's ability to make healthy choices by reducing exposure to tobacco advertising and increasing smoke-free indoor and outdoor policies.

Source Vermont Department of Health: ¹Behavioral Risk Factor Surveillance System, 2002-2012. Data is age adjusted to US Population. Changes in methodology limit the ability to compare results since 2011 to previous years, so historic data appear in graph while the most recent data is in a table below. ²Youth Risk Behavior Survey, 2011. ³Vermont Adult Tobacco Survey, 2010-2012. *Indicates statistically significant difference between the two income levels. For more information visit: <http://healthvermont.gov/hv2020/>

OVER THE LAST 8-10 YEARS, SMOKING RATES HAVE BEEN FALLING AMONG ADULTS AND YOUTH.



HEALTH: HIGH-RISK SUBSTANCE ABUSE

Goal *All Chittenden County residents are healthy.*

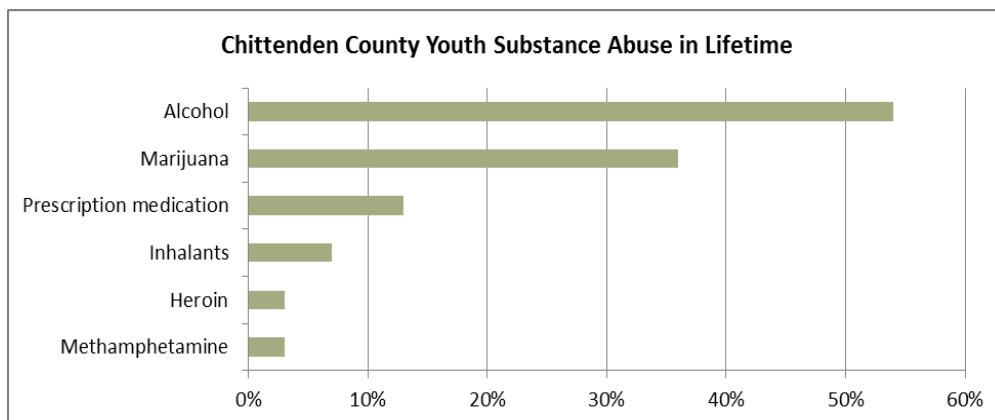
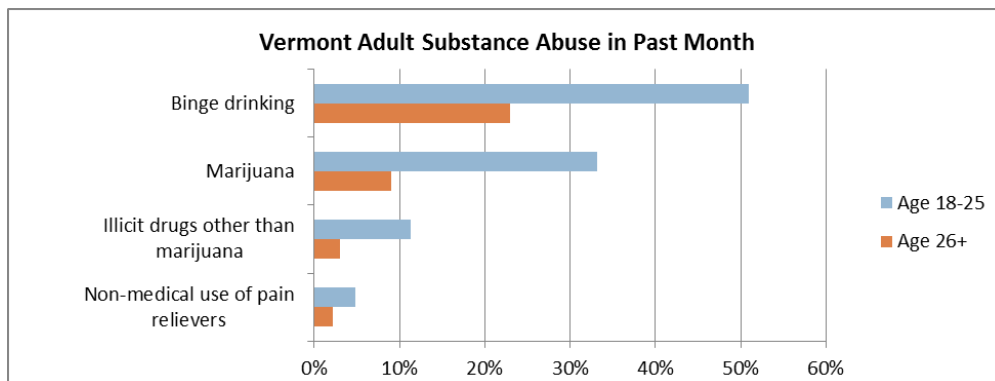
Indicator Percent of adults and Youth abusing substances

Description This indicator measures the percentage of Vermont adults who have used substances in the past month. Binge drinking is defined as five or more drinks on one occasion for men and four or more for women. This indicator also measures lifetime substance use among Chittenden County students in grades 9-12. Alcohol use for youth is defined as drinking any alcohol (more than a few sips).

Significance Excessive alcohol consumption is the third leading preventable cause of death nationwide and the most prevalent form of substance abuse in Chittenden County. Policies that reduce exposure to alcohol advertising and curb youth access to alcohol limit the health impacts of high-risk alcohol consumption.

Source Vermont Department of Health: ¹National Survey on Drug Use and Health, 2010-11. Data are statewide. ²Youth Risk Behavior Survey, 2011. Adult and youth results come from separate surveys and are not comparable. For more information visit: <http://healthvermont.gov/hv2020/>

EXCESSIVE ALCOHOL CONSUMPTION IS THE MOST PREVALENT FORM OF SUBSTANCE ABUSE AMONG ALL AGE GROUPS.



Special points of interest:

- Vermont has among the highest rates in the nation for marijuana use, other illicit drug use, binge drinking, and under-age drinking. Vermont has lower perception of risk for marijuana use and binge drinking compared to the U.S.; lower perceived risk can lead to higher prevalence of substance abuse.
- There is increasing community concern about opiate abuse. Beyond the hardships faced by individuals struggling with addiction, opiate abuse puts an immense strain on families, communities, medical and social service systems, and public safety.



PUBLIC SAFETY, CRIMINAL JUSTICE, & HAZARD MITIGATION: VIOLENT CRIME RATE

Goal *Improve the safety of the public including the loss of life and property from natural and manmade hazards.*

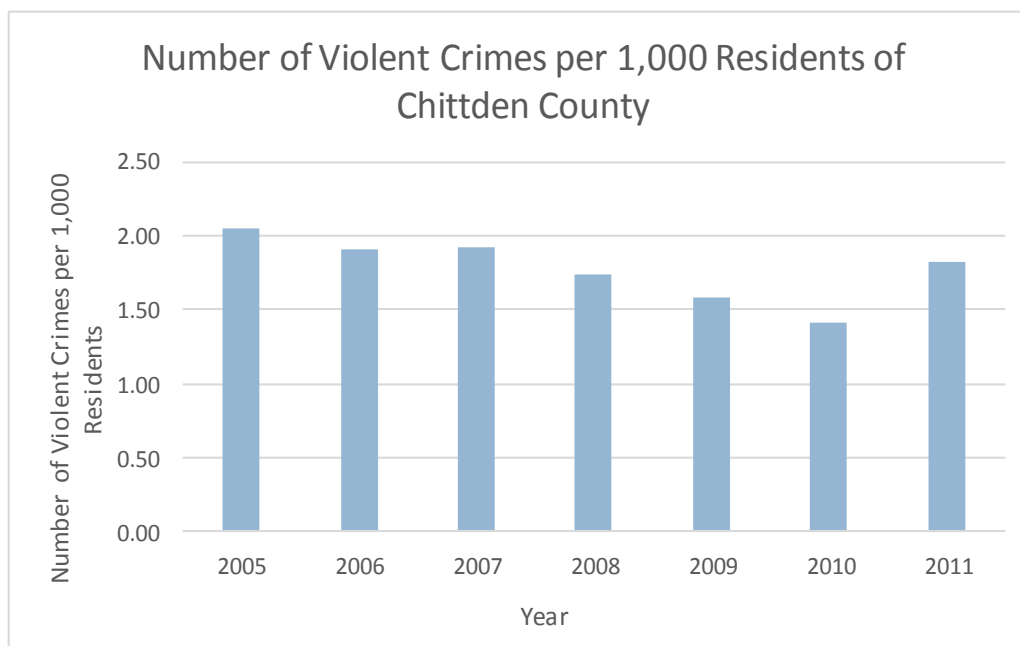
Indicator Violent crime rate per 1,000 Chittenden County residents

Description The number of violent crimes relative to the Chittenden County population estimated by the American Community Survey. Violent crime is defined by the US Bureau of Justice Statistics as murder, non-negligent manslaughter, forcible rape, robbery, and aggravated assault. This definition of violent crime serves only as a proxy, given that the ability to clearly define all crimes as violent or non-violent is difficult.

Significance The incidence of violent crimes can significantly detract from overall quality of life, by decreasing the ability to feel safe and secure in our homes and communities.

Source Vermont Crime Statistics Online, ACS 1-Year Population Estimates

THE VIOLENT CRIME RATE FOR CHITTENDEN COUNTY HAS LARGELY REMAINED BETWEEN 1.5 AND 2.0 VIOLENT CRIMES PER RESIDENT FROM 2005 TO 2011.



PUBLIC SAFETY, CRIMINAL JUSTICE, & HAZARD MITIGATION: NON-VIOLENT CRIME RATE

Goal *Improve the safety of the public including the loss of life and property from natural and manmade hazards.*

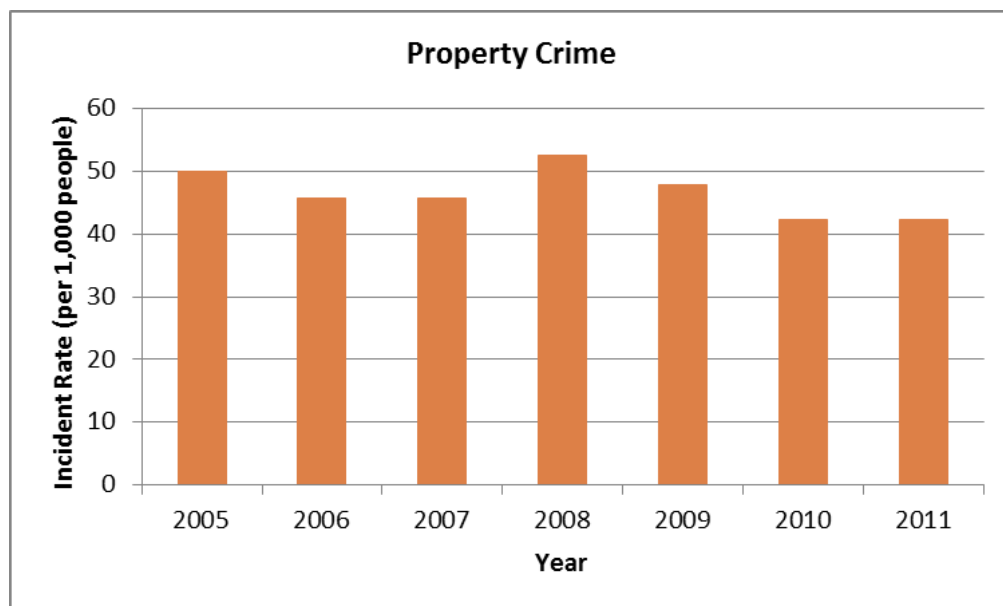
Indicator Property crime rate per 1,000 Chittenden County residents

Description This indicator measures the number of property crime offenses per 1,000 people. The types of crimes considered property crimes are larceny-theft, property destruction, burglary, fraud offenses, counterfeiting/forgery, embezzlement, arson, and extortion.

Significance Crimes against property is defined as the taking of someone else’s property and does not involve the use of force against a victim. It is an indicator of the safety of the community as there is a relationship between drug addiction to property crimes. It is recognized that “stealing” is a necessary way of life to support one’s drug habit.

Source Vermont Crime Statistics Online

THE PROPERTY CRIME RATE FOR CHITTENDEN COUNTY SPIKED IN 2008 AND DECREASED SLIGHTLY. IT HAS BEEN NOTED THAT THIS DATA HAS BEEN KNOWN TO UNDER-REPORT CRIMES .



Special points of interest:

Heroin cases are increasing in Vermont’s federal courts. According to Vermont U.S. Attorney Tristram Coffin, 65 people facing charges related to heroin trafficking have appeared before federal judges in Vermont in the first nine months of 2013, ending Sept. 30. That’s more than twice the number of heroin-related defendants who appeared in federal court in all of 2012, with three months still to go in 2013. It’s eight times as many heroin cases as the judges saw just four years ago in 2009. (Hemingway, Sam. “Heroin trafficking prosecutions soaring in Vermont, U.S. Attorney Says”. The Burlington Free Press 22 Oct. 2013)



PUBLIC SAFETY, CRIMINAL JUSTICE, & HAZARD MITIGATION: STRUCTURES IN FLOOD PRONE AREAS

Goal *Improve the safety of the public including the loss of life and property from natural and manmade hazards.*

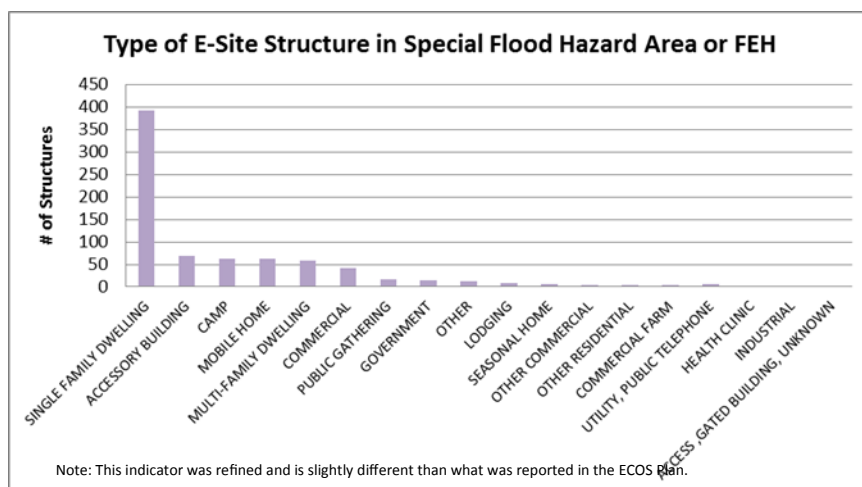
Indicator % and number of structures in special flood hazard areas and fluvial erosion hazard Area (FEH)

Description This indicator measures the % and number of structures within the special flood hazard area and the FEH. The special flood hazard area is the land that is vulnerable to inundation during base flood events. These areas are identified on the FEMA Flood Insurance Rate Maps. The FEH area is the land adjacent to the stream or river that is prone to erosion associated with the physical adjustment of waterways to maintain equilibrium.

Significance Flooding and fluvial erosion can damage or destroy homes, businesses and transportation infrastructure. Predictions about the impact of climate change on our infrastructure and buildings indicate that increased and more intense precipitation events may cause more frequent flooding and damage to development in close proximity to our waterways. This Indicator helps us identify what is at risk and to identify policies and actions that can be implemented over the long term to reduce risk and future losses.

Source Digital Flood Insurance Rate Maps, CCRPC FEH GIS DATA, VT E-9-1-1 Board

BASED ON GIS ANALYSIS, 1.3% OF STRUCTURES OR 776 STRUCTURES ARE LOCATED IN THE SPECIAL FLOOD HAZARD AREA OR FLUVIAL EROSION HAZARD AREA



PUBLIC SAFETY, CRIMINAL JUSTICE, & HAZARD MITIGATION: VACCINATION RATES

Goal *Improve the safety of the public including the loss of life and property from natural and manmade hazards.*

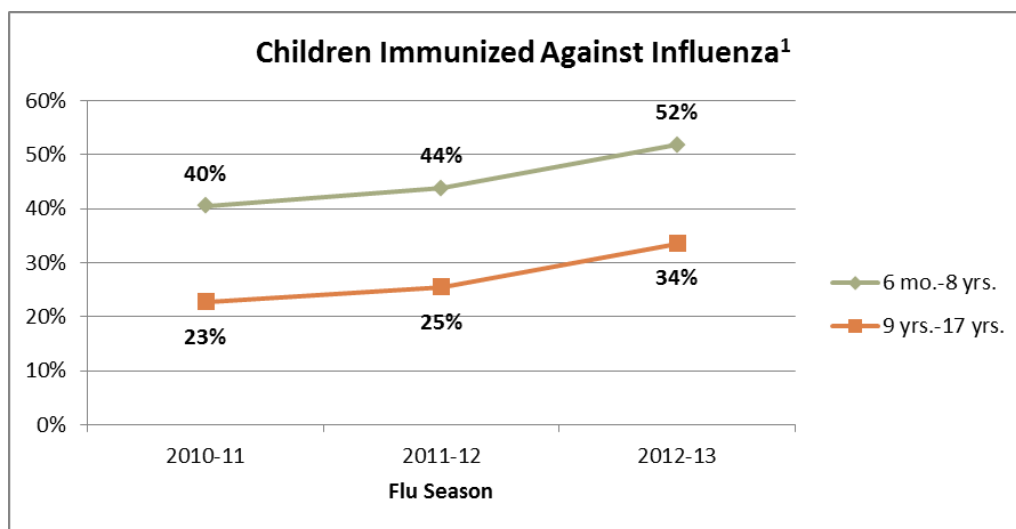
Indicator Percent of children immunized against influenza

Description This indicator measures influenza immunizations for children 6 months to 8 years, 9 years to 17 years, and for seniors age 65 and older.

Significance Immunization rates are increasing, but still need improvement for optimal protection. During the 2012-2013 flu season, there were 158 pediatric deaths reported nationwide, highlighting the need for improved immunization coverage.

Source ¹Vermont Immunization Registry, 2010-2013. Actual rates may be higher than indicated since the use of the Vermont immunization registry is not universal among practitioners. ²Behavioral Risk Factor Surveillance System, 2011-2012.

ANNUAL INFLUENZA IMMUNIZATIONS ARE RECOMMENDED FOR EVERYONE OVER 6 MONTHS OF AGE, BUT CHILDREN AND THE ELDERLY ARE AT A PARTICULARLY HIGH RISK.



PUBLIC SAFETY, CRIMINAL JUSTICE, & HAZARD MITIGATION: EMERGENCY INCIDENTS

Goal *Improve the safety of the public including the loss of life and property from natural and manmade hazards.*

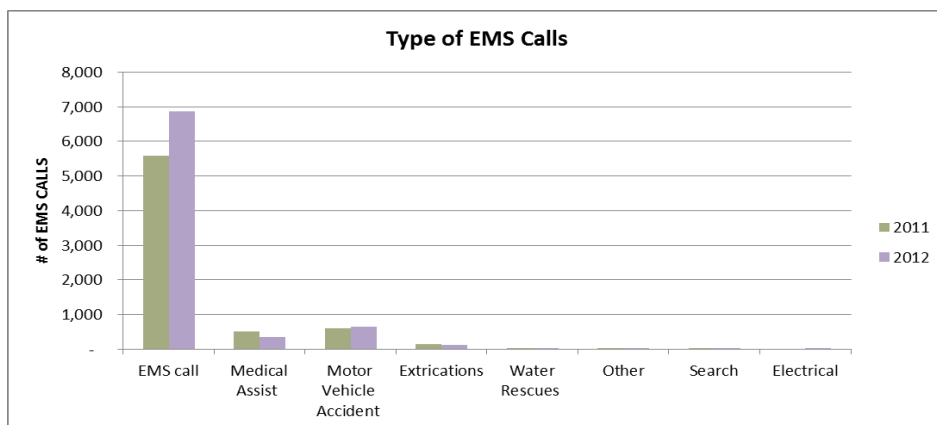
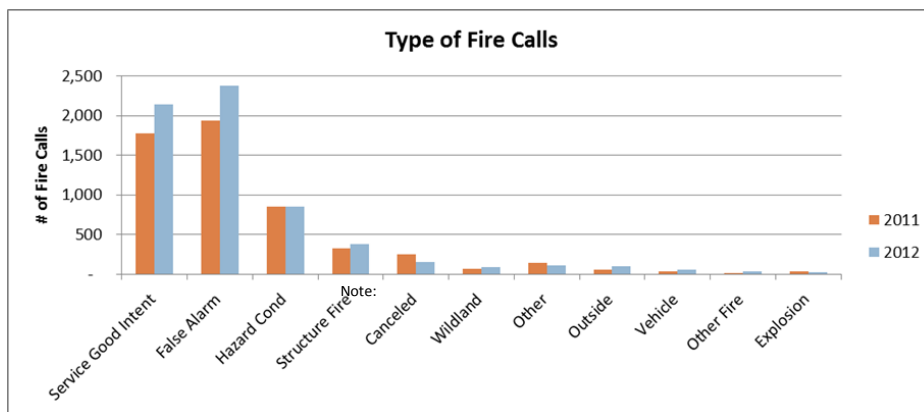
Indicator Number and type of fire and EMS calls

Description This indicator provides an overview of the number and type of incidents reported in the National Fire Incident Reporting System (NFIRS) data for Chittenden County. “Service Good intent” refers to calls where after investigation, the fire department finds no problems or provides some type of other non emergency assistance.

Significance Fire Departments provide an invaluable service to Chittenden County communities and are typically first at the scene responding to all types of incidents.

Source Vermont Division of Fire Safety Annual Report, http://firesafety.vermont.gov/sites/firesafety/files/pdf/Newsletters%20&%20FM%20reports/Reports/2012_FM_report_v2.pdf

OVERALL BETWEEN 2011-2012, THERE WAS A 14% INCREASE IN THE NUMBER OF FIRE AND EMS CALLS.



PUBLIC SAFETY, CRIMINAL JUSTICE, & HAZARD MITIGATION: TRANSPORTATION SAFETY

Goal *Improve the safety of the public including the loss of life and property from natural and manmade hazards.*

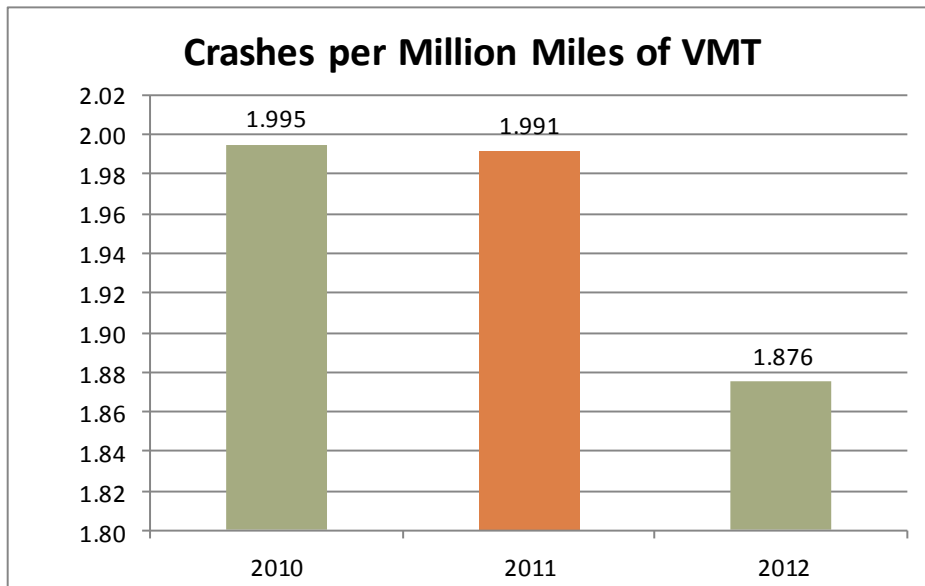
Indicator Number of Vehicle Crashes per one million Annual Vehicle Miles Travelled (VMT)

Description VTrans annually aggregates the total number of motor vehicle crashes statewide and by county from local and state public safety departments. They also annually calculate VMT by county. A ratio of the two results in the number of crashes for every million miles travelled.

Significance If our indicator ratio is decreasing, we are seeing improvements in motor vehicle related safety – fewer crashes per miles travelled is better than more.

Source VTrans

BOTH THE NUMBER OF CRASHES AND TOTAL VMT REMAINED REMARKABLY SIMILAR FROM 2010 TO 2011. IN 2012, HOWEVER, VMT ROSE WHILE THE NUMBER OF CRASHES WENT DOWN. THIS RESULTED IN A SAFER ROADWAY SYSTEM COMPARED TO PREVIOUS YEARS.



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Special points of interest:

- The number of reported vehicle crashes involving bicycles or pedestrians was 106 in 2010, 107 in 2011 and 97 in 2012. These numbers represent approximately 3.5% of all crashes.



SOCIAL CONNECTEDNESS: RACIAL COMPOSITION

Goal *Increase opportunities for people of all backgrounds to engage in the multi-cultural social fabric and activities of the community.*

Indicator Index of dissimilarity

Description The Index of Dissimilarity is a measure of the evenness with which two groups are distributed across neighborhoods (or census tracts). Higher values of dissimilarity imply higher residential segregation. It helps to answer the following question: Are racial groups evenly distributed throughout neighborhoods, or are some racial groups concentrated more in certain neighborhoods?

Significance The dissimilarity index is a metric for identifying whether racial groups are evenly distributed throughout neighborhoods or if some racial groups more concentrated in other areas.

Source HUD Office of Sustainable Housing and Communities, 2012

THE HISPANIC, BLACK, AND ASIAN POPULATIONS ARE LOW TO MODERATELY DISTRIBUTED THROUGHOUT THE COUNTY.

	Dissimilarity Index	
	2000	2010
Non-White/White	0.26	0.26
Black-African American/White	0.37	0.44
Hispanic/White	0.20	0.21
Asian/White	0.35	0.35
Pacific-Islander/White	0.00	0.00
Native-American/White	0.00	0.00

SOCIAL CONNECTEDNESS: SOCIAL SERVICE TRANSPORT

Goal *Increase opportunities for people of all backgrounds to engage in the multi cultural social fabric and activities of the community.*

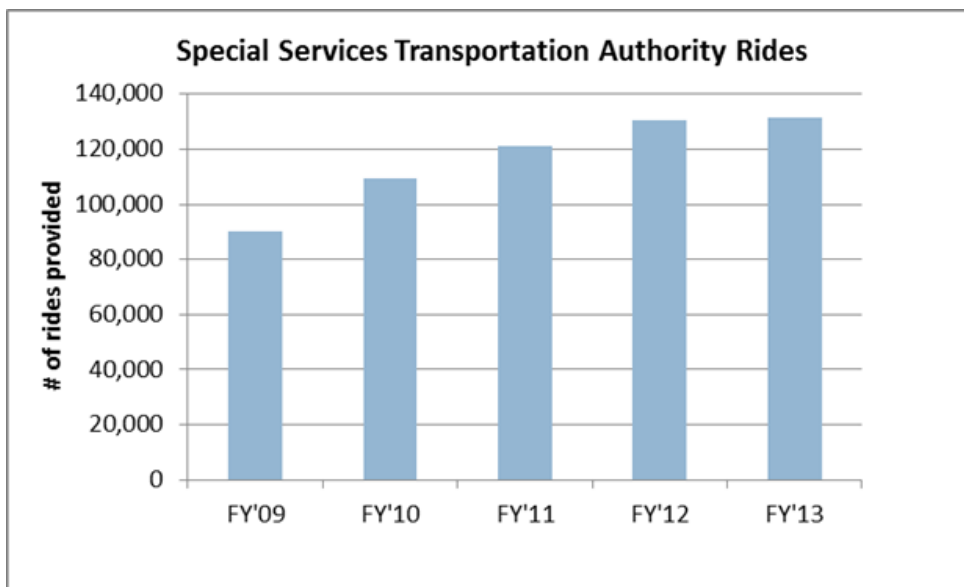
Indicator Number of trips provided by the Special Services Transportation Agency (SSTA)

Description SSTA has been providing transport to social services agencies, communities and CCTA since 1982. These are trips given to people who do not have the means to transport themselves primarily our youth, disabled, and elderly.

Significance The more trips we can provide to those in need and who are unable to use other modes, the better we serve the transport needs of more of our citizens and allow these people to more fully engage in all aspects of society.

Source SSTA and United Way of Chittenden County

RIDERSHIP HAS SHOWN A STEADY INCREASE YEAR TO YEAR, DEMONSTRATING THE TRANSPORTATION NEEDS OF VARIOUS SEGMENTS OF OUR POPULATION THAT HAVE NO OTHER TRANSPORT OPTION.



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Special points of interest:

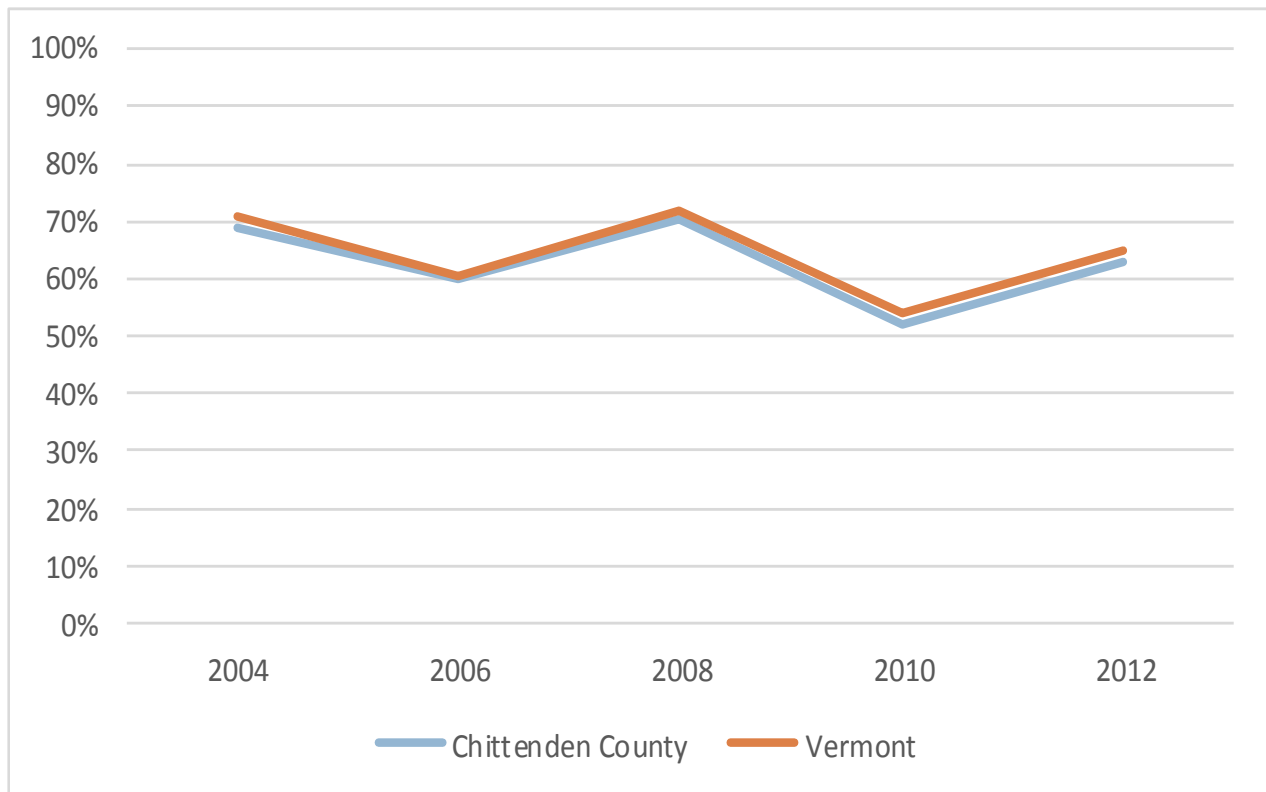
- United Way's Neighbor Rides Initiative began in March, 2013. Through August, this program has provided nearly 600 volunteer rides.



CIVIC ENGAGEMENT: VOTER RATE

- Goal** *People from diverse backgrounds feel that they have a say in political and non-political decisions that affect their lives, neighborhoods and communities.*
- Indicator** Percent of eligible voters that voted in general elections
- Description** The percent of registered voters who turned out to vote in the general election for Chittenden County compared to the State of Vermont.
- Significance** Voter turnout is an important indicator of civic engagement.
- Source** Vermont Secretary of State

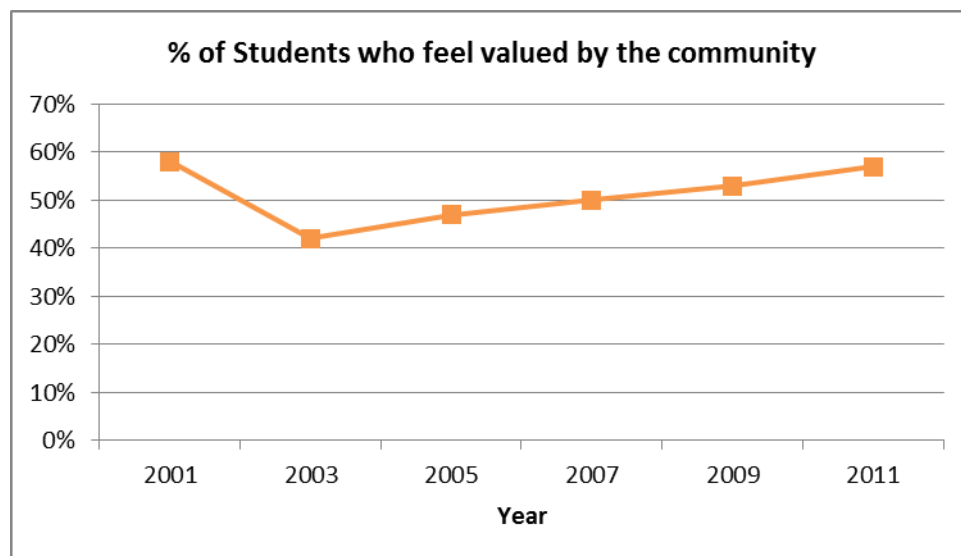
CHITTENDEN COUNTY'S ELIGIBLE VOTER TURNOUT PERCENTAGE CONTINUES TO BE SLIGHTLY LESS THAN THE STATE AS A WHOLE FOR RECENT GENERAL ELECTIONS.



CIVIC ENGAGEMENT: YOUTH ENGAGEMENT

- Goal** *People from diverse backgrounds feel that they have a say in political and non-political decisions that affect their lives, neighborhoods and communities.*
- Indicator** Percent of students who feel valued by the community
- Description** This indicator measures the percentage of students in grades 9-12 in Chittenden County who answered “agree” or “strongly agree” to the survey question “Do you agree or disagree that in your community you feel like you matter to people?”.
- Significance** Students’ perception that they matter to people in their community is an indicator of civic engagement among youth. Community design can impact feelings of inclusion among youth by creating welcoming public spaces and fostering opportunities for neighbors of all ages to interact. Additionally, youth who feel like they matter to people are less likely to binge drink or misuse prescription drugs.
- Source** Youth Risk Behavior Survey, 2011. The survey is administered every other year. 2013 results were not yet available at the time of this report’s publication.

THE PERCENTAGE OF STUDENTS WHO FEEL VALUED BY THE COMMUNITY HAS CLIMBED STEADILY SINCE 2003. COMPARED TO THE STATEWIDE AVERAGE, SIGNIFICANTLY MORE STUDENTS IN CHITTENDEN COUNTY FELT LIKE THEY MATTER TO PEOPLE.



SOCIAL COMMUNITY: OPPORTUNITY INDEX

Goal *All community members have the skills, resources, and assurances needed to participate in the workforce and in the family, civic, and cultural life within and among neighborhoods and in the larger community.*

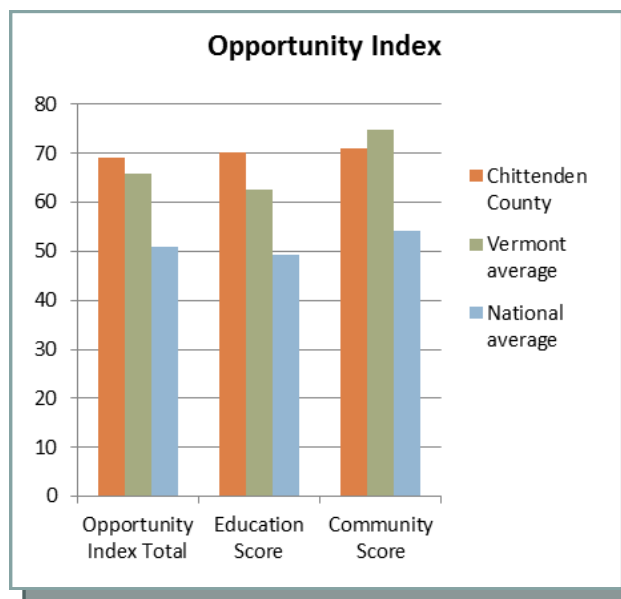
Indicator An index that measures economic opportunity, educational opportunity, and community health and civic life

Description The Opportunity Index consists of three dimensions: economic opportunity, educational opportunity, and community health and civic life. The economic opportunity dimension (not shown) is calculated from the unemployment rate, median household income, poverty, and household income. The education dimension includes preschool enrollment, four-year graduation rate, and post-secondary education. The community health and civic life is calculated from percent of adults who are involved in social, civic, sports, and r religious groups; percent of adults who volunteer; teenagers no in school and not working; violent crime; primary care providers; and grocery stores and produce vendors.

Significance The opportunity index measures outcomes that contribute to economic opportunity an mobility. The outcomes that make up the opportunity index are known indicators that have demonstrated a connection to a person or community’s access to jobs and education.

Source Opportunity Nation, <http://www.opportunitynation.org/>

CHITTENDEN COUNTY RECEIVED AN A– FOR OVERALL OPPORTUNITY



ECONOMIC INFRASTRUCTURE

Our goal for Chittenden County's Economic Infrastructure is to build the region's capacity for shared and sustainable improvements in the economic well-being of the community through support of both local and globally competitive initiatives.

How are we doing?

Good News

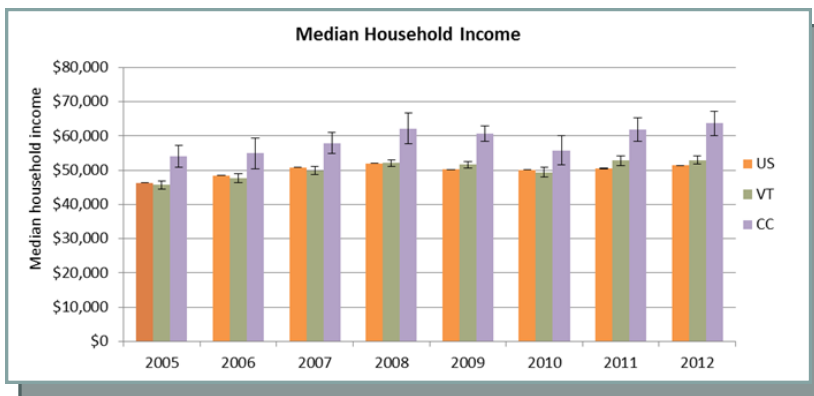
Chittenden County has a healthy economic climate with more businesses locating here and the unemployment rate being lower than the rest of the State. It leads the State in gross domestic product per capita. Wages are growing in the County's dominant business sectors: financial/professional, education, and health. Chittenden County income levels have also increased and are higher than areas outside of the County.

Needs Improvement

Continued efforts are necessary to grow the County's economy. These efforts are rooted in the ability to make the County a more affordable place to live; provide a labor force that is competent in science, technology, engineering, arts, and math (STEAM); and increase the number of industrial sites available for future employers.

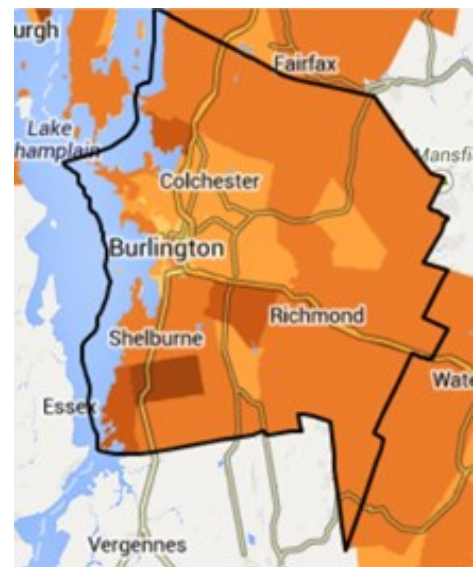
Indicator Snapshot

CHITTENDEN COUNTY INCOME IS HIGHER THAN ALL OF VERMONT AND THE UNITED STATES



Source: American Community Survey

HOUSING AND TRANSPORTATION COSTS EXCEED THE TARGET OF 45% OF INCOME SPENT ON HOUSING & TRANSPORTATION



Source: HUD Housing and Transportation Affordability (HTA) Initiative

ECONOMY: JOB GROWTH

Goal Retain and support existing employers and job growth, grow target sector employers and entrepreneurs, and work to attract a greater diversity of employers and employees.

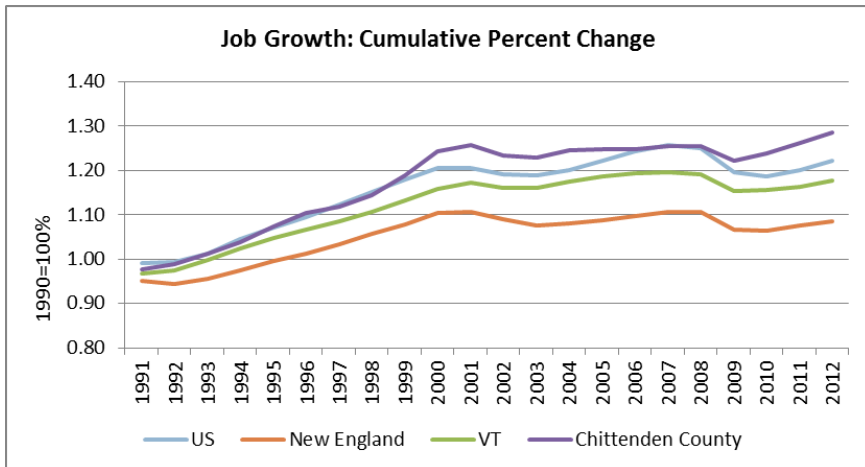
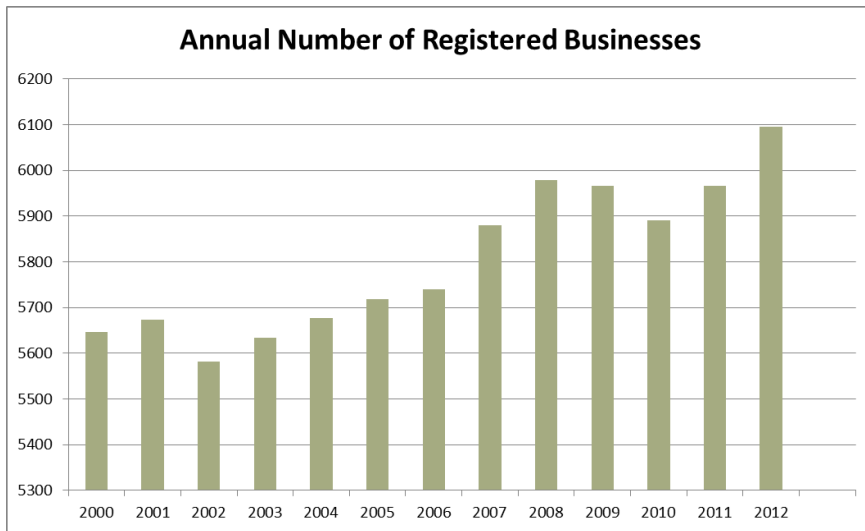
Indicator Number of registered businesses and percent change in job growth

Description This indicator measures the number of registered businesses in Chittenden County.

Significance An increase in the number of businesses can lead to a healthy economic climate. More businesses means more competition which is typically a driver of innovation. Business growth is essential for creating vital jobs and strengthening a community's economy.

Source Vermont Department of Labor, <http://www.vtlmi.info/indareanaics.cfm>

THE NUMBER OF BUSINESSES AND JOB GROWTH IS INCREASING AND HAS SURPASSED 2008 LEVELS, INDICATING RECOVERY FROM THE ECONOMIC DOWNTURN.



ECONOMY: UNEMPLOYMENT RATE

Goal *Retain and support existing employers and job growth, grow target sector employers and entrepreneurs, and work to attract a greater diversity of employers and employees.*

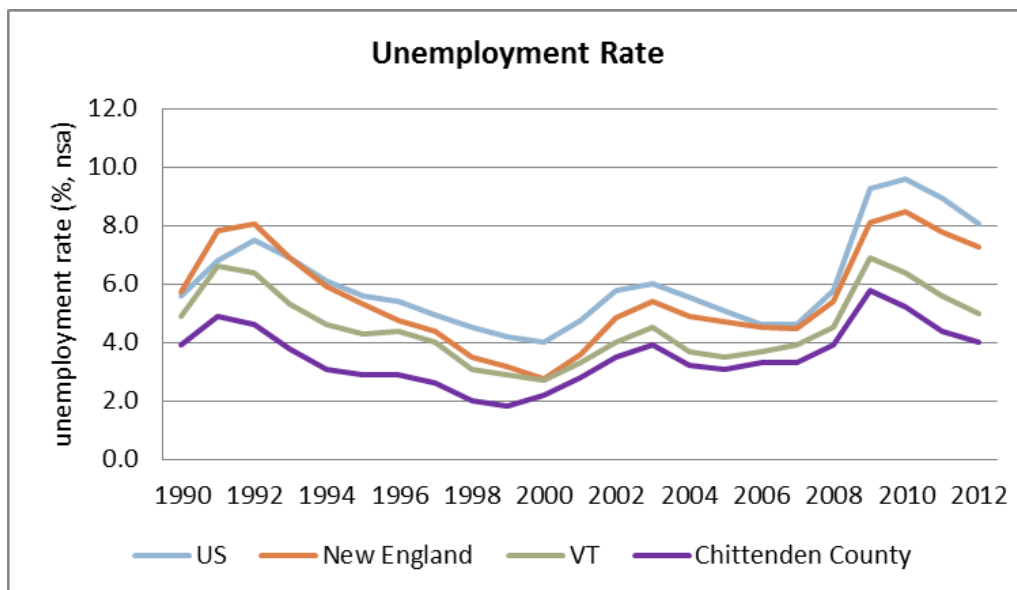
Indicator Unemployment rate

Description This indicator is a measure of the unemployment rate for the Burlington-South Burlington New England City and Town Area. Chittenden County unemployment rate is not available from this source. The unemployment rate is the number of the people working divided by the number of people unemployed. A person is considered to be unemployed if they are without a job and actively looking for work. Unemployment rates typically lag behind economic events because it can take months for a company to develop a lay-off plan.

Significance The County's labor force has a relatively low unemployment rate which is a good indicator to gauge the County's economy and how confident businesses are to hire new workers.

Source Vermont Department of Labor For Chittenden County/VT, Bureau of Labor Statistics for US, NE

SINCE 2008-2009, THE AREA'S UNEMPLOYMENT RATE HAS DECREASED.



ECONOMY: WAGES BY SECTOR

Goal Retain and support existing employers and job growth, grow target sector employers and entrepreneurs, and work to attract a greater diversity of employers and employees.

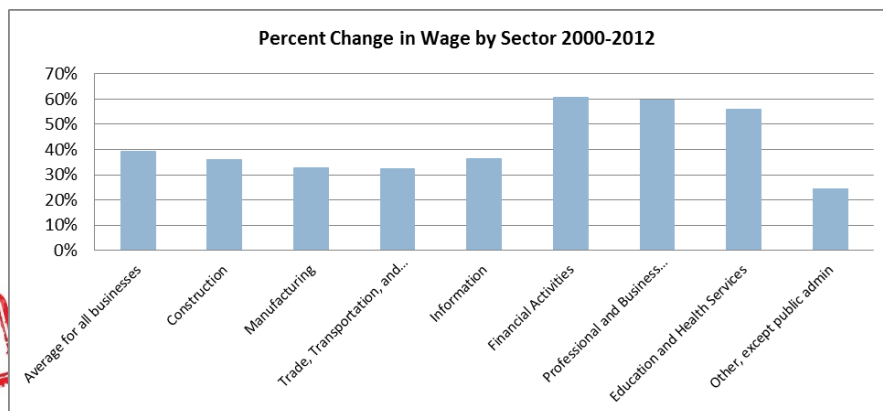
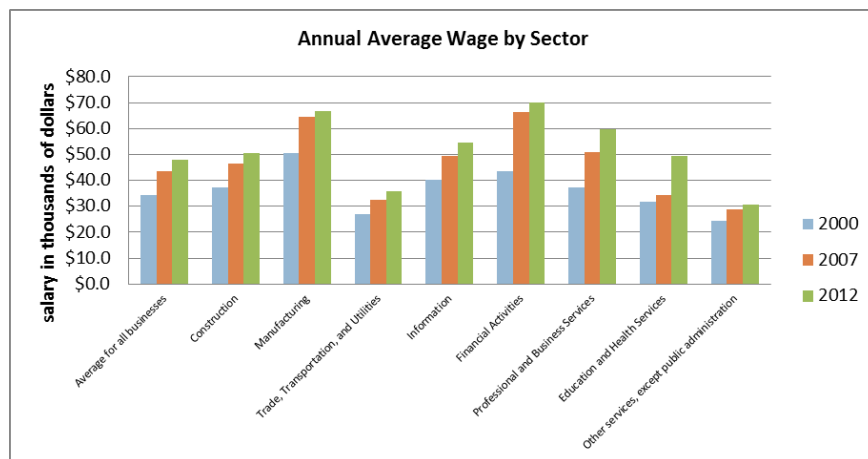
Indicator Annual average wage by sector (nominal dollars) and percent change

Description This indicator measures the annual average wage by sector.

Significance The trends seen in the wages by sector are not much different than in other regions of the country. Chittenden County’s employment base is largely within five industry sectors: Healthcare and social assistance; retail trade; manufacturing; accommodation and food service; and professional, scientific and technical services. The steadiness of wages in these sectors is good news for the Chittenden County economy.

Source Vermont Department of Labor

WAGES IN THE FINANCIAL, PROFESSIONAL/BUSINESS, AND EDUCATION/HEALTH SECTORS HAVE INCREASED THE MOST IN THE LAST 12 YEARS.



HOUSEHOLD FINANCIAL SECURITY: HOUSEHOLD INCOME

Goal *Improve the financial security of households.*

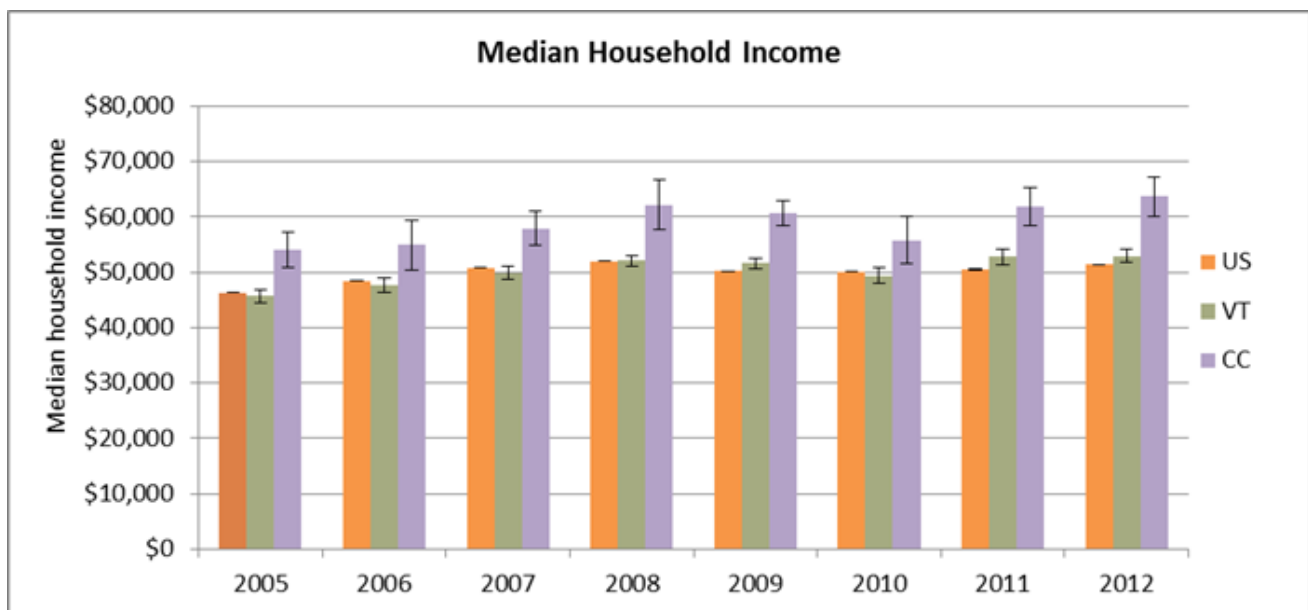
Indicator Median household income

Description This indicator measures the income of households which is the combination of two income earners pooling household resources.

Significance Levels of income and wealth are key determinants of individual or family wellbeing. Economic standard of living involves a complex combination of factors as such as income, living costs, and household size and composition.

Source American Community Survey 1-Year Estimates

**CHITTENDEN COUNTY INCOME IS HIGHER THAN BOTH VT AND US.
AFTER A 2-YEAR DECLINE, INCOME LEVELS ARE INCREASING.**



HOUSEHOLD FINANCIAL SECURITY: INCOME BY RACE

Goal *Improve the financial security of households.*

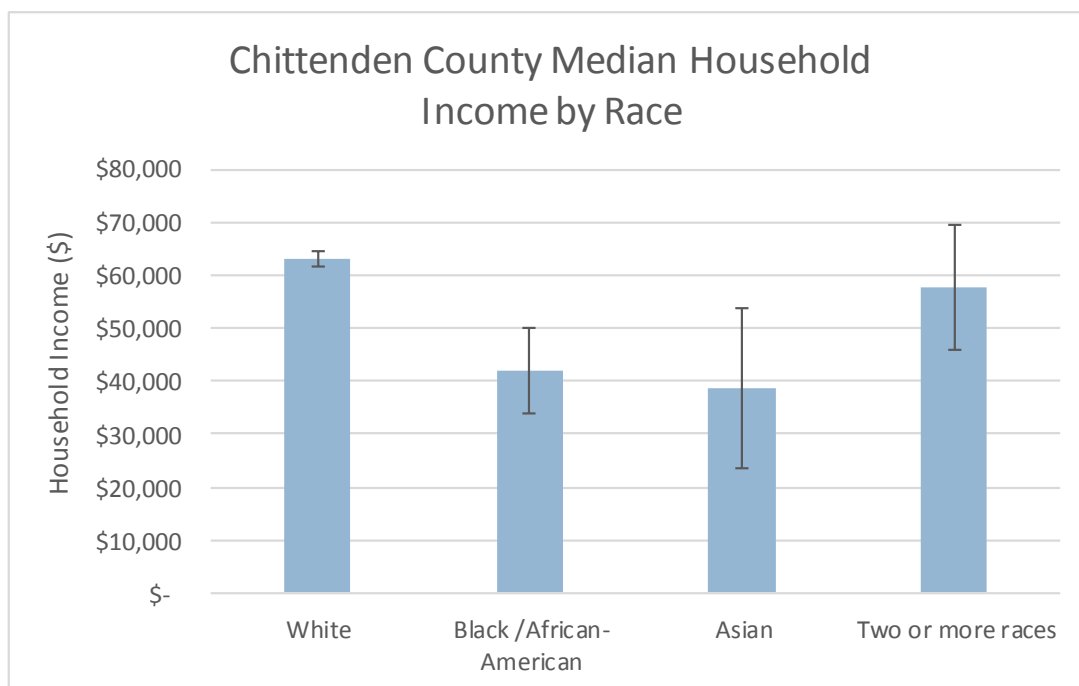
Indicator Median household income by race, average of annual survey results during 5 years in 2007-2011

Description This indicator shows the income of different races that divide income distribution into two equal groups. Median income is not affected by high or low outliers. Household income is the combination of two income earners pooling resources.

Significance Median household income is an indicator of the income gap between racial and ethnic groups and provides insight into income equality.

Source American Community Survey, 5-year estimates, 2007-2011

MEDIAN HOUSEHOLD INCOME AMONG BLACK/AFRICAN-AMERICANS AND ASIANS IS LOWER THAN THAT OF WHITES OR HOUSEHOLDS HEADED BY SOMEONE WITH TWO OR MORE RACES.



HOUSEHOLD FINANCIAL SECURITY: INCOME BELOW POVERTY

Goal *Improve the financial security of households.*

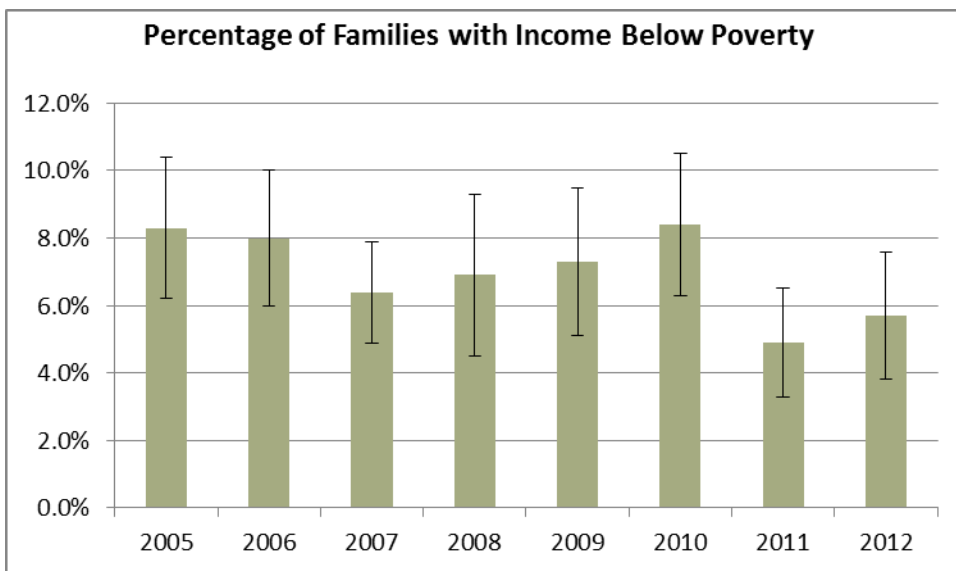
Indicator Percentage of families whose income in the last 12 months is below poverty level.

Description The number of families earning income below the poverty income threshold has remained steady; about 7% of families are considered to be in poverty. If a family's total income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. Poverty thresholds are updated annually to allow for changes in the cost of living (inflation factor) using the Consumer Price Index (CPI).

Significance Measuring poverty as an economic indicator focuses attention on the low income population and how we are doing as a community/society at providing services to improve access to wealth and education.

Source American Community Survey (1-year estimates)

OVER THE LAST 7 YEARS, ON AVERAGE ABOUT 7% OF FAMILIES EARNED INCOME BELOW THE POVERTY THRESHOLD.



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Special points of interest:

- 12% of individuals in Chittenden County face food insecurity.
- Nearly half of food insecure households have incomes that disqualify them from receiving 3SquaresVT.
- The number of individuals who receive food assistance through 3SquaresVT has increased by 74% in the past five years.



HOUSEHOLD FINANCIAL SECURITY: HOUSING AND TRANSPORTATION COSTS

Goal *Improve the financial security of households.*

Indicator Combined Housing + Transportation Costs

Description This indicator measures the portion of a household’s income going toward transportation and housing costs. It is known as the Location Affordability Index. It estimates the percentage of a family’s income dedicated to the combined cost of housing and transportation in a given Location. Affordability varies based on household size, number of commuters, and income levels and area indicated below for different household types.

Significance The combination of measuring both household and transportation costs for a household reveals a clearer picture of housing affordability. A house farther away from an employment center that is only accessible by making longer, more frequent trips may be less expensive to purchase, but the cost of transportation may decrease the overall affordability of this location.

Source [HUD Location Affordability Index](#) , 2006-2010

45% OF INCOME SPENT ON HOUSING + TRANSPORTATION IS CONSIDERED THE THRESHOLD OF AFFORDABILITY.

Location Affordability for Renter and Owner Households Combined						
	Income	Peo- ple	Comm- uters	Housing Cost -% of Income	Transpor- tation Cost-% of Income	Location Afford- ability
Regional Typical	\$58,075	2.4	1.22	31%	19%	50%
Regional Moderate	\$46,460	2.4	1.22	35%	23%	58%
Dual-Income Family	\$87,113	4	4	23%	18%	41%
Low Income	\$33,250	3	1	45%	30%	75%
Single Person Very Low Income	\$11,139	1	1	108%	57%	165%
Single Professional	\$48,396	1	1	37%	17%	54%
Single Worker	\$24,198	1	1	58%	30%	88%
Retirees	\$46,460	2	0	37%	17%	54%



Special points of interest:

- In September 2011, 75 major employers in Chittenden County were surveyed. One major result of this survey was that every kind of quality of life factor was rated well, except for affordability of housing.

WORKING LANDS & LAND BASED INDUSTRIES: USE VALUE APPRAISAL

Goal *Support the growth and vitality of working farms and managed forests; and sustainably manage sand and gravel extraction operations.*

Indicator Number of acres and parcels enrolled as forest
Number of acres and parcels enrolled as agriculture

Description This indicator measures the amount of land and number of parcels enrolled in the Use Value Appraisal Program (Current Use). Land in the current use program is taxed based on the agricultural and forest use instead of the market value of its highest potential use.

Significance The amount of land enrolled in current use is an indicator of our working landscape economy. The current use program is needed to keep agricultural and forest land in production and to help slow the development of them. Agricultural and forest lands are a valuable part of our economy in terms of products and tourism.

Source [Vermont Department of Taxes](#)

**OVERALL , CHITTENDEN COUNTY HAS MORE
FORESTED ACRES IN CURRENT USE THAN AGRICULTURAL ACRES.**

Acres in Use Value Appraisal	2010	2011	2012
Forest (includes non-productive)	60,331	61,351	59,686
Agriculture	31,298	30,909	29,980
Total	91,629	92,260	89,667
% of County	27%	27%	26%



WORKING LANDS & LAND BASED INDUSTRIES: NUMBER OF FARMS

Goal Support the growth and vitality of working farms and managed forests; and sustainably manage sand and gravel extraction operations.

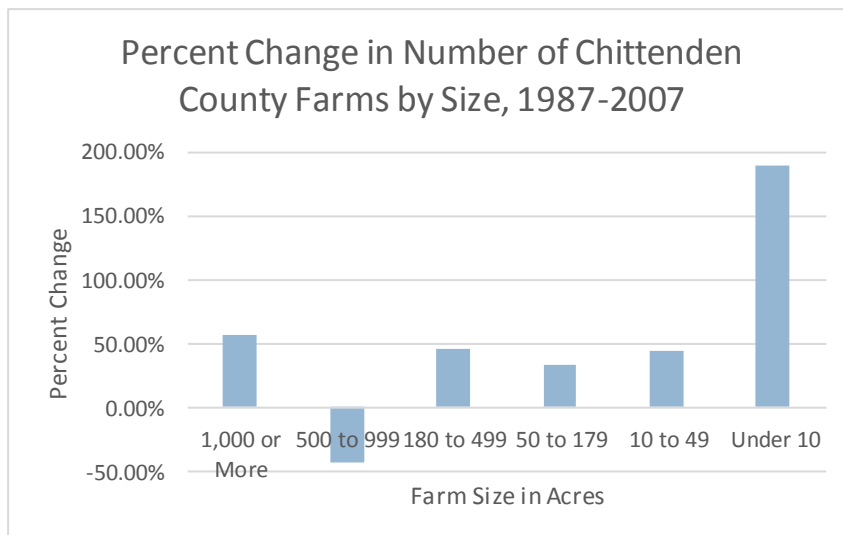
Indicator Total number of farms by size. Acres devoted to crops and forest.

Description Number of farms by size in Chittenden County, 1987-2007. The number and percent change of acres of Chittenden County farms in cropland, woodland, or other use. Cropland includes land planted for Christmas tree production and short rotation wood crops. Woodland includes natural or planted woodlots or timber tracts and cutover and deforested land with young growth that has or will have value for wood products and land in tapped maple trees.

Significance Agriculture in Chittenden County is a valued land use yet economic pressures have contributed to the loss of farmland to development, resulting in smaller farm parcels that could have diminished economic viability and ecological benefits.

Source United States Department of Agriculture, Census of Agriculture, 1987, 1997, 2007

WHILE THE NUMBER OF FARMS HAS INCREASED FROM 452 FARMS IN 1987 TO 641 FARMS IN 2007, THE TOTAL ACREAGE OF CROPLAND HAS DECREASED IN CHITTENDEN COUNTY BY MORE THAN 40%.



Special points of interest:

- Property taxes per acre for farms has increased 82% from 1987 to 2007, from \$18.60 to \$33.86 (adjusted for inflation).
- Net farm income per acre for farms has increased from \$102.49 in 2002 (adjusted for inflation) to \$110.17 in 2009.

Land Use	1987	1997	2007	Percent Change
Cropland	53,177	42,188	31,161	-41.40%
Woodland	31,925	28,853	34,744	8.83%
Other (including pasture)	12,967	12,314	17,477	34.78%
Total	98,069	83,355	83,382	-14.98%

BUILT ENVIRONMENT

Our goal for the Built Environment is to make public and private investments to minimize environmental impact, maximize financial efficiency, optimize social equity and benefits, and improve public health.

How are we doing?

Good News

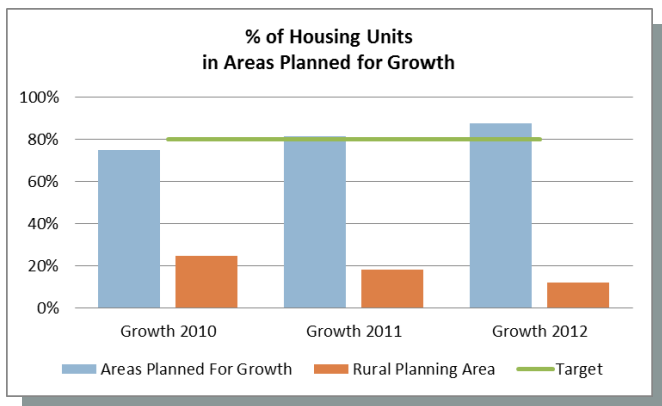
Over the last three years, municipalities have done better to focus development in centers or in close proximity to existing development where walking, biking, and transit are options for transportation and recreation. Additionally, the prevalence of cost burdened households has decreased and people are seeking alternatives to driving alone to work. Also, fewer homes are on the market than three years ago. Chittenden County is also having impact on Vermont's energy future by adding approximately 250 more renewable energy generation sites.

Needs Improvement

Chittenden County municipalities and the State need to continue the momentum established recently to encourage development in areas planned for growth. This will reduce development pressure in our rural areas and will continue to decrease energy consumed for transportation and land use. The vacancy rate and affordable rental housing stock is low, leaving renters and low-moderate income families without much housing choice and may subject them to potentially higher rents. Education and incentives are needed to move people to take action on weatherizing existing buildings and siting more renewable energy generation.

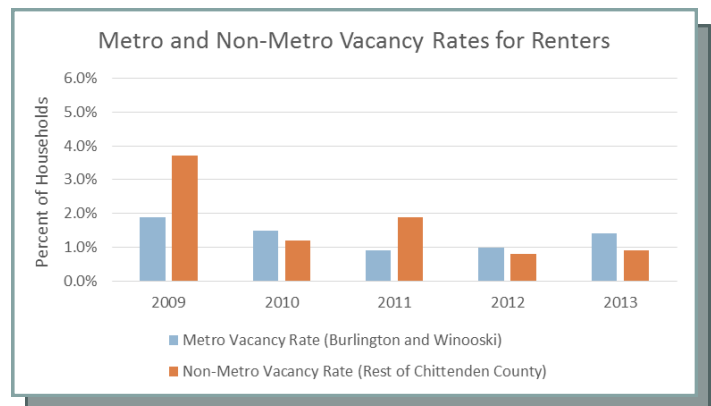
Indicator Snapshot

OVER 80% OF NEW HOUSING UNITS OCCURRED IN AREAS PLANNED FOR GROWTH



Source: CCRPC

THE VACANCY RATES FOR BOTH METRO AND NON-METRO RENTAL UNITS REMAIN EXTREMELY LOW IN CHITTENDEN COUNTY. A HEALTHY VACANCY RATE IS BETWEEN 3-5%.



Source: Allen and Brooks, Inc..

LAND USE: RESIDENTIAL DEVELOPMENT

Goal *Encourage future growth in the Center, Metro, Enterprise, Suburban, and Village Planning Areas to maintain Vermont’s historic settlement pattern and respect working and natural landscapes.*

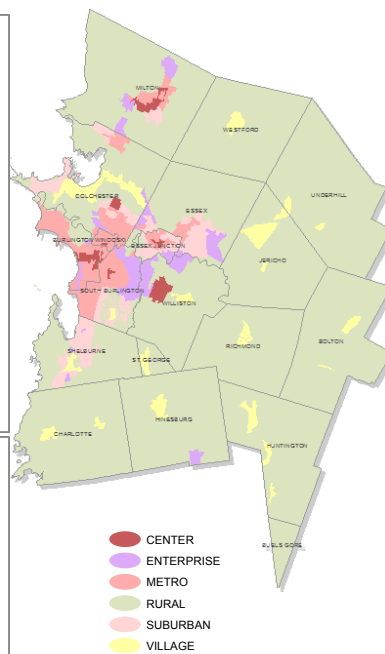
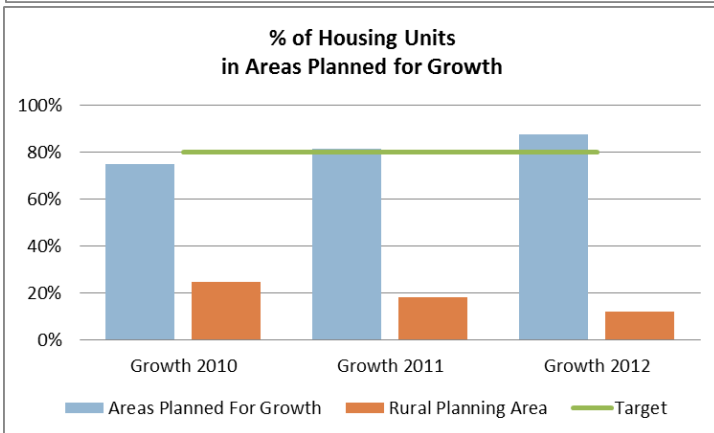
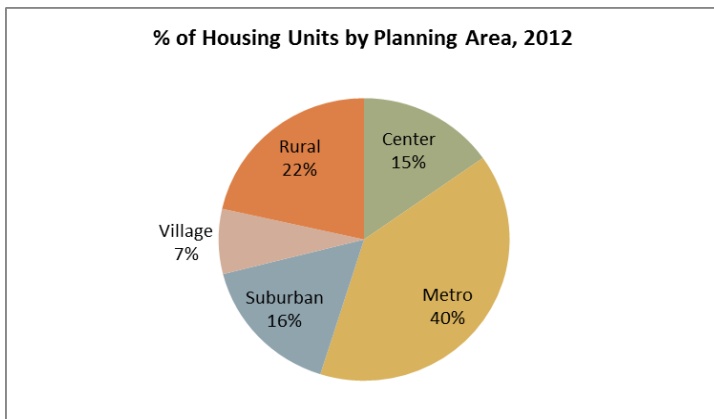
Indicator Percent of housing units in areas planned for growth

Description The indicator measures the percentage of new homes in areas planned for growth. These are defined as Center, Metro, Enterprise, Suburban, and Village Planning Areas.

Significance The location of housing in areas where the infrastructure, services, and jobs are nearby in stead of development in rural areas will create a built environment that uses less energy, preserves rural areas, and maintains Vermont historic settlement patterns.

Source Chittenden County Regional Planning Commission and its member municipalities

IN 2012 AND 2011, WE ACHIEVED ECOS STRATEGY 2 ,WITH OVER 80% OF NEW HOUSES BUILT IN AREAS PLANNED FOR GROWTH.



- Special points of interest:**
- 53% of housing units are within a 1/4 mile of a transit stop.
 - 64% of employers are within a 1/4 mile of a transit stop.
 - 35% of employers are within 100 ft. of an existing sidewalk and shared use path.
 - 35% of housing units are within 100 ft. of an existing sidewalk or shared use path.

LAND USE: LAND USE ACTIVITY

Goal *Encourage future growth in the Center, Metro, Enterprise, Suburban, and Village Planning Areas to maintain Vermont’s historic settlement pattern and respect working and natural landscapes.*

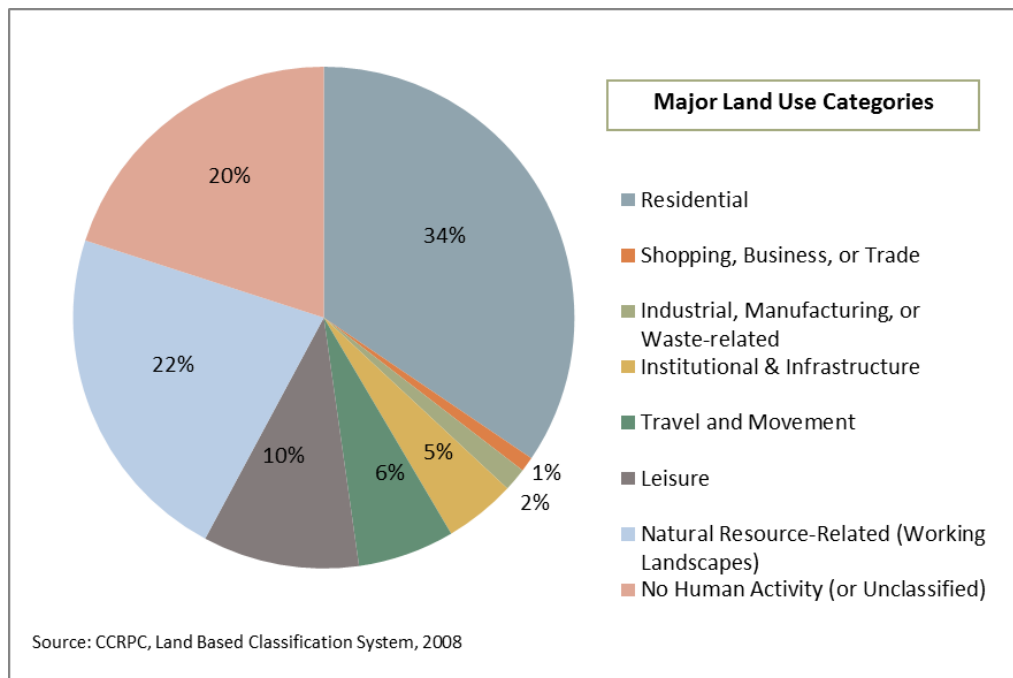
Indicator % of acres in major land use categories

Description This indicator measures the major type of land use activity that occurs on each parcel in the County. Activity refers to the actual use of land and what is taking place in physical or observable terms. Note that no human activity typically means that there is no observable activity taking place on the land or there are areas of no human habitation.

Significance Understanding how major land use categories are distributed among the County is key to determining whether development trends and land use practices match our goal to maintain Vermont’s historic settlement pattern.

Source Chittenden County Regional Planning Commission, [APA Land Based Classification System](#)

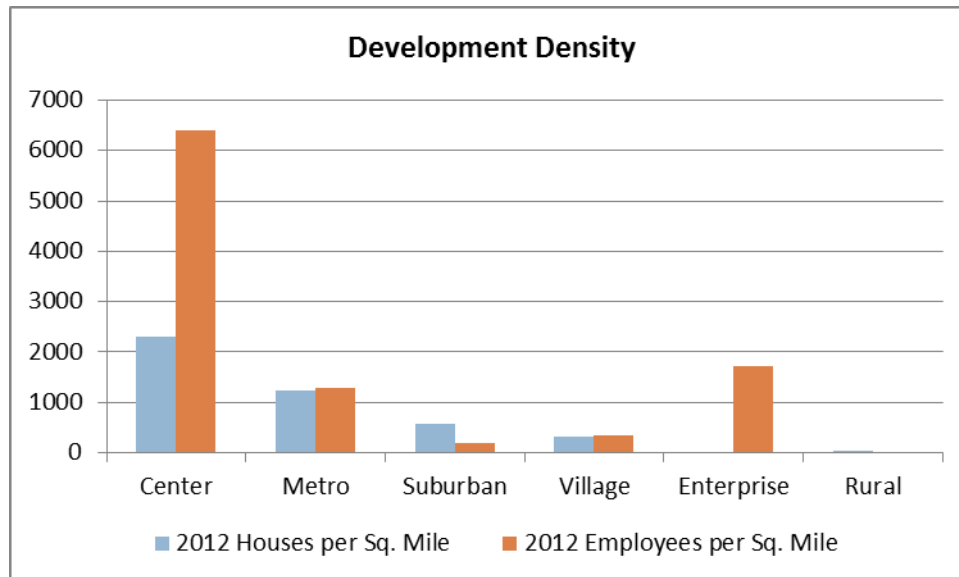
WORKING LANDS AND NATURAL AREAS MAKE UP A MAJORITY OF THE COUNTY’S LAND USE ACTIVITIES. SECOND TO THAT IS RESIDENTIAL ACTIVITY.



LAND USE: DEVELOPMENT DENSITY

- Goal** *Encourage future growth in the Center, Metro, Enterprise, Suburban, and Village Planning Areas to maintain Vermont’s historic settlement pattern and respect working and natural landscapes.*
- Indicator** Development density by planning area
- Description** This indicator measures the number of houses and employees per square mile for each planning area.
- Significance** Measuring the density of the development occurring in Chittenden County gives us key insight into the walkability and accessibility of our homes and businesses.
- Source** Chittenden County Regional Planning Commission and its member municipalities, INFOUSA

THE CENTER PLANNING AREA HAS THE HIGHEST CONCENTRATION OF HOUSES AND EMPLOYEES



HOUSING: AFFORDABILITY

Goal *Increase the opportunities for safe, decent, energy efficient, affordable, accessible and fair housing for all types of households in all neighborhoods.*

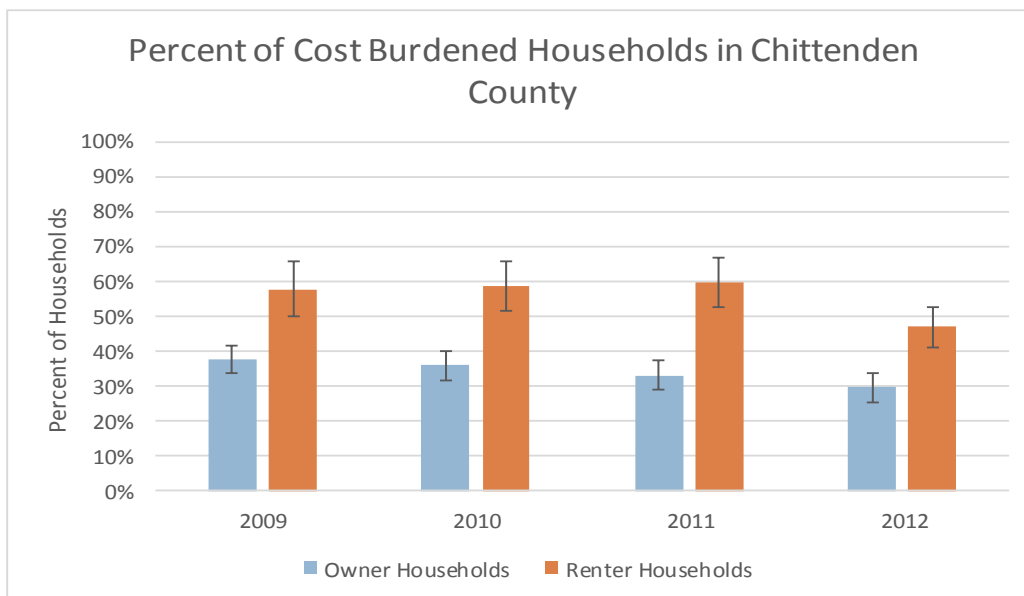
Indicator % of households spending over 30% of income on housing expenses

Description Number of renter households with gross rent of 30% or more of income as percentage of all renter households and the number of mortgaged owner households with monthly ownership costs of 30% or more of income as a percentage of all mortgaged owner households.

Significance The financial burden of paying a mortgage or rent, insurance, property taxes, utility expenses and other housing related costs is considered unaffordable when that these costs are greater than 30% of a household's income. These households are at much higher risk of foreclosure, eviction, homelessness, or frequent moving--all of which harm residents and the community.

Source American Community Survey, 1-year Estimates, Table DP04

THERE HAVE BEEN NO SIGNIFICANT CHANGES IN THE PORTION OF THE COUNTY'S RESIDENTS WHO ARE COST BURDERED BY THEIR HOUSING EXPENSES DURING 2009-2012, WITH THE EXCEPTION OF A DECREASE IN 2012 AMONG RENTER HOUSEHOLDS.



HOUSING: VACANCY RATE

Goal *Increase the opportunities for safe, decent, energy efficient, affordable, accessible and fair housing for all types of households in all neighborhoods.*

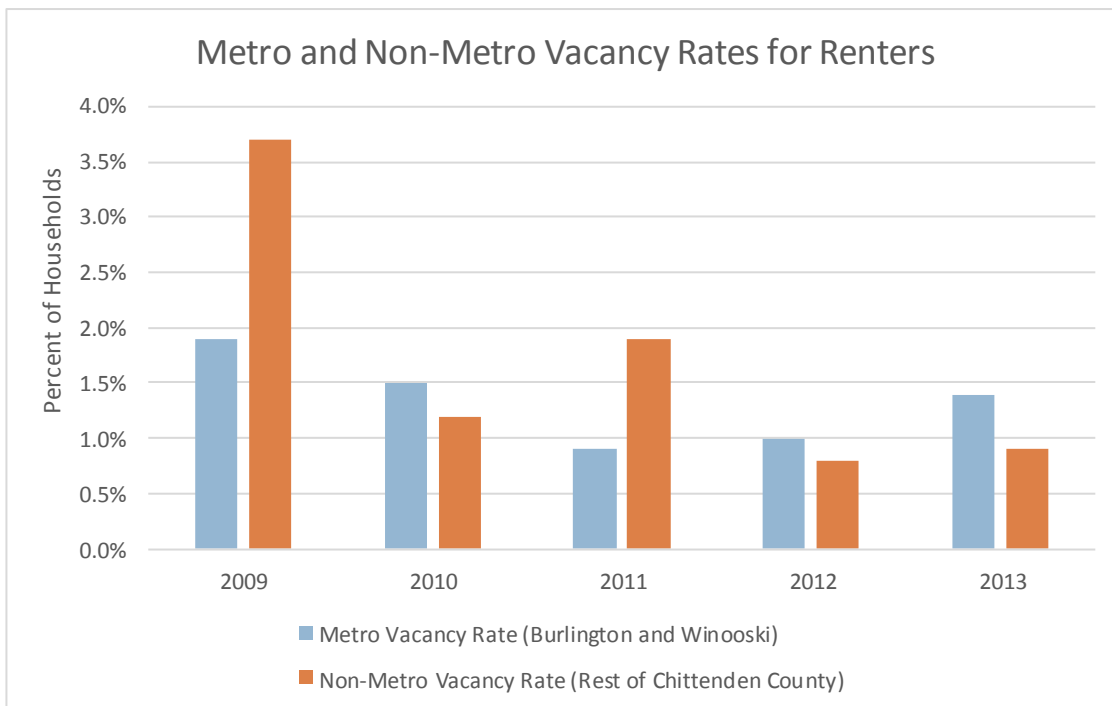
Indicator Metro and non-metro vacancy rate for renters

Description The percent of vacant rental units for metro area (Burlington and Winooski) and non-metro area (rest of Chittenden County).

Significance In general, a healthy rental market should have a vacancy rate between 3% and 5%. The metro and non-metro vacancy rates for Chittenden County are far below that target, leaving renters with little choice and upward pressure on rents.

Source Allen & Brooks Associates, Inc.

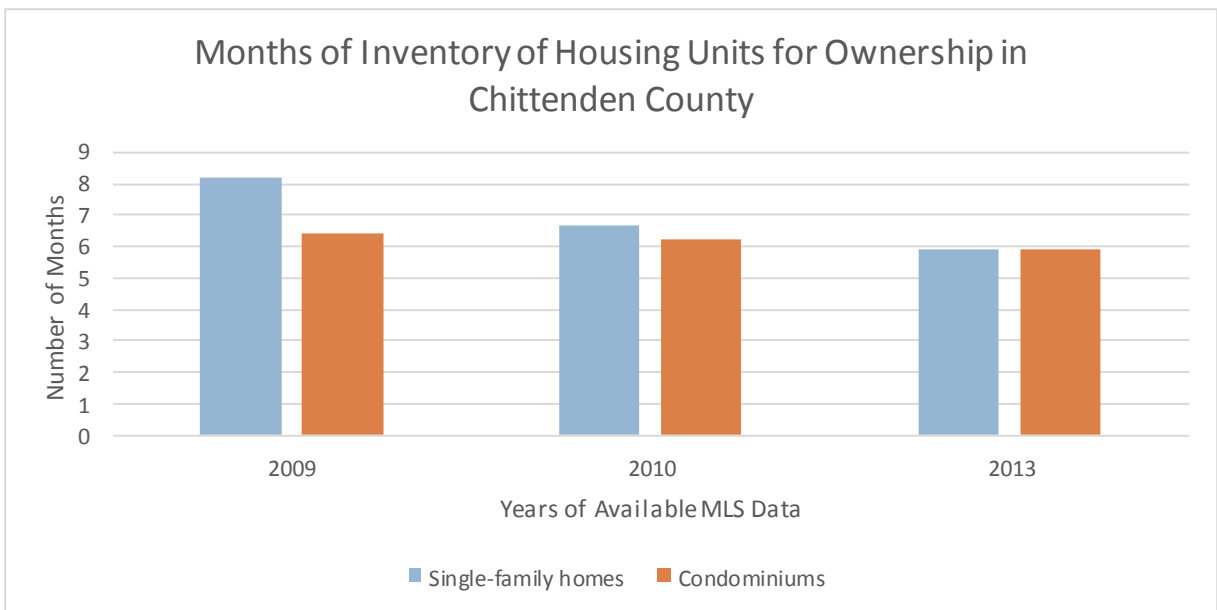
THE VACANCY RATES FOR BOTH METRO AND NON-METRO RENTAL UNITS REMAIN EXTREMELY LOW IN CHITTENDEN COUNTY, LEAVING RENTERS WITH LITTLE HOUSING CHOICE AND UPWARD PRESSURE ON RENTS.



HOUSING: INVENTORY

- Goal** *Increase the opportunities for safe, decent, energy efficient, affordable, accessible and fair housing for all types of households in all neighborhoods.*
- Indicator** Months of inventory for condos and single family homes
- Description** This indicator measures the inventory of homes for sale as a percentage of the average monthly sales.
- Significance** A healthy housing market is one in which approximately six months of housing units for ownership are on the market.
- Source** Multiple Listing Services Data; Data was not available for 2011 and 2012 due to changes in reporting sources.

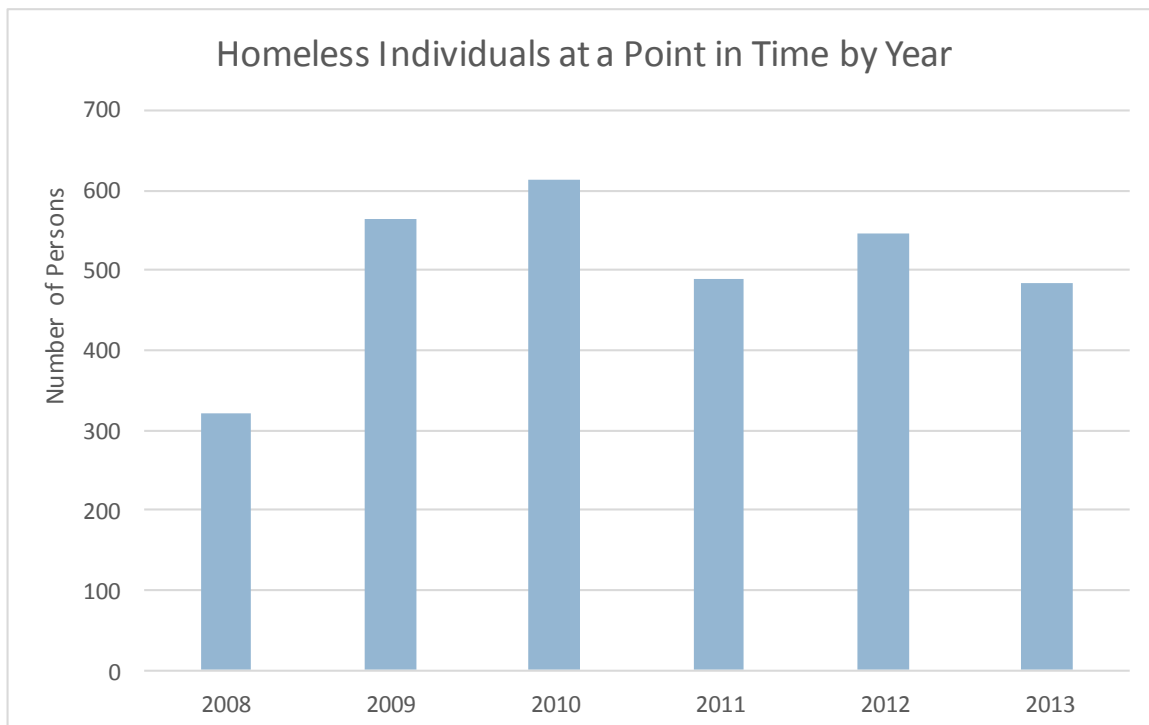
THE PACE OF THE HOUSING MARKET HAS INCREASED IN 2013 FOR BOTH CONDOMINIUMS AND SINGLE-FAMILY HOMES, COMPARED TO 2009 AND 2010.



HOUSING: HOMELESSNESS

- Goal** *Increase the opportunities for safe, decent, energy efficient, affordable, accessible and fair housing for all types of households in all neighborhoods.*
- Indicator** Homelessness at a point in time
- Description** Number of homeless individuals counted at a point in time during the subject year
- Significance** As long as the region has a homeless population, it is not meeting the needs of its residents.
- Source** Burlington Continuum of Care Report

COUNTING THE HOMELESS IS A UNIQUELY DIFFICULT CHALLENGE. NEVERTHELESS, THESE COUNTS INDICATE THAT HOMELESSNESS REMAINS A PERSISTENTLY SERIOUS ISSUE FOR CHITTENDEN COUNTY.



HOUSING: INVENTORY OF AFFORDABLE RENTAL HOUSING

- Goal** *Increase the opportunities for safe, decent, energy efficient, affordable, accessible and fair housing for all types of households in all neighborhoods.*
- Indicator** Inventory of sites (by number of units and the number of rental complexes) that received public project-based subsidies which ensure long-term affordability of rents
- Description** Inventory of sites that received public project-based subsidies which ensure long-term affordability of rents within Chittenden County.
- Significance** The availability of affordable rental units is important for a healthy housing market and for meeting unmet needs among the county’s current and future residents for rental housing at affordable rates.
- Source** Vermont Directory of Affordable Rental Housing, reported as of September-October for year

THERE HAS BEEN A SMALL INCREASE IN THE NUMBER OF AFFORDABLE RENTAL UNITS (72 UNITS) WITH THE ADDITION OF TWO RENTAL COMPLEXES BETWEEN 2012 AND 2013.

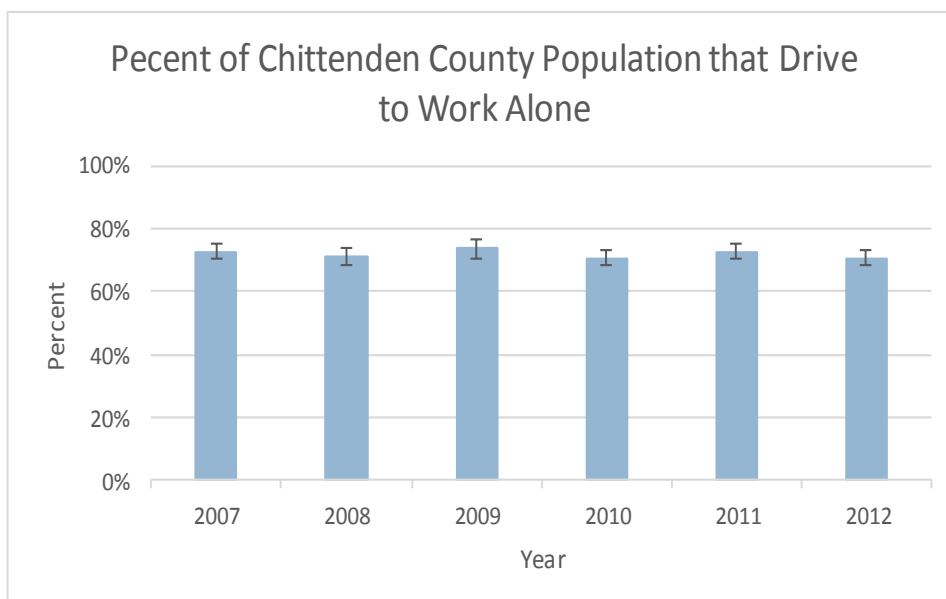
Inventory of Rental Properties and Units with Project-based Subsidies		
	2012	2013
Rental Units	4,520	4,592
Rental Complexes	120	122



TRANSPORTATION: PERCENT OF WORKERS WHO DRIVE ALONE TO WORK

- Goal** *Provide accessible, safe, efficient, interconnected, secure, equitable and sustainable mobility choices for our region's businesses, residents and visitors*
- Indicator** Percent of workers commuting by private vehicle
- Description** The US Census American Community Survey (ACS) tracks the number and percent of work trips by travel mode.
- Significance** The smaller the share of work trips taken via single occupant vehicle modes and the more residents choose to commute by bus, carpool, walking, biking, or telecommuting, the more efficient our transportation system functions. There are also environmental, safety, financial, and health benefits that can accrue to society and individuals, the lower this percentage goes.
- Source** American Community Survey, 1-Year Estimates, 2007-2012

THERE HAS BEEN LITTLE CHANGE IN THE PERCENT OF CHITTENDEN COUNTY POPULATION DRIVING TO WORK ALONE BETWEEN 2007 AND 2012.



- Special points of interest:**
- CarShare VT Membership includes 865 individuals and 15 businesses
 - 6% of workers work from home, up from 4.2% in 2000
 - CCTA provided over 2.7 million trips in FY13

TRANSPORTATION: VEHICLE MILES TRAVELED PER PERSON

Goal Provide accessible, safe, efficient, interconnected, secure, equitable and sustainable mobility choices for our region’s businesses, residents and visitors

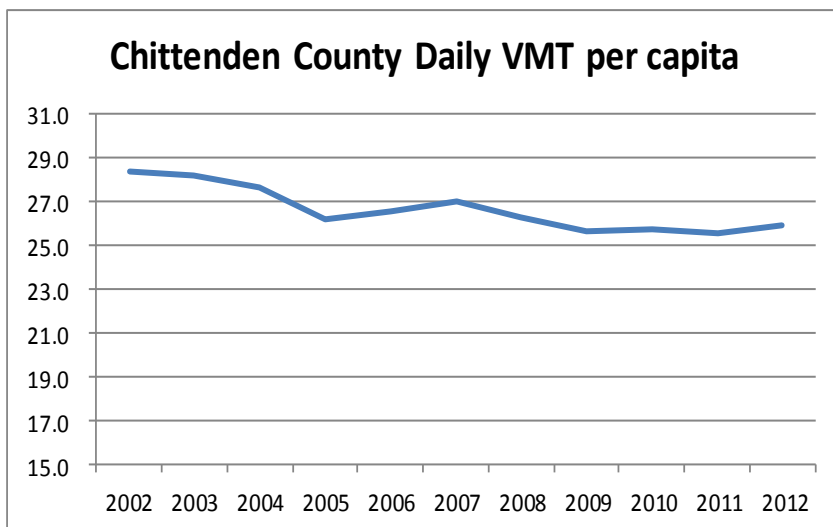
Indicator Vehicle Miles of Travel (VMT) per capita, per day

Description VTrans calculates the total number of miles driven by all vehicles annually and by county and statewide. We divide the Chittenden County number by the total population to come up with this average number of miles driven per person per year. This is divided by 365 for the daily figure.

Significance This statistic was on an upward climb for decades nationwide as well as in Chittenden County. Over the past five years or so it began to reverse and move lower. We would like to see a continued downward trend for this indicator to demonstrate less driving alone. More efficient use of our system and a greater reliance on transportation alternatives are the likely reasons behind a downward move – factors that point to a more sustainable and balanced transportation system.

Source VMT is from VTrans. Population is from 2010 US Census and subsequent estimates. Department of Motor Vehicles (10/2013)

WHAT SEEMED TO BE A SLOW DOWNWARD TREND HERE NOW APPEARS TO HAVE HIT A PLATEAU. EFFORTS TO PROMOTE AND INVEST IN TRANSPORTATION ALTERNATIVES, AS WELL AS GROWTH CENTER DEVELOPMENT, SHOULD SEE THIS TRENDING LOWER AGAIN IN THE FUTURE.



Special points of interest:

- Total VMT in 2012 was the highest since 2007 and increased 2% over 2011.
- 150 plug-in passenger car EVs have been registered in Chittenden County.
- 7 public EV charging stations in Chittenden County

TRANSPORTATION: WALKING/BIKING INFRA-STRUCTURE

Goal *Provide accessible, safe, efficient, interconnected, secure, equitable and sustainable mobility choices for our region's businesses, residents and visitors*

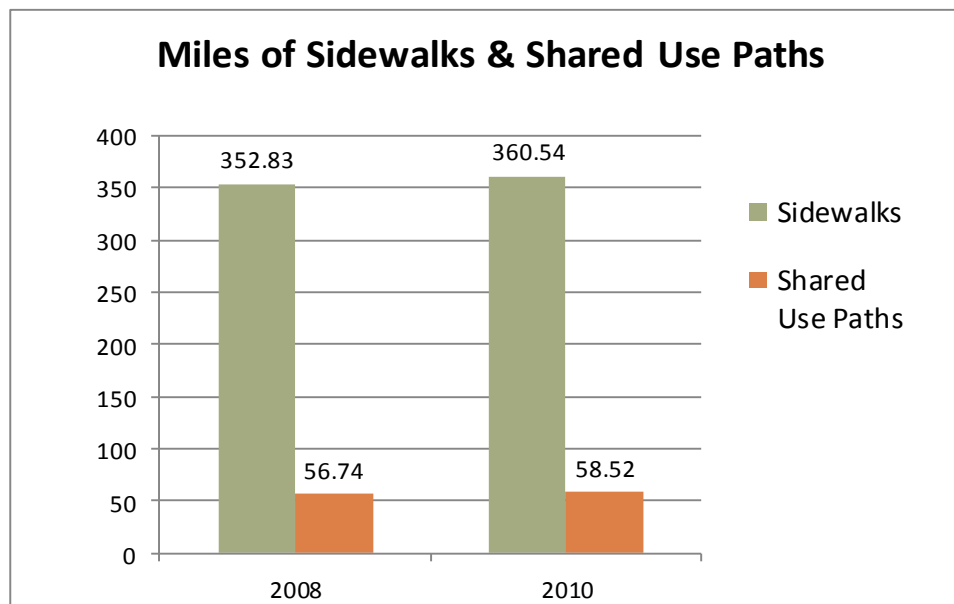
Indicator The number of miles of sidewalks, and shared use paths

Description Annually tabulate the length of sidewalk and shared use path miles.

Significance The greater length of these facilities means more facilities available for pedestrians and bicyclists – two modes we would like to see more people utilize more frequently. These facilities can take vehicle trips off roads and boost public health. We hope to see the lengths of these facilities go up each year.

Source CCRPC GIS calculation supplemented with an annual survey of local public works departments

OVER THE SHORT WINDOW OF 2008 TO 2010* WE EXPERIENCED A MODEST INCREASE IN THESE FACILITIES AND ANECDOTAL EVIDENCE SINCE 2010 SUGGESTS THESE THEY CONTINUE TO GROW. THE NEXT FULL INVENTORY WILL TAKE PLACE IN 2014.



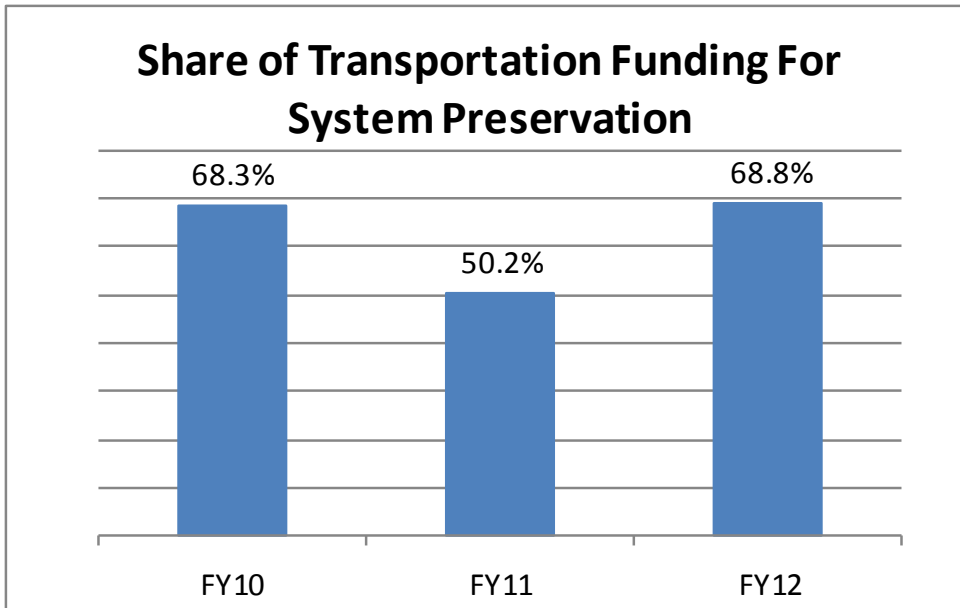
*The 2010 data do not represent a complete inventory



TRANSPORTATION: SUSTAINABLE FUNDING

- Goal** *Provide accessible, safe, efficient, interconnected, secure, equitable and sustainable mobility choices for our region’s businesses, residents and visitors*
- Indicator** Percent of annual Transportation Improvement Program (TIP) funding assigned to system preservation projects
- Description** At the end of each fiscal year, calculate that year’s share of funds obligated to a combination of the **Bridge Preservation** and the **Function and Performance** categories relative to total Transportation Improvement Program obligations for that year.
- Significance** Maintaining our existing transportation system is a critically important task and a top sustainable transportation priority. The ECOS Plan estimates that 64% of anticipated future transportation funds will need to go to system preservation in order to sustain its integrity and protect public safety. This annual calculation will be tracked to assure adequate system maintenance investment (while realizing there may be year to year fluctuations).
- Source** CCRPC Transportation Improvements Programs

RECENT HISTORY REVEALS THAT OUR TRANSPORTATION SYSTEM MAINTENANCE INVESTMENT IS CLOSELY TRACKING THE ECOS PLAN RECOMMENDATION.



Special points of interest:

- During these same three years, the Transportation Improvement Program shares obligated to the combination of bike, pedestrian and transit projects came to 22.5%, 35% and 25% respectively.

INFRASTRUCTURE & FACILITIES: CURRENT & RESERVE WATER CAPACITY FOR LARGE WATER UTILITIES

- Goal** *Ensure adequate infrastructure and facilities (i.e. water supply, wastewater treatment, stormwater treatment, broadband coverage and solid waste recovery and recycling) to support areas planned for growth while conserving resources.*
- Indicator** Current and reserve water capacity for large water utilities
- Description** This indicator reports the current and reserve capacity of the two large water districts in Chittenden County.
- Significance** Adequate current and future water supply is critically important for meeting the needs of both residents and businesses in Chittenden County.
- Source** Champlain Water District and City of Burlington

THE RESERVE CAPACITY BELOW EQUATES TO 39,000 NEW HOMES (AS A COMPARISON, THERE WERE 65,722 HOUSING UNITS IN 2010).

Utility	Capacity (Millions of Gallons/Day)	Reserve (Millions of Gallons/Day)
Champlain Water District	20	6.5
City of Burlington	12	1.3
TOTAL:	27.5	7.8

INFRASTRUCTURE & FACILITIES: CURRENT WASTE-WATER CAPACITY

Goal *Ensure adequate infrastructure and facilities (i.e. water supply, wastewater treatment, stormwater treatment, broadband coverage and solid waste recovery and recycling) to support areas planned for growth while conserving resources.*

Indicator Aggregate reserve capacity of waste-water treatment

Description This indicator reports the aggregate reserve capacity of the 12 municipal waste-water treatment plants in Chittenden County.

Significance Understanding whether current waste-water infrastructure capacity can support higher density and more growth in areas planned for growth is a necessity for the planning of mixed use development in the Center, Metro, Suburban, Enterprise, and Village Planning Areas.

Source State of Vermont Wastewater Division

12 MUNICIPAL WASTE WATER TREATMENT PLANTS HAVE A TREATMENT CAPACITY OF 21 MILLIONS OF GALLONS PER DAY.

Average Annual Flow (Million Gallons/Day)				
Facility	2010	2011	2012	Permitted Capacity (MGD)
Airport PKWY	1.59	2.01	1.78	3.30
Bartlett Bay	0.66	0.85	0.63	1.25
Burlington North	1.09	1.54	0.96	2.00
Burlington River	0.60	0.64	0.50	1.20
Burlington Main	4.32	5.00	3.75	5.30
Essex Jct	1.84	2.31	1.71	3.30
Hinesburg	0.12	0.17	0.13	0.25
Richmond	0.07	0.25	0.06	1.00
Shelburne #1	0.30	0.36	0.26	0.44
Shelburne #2	0.38	0.48	0.33	0.66
Winooski	0.71	0.92	0.64	1.40
Milton	0.24	0.30	0.24	1.00
County	12	15	11	21.1

INFRASTRUCTURE & FACILITIES: STORM WATER MANAGEMENT

- Goal** *Ensure adequate infrastructure and facilities (i.e. water supply, wastewater treatment, stormwater treatment, broadband coverage and solid waste recovery and recycling) to support areas planned for growth while conserving resources.*
- Indicator** % of impervious area managed by operational storm water permits.
% of impervious area managed by the Municipal Separate Storm Sewer System Permit (MS4).
- Description** This indicator measures the percent of impervious area managed by two types of stormwater permits. Stormwater is precipitation that runs off impervious surfaces rather than infiltrating into the soil. Operational stormwater permits address stormwater from projects over 1 acre of disturbance. The MS4 permit covers permitting in nine municipalities and three public entities in Chittenden County: Burlington, Colchester, Essex, Essex Junction, Milton, Shelburne, South Burlington, Williston, Winooski, Burlington International Airport, UVM and VTrans.
- Significance** Management of our stormwater is critically important to maintaining and improving water quality throughout the County. Stormwater treatment is challenging in both urban and rural areas of the County for a variety of reasons: existing urban areas need to retrofit old infrastructure, financing new infrastructure in areas planned for growth when development is incremental, and impacts from agriculture and forestry practices that don't follow best management practices. Additionally, VT's discharge permits are structured to address site level development for projects over 1 acre of disturbance; therefore, incremental and cumulative impact of development is not addressed through this program.
- Source** Vermont Agency of Natural Resources, Stormwater Permit Database, 2008 Impervious Surface Data, Municipal Separate Storm Sewer System Permit

A MAJORITY OF STORMWATER FROM IMPERVIOUS SURFACE IS MANAGED.

Type of Stormwater Water Permit	% of Impervious Area Countywide
Operational Stormwater Permits (2012)	16.9%
Municipal Separate Storm Sewer Permit (2008)	52%

INFRASTRUCTURE & FACILITIES: SOLID WASTE

Goal *Ensure adequate infrastructure and facilities (i.e. water supply, wastewater treatment, stormwater treatment, broadband coverage and solid waste recovery and recycling) to support areas planned for growth while conserving resources.*

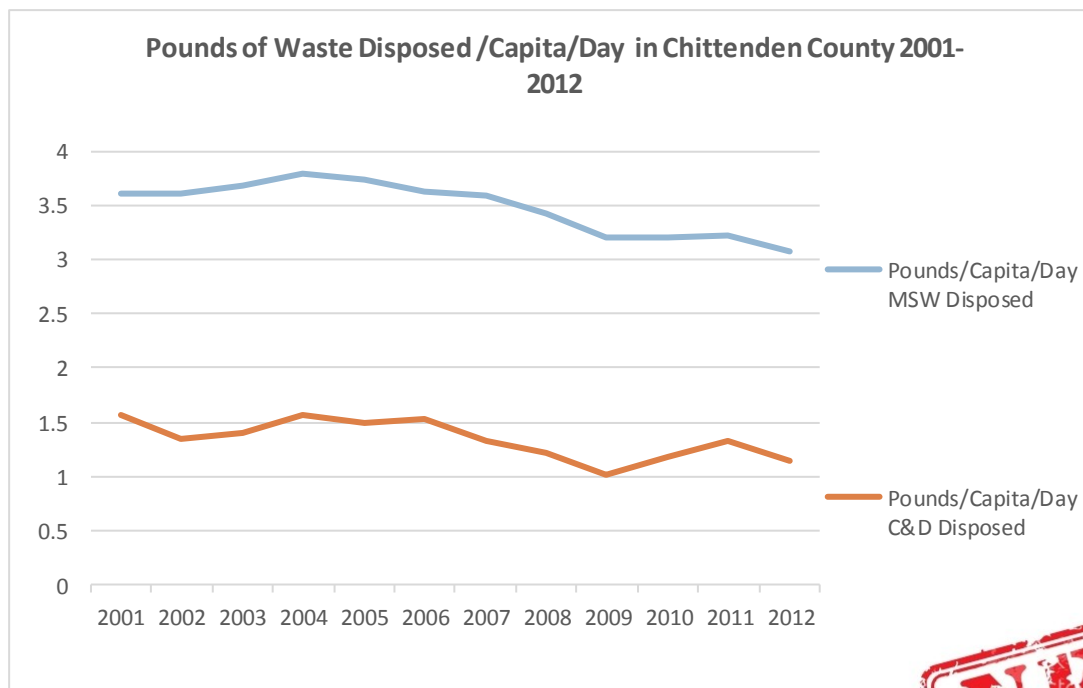
Indicator Pounds of waste disposed/capita/day

Description The amount of waste generated daily per resident in Chittenden County for both municipal solid waste and construction and debris waste.

Significance Waste reduction programs seek to decrease the amount of waste generated in Chittenden County through reduction, diversion, and proper disposal efforts.

Source Chittenden County Solid Waste District, 2001-2012

THE AMOUNT OF WASTE GENERATED PER CHITTENDEN COUNTY RESIDENT HAS CONTINUED TO DECREASE WITHIN THE LAST FIVE YEARS COMPARED TO EARLIER YEARS.



ENERGY: CONSUMPTION

Goal *Reduce Chittenden County's consumption of energy and reliance on non-renewable, energy. Improve the cost-effectiveness, efficiency and reliability of the energy production, transmission, and distribution system.*

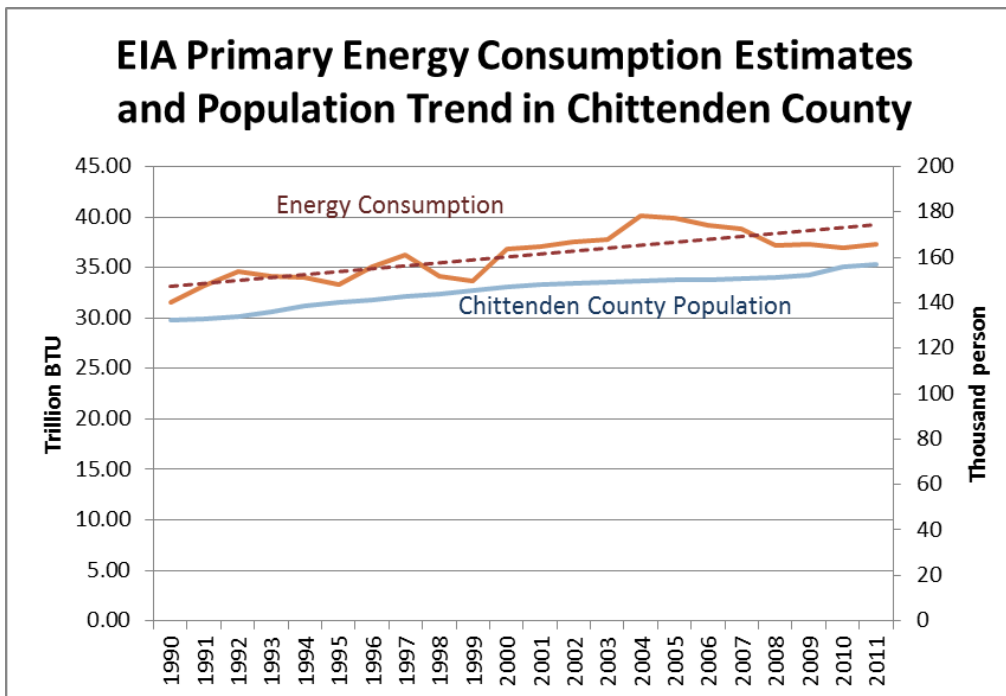
Indicator Energy consumption and population change

Description This indicator compares energy consumption and historic population trends in Chittenden County.

Significance Understand whether energy use is increasing or decreasing in comparison to increases in population will help citizens, businesses, and industry to gauge the effectiveness of their efforts to conserve and use less energy.

Source Efficiency VT, Energy Information Administration, UVM Transportation Energy Report (2009,2010)

COMPARISON OF CHITTENDEN COUNTY POPULATION WITH ENERGY CONSUMPTION



Special points of interest:

In 2009/2010,

- 89 million metric British thermal units (mmbtu) of energy consumed per household
- 120 million metric British thermal units (mmbtu) of energy consumed per employee
- 420 gallons of gas consumed per person for transportation



ENERGY: EFFICIENCY

Goal *Reduce Chittenden County's consumption of energy and reliance on non-renewable, energy. Improve the cost-effectiveness, efficiency and reliability of the energy production, transmission, and distribution system.*

Indicator Natural gas and electricity saved through efficiency programs

Description This indicator measures the amount of energy saved through energy efficiency measures. For electricity, these measures include the use of compact fluorescent light-bulbs, energy star appliances, light-emitting diode (LED) lights, and programs that educate people on how to use less electricity in their homes and businesses. Measures that reduce natural gas usage for heating homes and businesses include weatherization improvements that reduce air leakage and drafts and block heat loss in the winter.

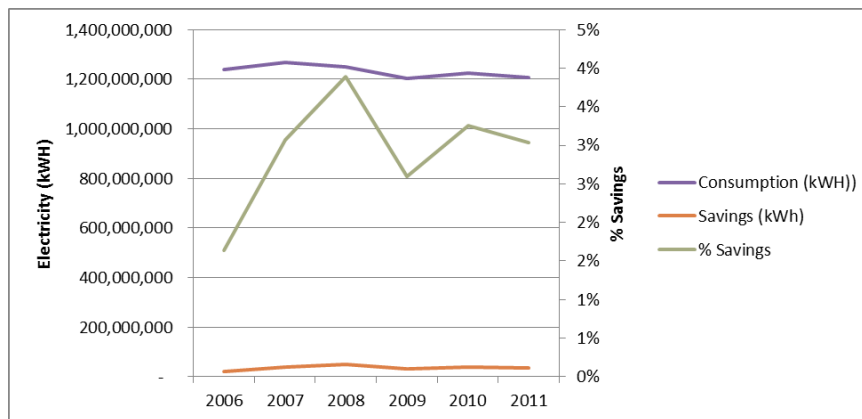
Significance Reducing energy use through efficiency programs is a less expensive alternative to generating more energy for our needs and is a key tool for meeting energy demands and goals. Money spent on energy efficiency creates job and reduces the environmental impact of energy use.

Source VT Gas, 2010-2012, Efficiency VT, 2006-2011

NATURAL GAS EFFICIENCY PROGRAMS WILL PREVENT 15,100 TONS OF CARBON DIOXIDE FROM ENTERING THE ATMOSPHERE ANNUALLY FOR THE NEXT 20 YEARS.

Natural Gas (McF)	2010	2011	2012
Consumed	6,363,760	6,524,764	6,156,104
Savings	82,151	111,081	76,615
Efficiency savings as a percentage of total consumption	1%	2%	1%
Tons of CO2 per year	4,600	6,300	4,200

ELECTRICITY EFFICIENCY MEASURES SAVE ABOUT 3% OF CONSUMED ELECTRICITY ANNUALLY.



ENERGY: RENEWABLE GENERATION

- Goal** *Reduce Chittenden County's consumption of energy and reliance on non-renewable, energy. Improve the cost-effectiveness, efficiency and reliability of the energy production, transmission, and distribution system.*
- Indicator** Number and capacity of renewable energy sites
- Description** This indicator measures the amount of electricity generated from solar, wind, hydro-electric, methane digesters, and woody biomass in Chittenden County.
- Significance** Increasing Chittenden County's production of renewable energy will improve the cost effectiveness, efficiency, and reliability of energy production, transmission, and distribution System and support the State's goal of 90% renewable energy by 2050.
- Source** The Vermont Sustainable Jobs Fund Vermont Renewable Energy Atlas, 2011-2013

RENEWABLE ENERGY GENERATED IN CHITTENDEN COUNTY HAS INCREASED BY 5% FROM 2011-2013.

	2011	2012	2013
Solar PV			
Sites	297	504	530
Capacity (kW)	6,101	8,364	10,696
Wind			
Sites	28	29	37
Capacity (kW)	491	500	507
Hydro			
Sites	6	6	6
Capacity (kW)	35,800	35,800	35,800
Methane Digesters			
Sites	1	1	1
Capacity (kW)	330	330	330
Woody Biomass			
Sites	1	1	1
Capacity (kW)	50,000	50,000	50,000
Total			
Sites	333	541	575
Capacity (kW)	92,722	94,994	97,333

Special points of interest:

- In 2011, 1,207,089,602 kWh of electricity was used .01% or 92,722 kW of the total usage in 2011 was from renewable energy sources in Chittenden County.
- Between 2011 and 2013, electricity generated from renewable sources increased by 5%.

