Connecticut Economic Strategic Plan

DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

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Defining Connecticut's Identity

What comes to mind when you think of Connecticut? Perhaps it's the charming seaport villages that dot the coastline, the rolling country hills lined with stone walls that frame small farms, or the state forests ablaze in countless hues of red, yellow and orange during the peak foliage season.

Or maybe it's the state's celebrated business environment and premier companies that call Connecticut home. Connecticut's story is rich with a long history of innovation and some of the most colorful, creative, daring and pioneering thinkers of our time.

The state turned to manufacturing early on as a means of economic vitality, with iron and brass works popping up on the Connecticut landscape as early as the 1660s. By the late 1700s, Connecticut was a recognized leader in machine tools.

Connecticut's industrial ingenuity and productive capacity made it a pivotal player in the fight for American independence and other wars. The first American warship, the *Oliver Cromwell*, slipped into the waters of Long Island Sound in the prosperous shipbuilding community of Essex in 1775. After the war, Eli Whitney and Simeon North began making firearms with interchangeable parts — generally recognized as the beginning of modern mass production. And by the end of World War I, with Colt's Armory in Hartford, the Remington Arms company in Bridgeport, and the Winchester Repeating Arms Company in New Haven leading the way, 80 percent of Connecticut's manufacturers were making military goods.

While all the manufacturing expertise and innovation was developing, Connecticut was also staking its claim as the nation's insurance capital. Marine insurance, which protected ships and cargoes that sailed to Caribbean ports and fire insurance both got their start here in the late 18th century and other types — life, accident, casualty, health — followed during the next century. Although the term insurance capital may be clichéd, Connecticut remains the epicenter of the global insurance industry with 106 insurance companies based here.

Connecticut industry was at the forefront of textiles, precision instruments, hardware, machine tools and electric power generation and distribution. The state that best reflected the spirit of Yankee ingenuity was fueling industrial growth at an incredible pace.

This legacy left its imprint on today's businesses — which are some of the most innovative, productive and dynamic in the world.

These are not mere adjectives that describe Connecticut companies, but also their products and the workers that make them. They speak to a dominance the state has had and continues to have in manufacturing, aerospace, insurance and financial services and now newer cutting-edge industries like bioscience, medical devices, nanotechnology and alternative energy sources. These industries not only define Connecticut's past, but also are signposts pointing the way to our economic future.

Now, Connecticut is home to some of the best and most innovative companies in these sectors. We're headquarters to 11 Fortune 500 and 27 of the top 1,000 — and many others have a significant presence in the state. And international companies more and more are looking to locate their U.S. operations here.

These and other businesses want to know what the future holds. Connecticut's new Economic Strategic Plan articulates a vision and provides the framework for immediate and long-term success.

An Economic Strategic Plan

On July 11, 2007, Governor M. Jodi Rell signed Public Act 07-239 (codified as CGS § 32-1o), culminating months of hard work on a public policy vision for growing the state's economy while preserving and enhancing Connecticut's natural treasures.

To set Governor Rell's vision in motion, the Department of Economic and Community Development (DECD) was required to formulate a plan or roadmap, so state policies will promote Connecticut's industries and help workers successfully innovate and compete in the global economy. A comprehensive, coherent plan ensures more efficient use of scarce resources, improves coordination among those on the front lines of economic and community development and ultimately makes Connecticut a more attractive place for businesses to invest and grow.

Connecticut's Economic Strategic Plan differs from existing plans because it proposes strategies and initiatives with implementation in mind. Of course, sound economic planning starts with an in-depth examination and understanding of all the factors that drive the state's economy, as this plan does. However, all plans are destined for the scrap heap unless they are workable and recommend goals and objectives that are attainable.

Connecticut's strategic plan is just that; it strives to be far-reaching, elucidating and most of all, achievable.

The Vision

Creating a comprehensive strategy that will expand economic prosperity for all citizens of Connecticut requires policymakers to begin at the end — meaning the destination must be decided before the journey commences.

This plan clearly enunciates where Connecticut should be and what it should look like now, in the near future, and far down the road. It plots a course in five year intervals for 20 years, and it will be updated, refined and analyzed every five years, ensuring that it always reflects the current trends and economic realities Connecticut faces. Connecticut's plan shows a way forward without stifling creativity.

Another key element of the plan is its simplicity. Connecticut's plan need not be complicated, just bold.

Connecticut will have a vibrant, diversified and resilient economy that provides the highest possible quality of life and access to opportunity for all. The state will promote responsible transit-oriented growth, balancing the conservation of existing assets and natural resources with innovative economic development. Connecticut will be identified as a place where families, students, workers, entrepreneurs, companies, government and other organizations come together to enhance its competitive advantage, distinguishing the state as a dynamic place to live, work and relax.

This statement anchors the entire strategic plan, serving as the foundation on which all of the plan's analyses, goals, and strategies are based. It is a shared vision for policymakers, taxpayers, advocates and businesses alike because we recognize that all in Connecticut are stakeholders — all will be affected by the plan in some way.

If the plan is to serve as an economic blueprint for Connecticut's economic future, then it must speak for and to everyone.

To accomplish this, DECD held 10 public forums around the state from November

2007 through January 2008. These forums were a key part of the process because they allowed citizens, businesses and advocacy groups, regional planning organizations and others to have a voice in shaping the future of our state.

Creating a Baseline for Connecticut

Once it was decided where Connecticut should go, we needed to know how to get there.

DECD carefully examined the history of the state's economy to help form a current characterization of the people, industries, labor market and other aspects of the state's economic infrastructure. This perspective identifies Connecticut's strengths that we can build on and weaknesses we must confront.

Next, DECD inventoried Connecticut's factors of economic growth, namely its transportation networks, technology transfer capabilities, higher education system, brownfield redevelopment efforts, housing and health care delivery. Other areas looked at were state-provided services, which are critical to a healthy workforce, land use policy and the state's emergency preparedness for natural and manmade disasters.

Taxation was examined because of its implications on competitiveness, as well as the availability of capital for sustaining current business operations and for growth. Connecticut's energy costs and supply-demand picture were evaluated because they influence the prosperity of residents and businesses alike. Connecticut is home to a rich panoply of cultural and tourism assets, therefore the department looked at the impact of the tourism industry.

Synthesizing these disparate aspects of what defines Connecticut and its economy is important so policymakers can better understand the challenges we face as the economy restructures and becomes more integrated into the global, knowledge economy.

The State's Economic Foundations

DECD analyzed Connecticut's economic infrastructure — areas like transportation, housing and workforce that provide the underpinnings for economic growth and prosperity. From this, policymakers will be able to accurately gauge Connecticut's strengths and weaknesses in certain fields, evaluate the state's overall health and see how it stacks up with other states.

Many of these areas overlap with Governor Rell's responsible growth initiatives, which have been making tangible progress in recent years. Other areas dovetail with efforts underway in transportation in concert with the Council of Northeast Governors and the Northeast Corridor Improvement Project.

The Office of Responsible Growth is analyzing housing, transportation, and land use issues, as well as improving state, regional and local planning. The Responsible Growth Task Force has assembled an economic development team to help guide the state's future investment decisions, study land use laws, policies and programs, including laws, policies and programs concerning the transfer of development rights.

Brownfield remediation is an important element of economic development and in implementing the state's responsible growth strategies because using these sites allows communities to revitalize their inventory of developable land as job generators, housing, community facilities and open space. DECD's Office of Brownfield Remediation and Development is leading the way to induce the renovation and reuse of these blighted properties for new office, commercial, retail and residential developments.

Housing is another key factor. Communities are spreading out impacting the transportation system, the environment, energy supplies and ultimately the state's quality of life. Programs like HOMEConnecticut offer grants to communities that plan concentrated developments near mass transit options.

On the following pages, major findings of the situational analysis are highlighted. The initiatives address approaches to achieving the vision.

Transportation

Transportation systems are critical to the overall health of economies. People need access when traveling to and throughout the state and ease of travel is essential to the productivity of businesses.

Eighty percent of commuters in Connecticut are single-riders in an automobile. They are looking for better options to get to work in the major urban areas, as well as to areas outside of the state.

Connecticut must continue its successful carpooling programs, promote the use of pedestrian walkways and bike paths and expand rail options and bus connections to facilitate a cleaner and less congested commute. All modes of transportation, including roads, rail, air and water, provide economic and user benefits. As the state's transportation system goes, so goes Connecticut's economic future.

Key Findings:

- Connecticut's ports have limited land for cargo storage space and consequently continue to miss opportunities for sea transportation business. Seaports need capital investment to expand storage capacity, and to increase intermodal connections between water, highway and rails.
- The state's maritime advantage is literally eroding as silt collects in deepwater ports. Without dredging, port channels grow shallower and larger ships cannot safely enter ports to offload goods. Cargo will need to be transported by alternative methods, most likely over highways, thus increasing congestion, maintenance, and pollution.
- Rail ridership between Connecticut towns is increasing and, although it still remains a small percentage of total rail ridership, it represents a growth component that is a priority for the state. Commuter rail service between New Haven through Hartford to Springfield, Massachusetts will improve and sustain the region's vitality and livability.
- In addition to serving commuters along the corridor, the service could provide a connection to Bradley International Airport, existing Metro-North and Shore Line East Commuter Rail in New Haven and links to the proposed New Britain-Hartford Busway.
- It is estimated that Connecticut needs an additional investment of $120.6 million in one-time capital spending, and about $30 million in the annual operating budget for its public bus systems.
- The U.S. Department of Transportation reports trucks currently carry approximately 76% of the freight in Connecticut and projects this share to grow to 77.5% by the year 2020. Transportation officials anticipate

trucking will continue to provide the majority of service, regardless of state policies and programs.

- Truck transport of intermodal freight will continue to impact Connecticut because of its small geographic area and close proximity to some of the nation's largest ports, intermodal rail facilities and airports.
- Connecticut ranks 43rd in deficient bridges — 32.8% of the state's bridges are deemed structurally deficient or functionally obsolete.

Housing Market and Affordability

Housing is another key issue because it directly impacts Connecticut's economy and affects the state's ability to attract and retain a skilled labor force — correlating to the state's quality of life and overall vitality.

The relationship between the availability and affordability of housing and economic growth may be less obvious. But business leaders continue to beat the drum for affordable housing because their employees need homes they can afford.

Key Findings:

- Connecticut's existing supply of housing is constrained, but the cost of producing a unit is high. That's why new developments of large homes are now the norm, instead of new single-family, starter homes being built across the state.
- Increasingly, the market is unable or unwilling to produce housing for those earning between 80 and 120% of area median income — and up to 140 to 150% in high cost areas.
- If housing in this income bracket is not being produced, then the laws of supply and demand dictate that the housing supply diminishes and the scarcity increases prices.
- This brings us to the situation facing Connecticut today. Housing prices and rents have increased faster than wages and the overall supply of housing units has not increased sufficiently to meet the need — especially for those households with income at or below 120% of area median income.
- Without the availability of affordable housing, homeowners will bear a greater burden of taxes in Connecticut and the flight of young adults out-of-state, as well as the retirements of older residents, will continue to adversely affect the labor market.
- Connecticut still has a sizeable special needs population — the elderly, those with disabilities and health issues and abuse victims — which requires affordable and adequate housing throughout the state. This echoes the need for affordable housing, based on the number of low-income families; while renting is becoming a more common option among young adults.

Education

The state has invested significant resources to make its educational system one of the best in the nation, from early childhood to higher education.

However, the educational system does not completely fulfill the needs of Connecticut businesses, indicating a less than favorable return on this investment. Retention and integration are two areas in which the state's educational system must progress.

Connecticut's educational system is highly fragmented among geographic areas as well as among certain ethnic distinctions. An analysis of educational achievement reveals significant disparities between urban and rural areas as well as between ethnic and income compositions.

Key Findings:

- Connecticut's education sector compares favorably with the rest of the nation with an SDE-reported, average, statewide high school graduation rate of 92%, and a high percentage of households that hold at least a bachelor's degree (33.7%). The state ranks 2nd in the nation in total spending per enrolled child, 3rd in the nation in state spending per enrolled child, and 1st in the nation in eighth graders in writing performance. Connecticut enjoys an increasingly competitive private and state university system, including the University of Connecticut.
- However, the state's urban high-school graduation rate is significantly lower than the statewide average.
- Forty percent of the state's high school graduates are academically ready for college, putting Connecticut 4th in the nation. Sixty-two percent of the state's high school graduates enroll in college the fall after they graduate, 13th in the nation.
- Connecticut performs poorly, however, in terms of the educational achievement gap among different demographic and economic categories. Educational achievement is not equally distributed between different income groups, races and geographic areas. However, with investment in charter schools among other things, this gap continues to close.
    - Twelve percent of black 4th graders are proficient in reading, compared to 54% of white students — ranking 41st out of 42 states that had available data.
    - Eighteen percent of Latino 4th graders are proficient in reading, compared to 54% of white students — ranking 40th out of 41 states with available data.
    - The growth in the number of low-income students at Connecticut colleges exceeded the national average over the last five years — 13.3% in

Connecticut compared to 2.5% across the U.S.

Workforce

Connecticut is renowned for its highly productive workforce, which is largely a result of workers' high level of educational attainment. But maintaining this productivity will be a challenge because researchers point to a marked decline in the level of education for new workers, a trend they expect to continue.

As across the country, labor markets in Connecticut presently are not faring well. In March 2008, Connecticut's nonfarm employment rose by 1%, less growth than a year ago and less than the nation's 1.1% nonfarm employment growth. This chronic problem makes hiring skilled labor more difficult and costly. This is clearly an unfavorable trend, especially given Connecticut's higher and recently raised minimum wage.

Evidenced by census data, it would appear Connecticut isn't a top destination for younger people, which will likely create a shortage of future workers in the state.

Attracting young people to Connecticut will pay dividends in the state's workforce. Of the 17,928 Connecticut public college graduates in 2007, 70%, or 12,471, were employed in Connecticut in the third quarter after graduation and earned an average of about $40,684 per year.

Connecticut has long had the highest per capita income of any state, but a closer analysis of the data shows that the wealth is limited to small demographic, geographic and industry concentrations. Specifically, the financial services and insurance sector in Fairfield County is skewing the distribution of income and wealth. The challenges that Connecticut faces, such as a transportation system that needs updating, more affordable housing and high energy costs, have been highlighted and in some cases exacerbated by the current recession.

Key Findings:

- Connecticut boasts one of the most highly educated workforces in the nation. The state ranks 23rd in educational and health care establishments, 16th in employment, and 13th in annual payroll among the states in this sector.
- Connecticut has witnessed significant productivity growth in all industrial sectors between 2000 and 2007, particularly in the utility, real estate, information, and management industrial sectors.
- In 2006, Connecticut ranked 3rd nationally for the percentage of its population 25 and older with a bachelor's degree or higher.
- But Connecticut is among the nation's 10 oldest states, ranking 8th in median age (39). The state's future workforce growth may be stunted unless we can import the labor we need to fill positions

being vacated by the aging workforce and the significant out-migration of the 25- to 44-year-old cohort.

- Connecticut's high-income households — the top 20% — received 51.6% of all the income in the state. The poorest 20% of households in Connecticut had 3.3% of all income in the in the state. This income disparity has been growing over the past several decades.

Healthcare

Connecticut's healthcare industry is a significant economic driver, consisting of 9,818 establishments, employing 245,242 persons and contributing $9.8 billion in payroll in 2006. And this sector's employment will likely grow as the population ages.

However, the high cost of healthcare in Connecticut and the nation is a burden for workers and businesses alike and is of significant concern.

Employee contributions to maintain coverage and premiums have been rising. For example, the family premium cost has risen 77% from 2000 to 2006 in Connecticut. The average total employee contribution for family health coverage is $2,970 per year, almost 16% of the mean annual wage in Connecticut. At the current rate, wages will not be able to keep up with the exponential rise of healthcare costs in Connecticut.

In the Small Business and Entrepreneurship Council's 2009 "Health Care Policy Cost Index," Connecticut ranked poorly based on a number of factors such as imposed mandates on insurers, coverage requirements or taxes to pay for state programs and availability of health savings accounts.

Key Findings:

- Less than 9% of Connecticut's population is uninsured (325,516 people), well under the national average of 15%. Employers cover 61% of the population; Medicare, Medicaid and individuals cover the other 28% of the population.
- Connecticut's workers are above national averages for insurance coverage rates. Accessibility to health insurance coverage is not the issue for Connecticut residents, more so is the rising employee contributions needed to maintain their coverage.
- Connecticut was ranked as the fourth costliest state in terms of healthcare to do business — ranked below only Massachusetts, Washington and Maine as the costliest state for small business healthcare.

Tech Transfer

Technology transfer refers to a process that facilitates the movement of scientific and technological advancements from the research lab into the marketplace. Technologies are usually developed by researchers

working in universities or large businesses. Other institutions help the individual commercialize the idea into a marketable product.

Connecticut has impressive science and technology resources that include Yale University and the University of Connecticut, as well as major research corporations, financial and insurance companies and manufacturing industries. The infrastructure is in place for development and fruition of new inventions, but there is room for improvement.

Key Findings:

- Through technology incubator programs and research parks, Connecticut's universities are now at the forefront of patents and new technologies in Connecticut. The University of Connecticut and Yale University both provide tech transfer services to their students and faculty and have been successful for both parties.
- Working directly with researchers, university programs, along with community colleges and local non-profits with an interest in entrepreneurial and workforce development, have helped Connecticut rank in the top 10 states in the nation under the latest State Technology and Science Index.
- The state is lacking in overall incubator space, early-stage seed funding, as well as the commercialization services surrounding the universities, relative to comparable states.
- Connecticut needs to provide better early funding, as well as market the availability of services if it wants to see growth in high-tech businesses in the state.

Taxation

The fact that most of the cited studies do not rate Connecticut as an attractive state for business is a cause for concern and may drive the perception that the state is not business-friendly.

Because taxes are a highly competitive issue, meaning workers and businesses take taxes into account and vote with their feet in location decisions, Connecticut must find innovative strategies to equalize tax burdens and broaden its tax base for stability and growth.

If Connecticut is to improve its standing in these evaluations, however, targeted reforms toward certain areas, such as reducing a specific top tax rate or expanding the relevant tax base, where Connecticut is ranked low should result in a significant improvement in the state's position, without necessitating a complete overhaul of the entire business tax system.

Key Findings:

- Most business rankings suggest that Connecticut places in the mid-range among the 50 states in terms of factors that influence the business climate. The exception is

property taxes, where the state is ranked second to last among the 50 states.

- Connecticut taxpayers pay more taxes on average because they earn more income per capita than taxpayers in other states.
- However, state tax collections divided by personal income provide a useful measure of taxpayers' ability to pay. According to this measure, Connecticut taxpayers' burden is toward the middle of the pack reflecting a modest ability to pay.
- In high-income towns, equalized mill rates tend to be lower than in low- income towns, reflecting greater property values in these towns and the ease with which they can raise the revenue required to support the local budget.

Availability of Capital

Connecticut companies need infusions of capital from external investors to grow and prosper. Because of limited resources, small and medium-sized companies sometimes have trouble competing with established larger corporations for marketing, exposure, research capacities and capital for growth.

Venture capital source of funds is necessary for the continuation of all of Connecticut's industries, especially the expanding technology and manufacturing sectors due to their high initial start-up costs.

Key Findings:

- With the recent emphasis on green jobs and clean technologies, there are a greater number of graduate students and professors at Connecticut's higher education institutions looking to commercialize their innovations.
- Connecticut is currently one of the leaders in venture capital availability, but such funds must continue to be obtainable and plentiful for start-ups and young firms.

Energy Costs and Supply

Connecticut lives up to its reputation as an energy-conscious and scientifically progressive state.

Unfortunately, Connecticut is still subject to market swings in energy costs. Because Connecticut has no indigenous petroleum supply, the state is subject to the amount of gas available and the reliance on transportation of fuel supplies. This puts Connecticut in a difficult position, with 52% of households relying on oil for their primary heat energy source.

However, the future is bright with Connecticut having a strong alternative energy research and development sector — as we are leaders in fuel cells, solar energy, and biofuels. This recent boom in research has brought in a new wave of high-tech manufacturing opportunities to the state.

There are currently some barriers to the widespread adaptation of renewable energy — such as the high initial development cost and slow processing time — but with the infusion of capital from the state, small production firms will be able to compete on a national scale sooner than later.

Key Findings:

- The Energy Information Administration reported that in 2006 Connecticut ranked 4th highest in the nation in terms of overall energy prices.
- Despite having some of the highest relative energy prices in the nation for motor fuels, heating oil, natural gas, coal and retail electricity, Connecticut ranked 22nd in total energy expenditures per person while its per capita energy consumption was less than all but five states in 2007.
- The state consistently ranks in the lower 50th percentile in per person consumption for each energy subcategory reflecting the state's energy efficient culture.
- Connecticut must meet federal ozone (smog) standards by June 2010, a challenge that underlines the importance of developing alternative energy sources.
- Connecticut is a critical region in terms of the need for increased electricity supply resources to meet long-term needs. Without the timely addition of new resources, ISO warns the state and the region will fail to meet established reliability criteria, increasing the need for emergency procedures to operate the system during peak periods, and the possibility of disconnecting customers at peak times.

Culture and Tourism

Underscoring the economic impact of the culture and tourism industry, analysis performed in 2004 found the total direct, indirect and induced economic benefits of Connecticut's culture and tourism operations generated $14.06 billion in gross state product, or 7.6% of the state's total. They contributed $9.1 billion in personal income (5.74% of state total), 171,023 jobs (10% of state total) and $1.715 billion in state and local revenue — monetary receipts from state and local taxes and fees — representing 6.9% of the state and local total.

Connecticut invested $27.7 million in culture and tourism in 2004-05 to leverage $258 million in net state and local revenue. Another way to consider the impact of culture and tourism state budget allocations is to view each dollar invested and track its rate of return. In this case, for every $1 invested, the state garnered $9.30 in state and local revenue, $507 in gross state product and $328 in personal income.

With 4.13% of total employment falling in the cultural enterprise category, Connecticut ranks second

only to Rhode Island among the New England states.

Key Findings:

- The region and state budgets are not competitive with other states marketing the same audiences. TIA TravelScope reports that with its $5.6 million budget for tourism for 2005, Connecticut ranked last among the states of Maryland ($11 million), New Jersey ($12.7 million), and Pennsylvania ($31.8 million). New York City alone spent $45 million in 2005.
- Connecticut's tourism industry is negatively affected by more than dwindling budgets and increased costs: high volume of traffic on interstates, general lack of awareness of what Connecticut offers, and lack of public transportation to and around the state hinder the growth potential of tourism in Connecticut.

Connecticut's Competitiveness

The Department of Economic and Community Development examined a broad selection of interdependent measures to determine the state's competitive advantages and disadvantages. Competitiveness is too complex and multifaceted to be judged from a single variable. Therefore, DECD considered workforce quality, education, globalization, energy, housing affordability, workers' compensation, regulations/costs of doing business, taxes and entrepreneurial activity.

DECD's analysis relied on, but was not limited to, the following:

- *The 2008 State New Economy Index*, Kauffman Foundation and the Information Technology and Innovation Foundation, November 2008.
- *2009 State Business Tax Climate Index*, Tax Foundation, October 2008.
- *Benchmarking Connecticut 2006: Determinants of Economic Growth*, Connecticut Economic Resource Center (CERC), 2006.
- *Eighth Annual State Competitiveness Report*, the Beacon Hill Institute, 2008.
- *Grading Places: What Do the Business Climate Rankings Really Tell Us?*, Peter Fisher, Economic Policy Institute, 2005.
- *Small Business Survival Index 2007*, Small Business and Entrepreneurship Council, November 2007.
- *State Technology and Science Index: Enduring Lessons for the Intangible Economy*, the Milken Institute, June 2008.
- *A Talent-Based Strategy to Keep Connecticut Competitive in the 21st Century*, Connecticut Office for Workforce Competitiveness, February 2007.
- *Total State and Local Business Taxes: 50-State Estimates for Fiscal Year 2008*, Ernst & Young LLP, January 2009.

Connecticut's Competitiveness

DECD's mission is to develop and implement strategies to attract and retain businesses and jobs, revitalize neighborhoods and communities, ensure quality housing and foster appropriate development. To do so, it is imperative to periodically assess the state's competitive position, to evaluate Connecticut's economic development challenges and opportunities across a wide array of measures — seeking an unvarnished answer to the question, "How does Connecticut rate?"

This plan provides a competitive analysis of the state drawing on a series of "report cards" that rate states on a variety of measures.

To determine the state's competitive advantages and disadvantages, DECD examines several categories because a broad selection of interdependent measures helps determine competitiveness. The selected measures include workforce quality, education, globalization, energy, housing affordability, workers' compensation, regulations/costs of doing business, and entrepreneurial activity.

The results are often used by businesses to determine their expansion and relocation plans and therefore have significance beyond their analytical prowess.

Workforce Quality

Across a variety of studies, Connecticut consistently scores high marks on various measures on the quality of its educated and talented workforce.

One determinant is its number of knowledge-based jobs. Connecticut scores near the top here, #2 overall (out of the 50 states, with #1 being the best), according to the Kauffman Foundation's *The 2008 New State Economy Index*.

Multiple indicators within Kauffman's knowledge-based employment category bode well for Connecticut, including:

- Employment in IT occupations: #7
- Share of workforce employed in managerial, professional, and technical occupations: #4
- Education level of workforce: #4
- Average educational attainment of recent immigrants: #5
- Employment in high value-added manufacturing sectors: #2
- Employment in high-wage traded services: #2

The factors above suggest that Connecticut is home to an educated and skilled workforce that is capable of efficiently producing technologically complex, high value-added goods and services.

Education

Overall, Connecticut scores well in various measures of Connecticut's current educational attainment. However, the educational attainment of the state's future workers may be a potential area of concern.

Workforce at a Glance

- Employment in IT occupations: #7
- Share of workforce employed in managerial, professional, and technical occupations: #4
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- Average educational attainment of recent immigrants: #5
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The Connecticut Office for Workforce Competitiveness (OWC) describes its educational attainment issues and needs in its report titled *A Talent-Based Strategy to Keep Connecticut Competitive in the 21st Century*. OWC writes, "Connecticut's future young workers are expected to be less prepared for the 21st century careers than those they are replacing in large part because nearly half of our future workforce will be coming out of the state's urban centers where a significant and stubborn achievement gap persists."

Connecticut Job Facts

- U.S. subsidiaries in Connecticut play a vital role in supporting jobs. They now employ 104,900 workers in Connecticut.
- Connecticut is an attractive location for international employers, ranking 17th in the United States in the number of employees supported by U.S. subsidiaries.
- The relative portion of jobs in Connecticut supplied by U.S. subsidiaries remains significant. They provide the livelihood for more than 7% of Connecticut's private-sector workforce.
- Connecticut is tied with South Carolina as 1st in the country in the share of its workforce supported by U.S. subsidiaries.

Globalization — Exports and Foreign Direct Investment (FDI)

In the global economy, exports are an important indicator of the strength of an economy. Connecticut's past export growth has outpaced the nation. This reflects favorably on the ability of Connecticut industries to produce items in demand around the world. As the world economy becomes increasingly integrated, exports will continue to fuel economic growth in Connecticut and the United States.

Foreign Direct Investment (FDI) is major investment by foreign companies, such as the construction of new plants or ownership of property and equipment, in the United States. FDI is important because it creates new jobs and leads to knowledge exchange and transfer, including the adoption of advanced new technologies and workforce practices. Foreign companies also serve as a source of business leads and as a resource for future foreign investment.

Job growth and foreign investment in plant and equipment in the state reflect the competiveness of Connecticut's international position. **Both job growth and investment by foreign affiliates in Connecticut outpaced that of the United States.**

In 2006, the latest year of available data, Connecticut tied with South Carolina for first in the largest shares of private industry employment accounted for by majority-owned U.S. affiliates.

Energy

The cost of electricity is of considerable concern to Connecticut, as several reports rank Connecticut near the bottom in this particular sector.

The energy sector represents a competitive disadvantage for Connecticut. Energy is a component of the cost of doing business in a state, as it factors into the equation of where to locate or expand a business. Therefore, to compensate for high energy costs, a state must offer other assets of high value, such as a highly skilled workforce.

Housing Affordability

Housing affordability, whether it is via ownership or rental, can be an obstacle to attracting and retaining workers. In a literature review, Connecticut does seem to have a competitive disadvantage in this sector.

Regulations/Costs of Doing Business

Connecticut has mixed results in this category. The state had the 8th highest business costs among the 50 states in 2006, the result of a weighted combination of labor, tax, and energy costs. Additionally, the Milken Institute found that in 2007 Connecticut had the 5th highest business costs, a ranking which has been relatively constant since 2004. Conversely, Commercial Property News (CPN)-Nielsen conducted a 50-state ranking to determine the best states for corporations and currently Connecticut ranks first.

Connecticut is at a competitive disadvantage in terms of workers' compensation rates, as an increase to non-wage labor cost represents an increase to the cost of doing business in the state.

Economic Outlook

In 2009, the American Legislative Exchange Council awarded Connecticut #32 out of 50 in its ALEC-Laffer index, which ranks state based on economic outlook. That's an eight-position improvement over its 2008 score of #40. With #1 being the top score, Connecticut scored fairly well in some of the index's various policy factors, such as: top marginal personal income tax (#17), sales tax burden (#12), and the remaining tax burden (#8). Conversely, the state scored poorly in areas such as property tax burden (#43) and high minimum wage (#44).

Entrepreneurial Activity

Connecticut received mixed marks in several reports' overall examinations of economic vitality: both high and low —however, within the various sub-indexes of vitality or entrepreneurial climate, the state scored well.

- ***Patents***

  CFED, CERC, and the Beacon Hill Institute rank Connecticut #9 in terms of the number of patents issued.

  OWC expresses concern regarding Connecticut's patent growth, finding that the state is "slipping in the utilization of its research and development base to support innovation…While Connecticut is a leader in absolute patents per worker, growth of patents is lagging well behind the nation — rising only 5 percent in Connecticut compared to 22 percent for the nation from 1996 to 2005." This growth rate may be an area of concern and is an issue to be monitored.

- ***Initial Public Offerings***

  Connecticut scores well in the number of IPOs offered within the state, as both the Beacon Hill Institute and CFED rank Connecticut #5 in this measure.

IPOs are a competitive advantage for the state, in that it is a sign that "financial markets have embraced entrepreneurial dynamism."

- ***Gazelle Jobs/Fast 500 List***

  Another component of the entrepreneurial climate is the number of gazelles, or fast-growing businesses, in a state. Connecticut receives mixed marks here — a #7 from the CERC report, and #23 according to the Kauffman Foundation.

  Connecticut ranks #7 in terms of the number of firms it has on such "Fast 500" lists. Such a positive ranking is good for the state, because such "fast" firms "represent a state's most successful entrepreneurial efforts and hold the most promise for continued growth." It is a sign of a state's high-tech industry strength.

- ***Business Churn***

  The Degree of the state's business churn, or the number of new start-ups and business failures combined as a share of the total number of businesses in each state, is a competitive disadvantage for Connecticut, as evidenced in several reports examined. Fast employment growth is a by-product of business churn. Slow churn is an issue of concern because it indicates that innovative businesses are being created elsewhere, along with those high-tech jobs. CERC's report finds Connecticut to be #44 out of 50, while the Kauffman Foundation ranks the state at #49.

- ***R&D***

  Connecticut receives mixed marks in the R&D category, depending on the group and the various sub-measures of private, federal or university R&D. For example, the Milken Institute found that Connecticut has made great improvements in its R&D measures, reinforced by Connecticut's expenditures and policies in areas such as stem cell research, life sciences and biomedicine. On the other hand, Connecticut scores lower when it comes to federal R&D and the number of businesses created via university R&D. The variety of scores makes it difficult to determine whether Connecticut has a definitive competitive advantage in the R&D field. More information is needed to make a conclusive determination.

- ***Venture Capital (VC)***

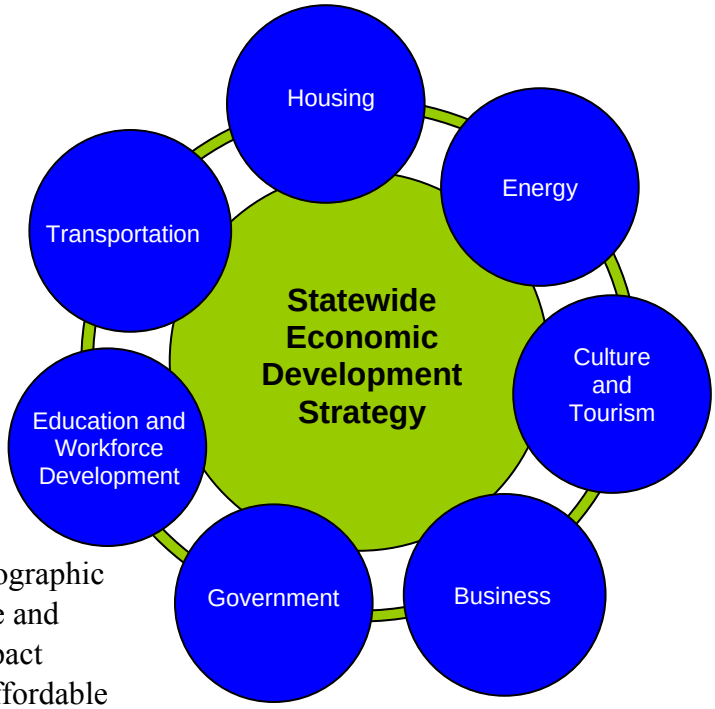
  Connecticut scores relatively well in terms of VC, #18 from the Kauffman Foundation.

  According to OWC, "Connecticut is not keeping pace in the growth of venture capital— an indicator of investment in high growth potential emerging companies. Venture capital investments in Connecticut from 1996 to 2006 have increased only 56 percent as compared to growth of 115 percent for the entire nation."

The comparative analysis highlights several factors that impact competitiveness and economic growth. However, it's important to keep in mind that not every factor has equal weight — strength in one area does not necessarily counteract a weakness in another.

Connecticut holds a competitive advantage in several areas, including an educated workforce, international orientation, patents, IPOs and "Fast 500" companies. In other measures, such as housing affordability, workers' compensation, energy infrastructure, taxes and business churn, Connecticut may need to refocus its efforts in order to reap greater growth benefits and sustain its current advantages.

Paths to Economic Progress



The Connecticut depicted by this plan is faced with significant challenges and opportunities in the coming years. Stagnant population and job growth, demographic changes, shifting industrial trends, income and educational disparities that negatively impact healthcare and social services, a lack of affordable housing, high energy costs and transportation needs are just some of the areas on which we must focus. This is a seminal moment for Connecticut.

However, economic growth does not have to rely on increases in population, the number of businesses or income.

Instead, we can dramatically improve the quality of our education system, our workforce, our transportation system and our housing through leveraging our historic Yankee ingenuity and through public-private partnerships. This reduces income inequality while raising the income of all households, reduces the

burden on the state and its municipalities for social services and education expenditures while increasing tax revenues. The Economic Strategic Plan points the way to this development.

The plan's initiatives and the guiding vision are intended to be bold, inspiring and broad so that implementers, now and in the future, are not bound in their actions but have a blueprint to follow that rises above political cycles and ideologies. Sustaining and enhancing Connecticut's competitiveness is the most important outcome, as the wellbeing of Connecticut, its businesses and its families will diminish if it is not.

As part of this process, DECD synthesized separate and distinct visions for housing, transportation, education and workforce development, government, business, culture and tourism and energy.

Housing

Housing opportunities will be affordable, environmentally friendly and available to meet the needs of all our citizens. Housing developments will be clustered around pedestrian-friendly areas, and in close proximity to employment and commercial centers, schools and public transportation. Connecticut will revitalize its urban and regional centers with mixed-use, mixed-income development, providing a safe and clean environment to attract an economically and socially diverse workforce. Connecticut's cities and towns will embrace regional solutions to promote responsible growth, concentrating new housing developments around established infrastructure.

Transportation

Transportation will be efficient, environmentally friendly and flow in a synchronized manner. Public transportation will be readily accessible; and link regions, people and businesses together. By developing and integrating pedestrian, bicycle, bus, rail, aviation and maritime infrastructure, citizens and businesses can maximize their economic and recreational productivity. Connecticut will leverage its strategic location and deepwater ports, linking New England to New York and destinations beyond.

Education and Workforce Development

Connecticut will attract and retain businesses by maintaining its highly productive and competitive workforce. With lifelong and enriching educational opportunities for all, Connecticut will nurture a diverse and well-educated population, sustaining a dynamic workforce that is adaptable to an evolving world economy. Apprenticeship and internship programs, as well as post-secondary curricula that emphasize the needs of local enterprises and Connecticut's core competencies, will give

students, young adults and senior citizens reason to stay here.

Government

All government entities will foster an environment that improves Connecticut's quality of life, maximizes economic growth, and conserves our natural resources. As this document goes to print, the federal government and every state in the nation have grappled with the impact of the largest recession since the Great Depression. Public sentiment is dictating that governments at all levels must provide only those essential services and must deliver those services as efficiently as possible. Public agencies will be more accessible to the public via the Internet and other media services. Governments will continue to address issues such as income inequality and racial segregation in the state. Government structure will promote inter-municipal cooperation and service sharing to provide cost-effective and efficient solutions to local and regional issues. State government will promote technological advancements and entrepreneurial enterprises to help solve problems of the 21st century.

Business

Connecticut will market a cohesive image in which business costs are low relative to high productivity and quality of life. Businesses will be able to capitalize on the state's abundant affordable housing, accessible transportation and renowned institutions of higher learning to build a highly-educated workforce. The state will support the private sector and intrastate commerce in a variety of ways. Moreover, Connecticut businesses will invest in and partner with educational institutions to maintain a competitive and innovative edge in the global economy. We will be a state where a combination of talent and technology will position us as a leader in the new economy.

Culture and Tourism

Connecticut will strengthen its brand image as a heritage and cultural vacation destination with myriad activities and natural resources, which include waterfront areas, historic sites, artistic and cultural venues and rural colonial charm. The state will market a cohesive New England character, complementing New York and Boston. Culture and tourism will be a driver of economic growth in the state without burdening existing transportation and environmental infrastructure.

Energy

Energy efficiency programs will offer incentives to help lower operating costs and improve productivity, allowing Connecticut businesses to remain globally competitive and avoid outsourcing

jobs. Connecticut will be a leading exporter of green technology with its competitive advantage in fuel cell and biofuel research. Education initiatives will develop green-collar jobs and promote energy efficient households and businesses. Alternative fuels like biodiesel will be widely available for residential and transportation uses. State government will set minimum energy efficiency standards and be a model in its choice of energy technology used in state buildings and vehicles.

Strategies for a New Economy

Connecticut is at a crossroads. The workforce is aging, as talented, young workers are leaving the state and population and job growth are stagnating. Like other areas, the state is transitioning from a manufacturing to a service economy. Connecticut has experienced a large and growing income disparity that impacts the need for healthcare and social services. Poor academic performance in urban schools portends a workforce less prepared to fill the shoes of those retiring and those leaving. Nine percent of Connecticut's adults (240,000 people) are functionally illiterate, a troubling statistic that can undermine the next generation's chances for success.

This depiction of Connecticut makes the point that maintaining the status quo has consequences. Economic growth, which can come in various forms, does not necessarily entail more population, businesses or income. Changes can occur from dramatically improving education, workforce, transportation, and housing. Such changes can reduce income inequality while raising the income of all households, and reduce the burden on the state and municipalities for social services and education expenditures while increasing tax revenues. The strategic plan points the way to this development.

To realize the visions for economic development in the preceding pages, DECD has enumerated a set of strategies. These strategies account for Connecticut's tremendous strengths, yet address the many challenges that must be faced. If successful, our children and grandchildren will be left a state whose wealth and well-being are sustainable and secure — a legacy well worth the effort.

The vision for Connecticut's future is articulated in three distinct, yet interrelated public policy arenas in Section III.

I. Introduction and Overview

The Purpose of This Report

Public Act 07-239, Section 4 (now codified as CGS § 32-1o) mandated that the Department of Economic and Community Development (DECD) create an economic strategic plan for the state looking out five, ten, fifteen and twenty years with initiatives that would strengthen Connecticut's industries and workforce and significantly improve its economic performance and competitiveness. The plan consists of three parts: a comprehensive vision, a baseline characterization of the Connecticut economy, and a set of actionable, credible, bold and creative strategies or initiatives.

The vision arose, in large part, from ten public forums conducted around the state from November 2007 through January 2008. DECD synthesized a vision for Connecticut from testimony transcribed at each forum, combined with email and paper documents received subsequently. DECD constructed a baseline characterization from many sources to establish a reference from which we may gauge progress towards achieving the goals manifested in the strategies. Indeed, policy implications arise directly from describing the status quo. HR&A Advisors, Inc. and their team of consultants constructed the initiatives with input from experts, economic development partners, business leaders, and agency heads.

A Different Kind of Plan

The Economic Strategic Plan (ESP) mandated by § 32-1o must take into account several existing plans such as the State Plan of Conservation and Development and the Regional Planning Organizations' Comprehensive Economic Development Strategies (CEDS) among others such as the Transportation Strategy Board initiatives and the Department of Transportation's recent Strategic Long-Range Transportation Plan. In so doing, the ESP complements these plans where possible, but does not substitute for them. The ESP brings together in one document the myriad facts describing Connecticut available in many studies, reports, journal articles, news articles, books and from public data sources such as the Connecticut State Data Center, the Census Bureau, the Bureau of Labor Statistics, the Bureau of Economic Analysis, Connecticut executive agencies, and non-governmental agencies such as Connecticut Voices for Children, the Center for Budget Policy and Priorities, the Tax Foundation and many others.

The ESP differs from existing plans in that it proposes initiatives (strategies) that incorporate the major implementation needs, the necessary implementation steps, potential legislation required, lead agency/organization(s) responsible, challenges to adoption/implementation, costs, and other resources required for implementation. The ESP provides a schedule for implementation, sources of funding and financing structures, and metrics for assessing progress as implementation proceeds. These attributes

differentiate competing strategies and establish credibility by describing the social and economic benefits and costs of each strategy. In addition, § 32-1o mandates that the ESP be updated and revised at least every five years to account for a changing environment.

The ESP is organized as follows: Section I is the introduction and overview. Section II presents a baseline characterization of Connecticut from several perspectives. DECD describes the historical Connecticut economy that naturally leads to a current characterization of the state's people, its labor market and housing market. DECD describes the industrial organization of the state's economy and provides perspective on the industrial strengths of the state on which we may build. Following the introductory sections, DECD describes factors of economic growth, including the state's transportation system; its technology transfer apparatus that bears on the state's competitiveness and higher education infrastructure; its brownfields that often represent historical assets offering opportunity for redevelopment in urban areas; and health care delivery that represents a cost to businesses and individuals and an opportunity to improve productivity via a healthier workforce and school population.

Section III presents the ESP and the guiding vision that is bold, inspiring and broad so that implementers now and in the future are not unnecessarily constrained in their actions but have a roadmap to follow that transcends election cycles and political ideologies. The ESP intendeds to show a way forward without stifling creativity. Indeed, the details of implementation remain to those directly involved and to Connecticut's citizens who will be watching and contributing their energy and creativity to the process.

DECD further interprets the factors of economic growth by characterizing its workforce and education system and the challenges they face as the economy restructures and becomes further integrated into the global 'knowledge' economy. Keys to sustaining a healthy workforce are the social services the state and the private sector provide and their relevant costs. Closely related to transportation and housing is land use policy that largely is determined in the state's 169 municipalities. Of increasing importance is the state's emergency preparedness for natural and manmade disasters. Port security, food security, energy security, and the state's ability to deal with pandemics such as avian flu and natural disasters such as hurricanes and floods are increasingly significant as the climate changes and we become increasingly connected with the world community.

Taxation is an important area for competitiveness and policy analysis. DECD's analysis of the taxes Connecticut residents pay and their spatial and income distribution illuminate this complex subject. Further, the comparative analysis yields some surprising findings and, together with the burden and incidence findings, may suggest policy changes.

The availability of capital for sustaining current business operations and for growth of households and businesses is as important as the proximity to markets and our quality of life. In addition, our entrepreneurs thrive to the extent that they are able to obtain

investment in the early stages of their ventures. This is more important today as Connecticut has historically depended on innovation to create wealth and needs to nurture young firms as they look to grow in the state. Small firms are the engines of employment growth and their success relates strongly to technology transfer and the superiority of our institutions of higher learning.

Connecticut's energy costs and supply-demand picture influence the prosperity of residents and firms alike. With the highest electricity costs in the contiguous states, Connecticut is immediately at a competitive disadvantage with respect to its peers and competitors for workers and firms. Understanding the state's energy supply and demand from generation, transmission, distribution, and end use helps policymakers and the public make informed choices.

Connecticut is home to a rich panoply of cultural and tourism assets. From its unique historic and heritage venues, to its theaters, playhouses, galleries, and museums, Connecticut residents and businesses benefit as do visitors who come to our state. Connecticut's culture and tourism business represents $10 billion in new state gross domestic product and enriches the lives of all who live here and those who visit. Unfortunately, these assets are a well-kept secret as Connecticut's marketing pales in comparison to peer and competitor states.

The report provides a competitive analysis of the state drawing on a compendium of 'report cards' that rate states on a variety of metrics. Individuals and firms use these metrics to calibrate their expansion and relocation plans and therefore they may have significance beyond their analytical utility. This analysis offers avenues for potential further study and illumination as Connecticut is increasingly in competition with other states and regions to sustain its wealth.

Our intent is to paint a recognizable picture from the billions of facts that describe Connecticut. The perspectives are demographics, transportation, workforce/education, housing, culture and tourism, government structure including taxes, regulations, organization and land use, industrial organization and occupational profile, and energy. We omit the physical environmental characteristics from the narrative and refer to Connecticut's 'New England character' as a recognizable and valuable attribute. These perspectives assemble facts into a coherent and recognizable portrait of Connecticut such that we may use it as a reference from which to depart and measure progress towards a different state of affairs. The characterizations are neutral and purely descriptive however, there are policy implications that emerge.

Data Limitations

While there is much data employed in this report to describe the landscape of Connecticut, there is rarely sufficient data available at the desired time and with the desired temporal and spatial granularity to satisfy the researcher's needs. Most data appears with a lag that is in some cases up to two years (for example, state GDP). Important employment data is fortunately available monthly as are inflation and price index data. While exchange rate and stock market prices are almost real time, they are not useful for the tasks at hand.

The most complete census data appears decennially while the American Community Survey data appears annually but represents a smaller sample. This is a frequent tradeoff: frequency and sample size that relate directly to the cost of collection. DECD makes use of the most recent data available at the time of writing that in some cases was updated (and changed significantly) during the course of the writing, review and revision process. All data sources are listed with their source tables, charts and graphs. The authors' calculations that produce new data are noted where they occur.

The events of 2008 and to date in 2009 make reporting and describing the status quo difficult and unrealistic. The U.S. and Connecticut economies have undergone such dramatic changes in the past twelve months and are still undergoing significant changes that it is difficult to describe what was, given what is and what is likely to be. The economies of the state and nation are struggling on several fronts, and we do not know when we will hit bottom or how deep the trough will be for the current recession. We do know that the U.S. and the Connecticut economies will not be the same as significant industry restructuring is taking place. This has employment, output, and tax implications that arise from the new industrial structure and the evolving occupational profile of the state. Nevertheless, we cannot wait for the next economic equilibrium (that is, historic trend growth) to assess the status quo, so we use the data we accessed when needed and in many cases the relationships we describe are stable (such as children per household). We are mindful of trends that may or may not continue; nevertheless, we proceed as if certain trends will continue and certain projections will likely materialize. We therefore present our analysis with these caveats in mind and understand that some things may (and have) change(d) significantly.

The Situation

Connecticut is at a crossroad.[1] We have a population with a larger cohort of older workers (measured as a share of population) than other parts of the country. We face significant out-migration of young workers and we face a paucity of indigenous, talented, young workers. We have stagnant population and job growth in the state (white and black fertility rates are less than replacement, while Hispanics rates slightly exceed replacement). Connecticut, like other regions, has seen a transition from manufacturing to services measured as a share of the workforce or state GDP. This transition carries with it a transition to relatively lower-paying jobs and less revenue for state coffers. The state has experienced large and growing income disparity that has negative consequences with respect to the need for healthcare and social services. Low-income households are not typically high academic achievers and as they increase in proportion to middle- and high-income households, the average K-12 academic achievement may decline (school enrollments in many areas are declining implying a smaller indigenous workforce pool as well). Poor academic performance in our urban schools portends a workforce less prepared to fill the shoes of those retiring and those leaving. Relatively high dropout rates in the state's urban areas may portend an increase in crime and the need for increased social and health services. Nine percent of Connecticut's adults (240,000 people) are functionally illiterate, a troubling statistic that can undermine the next generation's chances for success.

Connecticut's housing is largely unaffordable. Affordability is relative yet firms continue to cite the lack of affordability as a deterrent to attracting and retaining a high-quality workforce. While progress has been made in this area, impediments—both financial and institutional—inhibit the ability to create sufficient supply. Brownfields offer potential development sites near established infrastructure yet many are untouched and perhaps untouchable.

The dearth of intrastate mass transit makes dependence on cars a necessity and the daily, extreme congestion in southwest Connecticut is one result. The lack of commuter rail from New Haven to New London promotes automobile use on Interstate 95 and the lack of commuter rail from New Haven to Springfield and the five college area beyond thwarts further development of the 'knowledge corridor'. Transit-oriented development is thus stymied although progress is occurring (in Meriden and Naugatuck).

Connecticut's energy costs are among the highest in the nation. One the one hand, this encourages efficiency (and Connecticut residents are efficient energy users). On the other, high energy costs discourage business expansion and in fact lead to out-migration (the Franklin Mushroom Farm is one example).

[1] See the Plan of Conservation and Development, http://www.ct.gov/opm/cwp/view.asp?A=2990&Q=385378, page 9.

The recent collapse of the financial, insurance and real estate (FIRE) industry in the state portends long-term structural change and significantly less resources with which the state may address the issues raised above. The restructuring of the transportation (automobile) industry may have consequences for Connecticut suppliers. The potential 'streamlining' of the defense establishment in concert with the eponymous action of the military may have economic consequences for Connecticut suppliers.

Connecticut has 169 towns and 154 school districts. Education represents the lion's share of town budgets. Property taxes are towns' only source of revenue other than state transfers that are significant in some cases (80% of Bridgeport's school budget arrives from intergovernmental transfers). Many towns have their own public safety, public works, public health, and public education systems. It seems as if there is redundancy if only because of the replication of similar services in small geographic areas. Connecticut occupies 4,845 square miles, 698 square miles (14.4%) of which are covered by water. This means that the average town occupies 24.5 square miles of land (Hartford occupies 17.5 square miles). There are counties in the U.S. larger than the state of Connecticut that administer and develop regional assets such as transportation systems, educational systems, and public works systems and so on with a concomitantly larger tax base. For two disparate examples, Florida has 67 school districts, one per county or one for each 809.7 square miles (of dry land area), while Pennsylvania has 505 districts or one for every 86.3 square miles. Connecticut is in competition with these and similar regions for workforce and businesses.

The point of this narrative is that maintaining the status quo has consequences, not all of which are pleasant. Economic growth does not necessarily entail large increases in population or firms or income. That is extensive development. We prefer intensive development that dramatically improves the quality of our education system, our workforce, our transportation system, and our housing through leveraging our historic Yankee ingenuity and through (new) public-private partnerships. Such intensive development reduces income inequality while raising the income of all households. This development in turn reduces the burden on the state and its municipalities for social services and education expenditures while increasing tax revenues. The ESP intends to point the way to this development.

II. BASELINE CHARACTERIZATION OF CONNECTICUT

A. Connecticut's Economy

A Historic Overview

In 1614, Adriaen Block, a Dutch explorer, sailed up the Connecticut River and landed at what is now the City of Hartford. Shortly thereafter, the Dutch established the first European colony in Connecticut. The English followed suit in the 1630s establishing several separate colonies along the Connecticut River and the Connecticut shoreline. In 1662, a royal charter consolidated these separate colonies into a crown colony of England. Connecticut became the 5th U.S. state in 1788.

For its original colonists, Connecticut proved to be a place abundant in natural resources, but lacking accessible agricultural land. As such, colonial Connecticut turned to manufacturing as a means of economic vitality and growth. Iron and brass works appeared in Connecticut as early as the 1660s and by the late 1700s Connecticut was widely recognized as a leader in machine tools.[1] "*When Connecticut was still a colony, her factories were already important enough to draw angry complaints from competitors in England. Connecticut metal buttons were replacing the imported product and were providing the start of Connecticut's great brass industry*."[2]

Connecticut quickly became known for its "industrial ingenuity" and productive capacity. During the American Revolutionary War, Connecticut played a significant part in arming the Revolutionary Army. The first American warship, the *Oliver Cromwell*, was built in Essex[3] and the Salisbury Furnace[4] iron works produced 42% of the cannons used by Washington's Army.

After the American Revolutionary War, Connecticut remained at the forefront of arms manufacturing and innovation. Early in the 19th century, Eli Whitney and Simeon North began making firearms with interchangeable parts—generally recognized as the beginning of modern mass production. This innovation allowed Whitney and North to exceed the production of all other U.S. firearms makers of the time securing them the first official firearms contract from the United States Government (footnotes 1 and 3).

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[1] Harris, Patricia and Lyon, David, Connecticut: The Spirit of America, Harry N. Abrams, Inc. Publishers, New York, 2000.
[2] Connecticut State Library Web Site, www.cslib.org/history.htm, Connecticut History, 2009.
[3] Faude, Wilson H and Friedland, Joan W., Connecticut's Firsts, Peregrine Press, Connecticut, 1985.
[4] Carter, John, The Arsenal of the Revolution: The Salisbury Cannon, Associated Content, 2009, www.associatedcontent.com.

Continuing in that tradition, Colt's Armory in Hartford, the Remington Arms company in Bridgeport, and the Winchester Repeating Arms Company in New Haven were three of several arms manufacturers that prospered on the back of conflict. By the end of World War I, 80% of Connecticut's manufacturers were making military goods.

Arms were not the only products coming out of Connecticut in the 1800s. Connecticut industry was also at the forefront of textiles, precision instruments, hardware, machine tools, and electric power generation and distribution.

Jeremiah Wadsworth built the first woolen mill in America in Hartford in 1788 and in 1794, Eli Whitney, the father of modern manufacturing, invented the cotton gin, revolutionizing the American textile industry by making the use of cotton for textiles affordable. In 1810, Connecticut was home to the nation's first silk mill in Mansfield that produced the first manufactured silk thread in 1819. Other important Connecticut contributions to the textile industry were the introduction of elastic webbing produced by the Russell Manufacturing Company in Middletown in 1841 and the invention of the sewing machine in 1846 by Elias Howe (footnote 3 for all points in this paragraph).

The manufacture of precision instruments in Connecticut dates back to the colonial times when the "first clockmaker of record in America was Thomas Nash, an early settler of New Haven in 1638."[5] Timekeeping innovations continued to stream from Connecticut entrepreneurs. In 1793, the self-winding clock was perfected in Litchfield (footnote 3) and by 1800, Eli Terry had systematized clock production (footnote 5) using standardized, mass produced interchangeable parts and was producing clocks in hitherto unforeseen quantities. "Virtually every major [clock manufacturer] in existence at the end of the nineteenth century could trace its descent from… early Connecticut-based establishments." Watch making followed a similar path in the state. "The earliest production of watches in some volume is accorded to Thomas Haftand of Norwich, Connecticut" and "between 1836 and 1841 James and Henry Pitkin of East Hartford, Connecticut, made perhaps 800 movements, using the most elaborate tools known in America up to that time." Just as important, watch making "helped establish and carry forward a new standard of accuracy in American metalworking" (footnote 5).

Other notable advances in the production of precision instruments include the invention of the profile late in 1819 by Thomas Blanchard of Middlebury and the production of the first commercially manufactured gyroscope in 1857. The Blake Brothers of Westville began manufacturing the first mortised locks in 1835 and the first American nut and bolt factory was established in 1840 in Southington. In 1893, the Hartford electric light company was the first utility company to transmit three-phase alternating current over a

[5] Uselding, Paul, Clock and Watch Industry, U.S. History Encyclopedia/Answers.Com, http://www.answers.com/topic/clock-and-watch-industry#copyrights_ans, 2006.

long distance and in 1901, it was the first utility company in America to install a steam-driven turbine (this paragraph references footnote 3).

Connecticut's history of innovation includes many world-changing achievements. "Through the years, Connecticut industrial genius has given the world such varied inventions as vulcanized rubber, friction matches, sewing machines, steamboats, safety fuses, lollipops, cork screws, mechanical calculators, portable typewriters, the first ice-making machine, can openers, the tape measure, the vacuum cleaner, cylindrical locks, the first color television, the helicopter, the first submarine and the first nuclear-powered submarine and the first artificial heart, and 'game changing' innovations such as mass production and standardized interchangeable parts and the first factory town in America, planned and established in Seymour." This paragraph references footnote two.

Throughout Connecticut's history, innovation spread within and among its industries. Employing the concept of standardized interchangeable parts and mass production, pioneered by Eli Whitney and Simeon North and first brought to large-scale operation by Samuel Colt and Elisha Root, the Pratt & Whitney Machine Tool Company, established in Hartford in 1860, began manufacturing guns and gun making machinery.[6] The company's manufacturing process was not the only idea borrowed from Colt. Their workforce was largely composed of Colt-trained machinists. The company went on to produce primarily precision machine tools and measurement instruments, unit 1925, when "Frederick B. Rentschler approached Pratt & Whitney for funding and a location to build his new aircraft engine." In 1929, "Frederick Rentschler, ended his association with Pratt & Whitney Machine Tool and formed United Aircraft and Transport Corporation, the predecessor to today's United Technologies. His agreement allowed Rentschler to carry the name with him to his new corporation."[7] The Pratt & Whitney Machine Tool Company now known as the Pratt & Whitney Measurement Systems, Inc. continues to produce precision measuring instruments in Bloomfield, Connecticut.

From 1934 until 1975 the United Aircraft and Transport Corporation, composed of Pratt & Whitney Aircraft, Hamilton Standard (now Hamilton Sundstrand) and Sikorsky Aircraft, concentrated on aerospace and defense.[8] The company changed its name to the United Technologies Corporation in 1975 and began its transformation into a multi-industry conglomerate by acquiring the Otis Elevator Company in 1976 (footnote 8). The company further diversified through the acquisition of other businesses including, Carrier Refrigeration, Chubb Security, Rocketdyne, and Kidde and through the creation of new businesses such as International Fuel Cell (now UTC Power) (footnote 8). Just as Colt-trained machinists went on to spawn or fuel new businesses in the late 19th and early 20th centuries, UTC-trained machinists and engineers have gone on to create new businesses

[6] Pratt & Whitney History, www.prattandwhitney.com/history.htm, 2009.
[7] History of Pratt & Whitney, www.stocklobster.com , 2009.
[8] www.utc.com

throughout the state, not only in the aerospace industry but other industries such as precision manufacturing, composite materials, and medical instruments and devices.

Connecticut is not only known for its manufacturing expertise and innovation. Marine insurance, the great-grandfather of modern forms of insurance, had its start in Connecticut with coverage for ships and cargoes that sailed from the state's ports to the Caribbean. Fire insurance got its formal start in 1794; other types—life, accident, casualty, health—followed during the next century. The nation's first insurance company incorporated in 1795 as the Mutual Assurance Company of the City of Norwich.[9]

The first half of the 19th century saw the creation of numerous insurance businesses and by the middle of that century Connecticut cemented its position as the nation's insurance capital. In 1810, the Hartford Fire Insurance Company was incorporated (footnote 9). The Mutual Insurance Company of Hartford was founded in 1831 (footnote 9) and the Connecticut Mutual Life Insurance Company, the first life insurance company, chartered in Connecticut began in 1846 (footnote 9). In 1851 the Phoenix Mutual Life Insurance Company started (under another name) (footnote 9) in Hartford and the Aetna Life Insurance Company started, also in Hartford, in 1853 (footnote 9). In 1864, the Travelers Insurance Company issued its first policy (footnote9) and in 1865, the Connecticut General Life Insurance Company was founded (footnote 9). Much has changed in the business of insuring risk since the industry's humble beginnings in the U.S. in 1795; however, Connecticut remains the epicenter of the global insurance industry. Currently there are 106 insurance companies based in Connecticut (footnote 1).

Connecticut is a model of ingenuity and inventiveness. Notable examples mentioned are the first cotton gin patented by Eli Whitney (1846) and the first revolver made by Samuel Colt (1836). Further, Connecticut innovators created the first pay telephone and telephone exchange (1877), opened the first public art museum in America—the Wadsworth Atheneum (1842), flew the first successful helicopter in the Western Hemisphere designed by Igor Sikorsky (1939), designed and built the first nuclear submarine launched in New London (1954), and in 1982, Stamford native Robert Jarvik invented the world's first artificial heart.[10]

These 'firsts' underscore that "Connecticut has nearly unmatched production skills, that have made it a world leader in manufacturing, insurance, financial services and space technology. Since colonial times Connecticut's industrial genius has produced such varied inventions as brass buttons, vulcanized rubber, steamboats, safety fuses, cork screws, calculators, clocks and locks. Connecticut's manufacturing industry continues to be highly diversified. Jet engines, helicopters and nuclear submarines still give the state

[9] Connecticut Timeline of State History, State House Girls, www.shgresources.com, 2009.
[10] "Connecticut's Historical Firsts," http://www.ct.gov/ctportal/cwp/view.asp?a=843&q=246434.

pre-eminence in transportation equipment – the state's single largest merchandise export" (footnote 10).

Yet Connecticut, as do many other manufacturing states, faces a decades-old decline in manufacturing employment due primarily to significantly improved productivity of the manufacturing workforce. In addition, jobs in firms such as Pratt & Whitney not directly related to producing gas turbines have been outsourced to IT, accounting, security, food service, and other non-core-function entities. Even so, as Connecticut has diversified its industry structure to become less reliant on defense-related work for example, it has seen the share of manufacturing employment and value added (industry gross domestic product) decline in the state's labor force and state GDP respectively. In fact, the growth of Connecticut's Native American Tribal Nations operations during the 1990s absorbed much of the labor liberated from manufacturing and contributed to the diversification of the state's labor force.

In the chapters that follow, we detail the industrial structure of the state, its transportation systems, its education systems and workforce characteristics, its cultural and tourism assets, its energy profile, its tax system and distribution of burden and incidence, and its housing characteristics and needs.

Industrial Structure

Connecticut's Industrial Composition

Introduction

This chapter characterizes the state's industrial organization by employment, establishments, exports, and certain of its historic developments to illustrate its industrial evolution. In addition, we profile Connecticut's occupations, its entrepreneurial character, and its women- and minority-owned businesses.

As we describe above, Connecticut is a model of ingenuity and inventiveness. Notable examples are the first cotton gin patented by Eli Whitney (1846), the first revolver made by Samuel Colt (1836), the first pay telephone and telephone exchange (1877), the first public art museum in America—the Wadsworth Atheneum (1842), the first successful helicopter in the Western Hemisphere designed by Igor Sikorsky (1939), the first nuclear submarine launched in New London (1954), and the world's first artificial heart invented by Stamford native Dr. Robert K. Jarvik (1982).[1]

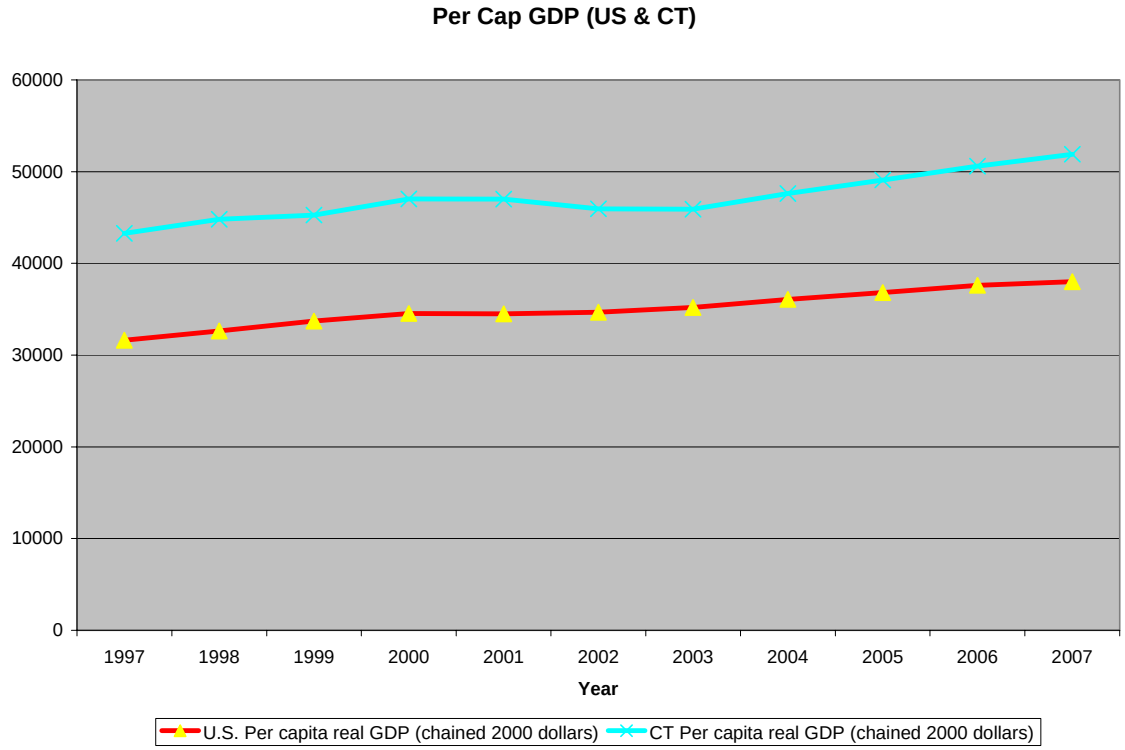
These 'firsts' underscore that "Connecticut has nearly unmatched production skills, that have made it a world leader in manufacturing. Since colonial times, Connecticut's industrial genius has produced such varied inventions as brass buttons, vulcanized rubber, steamboats, safety fuses, cork screws, calculators, clocks and locks. Connecticut's manufacturing industry continues to be highly diversified. Jet engines, helicopters and nuclear submarines still give the state pre-eminence in transportation equipment – the state's single largest merchandise export" (footnote 1).

Yet, Connecticut's loss of manufacturing jobs continues a decades-old trend evident in the nation and around the world. Manufacturing's share of Connecticut employment declined from 63% of payroll employment in 1945 to less than 15% of total employment in 2000.[2] In 2007, manufacturing accounted for 11.6% of total non-farm employment (based on the employer survey) in Connecticut.[3] Connecticut's November 2008 manufacturing employment stood at 187,700, its lowest level since reporting began in 1939.[4] However, at the same time, the output of manufacturers increased in inflation-adjusted (real) terms. This means Connecticut achieved increases in manufacturing

[1] "Connecticut's Historical Firsts," http://www.ct.gov/ctportal/cwp/view.asp?a=843&q=246434.
[2] Lanza, Steven P. "Teaching Old Dogs New Tricks: Does Job Retraining Work? Is it Worth the Cost?" *The Connecticut Economy* (Summer 2004), p. 6. In 2006, manufacturing accounted for just 12% of total non-farm employment in Connecticut.
[3] Connecticut Business and Industry Association. *2007 Survey of Current and Future Manufacturing Jobs in Connecticut.* p. 2. http://www.cbia.com/newsroom/surveys/2007/manufacturingjobssurvey07.pdf.
[4] Bureau of Labor Statistics, State and Area Employment. Note that from 1939 through 2002 the Standard Industrial Classification System (SIC) was in effect. In March 2003, the North American Industrial Classification System came into use. However, at the two-digit level of aggregation, there is not much difference in the two series.

output by gains in productivity. State Gross Domestic Product (SGDP) per worker quintupled from $21,638 in 1977 to $116,653 in 2006.[5] Figure 1 shows the recent trend in real per capita GDP for Connecticut and the nation. It is significant that since 2003, Connecticut's average productivity is growing faster than that of the nation.

Figure 1: Recent Trends of U.S. and Connecticut Average Productivity



Source: Bureau of Labor Statistics

Connecticut's workforce is highly skilled in metalworking, electronics, and plastics. This contributed significantly to the state's standard of living—the quality of life that has attracted, over the years, corporations such as Xerox, G.E., Uniroyal, G.T.E., Olin, Champion International, and a variety of insurance firms—life, accident, casualty, and health (there were once 106 insurance companies in Connecticut). As a share of SGDP, finance and insurance is twice the national finance and insurance share of national GDP.[6] Although agriculture is no longer a large contributor to Connecticut's economy, farming is important, notably dairy, poultry, forestry, nursery, tobacco, vegetables, and fruit (footnote 1). Connecticut, for example has more chickens per square mile than any state in the nation.[7] The egg industry is among the top agricultural businesses in the state, and

[5] CERC (2007) *The Connecticut Economic Review*. Based on a calculation of output divided by the labor force. http://www.ct.gov/ecd/lib/ecd/nu_eco_review/nueconreview06.pdf.
[6] Bureau of Economic Analysis.
[7] Regan, W. Michael and Mark Prisloe (2003). "The Economic Impact of Avian Influenza on Connecticut's Egg Industry," June, http://www.ct.gov/ecd/lib/ecd/cts_egg_industry_eia_6.20.03.pdf.

along with Maine, Connecticut controls the egg market of New England.[8] Connecticut agriculture represents more than $2.2 billion in revenue and employs more than 228,000 part-time, full-time, and seasonal workers.[9] The Connecticut's Blue Point oyster harvested from Long Island Sound has won international acclaim by oyster connoisseurs as "the world's premium oyster."[10]

Connecticut's competitiveness manifests in numerous ways. The state is most competitive relative to other states as follows: Connecticut ranks first among the states in per capita income with a 2006 figure of $43,518, compared to $31,667 nationally – 37% higher than the national average. Connecticut's comparative per capita income advantage has existed each year since 1986.[11] Connecticut is a wealthy state as indicated by the real (inflation-adjusted) median household income of $63,422 that is 30% higher than the national average ($48,451). This places Connecticut third highest (behind Maryland and New Jersey) in median household income,[12] and second in per capita SGDP (Delaware's first rank is an artifact of the large number of corporations registered though not present there).

[8] Environmental Organizers Network, "Battery Farming in Connecticut," http://www.wesleyan.edu/wsa/warn/eon/connecticut/index.html
[9] Connecticut Department of Agriculture. http://www.ctagcluster.com/pages/aboutINDEX.html.
[10] Working the Land: Farm News and Features. "Shellfish Farming Across Generations." http://www.workingtheland.com/feature-best-oysters071007.htm
[11] U.S. Bureau of Economic Analysis (BEA). Department of Commerce. Table SA-04. "Per Capita Personal Income."
[12] U.S. Census. "Median Household Income (In 2006 Inflation-Adjusted Dollars): 2006 *American Community Survey* (ACS)."

Table 1: Per Capita Real GDP by State

Per Capita Real GDP by State, 2007*							
States with the highest per capita				States with the lowest per capita			
	Per capita real GDP by state (chained (2000) dollars)	Rank in the U.S.	Percent of the U.S.		Per capita real GDP by state (chained (2000) dollars)	Rank in the U.S.	Percent of the U.S.
United States	**38,020**	.....	**100**	**United States**	**38,020**	.....	**100**
Delaware	56,496	1	149	Kentucky	30,364	41	80
Connecticut	51,911	2	137	Maine	30,282	42	80
New York	49,038	3	129	Idaho	29,843	43	78
Massachusetts	47,351	4	125	Alabama	29,603	44	78
New Jersey	45,052	5	118	Oklahoma	29,470	45	78
Alaska	44,807	6	118	South Carolina	28,894	46	76
California	42,376	7	111	Montana	28,201	47	74
Virginia	41,617	8	109	Arkansas	27,781	48	73
Minnesota	41,353	9	109	West Virginia	24,929	49	66
Colorado	40,805	10	107	Mississippi	24,477	50	64
* Advance Estimates Source: U.S. Bureau of Economic Analysis							

Source: http:www.bea.gov/newsreleases/regional/gdp_state/gsp_newsrelease.htm

Despite declines in the 1990s, Connecticut ranks tenth in federal defense spending (prime contract awards by place of performance) in 2006, down from fifth in 2005.[13] Connecticut ties with California and Vermont in leading the states in energy efficiency.[14] Connecticut ranks among the top ten states in the following areas:

- livability;[15]
- worker value added;
- per capita SGDP, worker productivity;
- number of *Fortune* 500 companies;
- per capita personal income;
- per capita income growth;
- college attainment;
- pupil-student ratio;
- percent of households with a computer and computer access;
- industry research and development share of GSP;
- average annual patents per million;
- availability of financial capital;
- graduate students in science or engineering; and,
- median household net worth [16]

[13] U.S. Department of Defense Directorate for Information (DIOR). "Geographic Statistics: DoD Prime Contract Awards by State: 2006." http://siadapp.dmdc.osd.mil/procurement/historical_reports/geographic/geostat.html.
[14] American Council for an Energy-Efficiency Economy, "The State Energy Efficiency Scorecard for 2006." http://apps1.eere.energy.gov/states/state_news_detail.cfm/news_id=11008/state=VT.
[15] See Morgan Quitno Press ranking of the states, Connecticut: (2003-2007). http://www.infoplease.com/ipa/A0921975.html

However, in a world of increasing global competition, Connecticut ranks 14th among the states in per capita exports. Likewise, Connecticut has the following impediments or ranks the "worst in":

- homeownership among minorities (43.1 percent versus 74.5 percent among whites) places Connecticut 43rd out of 51 states and the District of Columbia—making it one of the most inequitable in the nation in this category; (footnote 15).
- 10th highest level of average mortgage debt in the country ($151,914); (footnote 15).
- 37th in employment growth;
- weakened infrastructure (bridge deficiencies, highway performance), (footnote 14);
- 47th in federal share of R&D as a percent of GSP; and,
- 50th in student "achievement gap" (disparity in gender, race, ethnicity, status); worsening income inequality (footnote 15).

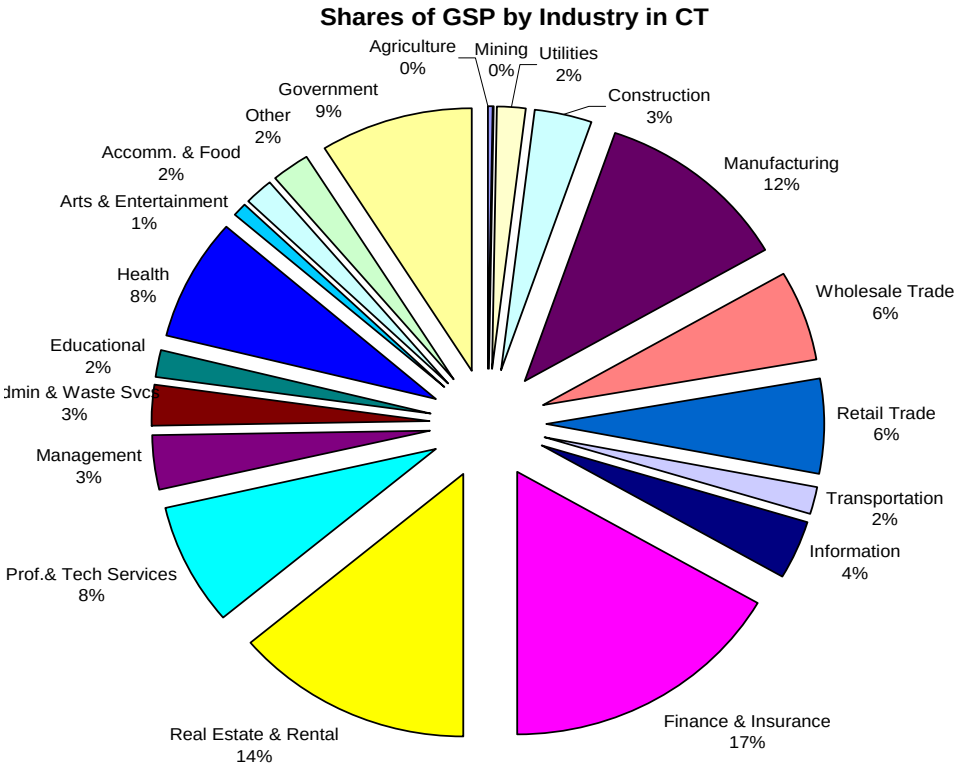
Connecticut has a well-educated, highly skilled, and productive labor force that ranks the state 2nd only to Delaware in per capita state GDP (Table 1).

Figure 1 shows the industrial composition of Connecticut's economy. In 2007, the Finance and Insurance share of SGDP (16.5%) was more than twice its share of the nation's GDP (8.0%).[17] Finance and Insurance is the largest industry in terms of contribution to SGDP, followed by Real Estate and Rental, Manufacturing, Professional and Technical Services, Education, and Health Care.

[16] Voices for Children. *Connecticut Family Asset Scorecard, 2007-2008: Executive Summary*, December 2007, p. 3, http://www.ctkidslink.org/publications/econ07familyassetscorecardes.pdf.

[17] Bureau of Economic Analysis. "Gross Domestic Product by State," 2007, http://www.bea.gov/regional/gsp/action.cfm

Figure 1: Connecticut Shares of GDP (2007)



Source: Bureau of Economic Analysis

Finance and Insurance

Connecticut's Finance and Insurance industry has the largest share of SGDP of any state, and employs 122,600 workers that makes Connecticut 13th among the states in employment for this industry. Connecticut ranks 29th in the number of establishments, and 13th in payroll for this industry. Finance and Insurance are part of the broader category, Financial Activities, employing 144,600 workers in 2007. Connecticut gained jobs at an annual rate of 0.2% and in 2007 had the highest employment level for that industry in the last decade, up from 137,000 in 1998.

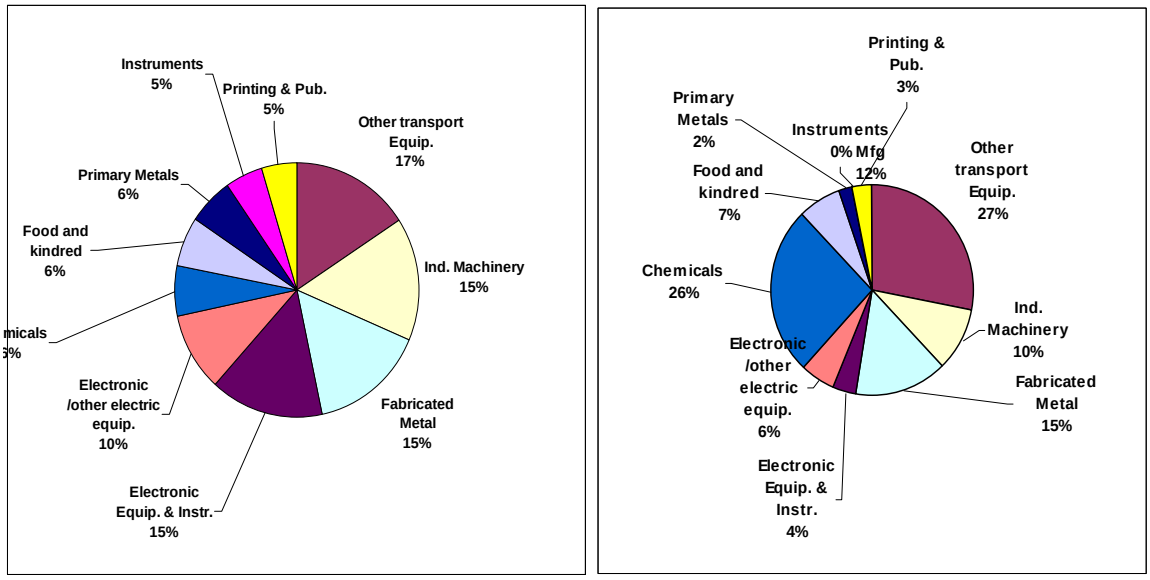
Manufacturing

Manufacturing has historically been a backbone of the Connecticut economy. In 1855, the Hartford-based Samuel Colt factory was the largest arms manufacturing facility in the world. From nineteenth-century watch making and typewriters to modern day aerospace,

machine tools, submarines and pharmaceutical products, many Connecticut manufacturers are world leaders in their industries.

In the last half of the twentieth century, manufacturing experienced a major national and global structural shift that is ongoing. In 1963, manufacturing in Connecticut was 39.7% of SGDP. In 1977, manufacturing constituted 29.8% of SGDP while manufacturing employment in Connecticut constituted 12.7%.[18] Figure 2 shows the shifting share of each subsector's contribution to SGDP between 1977 and 2007.[19]

Figure 2: Changing Shares of Manufacturing (1977-2007)

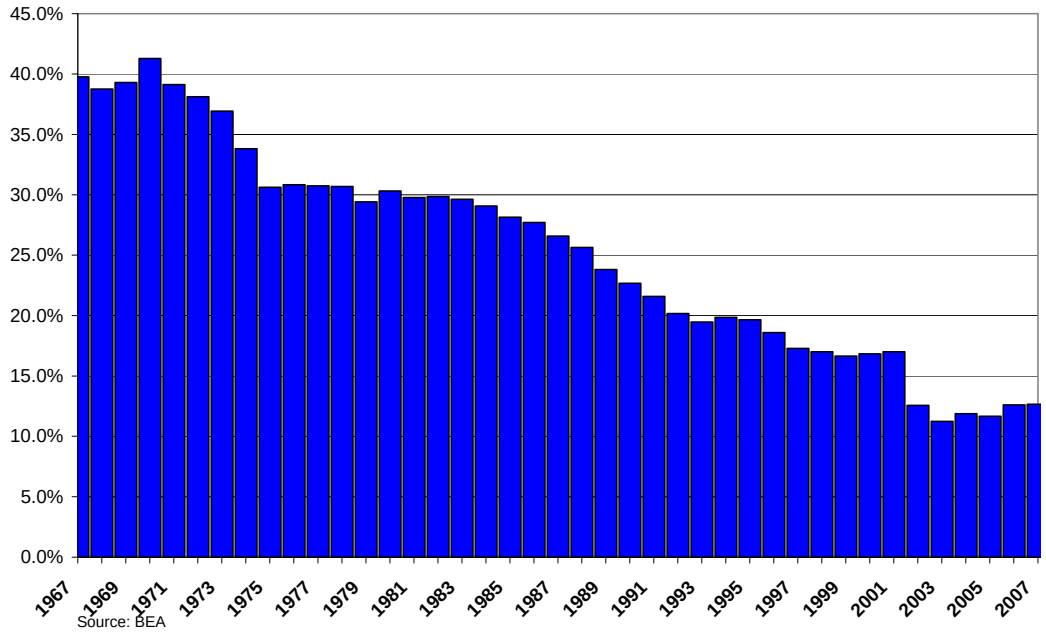


Source: Bureau of Economic Analysis

Manufacturing output in Connecticut, measured by its value added more than tripled from $8.8 billion in 1977 to $25 billion in 2006 (in nominal dollars). In that same period, the manufacturing share of SGDP more than halved from 29.8% to 12% as the state moved into services (Figure 3). Meanwhile, manufacturing employment in Connecticut declined precipitously from 406,700 jobs in 1977 to 226,700 jobs in 2001 and to 180,500 jobs in February 2009.

[18] Almeida, Beth (1997). "Are Good Jobs Flying Away? U.S. Aircraft Engine Manufacturing and Sustainable Prosperity," Working Paper No. 206, August 1997, http://www.levy.org/pubs/wp206.pdf.
[19] U.S. Bureau of the Census, *2006 County Business Patterns*. Released June 2008). http://factfinder.census.gov/servlet/IQRTable?_bm=y&-ds_name=CB0600A1&-NAICS2002=531&-_lang=en

Figure 3: Connecticut's Manufacturing Share of State GDP



Global economic growth helped expand Connecticut's transportation equipment industry value added from 17% to 27% of the state's GDP from 1997 through 2007. Primary metal production is one-third of what it was in 1977 as the industry relocated to lower-wage economies. Similarly, electronics and other electrical equipment shrank from 15% to 4% from 1997 through 2007. The share occupied by chemicals, including pharmaceuticals more than doubled from 1997 through 2007 as the state's highly educated workforce focused on research and development and firms seeking such employees expanded. There must be high value added output if firms are willing to pay Connecticut's generally higher wages required for the state's generally higher cost of living (footnote 15).

Real Estate, Rental and Leasing

Connecticut's Real Estate sector makes up 14% of state GDP, after Finance and Insurance in 2007. This sector contains 2,957 firms employing 16,408 people earning $822 million. Among the states, Connecticut ranks 30th in the number of Real Estate establishments, 33rd in employment, and 30th in terms of annual payroll (footnote 18).

Along with the large national real estate companies in Connecticut there are "scores of independent commercial real estate firms with intimate knowledge of their markets … clustered primarily around the Cities of Hartford, New Haven, New London, Middletown, Waterbury, Bridgeport and Stamford. … Connecticut's residential real

estate market is best described as mature."[20] Realtors handled sales of more than 54,000 existing homes annually during the past decade at an average price ranging from $244,900 in Norwich-New London to $439,300 in Bridgeport-Stamford-Norwalk in the first quarter of 2008.

Rental and leasing services include 649 firms employing about 7,500 people. The industry pays wages averaging $46,716 (as of 2006), up 6.8% from the previous year.[21]

Professional and Technical Services

Professional and Technical Services represented eight percent of SGDP in 2006. Connecticut ranked 25th in terms of the number of establishments in this sector. It ranks 22nd in employment, and 20th in annual payroll (footnote 16). Services that make up this sector include architecture, engineering, legal, advertising, consulting, business services, and other specializations that may require certification by the state.

Richard Urban describes some of the professions as follows:

> Many of the nation's largest law firms have offices in Connecticut, and hundreds of local firms complement the broad range of disciplines. Law firms employ more than 15,000 people with a total payroll of nearly $800 million (see Urban's footnote 16, p. 256).
>
> The Big Four national accounting firms are well established in Connecticut, representing the largest firms in the state as measured by the number of certified public accountants on their Connecticut staffs. … Accounting, bookkeeping, tax preparation, and payroll services employ more than 12,000 people in the state, with a payroll of more than $500 million. …The state boasts a strong accounting community, with membership in the Connecticut Society of Certified Public Accountants numbering 6,200.
>
> Construction companies alone generate $4.6 billion in annual income and employ 60,000 people. Another 23,000 are employed by architectural and engineering firms to provide one-stop shopping (footnote 31).

[20] Urban, Richard (2002). *Connecticut: Chartered for Progress*, Cherbo Publishing Group, Inc., p. 261.
[21] Connecticut Department of Labor data, as analyzed by CT Voices for Children, http://www.ctkidslink.org/publications/SOWCT2007fullreport.pdf .

Education

Connecticut boasts one of the most highly educated workforces in the nation. The Educational Services industry, representing eight percent of SGDP employs 59,255 workers in 1,222 institutions, with an annual payroll of $213.2 million. The state ranks 23rd in educational and health care establishments, 16th in employment, and 13th in annual payroll among the states in this sector (footnote 15).

Success in grade school begins with readiness to learn and continues with timely advancement. Connecticut in recent years has maintained its rank as one of the "smartest" states because of high scores on math and reading tests (footnote 14). However, as expressed by the State Board of Education, "…the most urgent issue of our time: high academic achievement of **all** students in reading, writing, mathematics and science. …We must be bold and focused if we are to close the large and unacceptable gaps in achievement, resources and opportunities for students in Connecticut."[22]

Connecticut's education sector compares favorably with the rest of the nation with an average statewide high school graduation rate of 92%,[23] a high percentage of households that hold at least a bachelor's degree (33.7%).[24] The state ranks 2nd in the nation in total spending per enrolled child, 3rd in the nation in state spending per enrolled child,[25] 1st in the nation in eighth graders in writing performance,[26] and has an increasingly competitive University of Connecticut.

However, these favorable statistics must be counterbalanced by those on urban high school drop out rates that approach 68%[27] and an adult literacy rate of 91% (that is, more than 240,000 or 9% of Connecticut adults lack the most basic reading skills).[28]

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[22] State Board of Education (2007). *Comprehensive Plan for Elementary, Secondary, Vocational, Career and Adult Education: A Superior Education for Connecticut's 21st Century Learners*: *Five Year Comprehensive Plan for Education 2006-2011*, p. 9, http://www.sde.ct.gov/sde/lib/sde/pdf/commish/comp_pln06-11.pdf

[23] Connecticut Department of Education, 2008, http://www.csde.state.ct.us/public/cedar/cedar/grads/grad_rate_2002_07.htm. But see pages 301-302 below for different and less attractive statistics.

[24] U.S. Bureau of the Census, *American Community Survey* 2007.

[25] National Institute for Early Education Research (NIEER) (2008). "Governor Rell: Study Ranks Connecticut Among Top States for Early Childhood Education," Press release. March 22, 2008. http://www.ct.gov/governorrell/cwp/view.asp?Q=412168&A=3293&pp=12&n=1

[26] Becker, Arielle Levin (2008). "Connecticut 8th Graders No. 1 in Writing Performance." *The Hartford Courant*. April 3, 2008. http://www.cea.org/newsinfo/inthenews/ct-8th-graders-tops-in-writing.cfm

[27] Hartford's 2005 official graduation rate was 72.3% while the Education Week's Research Center for its Diplomas Count project found the rate to be 38.6%. Several other high schools were in the 40-50% range in the Diplomas Count project. See http://www.conncan.org/matriarch/MultiPiecePage.asp_Q_PageID_E_217_A_PageName_E_NewsReleaseJune0508.

[28] Hartford Courant, January 9, 2009 reporting on literacy estimates released by the National Center for Education Statistics. http://mobile.courant.com/inf/infomo;jsessionid=A55BC3BE80B6D28141D6.1368?view=latest_connecticut_news_item&feed:a=courant_1min&feed:c=latestconnecticut&feed:i=44432660&nopaging=1

Health Care

Connecticut's Health Care industry consisted of 9,818 establishments, employed 245,242 persons, and had $9.8 billion in payroll in 2006. It is likely this sector's employment will grow as the population ages. Salient aspects of the Connecticut health care system are:

- The cost and availability of medical malpractice insurance;
- Improving the health and productivity of Connecticut residents along with increasing the number of graduates in health care occupations;[29]
- Lack of access to care because health insurance is lacking;
- Deficits in health care quality that pose a serious threat in Connecticut (footnote 24);
- Health spending comprises about 26% of the total state budget; (footnote 24);
- The need to consider the health care of the workforce and immigrants as well as residents; and
- An aging population and increasingly unhealthy lifestyles adding to consumer demand for new medical treatments, more intensive diagnostic testing, greater staffing, and the practice of defensive medicine.

Other Industries and Location Quotients

Figure 2 (above) shows manufacturing industries' contributions to SGDP and Appendix A provides details. Table 2 shows employment growth of key industries relative to peer states with Connecticut leading in Education and Health Services, Leisure and Hospitality, and Native American operations.

Connecticut does not lead in job growth in any of these industries. With the exception of New York, Connecticut has slower job growth in the construction industry than its peer states. Connecticut is the only state that shows a small decline in job growth in the retail sector. Despite a 22% increase in employment in professional and business services, Connecticut's growth in this sector lags behind that in peer states.

[29] Business Council of Fairfield County (2006). "Connecticut Health Scorecard: Executive Summary," http://www.businessfairfield.com/webpdf/CTHealthCareCrisis.pdf

Table 2: Connecticut Employment Growth Relative to Peer States

Employment Change 1990-2007	CT	MA	PA	NJ	NY	RI
Natural Resources and Mining	-22%	0%	-23%	-47%	-7%	50%
Construction	10%	38%	16%	16%	9%	20%
Manufacturing	-36%	-39%	-31%	-41%	-44%	-47%
Wholesale Trade	-6%	-4%	7%	2%	-13%	1%
Retail Trade	-3%	0%	3%	7%	4%	2%
Transportation and Utilities	7%	5%	31%	6%	-9%	15%
Information	-9%	1%	-2%	-19%	-7%	5%
Financial Activities	-6%	5%	2%	17%	-6%	30%
Professional and Business Services	22%	41%	54%	39%	32%	32%
Education and Health Services	46%	36%	45%	60%	49%	44%
Leisure and Hospitality	26%	27%	30%	26%	22%	44%
Other Services	12%	23%	22%	37%	31%	44%
Government	18%	27%	6%	12%	2%	4%

Source: BLS

Another measure of industrial organization is the industry's "location quotient" (LQ) that indicates the intensity or concentration of an industry in a state or region relative to another region (e.g., Connecticut compared with the U.S.). An LQ greater than one suggests a higher concentration of a given industry in a state compared to the U.S. LQs may be based on employment or value added (industry GDP).

Appendix B displays LQs for NAICS industries based on the intensity of value added (SGDP) in each industry. The finance and insurance sectors, notably insurance carriers, funds, trusts, and other financial vehicles have the largest LQs as might be expected because Hartford is nicknamed the "Insurance Capital of the World." Stamford in Fairfield County is a top-five city in the U.S. in terms of concentration of Fortune 1000 headquarters, and the largest (in terms of employment) financial district outside of New York. Companies include G.E. Capital, Pitney Bowes, Clairol, Xerox, UBS, Hyperion Software, and Diageo, which is the world's largest distillery of beer, wine, and spirits such as Guinness, Beaulieu and Sterling wines, Smirnoff, Johnnie Walker, Captain Morgan, and Tanqueray.

Appendix C displays industry LQs based on employment intensity. The LQs for several Connecticut industries based on employment exceed one in sectors such as finance and insurance, and services in general, durable goods, fabricated metals, machinery, transportation equipment, aerospace products, and motor vehicle parts (e.g. bearings), among others. Note the significance of the finance and insurance industry's components.

Ground transit, arts, gambling (amusement and recreation), and personal services have a higher concentration of employment in Connecticut than in the U.S.

Women- and Minority-Owned Businesses

Women- and minority-owned business ownership is another way in which to characterize the state's economy. Using the most recently available Census of Business Owners (2002), DECD compiled the direct employment impact of women- and minority-owned businesses in Connecticut.

If data was unavailable due to disclosure restrictions or reporting errors, we made conservative employment estimates. Our assumptions are:

- In several sectors, the number of firms in the Census survey was higher than the corresponding number of employees for those firms. The reason that the number of firms in the Census survey exceeds the number of employees is that it does not report proprietors or partners of unincorporated businesses in its employee count. We correct for this in the manner listed below.
- Each firm has at least one employee; therefore when the number of firms was available but the corresponding employment was listed as zero or unavailable, we assumed employees in the sector equals the number of firms.
- When an employment range appeared instead of an actual number (due to disclosure restrictions), we used the minimum value of the range for the number of employees for firms in a NAICS sector. The exception was if the number of firms was greater than the minimum value of the employment range; in that case we assumed the number of employees equals the number of firms. When neither the number of firms nor employees were available for a sector because the data did not meet publication standards, we conservatively assumed two firms and two employees, unless it was possible to calculate either number based on elimination.

Because some women who own businesses are in addition minority group members, their businesses are included in both the female-owned business survey data and the minority-owned business survey data from the Census. To avoid double counting and thus over-estimating the impact of these businesses, DECD removes employment estimates of female, minority-owned businesses from that of total minority-owned businesses for each sector. Table 3 shows that women- and minority-owned businesses represented 36.6% of all businesses in Connecticut and 4.7% of Connecticut's payroll in 2002. The share of total non-farm employment for women- and minority-owned businesses in Connecticut in 2002 was 8.2%. These statistics suggest that while a substantial portion of the state's businesses are women- and minority-owned, they employ a disproportionately smaller share of workers and are lower paid.

Table 3: Women- and Minority-Owned Businesses in Connecticut, 2002

	All Business in CT	Women-owned Businesses	Minority-owned Businesses	Total Women- and Minority-Owned	Minority % of All Businesses in CT
Total Firms	301,671	82,118	28,262	110,380	36.6%
Payroll*	$66,374,672,000	$2,395,572,000	$718,198,000	$3,113,770,000	4.7%
Employment*	1,664,900	109,544	27,393	136,937	8.2%

*Conservative estimates due to incomplete data and the dated Economic Census 2002

Table 4 shows the jobs in sectors in which women- and minority-owned businesses excel. These statistics show that among the largest industries (in employment terms) with businesses owned by women are healthcare and social assistance as well as professional, administrative and support services, retail trade, and other services. Predominantly, minority-owned businesses are in accommodations and food services, retail trade, professional services, construction and healthcare. It is interesting to note that manufacturing is among the top ten industries with women- or minority-owned business.

Table 4: Jobs in Women- and Minority-Owned Businesses by Major Sector, 2002

Women-owned businesses	
	Employees
Healthcare, social assistance	14,642
Professional services	13,938
Administrative and support services	12,676
Retail trade	11,939
Other services	10,210
Real estate, and rental and leasing	7,876
Manufacturing	6,946
Construction	5,946
Accommodation, food services	5,452
Wholesale trade	5,449
Arts, entertainment and recreation	4,519
Educational services	3,108
Finance and insurance	2,487
Transportation	2,026
Information	1,750
Management of companies	375
Forestry and agriculture	111
Industries not classified	52
Mining	22
Utilities	20
Total	109,544

Minority-owned businesses (minus minority women-owned businesses to avoid double counting)	
	Employees
Accommodation, food services	6,770
Retail trade	2,974
Professional services	2,669
Construction	2,415
Healthcare, social assistance	2,272
Other services	2,131
Administrative and support services	1,910
Transportation	1,490
Manufacturing	1,200
Real estate, and rental and leasing	959
Arts, entertainment and recreation	756
Wholesale trade	722
Finance and insurance	495
Information	272
Forestry and agriculture	169
Educational services	128
Industries not classified	46
Utilities	13
Mining	2
Management of companies	-
Total	27,393

The Self-Employed in Connecticut

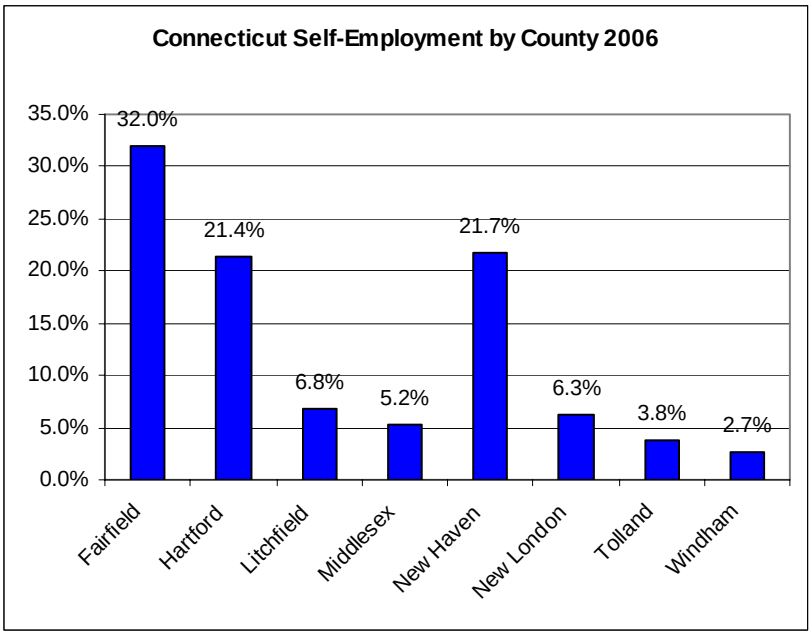
The state's labor force consists of persons who meet the definition of "employed," meaning they did any work for pay or profit during a given household survey week, including part-time, temporary work, as well as regular full-time, year-round employment plus all non-farm and farm employment, unpaid family workers, the unemployed (those actively seeking work), and the self-employed, or "non-employers".

The latter class of workers may include any form of business organization (proprietorship, partnership, or corporation) that has no paid employees, has annual business receipts of $1,000 or more ($1 or more in the construction industries), and is subject to federal income taxes.[30] Most non-employers are self-employed individuals operating small, unincorporated businesses, which may or may not be the owner's principal source of income. Professionals such as doctors (not employed by a hospital or institution) and lawyers (if not employed by a legal firm) could be non-employers if they run their practices without paid help. Non-employer statistics originate from tax return information of the Internal Revenue Service.

Connecticut's self-employed numbered 228,082 in 2002, when they represented 12.8% of the labor force; they increased by 11.4% to 253,992, and comprised 13.9% of the labor force in 2006. Figure 4 displays each county's self-employment share of total employment. Fairfield and New Haven have the largest shares of self-employed persons and Windham has the least number of self-employed persons.

[30] U.S. Census. "Labor Force Statistics from the Current Population Survey," U.S. DOL Website: http://www.bls.gov/cps/cps_htgm.htm

Figure 4: Connecticut Self-Employment by County



Source: U.S. Census

The self-employed work in most industries appearing in the NAICS taxonomy. Figure 5 represents the distribution of employment among the self-employed. The shares differ noticeably from the payroll employment shares of statewide employment (Figure 6) because self-employers are more significant in some industries such as construction (17%) and professionals (14%) than they are among payroll employees where finance and insurance are more prevalent. Manufacturing contains 11% of non-farm employment, but only one percent of self-employment, among other easily observed differences.

Figure 5: Self-Employed by Industry

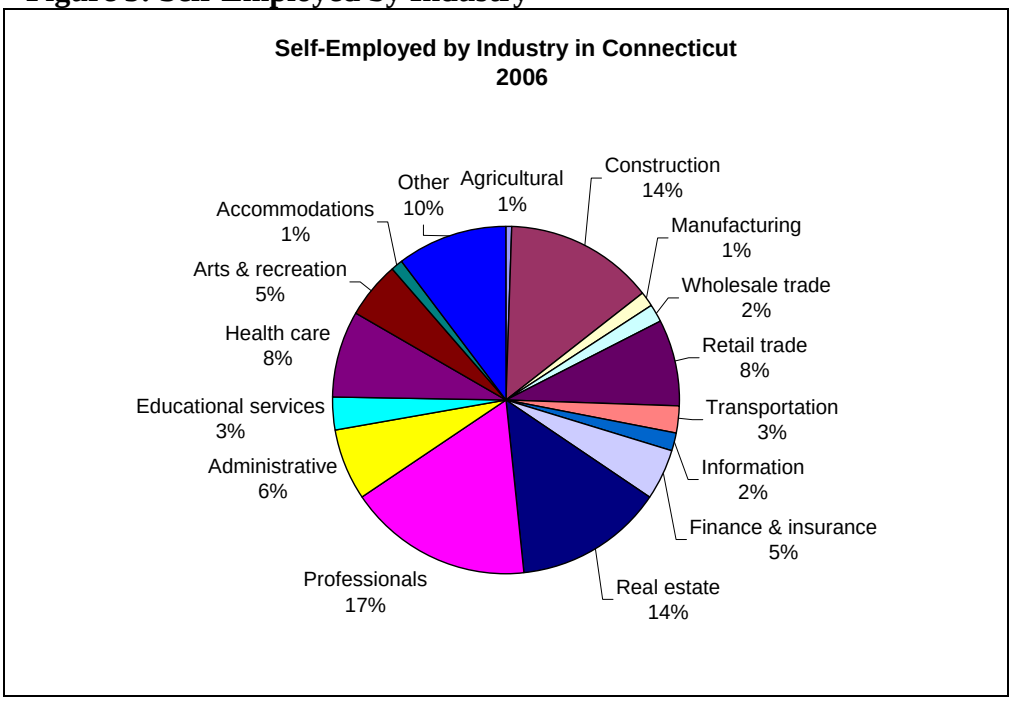
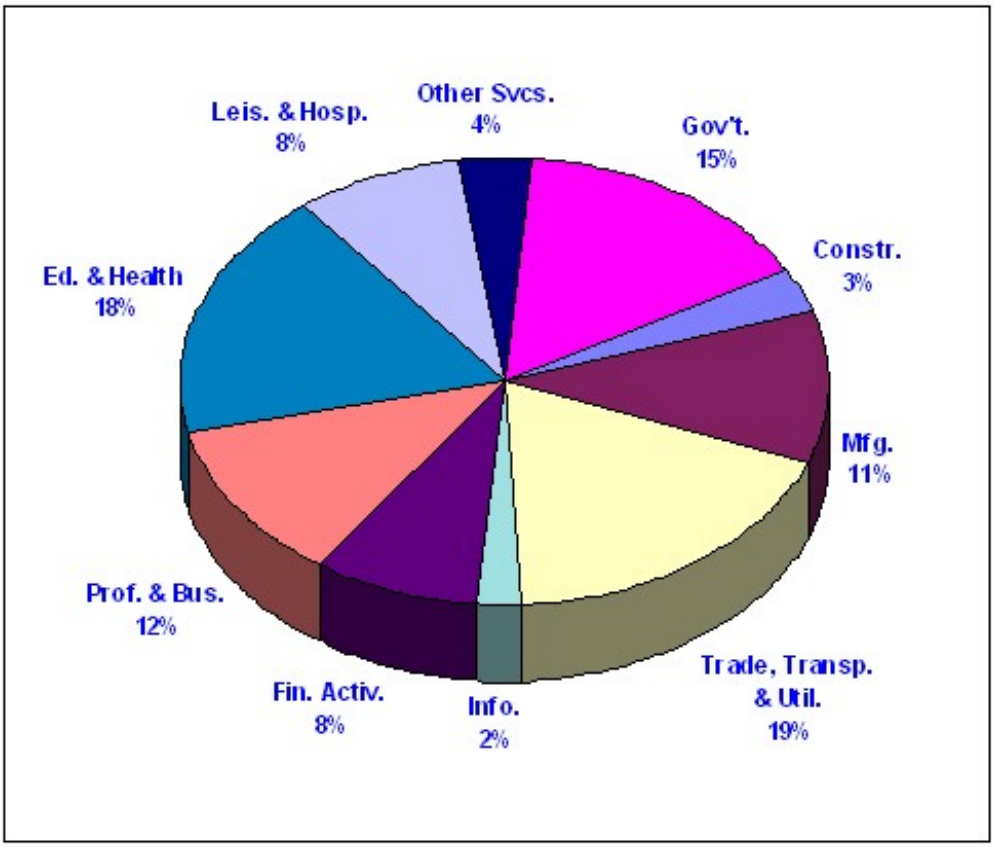


Figure 6: Connecticut Statewide Non-farm Employment by Industry



Source: CT DOL, Feb. 2009

Foreign Direct Investment (FDI) and Exports

In the global economy, exports are an important indicator of the strength of a state's economy. Connecticut's recent export growth has outpaced that of the nation. This reflects favorably on the ability of Connecticut industries to produce items in demand around the world. According to the World Institute for Strategic Economic Research (WISER), Connecticut exports were $12.2 billion in 2006.[31] This represents a 26.3% gain from the $9.7 billion in exports recorded in 2005 while U.S. exports increased by 14.7% in this period. This continues a trend: in 1996, Connecticut exports were $6.1 billion; in 2006, Connecticut exports more than doubled, increasing 100.63% to $12.2 billion. By comparison, U.S. exports in the same period grew 66.5%.

In 2006, Connecticut's top major export commodities were industrial machinery including computers, aircraft, spacecraft, and parts; optical, photo, medical and surgical instruments; and electric machinery, sound equipment, TV equipment, and plastics and articles thereof. The top five commodities combined accounted for 73.4% of total export value in 2006. Among the top five, industrial machinery, including computers, accounted for 43% of state export value in 2006. Canada continues to be Connecticut's top export destination. France, Germany, the United Kingdom, and Singapore rounded out the state's top five export partners in 2006. The export values of the combined top five countries accounted for 49.4% of state total export value in 2006.

As the world economy becomes increasingly integrated, exports will continue to fuel economic growth in Connecticut and the United States. Connecticut exports were 6% of the state economy measured by state GDP, up from 5% in 2005 and averaged 5.06% of Connecticut's economy from 1997 to 2006, while nationally they averaged 7.45%.[32] Connecticut is slowly increasing the portion of its economy attributable to exports; however, it needs to accelerate the increase in the value of these exports in order to keep pace with the share at the national level.

Connecticut's export composition has remained stable. In 2006, industrial machinery, including computers, aircraft, spacecraft and parts thereof, optical, photographic and other instruments, electrical machinery, and plastics ranked as Connecticut's top five export commodities. Industrial machinery led in 2006 export value of $5.3 billion, a 39% increase from $3.8 billion in 2005. With the exception of special classification provisions and optical, photographic, medical, and surgical instruments, the remainder of Connecticut's top ten export commodities experienced growth between 2005 and 2006. The top ten exports accounted for about 83% of total export values in 2006.

[31] WISER and U.S. Bureau of Economic Analysis.
[32] Connecticut Department of Economic and Community Development, *Annual Report for Fiscal Year 2006-2007*, p. 55.

Connecticut's international trading partners exhibit consistency over the years. In 2006, Canada was the number one destination for Connecticut exports. Connecticut's exports to Canada increased 14.9% in 2006 to $1.9 billion, up from $1.7 billion in 2005. In 2006, 15.8% of Connecticut's exports were destined for Canada, compared to 22.2% of all U.S. exports to Canada. The balance of Connecticut's top ten export destinations were France, Germany, the United Kingdom, Singapore, Mexico, Japan, Switzerland, the Netherlands, and Korea. The top ten countries' export values account for 71% of total export values in 2006. Among the state's top ten trading partners, countries experiencing the largest growth were Singapore, Switzerland, and Korea at 240.6%, 160.8%, and 122.1%.

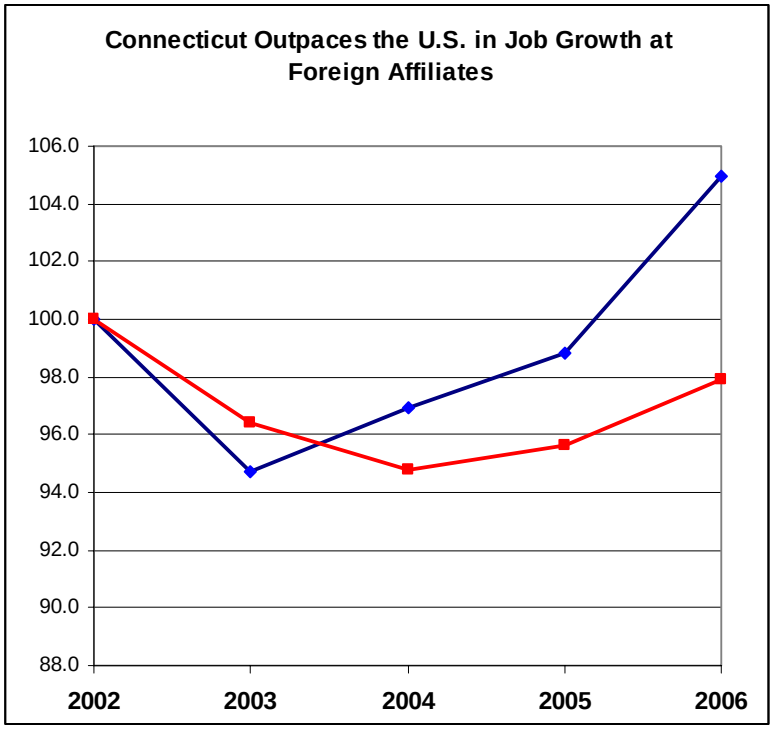
Employment and investment by foreign affiliates located in the state measure the strength of a state's international sector. The Bureau of Economic Analysis (BEA) defines a foreign U.S. affiliate as a U.S.-located business enterprise in which a single foreign investor owns at least 10% of the voting securities or the equivalent. Likewise, a majority-owned U.S. affiliate is one in which a foreign direct investor owns more than 50%.[33]

Job growth and foreign investment in plant and equipment in the state reflect the competiveness of Connecticut's international position. Both job growth and investment by foreign affiliates in Connecticut outpaced that of the U.S. (Figure 7; the top line represents Connecticut). By 2003, Connecticut was among the top five states for shares of private-industry employment accounted for by majority-owned U.S. affiliates. Employment shares were highest in South Carolina (8.4%), followed by Hawaii (7.8%), New Hampshire (7.7%), Connecticut (7.3%) and Delaware (7.3%).[34] Figure 8 shows the five states with the largest shares of FDI employment.

[33] U.S. Department of Commerce, Bureau of Economic Analysis. *Foreign Direct Investment in the U.S.: Financial and Operating Data for U.S. Affiliates of Foreign Multinational Companies* "International Economic Accounts - Entity Classifications." Retrieved March 16, 2009.

[34] Anderson, Thomas. "U.S. Affiliates of Foreign Companies Operations in 2006." *Survey of Current Business.* August 2008. p. 192. Retrieved March 16, 2009.

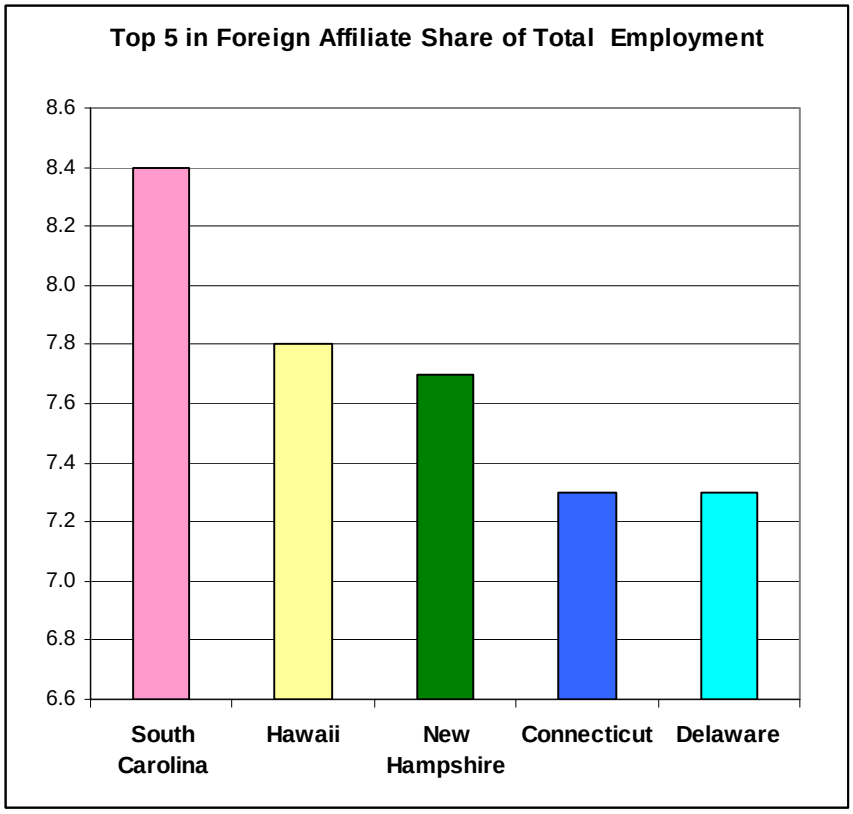
Figure 7: FDI Job Growth in Connecticut versus the U.S.



Source: Author's calculation based on BEA data.

In 2006, the latest year of available state-level foreign affiliate data, Connecticut tied with South Carolina in first place for the largest shares of private industry employment accounted for by majority-owned U.S. affiliates (footnote 32, p.193).

Figure 8: Top Five States in Shares of FDI Employment



Source: Author's calculation based on BEA data.

Interestingly, manufacturing accounted for nearly half of total investment outlays by foreign companies in 2007. Connecticut demonstrated strong international competitiveness in the global market in terms of capital investment in plant and equipment by foreign affiliates. These are positive developments and indicate a strengthening of the Connecticut economy's global competitiveness.

Occupational Analysis

The occupations that make up Connecticut's industries reveal other aspects of its economy. Appendices D and E answer the following questions: 1) what are the fastest growing occupations? and 2) what occupations have the most openings? Data maintained and analyzed by the Connecticut Labor Department (DOL) provide answers. The occupations occur in several sectors and the data contained here are from the DOL's Website "Occupations in Demand."[35]

[35] http://www.ctdol.state.ct.us/lmi/misc/occsindemand.htm.

Registered Nurses, Accountants and Auditors, Nursing Aides, Orderlies and Attendants, Computer Software Engineers, and Elementary School Teachers (except special education) have the largest expected change in the number of positions between 2006 and 2016. Therefore, the health care industry will have some of the greatest need for new employees over the next ten years (see Appendix D).

The most plentiful job openings will be for Cashiers, Retail Salespersons, Waiters and Waitresses, Customer Service Representatives, and Registered Nurses. This indicates the relative importance of retail, and eating and drinking places in the Connecticut economy (see Appendix E).

Cluster Analysis[36]

Since Connecticut's Industry Cluster Initiative began in 1997, business, government, education, and civic sectors have collaborated in unexpected ways. In doing so, they have accelerated a cluster development process that has deep roots in Connecticut's history. The nine formal clusters operating today are:

- Aerospace Components Manufacturers;
- Agriculture;
- BioScience;
- Insurance and Financial Services;
- Maritime;
- Metal Manufacturing;
- Plastics;
- Software and Information Technology; and
- Tourism.

Over the past ten years, DECD has invested approximately $17 million in the Industry Cluster Initiative. This has been matched by the private sector through cash and in-kind investments (capital, real estate, equity, loans, and grants). The Industry Cluster Initiative leveraged more than $23 million in federal funds and $8 million in other public and foundation funds (footnote 32). In addition, DECD estimates that Connecticut Innovation's investment of $33 million into the BioScience Facilities Fund generated about $40 million in related private investments (footnote 32).

More than 180 CEOs actively lead different cluster boards, resulting in initiatives that benefit thousands of companies and hundreds of thousands of workers in every part of the state. Appendix F summarizes the direct economic impact of Connecticut's clusters measured by their employment and number of establishments. The data are based on the

[36] The Governor's Council (2004). "Partnership for Growth II: A Competitiveness Agenda for Connecticut," http://www.youbelonginct.com/pupload/PforGreport_web.pdf .

NAICS taxonomy of the industries that comprise each cluster as defined by the Connecticut Department of Labor (DOL) in conjunction with DECD in April 2005.

APPENDIX A: Connecticut Gross Domestic Product ($ nominal millions)

CONNECTICUT State GDP (nominal $ millions)

Industry	2006		2006
Total Gross Domestic Product by State	**204,964**		
Private industries	186,772	**Information**	8,160
Agriculture, forestry, fishing, and hunting	333	Publishing including software	1,794
Crop and animal production (Farms)	276	Motion picture and sound recording industries	134
Forestry, fishing, and related activities	57	Broadcasting and telecommunications	5,289
Mining	134	Information and data processing services	944
Oil and gas extraction	(L)	**Finance and insurance**	34,086
Mining, except oil and gas	130	Federal Reserve banks, credit intermediation	7,548
Support activities for mining	4	Securities, commodity contracts, investments	9,544
Utilities	3,825	Insurance carriers and related activities	15,247
Construction	6,803	Funds, trusts, and other financial vehicles	1,747
Manufacturing	25,849	**Real estate and rental and leasing**	27,653
Durable goods	16,284	Real estate	25,847
Wood product manufacturing	116	Rental and leasing services	1,806
Nonmetallic mineral product mfg	205	**Professional and technical services**	14,862
Primary metal manufacturing	480	Legal services	2,381
Fabricated metal product manufacturing	3,272	Computer systems design and related	2,809
Machinery manufacturing	2,129	Other professional, scientific and technical	9,672
Computer and electronic product mfg	773	**Mgmt of companies and enterprises**	6,159
Electrical equip. & appliance mfg.	1,223	**Administrative and waste services**	5,471
Motor vehicle, body, trailer, and parts mfg	380	Administrative and support services	4,766
Other transportation equipment mfg	6,170	Waste management and remediation services	705
Furniture and related product mfg	206	**Educational services**	3,036
Miscellaneous manufacturing	1,330	**Health care and social assistance**	15,176
Nondurable goods	9,565	Ambulatory health care services	7,473
Food product manufacturing	1,550	Hos. & nursing, residential care facilities	6,226
Textile and textile product mills	142	Social assistance	1,477
Apparel manufacturing	95	**Arts, entertainment, and recreation**	1,855
Paper manufacturing	603	Performing arts, museums, and related	699
Printing and related support activities	665	Amusement, gambling, and recreation	1,156

Petroleum and coal products mfg	68	Accommodation and food services	3,678
Chemical manufacturing	5,737	Accommodation	766
Plastics and rubber products mfg	706	Food services and drinking places	2,912
Wholesale trade	10,888	Other services, except government	4,058
Retail trade	11,376	**Government**	18,191
Transport.& warehousing	3,369	Federal civilian	2,113
Air transportation	222	Federal military	1,049
Rail transportation	7	State and local	15,029
Water transportation	189		
Truck transportation	711		
Transit and ground passenger transportation	568		
Pipeline transportation	37		
Other transportation and support activities	1,089		
Warehousing and storage	547		

NAICS Industry detail is based on the 1997 North American Industry Classification System (NAICS).

(D) Not shown in order to avoid the disclosure of confidential information; estimates are included in higher level totals.

(L) Less than $500,000 in nominal or real GDP by state.

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Last updated: Thursday, June 05, 2008.

APPENDIX B: Connecticut Location Quotients based on 2006 State GDP

Industry Gross Domestic Product or value Added	LQ
Total Gross Domestic Product by State	**0.97**
Private industries	
Agriculture, forestry, fishing, and hunting	**0.16**
Crop and animal production (Farms)	**0.17**
Forestry, fishing, and related activities	**0.11**
Mining	**0.03**
Oil and gas extraction	**n/a**
Mining, except oil and gas	**0.18**
Support activities for mining	**0.00**
Utilities	**0.84**
Construction	**0.65**
Manufacturing	**1.00**
Durable goods	**1.10**
Wood product manufacturing	**0.19**
Nonmetallic mineral product manufacturing	**0.22**
Primary metal manufacturing	**0.45**
Fabricated metal product manufacturing	**1.49**
Machinery manufacturing	**1.03**
Computer and electronic product manufacturing	**0.33**
Electrical equipment and appliance manufacturing	**1.63**
Motor vehicle, body, trailer, and parts manufacturing	**0.23**
Other transportation equipment manufacturing	**4.08**
Furniture and related product manufacturing	**0.39**
Miscellaneous manufacturing	**1.14**
Nondurable goods	**0.86**
Food product manufacturing	**0.58**
Textile and textile product mills	**0.44**
Apparel manufacturing	**0.35**
Paper manufacturing	**0.69**
Printing and related support activities	**0.86**
Petroleum and coal products manufacturing	**0.05**
Chemical manufacturing	**1.60**
Plastics and rubber products manufacturing	**0.59**
Wholesale trade	**0.85**
Retail trade	**0.80**
Transportation and warehousing, excluding Postal Service	**0.52**
Air transportation	**0.27**
Rail transportation	**0.01**
Water transportation	**1.14**

Truck transportation	**0.34**
Transit and ground passenger transportation	**1.88**
Pipeline transportation	**0.20**
Other transportation and support activities	**0.67**
Warehousing and storage	**0.88**
Information	**0.82**
Publishing including software	**0.71**
Motion picture and sound recording industries	**0.19**
Broadcasting and telecommunications	**0.94**
Information and data processing services	**0.82**
Finance and insurance	**1.86**
Federal Reserve banks, credit intermediation and related	**0.79**
Securities, commodity contracts, investments	**2.62**
Insurance carriers and related activities	**3.25**
Funds, trusts, and other financial vehicles	**4.12**
Real estate and rental and leasing	**0.99**
Real estate	**0.99**
Rental and leasing services and lessors of intangible assets	**1.02**
Professional and technical services	**0.96**
Legal services	**0.76**
Computer systems design and related services	**1.15**
Other professional, scientific and technical services	**0.98**
Management of companies and enterprises	**1.52**
Administrative and waste services	**0.83**
Administrative and support services	**0.79**
Waste management and remediation services	**1.23**
Educational services	**1.50**
Health care and social assistance	**1.01**
Ambulatory health care services	**0.96**
Hospitals and nursing and residential care facilities	**1.04**
Social assistance	**1.13**
Arts, entertainment, and recreation	**0.88**
Performing arts, museums, and related activities	**0.69**
Amusement, gambling, and recreation	**1.05**
Accommodation and food services	**0.62**
Accommodation	**0.41**
Food services and drinking places	**0.72**
Other services, except government	**0.81**
Government	**0.70**
Federal civilian	**0.44**
Federal military	**0.40**

State and local	**0.80**

Source: BEA

APPENDIX C: Connecticut Location Quotients based on Employment

Connecticut – Statewide: Current Employment Statistics

All Employees - 2007 (000's) [Not Seasonally Adjusted]

Industry Title	Location Quotient	CT Annual Average	U.S. Annual Average
Total Nonfarm		**1,697.6**	**137,618.1**
Goods Producing	**0.95**	260.6	22,221.0
Service Providing	**1.25**	1,437.0	93,196.8
Natural Res, Mining and Construction	**7.76**	69.2	722.6
Manufacturing	**1.12**	191.4	13,882.6
Durable Goods	**1.33**	144.5	8,815.7
Fabricated Metal	**1.73**	33.3	1,563.4
Machinery Mfg	**1.24**	18.2	1,188.1
Computers and Electronics	**0.90**	14.1	1,272.0
Transportation Equipment	**2.07**	43.6	1,710.7
Aerospace Products	**5.06**	44.6	714.2
Motor Vehicle and Parts	**3.71**	45.6	996.6
Miscellaneous Mfg	**1.50**	11.9	641.0
Nondurable Goods	**0.75**	46.9	5,066.9
Chemical Mfg	**1.48**	15.7	862.7
Trade, Transportation and Utilities	**0.95**	311.4	26,604.8
Wholesale Trade	**0.91**	68.0	6,027.9
Wholesalers, Durable Goods	**0.82**	31.7	3,130.3
Wholesalers, Nondurable Goods	**0.87**	22.3	2,068.7
Wholesale Electronics	**1.38**	14.1	828.9
Retail Trade	**1.00**	191.1	15,487.3
Motor Vehicle and Parts	**0.93**	22.0	1,913.3
Building Materials	**1.02**	16.4	1,305.8
Food and Beverage Stores	**1.19**	41.9	2,847.6
Health and Personal Care Stores	**1.14**	13.9	988.7
Clothing and Accessory Stores	**1.19**	22.0	1,496.4
General Merchandise	**0.69**	25.5	2,985.2
Trans, Warehousing, and Utilities	**0.94**	52.4	4,536.3
Utilities	**1.20**	8.2	553.3
Transport and Warehousing	**0.79**	44.2	4,536.3
Truck Transportation	**0.40**	7.2	1,441.7
Transit and Ground Transportation	**2.31**	11.7	410.1
Couriers and Messengers	**0.99**	7.1	581.4
Information	**1.03**	38.5	3,028.9
Telecommunications	**1.03**	13.1	1,028.7
Financial Activities	**1.41**	144.6	8,309.6
Finance and Insurance	**1.63**	123.5	6,147.2
Credit Intermediation	**0.88**	31.3	2,882.0
Depository Credit Intermediation	**0.93**	20.9	1,822.6
Nondepository Credit Intermediation	**0.64**	8.3	1,059.4

Securities, Commodities and Other Invest	**2.11**	22.1	848.2
Insurance Carriers and Related Activities	**2.29**	65.3	2,308.0
Funds, Trusts and Other Ins*	**4.43**	4.8	87.9
Real Estate, Rental and Leasing	**0.79**	21.1	2,162.2
Professional and Business Services	**0.93**	205.9	17,965.8
Professional, Scientific and Tech Services	**0.98**	92.2	7,663.7
Legal Services	**1.00**	14.5	1,177.0
Accounting, Tax, and Payroll Serv	**0.90**	10.5	948.3
Architectural, Engineering and Related	**0.73**	13.0	1,436.0
Computer Systems Design	**1.29**	21.6	1,360.0
Mgt, Scientific and Tech Consulting	**0.95**	11.2	951.9
Management of Companies	**1.10**	25.1	1,844.9
Admin and Support and Waste Mgt	**0.89**	88.6	8,100.3
Employment Services	**0.72**	32.0	3,604.7
Services to Buildings	**1.17**	26.7	1,851.3
Education and Health	**1.27**	287.7	18,326.8
Educational Services	**1.51**	54.9	2,949.8
Health Care and Social Assistance	**1.23**	232.8	15,377.0
Offices of Physicians	**1.11**	30.2	2,204.1
Hospitals	**1.04**	58.0	4,517.1
Nursing and Residential Care	**1.62**	59.0	2,951.8
Social Assistance	**1.36**	40.8	2,430.2
Child Day Care	**1.32**	13.8	848.4
Leisure and Hospitality	**0.82**	135.6	13,470.1
Arts, Entertainment and Recreation	**1.01**	24.6	1,978.1
Amusement, Gambling and Recreation	**1.02**	18.0	1,436.0
Accommodation and Food Services	**0.78**	111.0	11,492.1
Accommodations	**0.53**	12.1	1,856.2
Food Services and Drinking Places	**0.83**	99.0	9,635.9
Other Services	**0.95**	64.3	5,490.8
Repair and Maintenance	**0.95**	14.7	1,256.8
Personal and Laundry	**1.22**	19.6	1,305.0
Religious, Grantmaking Civic and Professional	**0.83**	30.1	2,928.9
Government	**0.91**	249.0	22,200.3
Federal Government	**0.58**	19.6	2,726.5
State and Local Government	**0.95**	229.4	19,473.8

Note: All data benchmarked to March 2007.

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Last Updated: March 18, 2008

* includes all of these below

5251 Insurance and Employee Benefit Funds

52511 Pension Funds

52512 Health and Welfare Funds

52519 Other Insurance Funds

5259 Other Investment Pools and Funds

52591 Open-End Investment Funds

52592 Trusts, Estates, and Agency Accounts

52593 Real Estate Investment Trusts

52599	Other Financial Vehicles

APPENDIX D: Top Occupations Requiring Postsecondary Education in Connecticut 2006 – 2016 by Level Change

TOP OCCUPATIONS REQUIRING POSTSECONDARY EDUCATION by LEVEL CHANGE

Occupational Title	Employment		Change		Annual	Avg. Ann.
	2006	2016	Net	Percent	Openings	Salary
Registered Nurses	32,840	38,560	5,720	17.40%	1,114	$68,594
Accountants and Auditors	21,400	24,460	3,060	14.30%	683	$70,540
Nursing Aides, Orderlies, and Attendants	24,660	27,590	2,930	11.90%	513	$30,157
Computer Software Engineers, Applications	7,000	9,540	2,540	36.40%	356	$88,211
Elementary School Teachers, Except Special Education	18,550	20,570	2,020	10.90%	608	$63,097
Computer Systems Analysts	9,630	11,580	1,950	20.20%	450	$83,514
Financial Analysts	6,440	8,250	1,810	28.10%	218	$101,011
Network Systems and Data Communications Analysts	3,120	4,490	1,370	43.70%	200	$74,962
Hairdressers, Hairstylists, and Cosmetologists	11,150	12,460	1,310	11.70%	264	$30,495
Management Analysts	10,870	12,010	1,140	10.50%	300	$87,114
Securities, Commodities, Financial Services Sales Agents	7,010	8,130	1,120	16.00%	292	$149,536
Licensed Practical and Licensed Vocational Nurses	8,020	9,070	1,050	13.10%	324	$52,248
Middle School Teachers, Except Special and Voc. Ed.	10,380	11,300	920	8.80%	318	$64,933
Preschool Teachers, Except Special Education	7,140	8,040	900	12.70%	209	$29,821
Financial Managers	10,150	11,010	860	8.50%	234	$112,497
Rehabilitation Counselors	4,370	5,220	850	19.40%	172	$41,562
Network and Computer Systems Administrators	4,190	5,030	840	20.00%	180	$73,619
Automotive Service Technicians and Mechanics	10,370	11,190	820	7.90%	290	$42,853
Computer Software Engineers, Systems Software	3,660	4,410	750	20.40%	128	$88,508
Personal Financial Advisors	2,650	3,390	740	27.70%	98	$109,882
Computer Support Specialists	7,630	8,340	710	9.30%	307	$52,453
Lawyers	10,710	11,390	680	6.40%	271	$121,652
Postsecondary Teachers, All Other	3,680	4,370	690	18.60%	130	$83,596
Paralegals and Legal Assistants	4,680	5,350	670	14.20%	129	$49,274
Fitness Trainers and Aerobics Instructors	3,970	4,620	650	16.60%	140	$44,195
Mental Health and Substance Abuse Social Workers	2,640	3,280	640	24.40%	120	$49,120
Dental Hygienists	3,160	3,790	630	19.80%	123	$70,973
Insurance Sales Agents	8,000	8,600	600	7.50%	234	$75,877
Industrial Engineers	3,290	3,890	600	18.20%	139	$79,002
Physical Therapists	3,200	3,780	580	18.30%	98	$73,844
Mental Health Counselors	2,010	2,600	590	29.00%	98	$41,993
Social and Community Service Managers	2,780	3,340	560	20.10%	109	$61,300
Pharmacists	2,760	3,280	520	18.80%	100	$104,444
Child, Family, and School Social Workers	5,200	5,700	500	9.70%	160	$59,826
Special Education Teachers, Preschool, Kindergarten, Elem.	3,110	3,610	500	16.10%	119	$63,559
Computer and Information Systems Managers	4,630	5,090	460	10.10%	122	$116,497
Market Research Analysts	3,330	3,790	460	13.90%	69	$70,388
Medical and Public Health Social Workers	2,220	2,680	460	20.80%	93	$56,955
Secondary School Teachers, Except Special and Voc. Ed.	13,000	13,440	440	3.40%	432	$64,902
Database Administrators	1,920	2,360	440	23.20%	66	$77,495
Construction Managers	3,500	3,940	440	12.70%	98	$100,364
Radiologic Technologists and Technicians	2,970	3,410	440	14.70%	84	$59,836
Substance Abuse and Behavioral Disorder Counselors	1,210	1,640	430	35.50%	67	$42,249
Veterinary Technologists and Technicians	1,030	1,460	430	41.30%	75	$35,697
Public Relations Specialists	3,250	3,680	430	13.10%	68	$58,821
Health Specialties Teachers, PS	2,490	2,890	400	16.20%	82	$63,815
Employment, Recruitment, and Placement Specialists	2,970	3,370	400	13.50%	104	$63,423
Property, Real Estate, and Community Association Managers	2,870	3,260	390	13.50%	79	$65,874
Training and Development Specialists	3,040	3,430	390	12.60%	104	$59,013
Medical and Health Services Managers	3,690	4,070	380	10.30%	107	$99,718
Cost Estimators	2,760	3,140	380	13.50%	94	$64,982
Sales Managers	4,470	4,830	360	7.90%	134	$113,513
Manicurists and Pedicurists	1,770	2,120	350	19.70%	53	$23,701
Emergency Medical Technicians and Paramedics	2,800	3,150	350	12.30%	67	$36,579
Veterinarians	1,060	1,400	340	31.20%	54	$113,868
Civil Engineers	3,300	3,630	330	9.90%	120	$73,937
Clinical, Counseling, and School Psychologists	2,950	3,270	320	11.10%	78	$75,987
Medical Scientists, Except Epidemiologists	1,750	2,060	310	17.90%	85	$88,857

Note: Annual Job Openings refer to the expected number of new workers needed. All data benchmarked to March 2007. From Labor Market Information Home Page | Department of Labor Home Page http://www.ctdol.state.ct.us/lmi/misc/occsindemand.htm.

APPENDIX E: Occupations with Largest Number of Openings 2006-2016

Occupational Title	Employment		Change		Annual	Avg. Ann.
	2006	2016	Net	Percent	Openings	Salary
Cashiers	47,520	47,570	53	0.1%	2,265	$20,777
Retail Salespersons	51,690	58,310	6,614	12.8%	2,253	$27,955
Waiters and Waitresses	26,930	30,180	3,249	12.1%	1,788	$21,611
Customer Service Representatives	30,930	36,800	5,874	19.0%	1,448	$38,083
Registered Nurses	32,840	38,560	5,722	17.4%	1,114	$68,594
Janitors and Cleaners, Exc. Maids, Housekeeping Cleaners	32,300	35,540	3,238	10.0%	942	$27,800
Office Clerks, General	33,540	36,150	2,611	7.8%	876	$31,166
Food Preparation Workers	14,370	16,680	2,307	16.1%	730	$22,892
Bookkeeping, Accounting, and Auditing Clerks	27,540	30,370	2,838	10.3%	715	$39,953
Combined Food Preparation, Serving Workers, incl. Fast Food	18,410	22,060	3,649	19.8%	714	$20,053
Accountants and Auditors	21,400	24,460	3,057	14.3%	683	$70,540
Laborers and Freight, Stock, and Material Movers, Hand	19,580	19,630	53	0.3%	632	$28,052
Sales Representatives, Exc. Technical, Scientific Products	20,860	22,530	1,672	8.0%	627	$71,736
Executive Secretaries and Administrative Assistants	23,750	26,110	2,360	9.9%	614	$45,502
Elementary School Teachers, Except Special Education	18,550	20,570	2,029	10.9%	608	$63,097
Child Care Workers	14,690	16,540	1,850	12.6%	607	$23,127
Counter Attendants, Cafeteria, Concession, Coffee Shop	7,080	7,900	822	11.6%	573	$20,022
Receptionists and Information Clerks	14,720	16,720	2,003	13.6%	560	$29,653

Supervisors of Retail Sales Workers	18,800	20,080	1,277	6.8%	522	$41,685
Nursing Aides, Orderlies, and Attendants	24,660	27,590	2,924	11.9%	513	$30,157
Teacher Assistants	23,290	24,540	1,245	5.3%	504	$27,380
Stock Clerks and Order Fillers	21,220	19,910	-1,303	-6.1%	504	$26,097
General and Operations Managers	19,850	19,660	-192	-1.0%	479	$121,358
Computer Systems Analysts	9,630	11,580	1,948	20.2%	450	$83,514
Supervisors of Office and Administrative Support Workers	19,850	20,100	246	1.2%	435	$51,725
Maids and Housekeeping Cleaners	14,380	16,000	1,617	11.2%	433	$23,916
Secondary School Teachers, Except Special and Voc. Ed.	13,000	13,440	446	3.4%	432	$64,902
Secretaries, Except Legal, Medical, and Executive	26,350	25,830	-514	-2.0%	420	$35,284
Landscaping and Groundskeeping Workers	14,620	16,820	2,200	15.1%	413	$29,501
Truck Drivers, Heavy and Tractor-Trailer	14,660	16,010	1,350	9.2%	395	$42,672
Home Health Aides	10,590	13,280	2,694	25.4%	364	$28,404
Computer Software Engineers, Applications	7,000	9,540	2,543	36.4%	356	$88,211
Security Guards	12,210	13,250	1,038	8.5%	352	$27,708
Tellers	5,900	6,660	762	12.9%	334	$27,477
Truck Drivers, Light or Delivery Services	13,290	14,190	898	6.8%	326	$32,114
Bartenders	6,310	7,260	956	15.2%	325	$23,424
Licensed Practical and Licensed Vocational Nurses	8,020	9,070	1,050	13.1%	324	$52,248
Personal and Home Care Aides	6,340	8,450	2,109	33.2%	319	$22,051
Middle School Teachers, Except Special and Voc.	10,380	11,300	912	8.8%	318	$64,933

Ed.						
Computer Support Specialists	7,630	8,340	709	9.3%	307	$52,453
Management Analysts	10,870	12,010	1,138	10.5%	300	$87,114
Dishwashers	5,600	6,260	661	11.8%	295	$20,320
Securities, Commodities, Financial Services Sales Agents	7,010	8,130	1,120	16.0%	292	$149,536
Automotive Service Technicians and Mechanics	10,370	11,190	823	7.9%	290	$42,853
Cooks, Restaurant	7,050	7,990	932	13.2%	284	$27,872
Electricians	8,330	9,020	692	8.3%	283	$53,908
Lawyers	10,710	11,390	684	6.4%	271	$121,652
Hairdressers, Hairstylists, and Cosmetologists	11,150	12,460	1,307	11.7%	264	$30,495
Carpenters	12,550	13,440	890	7.1%	259	$48,438
Police and Sheriff's Patrol Officers	7,410	7,970	561	7.6%	254	$56,768
Business Operations Specialists, All Other	9,310	10,830	1,525	16.4%	253	$64,982
Shipping, Receiving, and Traffic Clerks	9,510	9,680	170	1.8%	245	$31,431
Team Assemblers	11,330	11,320	-1	0.0%	235	$29,825
Financial Managers	10,150	11,010	864	8.5%	234	$112,497
Insurance Sales Agents	8,000	8,600	602	7.5%	234	$75,877
Social and Human Service Assistants	8,350	9,670	1,322	15.8%	229	$40,968
Managers, All Other	8,220	8,850	636	7.7%	228	$92,201
Financial Analysts	6,440	8,250	1,809	28.1%	218	$101,011
Medical Assistants	4,990	6,520	1,529	30.7%	215	$33,487
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	2,660	2,980	319	12.0%	214	$21,641
Cooks, Fast Food	5,370	6,010	648	12.1%	210	$21,580
Preschool Teachers, Except Special Education	7,140	8,040	905	12.7%	209	$29,821
Cleaners of Vehicles and	4,240	4,670	432	10.2%	205	$23,980

Equipment						
Dining Room and Cafeteria Attendants and Bartender Helpers	3,790	4,250	459	12.1%	205	$20,063
Counter and Rental Clerks	3,730	4,300	575	15.4%	200	$26,609
Network Systems and Data Communications Analysts	3,120	4,490	1,364	43.7%	200	$74,962

Source: Connecticut DoL, September 2006, "Connecticut Occupations in Demand."

APPENDIX F: Connecticut Industry Clusters 2006

NAICS Code		Jobs	# Estab.
	Agriculture		
	TOTAL	**72,858**	**3,429**
11	Agriculture, Forestry, Fishing, and Hunting	325	83
311	Food Manufacturing	8,227	277
312120	Breweries	10	1
312130	Wineries	50	8
312140	Distilleries	0	0
3122	Tobacco Manufacturing	50	2
3253	Pesticide, Fertilizer, and other Agricultural Chemical Manufacturing	6,109	143
4244	Grocery and Related Product Wholesalers	10,598	347
4245	Farm Product Raw Material Merchant Wholesalers	175	23
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	2,637	55
424910	Farm Supplies Merchant Wholesalers	325	42
424930	Nursery and Florist Merchant Wholesalers	534	51
424940	Tobacco and Tobacco Product Merchant Wholesalers	1,750	20
445	Food and Beverage Stores	41,083	2,198
453110	Florists	1,310	262
	Bioscience		
	TOTAL	**43,361**	**1,633**
3254	Pharmaceutical and Medicine Manufacturing	789	17
334510	Electromedical and Electrotherapeutic Apparatus Manufacturing	527	13
334516	Analytical Laboratory Instrument Manufacturing	821	13
334517	Irradiation Apparatus Manufacturing	325	4
3391	Medical Equipment and Supplies Manufacturing	6,752	171
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	1,484	92
423460	Ophthalmic Goods Merchant Wholesalers	175	12
446110	Pharmacies and Drug Stores	13,428	499
446130	Optical Goods Stores	966	185
541710	Research and Development in the Physical, Engineering, and Life Sciences	10,712	187
541940	Veterinary Services	3,843	322
6215	Medical and Diagnostic Laboratories	4,328	135

NAICS Code		Jobs	# Estab.
	Insurance and Financial Services		
	TOTAL	**185,316**	**9,307**
522	Credit Intermediation and Related Activities	39,138	2,499
523	Securities, Commodity Contracts, and other Fin. Invests. and Related Activities	48,406	1,685
524	Insurance Carriers and Related Activities	81,189	2,145
525	Funds, Trusts, and Other Financial Vehicles	175	21
531	Real Estate	16,408	2,957
	Maritime		
	TOTAL	**9,863**	**226**
3366	Ship and Boat Building	7,500	17
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	566	22
4832	Inland Water Transportation	83	5
4883	Support Activities for Water Transportation	341	31
4885	Freight Transportation Arrangement	1,373	151
	Metal Manufacturing		
	TOTAL	**57,310**	**2,097**
331	Primary Metal Manufacturing	3,968	84
332	Fabricated Metal Product Manufacturing	31,767	1,289
333	Machinery Manufacturing	18,401	506
337124	Metal Household Furniture Manufacturing	453	61
33991	Jewelry and Silverware Manufacturing	325	20
423510	Metal Service Centers and other Metal Merchant Wholesalers	2,396	137
	Plastics		
	TOTAL	**8,072**	**184**
325211	Plastics Material and Resin Manufacturing	750	10
3261	Plastics Product Manufacturing	7,312	173
326220	Rubber and Plastics Hoses and Belting Manufacturing	10	1

NAICS Code		Jobs	# Estab.
	Software and Information Technology		
	TOTAL	**34,906**	**2,309**
3341	Computer and Peripheral Equipment Manufacturing	390	31
3344	Semiconductor and other Electronic Component Manufacturing	4,496	110
334611	Software Reproducing	39	3
334613	Magnetic and Optical Recording Media Manufacturing		
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	3,446	164
425110	Business to Business Electronic Markets	175	4
443120	Computer and Software Stores (retail)	1,750	1,12
454111	Electronic Shopping	1,750	94
454112	Electronic Auctions	10	4
5112	Software Publishers	2,800	130
518	Internet Service Providers, Web Search Portals, and Data Processing Services	4,367	277
5415	Computer Systems Design and Related Services	15,513	1,345
611420	Computer Training	170	35
	Tourism Industry		
	TOTAL	**62,421**	**2,602**
71	Arts, Entertainment, and Recreation	22,924	1,664
7211	Traveler Accommodation	33,297	381
7212	RV (Recreational Vehicle) Parks and Recreational Camps	325	51
481111	Scheduled Passenger Air Transportation	1,147	19
481211	Nonscheduled Chartered Passenger Air Transportation	325	30
482111	Line-Haul Railroads		
487	Scenic and Sightseeing Transportation	60	19
532111	Passenger Car Rental	1,043	79
532292	Recreational Goods Rental	89	12
561510	Travel Agencies	1,906	265
561520	Tour Operators	577	31
561591	Convention and Visitors' Bureaus	46	8
561599	All other Travel Arrangement and Reservation Services	682	43

Source: U.S. Census, CPB 2006 http://www.census.gov/epcd/cbp/index.html. Industries: DECD, DOL, Others

Demographics of Connecticut

Population Growth and Distribution

Table 1 in the appendix to this chapter displays historical population estimates for Connecticut's 169 towns. One observes that several municipalities have gained population while others both large and small have lost population (for example, Hartford, Bridgeport, and Norfolk). This is likely a continuing consequence of the urban populations' flight to suburbia as well as the aging and out-migration of young people. Retired persons who remain in the state may move to retirement communities as they downsize and economize on operational costs. Other retirees leave for warmer climes. Young people between the ages of 25 and 44 leave for many reasons but anecdotal evidence points to Connecticut's cost of living (housing, energy, and taxes) and the availability of abundant job opportunities elsewhere as important reasons.

Table 2 presents historical population estimates and growth rates for Connecticut's eight counties. We report estimates for the year 1990 from Census and for 2000 and 2007 from the Connecticut Department of Public Health. The data shows that Hartford County grew at the slowest rate, while Tolland County grew at the fastest rate. Middlesex and Windham Counties had relatively high growth rates as well. Windham County's relatively high population growth rate may be related to the growth of Native American Tribal operations in New London County that itself grew relatively slowly.

Table 2: Connecticut Population Estimates by County for 1990, 2000, and 2007

County	1990	2000	2007	Period-to-Period Avg. Growth Rate	Overall Growth Rate 1990-2007
Fairfield	827,645	884,109	895,015	4.03%	8.14%
Hartford	851,783	858,026	876,824	1.46%	2.94%
Litchfield	174,092	182,388	188,273	4.00%	8.15%
Middlesex	143,196	155,224	164,150	7.08%	14.63%
New Haven	804,219	824,714	845,494	2.53%	5.13%
New London	254,957	259,326	267,376	2.41%	4.87%
Tolland	128,699	136,552	148,139	7.29%	15.11%
Windham	102,525	109,210	117,038	6.84%	14.16%

Source: 1990 US Census, 2000 and 2007 Connecticut Department of Public Health.

Ethnic Composition

Table 3 shows the ethnic composition of each Connecticut county. Urban counties such as Fairfield, Hartford, and New Haven contain a larger share of Connecticut's non-white population.

Table 3: Connecticut Population by County and Race/Ethnicity for 1990, 2000, and 2007

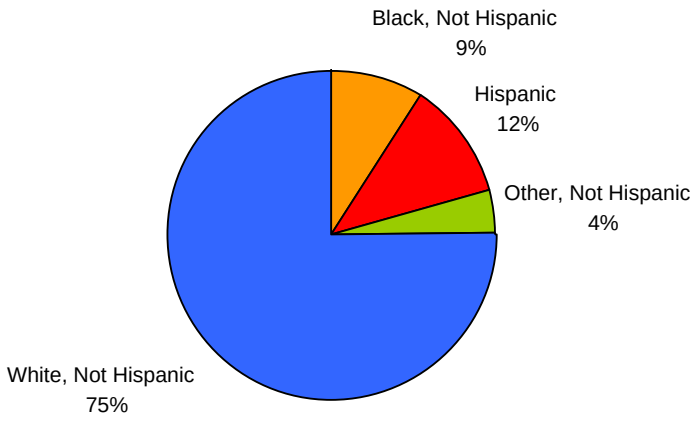
		1990	2000	2007
Fairfield	Black, Not Hispanic	75,056	86,410	87,827
	Hispanic	69,465	100,154	133,198
	Other, Not Hispanic	18,693	38,924	46,751
	White, Not Hispanic	648,672	639,103	620,371
Hartford	Black, Not Hispanic	79,106	94,693	102,978
	Hispanic	69,613	93,156	117,533
	Other, Not Hispanic	14,947	28,809	34,493
	White, Not Hispanic	343,330	614,044	608,996
Litchfield	Black, Not Hispanic	1,486	1,565	1,992
	Hispanic	1,820	2,672	6,745
	Other, Not Hispanic	1,675	4,287	3,103
	White, Not Hispanic	166,663	171,167	173,758
Middlesex	Black, Not Hispanic	5,170	6,109	6,651
	Hispanic	2,598	3,232	6,441
	Other, Not Hispanic	1,612	3,822	4,923
	White, Not Hispanic	127,777	135,681	143,934
New Haven	Black, Not Hispanic	75,148	88,675	97,897
	Hispanic	49,161	77,067	107,913
	Other, Not Hispanic	11,497	26,228	35,131
	White, Not Hispanic	642,688	604,364	593,866
New London	Black, Not Hispanic	10,123	12,215	13,428
	Hispanic	7,633	10,328	16,915
	Other, Not Hispanic	4,424	10,152	12,008
	White, Not Hispanic	219,184	214,531	217,362
Tolland	Black, Not Hispanic	1,442	1,663	3,787
	Hispanic	1,688	1,931	5,308
	Other, Not Hispanic	2,138	4,007	5,001
	White, Not Hispanic	112,651	117,710	131,861
Windham	Black, Not Hispanic	826	1,282	1,852
	Hispanic	4,039	3,575	9,322
	Other, Not Hispanic	1,102	2,835	1,153
	White, Not Hispanic	93,631	94,606	102,309
Connecticut	Total Population	2,865,058	3,294,997	3,454,807

Black, Not Hispanic	248,357	292,612	316,412
Hispanic	206,017	292,115	403,375
Other, Not Hispanic	56,088	119,064	142,563
White, Not Hispanic	2,354,596	2,591,206	2,592,457

Source: 1990 and 2000 CT State Data Center, 2007 ACS

Chart 1 shows that in 2007, 75% of Connecticut's population was white while 25% consisted of other races and ethnicities. The racial and ethnic categories in Table 3 are not exhaustive and therefore the county totals in Table 3 are smaller than those in Table 2.

Chart 1: 2007 Ethnic Composition of Connecticut



Source: 2007 ACS

Age Distribution

Tables 4, 5, and 6 show Connecticut's age distribution for 1990, 2000, and 2008 respectively. The baby boomers (people born between 1946 and 1964) account for a significant part of the population in these years, while 20-29 year olds are leaving the state, ostensibly to avoid the high cost of living and find jobs elsewhere. Part of the explanation of the increasing share of the population occupied by older people is that they are aging in place and are not being replaced by sufficient numbers of young people. This is because the fertility rate of white females is about 1.8 and that of African-Americans is about 2.0 (still less than replacement, which is 2.1 births per woman), while the fertility rate for Hispanics is 2.2 (source Connecticut State Data Center).

Table 4: 1990 Connecticut Age Distribution by County								
	Fairfield County	Hartford County	Litchfield County	Middlesex County	New Haven County	New London County	Tolland County	Windham County
Total Population	827,646	851,782	174,092	143,197	804,223	254,956	128,703	102,522
Age 0 - 4	6.9%	6.8%	6.9%	6.7%	7.0%	7.4%	6.8%	7.4%
Age 5 - 9	6.1%	6.3%	6.7%	6.1%	6.3%	6.7%	6.4%	7.5%
Age 10 - 14	5.9%	5.9%	6.1%	5.6%	5.9%	6.0%	5.8%	6.9%
Age 15 - 19	6.2%	6.4%	6.1%	6.5%	6.4%	6.6%	8.2%	7.0%
Age 20 - 24	7.0%	7.6%	6.2%	7.3%	7.8%	8.8%	11.6%	7.8%
Age 25 - 34	17.1%	17.9%	16.8%	18.3%	18.0%	19.3%	17.7%	17.6%
Age 35 - 44	15.7%	15.3%	17.1%	16.9%	15.1%	14.9%	16.6%	15.2%
Age 45 - 54	12.0%	10.6%	11.4%	11.1%	10.1%	9.9%	10.7%	10.2%
Age 55 - 64	9.8%	9.2%	8.7%	8.5%	8.7%	8.4%	7.3%	7.8%
Age 65 - 74	7.7%	8.1%	7.9%	7.3%	8.4%	7.0%	5.4%	7.0%
Age 75 - 84	4.2%	4.5%	4.7%	4.3%	4.8%	3.7%	2.8%	4.1%
Age 85+	1.4%	1.5%	1.5%	1.5%	1.6%	1.2%	0.8%	1.5%
Median Age	35.5	34.5	35.7	34.8	34.2	32.4	31.6	32.6

Source: CERC Datafinder 1990 Census

Table 5: 2000 Connecticut Age Distribution by County								
	Fairfield County	Hartford County	Litchfield County	Middlesex County	New Haven County	New London County	Tolland County	Windham County
Total Population	882,567	857,183	182,193	155,071	824,008	259,088	136,364	109,091
Age 0 - 4	7.3%	6.4%	5.9%	6.2%	6.4%	6.3%	5.9%	6.1%
Age 5 - 9	7.6%	7.1%	7.1%	6.7%	7.0%	7.1%	6.5%	7.1%
Age 10 - 14	7.1%	7.1%	7.6%	6.5%	7.1%	7.1%	6.9%	7.5%
Age 15 - 19	5.8%	6.4%	6.0%	6.0%	6.6%	6.5%	8.3%	7.6%
Age 20 - 24	4.9%	5.4%	3.8%	5.0%	6.0%	6.0%	8.3%	6.4%
Age 25 - 34	13.4%	13.1%	11.6%	13.2%	13.6%	13.6%	12.9%	13.1%
Age 35 - 44	17.5%	16.6%	18.1%	17.9%	16.3%	17.6%	17.8%	17.2%
Age 45 - 54	14.0%	14.1%	15.8%	15.3%	13.7%	13.9%	14.5%	14.1%
Age 55 - 64	9.2%	9.1%	9.9%	9.5%	8.7%	8.9%	8.7%	8.6%
Age 65 - 74	6.8%	7.1%	7.0%	6.7%	6.8%	6.7%	5.4%	6.1%
Age 75 - 84	4.7%	5.5%	5.3%	4.9%	5.6%	4.7%	3.6%	4.5%
Age 85+	1.8%	2.0%	2.0%	2.0%	2.1%	1.6%	1.2%	1.8%
Median Age	37.3	37.7	39.6	38.5	37	37	35.7	36.3

Source: CERC Datafinder 2000 Census

Table 6: 2008 Connecticut Age Distribution by County								
	Fairfield County	Hartford County	Litchfield County	Middlesex County	New Haven County	New London County	Tolland County	Windham County
Total Population	903,586	881,904	192,380	162,398	857,312	269,732	154,406	119,053
Age 0 - 4	6.3%	6.0%	5.0%	6.3%	5.9%	5.3%	5.4%	5.8%
Age 5 - 9	6.7%	5.9%	5.5%	5.5%	6.2%	6.0%	5.1%	5.4%
Age 10 - 14	7.2%	6.6%	6.3%	6.2%	6.5%	6.5%	5.7%	6.2%
Age 15 - 19	7.0%	6.9%	6.6%	6.5%	6.9%	6.8%	8.1%	7.5%
Age 20 - 24	6.1%	6.5%	5.8%	6.0%	6.9%	6.2%	10.5%	7.1%
Age 25 - 34	10.2%	11.7%	10.8%	11.2%	12.6%	12.6%	12.9%	14.3%
Age 35 - 44	14.9%	14.3%	14.1%	14.9%	14.3%	15.1%	13.6%	14.4%
Age 45 - 54	16.2%	15.6%	17.6%	16.7%	15.2%	16.6%	15.9%	15.7%
Age 55 - 64	12.0%	12.1%	13.6%	12.3%	11.6%	11.3%	11.5%	11.1%
Age 65 - 74	6.9%	6.9%	7.7%	7.6%	6.8%	6.8%	6.3%	6.6%
Age 75 - 84	4.4%	5.0%	4.3%	4.8%	4.8%	4.7%	3.6%	4.1%
Age 85+	2.2%	2.5%	2.7%	2.2%	2.5%	2.1%	1.5%	1.8%
Median Age	39.82	39.76	42.61	41.07	38.77	39.79	36.99	37.9

Source: CERC Datafinder 2008

Income Distribution

Table 7 shows the income distribution of Connecticut for 2008 for its eight counties. Fairfield County residents have the highest average household income and Windham County residents have the lowest average household income.[1]

Table 7: 2008 Connecticut Income Distribution by County

	Fairfield County	Hartford County	Litchfield County	Middlesex County	New Haven County	New London County	Tolland County	Windham County
Total Households	326,398	338,086	76,049	66,941	321,391	104,906	54,567	44,712
Household Income								
$ 0 - $9,999	5.2%	6.5%	3.9%	3.4%	6.9%	5.1%	3.9%	6.3%
$ 10,000 - $19,999	6.0%	7.8%	6.8%	6.2%	8.5%	7.0%	5.8%	9.2%
$ 20,000 - $29,999	6.4%	8.2%	7.7%	7.0%	8.8%	8.6%	6.3%	10.0%
$ 30,000 - $39,999	6.8%	8.8%	7.9%	7.4%	8.6%	9.2%	7.4%	9.8%
$ 40,000 - $49,999	7.1%	8.7%	8.3%	8.1%	8.8%	9.4%	8.3%	9.5%
$ 50,000 - $59,999	6.5%	7.7%	7.6%	7.6%	7.9%	8.8%	8.1%	9.4%
$ 60,000 - $74,999	8.8%	10.2%	11.3%	11.0%	10.4%	11.6%	11.4%	12.1%
$ 75,000 - $99,999	12.1%	14.0%	15.8%	15.7%	13.8%	15.4%	16.1%	14.7%
$100,000 - $124,999	9.6%	10.0%	11.2%	12.1%	9.8%	9.9%	12.4%	8.9%
$125,000 - $149,999	7.1%	6.2%	7.2%	8.1%	6.0%	5.8%	8.1%	4.4%
$150,000 +	24.5%	11.9%	12.3%	13.4%	10.6%	9.2%	12.2%	5.7%
Average Household Income	$130,074	$81,768	$89,157	$85,890	$76,041	$78,540	$87,686	$67,561
Median Household Income	$81,058	$63,239	$70,291	$74,132	$60,718	$62,230	$73,510	$54,859
Per Capita Income	$48,024	$32,340	$35,904	$36,468	$29,467	$32,209	$32,578	$26,380

Source: CERC Datafinder 2008

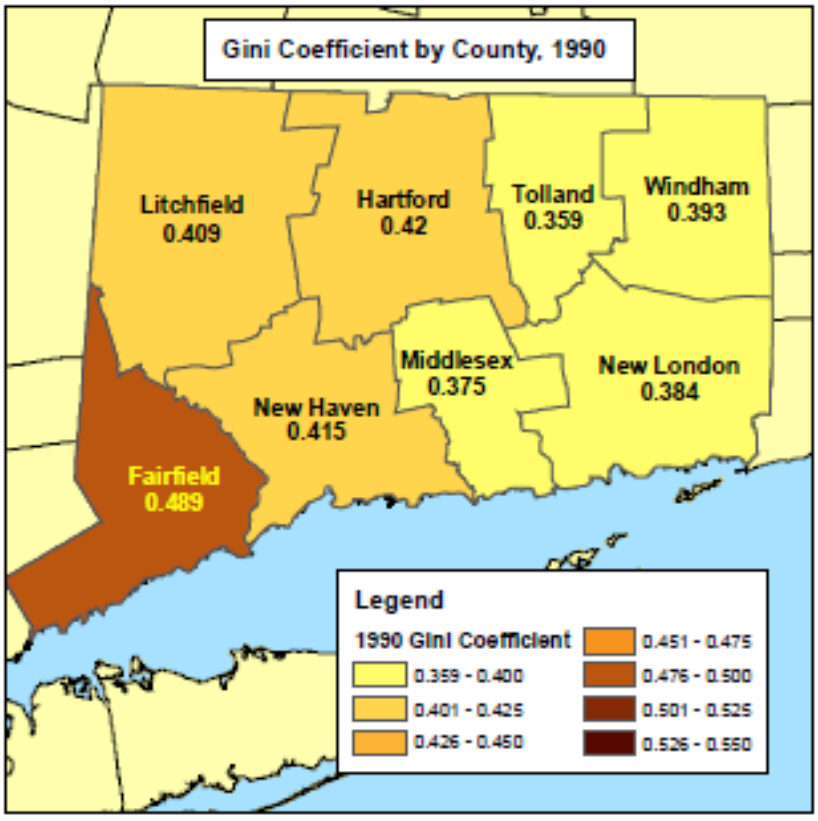
According to Hero (2009),[2] Connecticut has an income equality problem. In addition to having the second most unequal household income distribution in the country, Connecticut has had the greatest *growth* in household income inequality over the past several decades. Connecticut's highest-income households — the top 5% — received a quarter (24.9%) of all the income in the state. The poorest 20% of Connecticut's households received 3.3% of all income in the state.

One measure of inequality is the Gini Coefficient. The Gini Coefficient ranges from 0 to 1, where 0 indicates perfect equality (a proportional distribution of income), and 1

[1] Connecticut Voices for Children, http://www.ctkidslink.org
[2] Hero, Joachim (2009). "Connecticut Leads the Nation in Multiple Measure of Income Inequality: 2007" Connecticut Voices for Children, February.

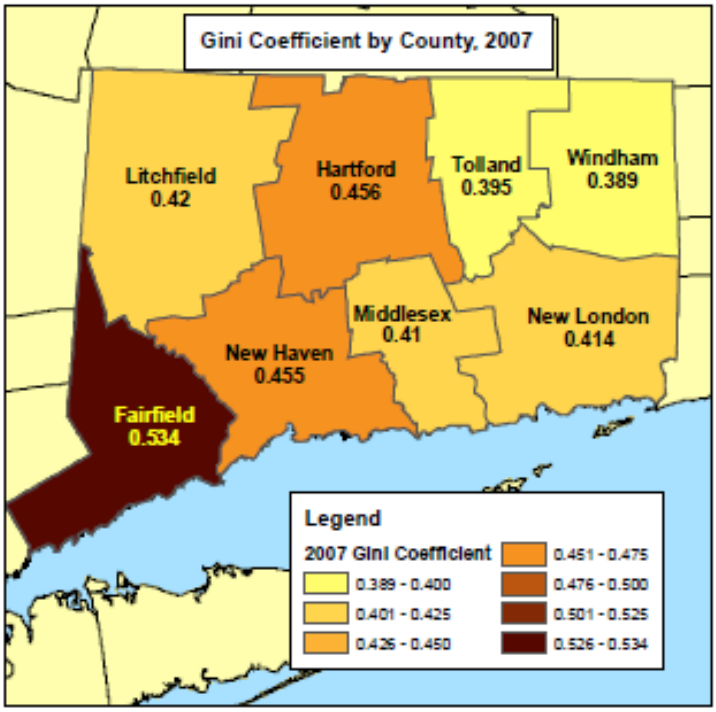
indicates perfect inequality (where one person has all the income and no one else has any). The Connecticut Gini Coefficient is 0.481, the only state with a higher Gini Coefficient is New York and the national Gini Coefficient is 0.464. The following maps show the Gini Coefficients for each Connecticut county in 1990 and 2000 (footnote 2). Unfortunately, the Gini Coefficients have been growing in seven of the eight counties. This is a problem, as research shows that income inequality negatively impacts health, economic opportunities, and quality of life. Children who grow up in poverty have poorer health, higher rates of learning disabilities and developmental delays, and poorer school achievement. They also are far more likely to be unemployed as adults than children who were not poor. This extends the income gap between Connecticut's high and low earners into future generations (footnote 2).

Figure 1: Connecticut's Gini Coefficient by County, 1990



Source: Connecticut Voices for Children

Figure 2: Connecticut's Gini Coefficient by County, 2007



Source: Connecticut Voices for Children

Poverty

Connecticut has one of the lowest poverty rates in the nation. In 2007, the U.S. Census Current Population Survey ranked Connecticut 7th for states with the lowest poverty rates, with 8.9% of its population being poor defined by Census poverty thresholds. Table 8 shows the number of Connecticut families below the poverty threshold and accounts for the number of children under 18 in the family.

Table 8: Connecticut Families Living in Poverty										
		Number of related children under 18 years								
Families in poverty		None	One	Two	Three	Four	Five	Six	Seven	Eight or more
Below poverty level										
One person	10,189	10,189	-	-	-	-	-	-	-	-
Under 65	7,971	7,971	-	-	-	-	-	-	-	-
65+	2,218	2,218	-	-	-	-	-	-	-	-
Two people	2,796	1,487	1,310	-	-	-	-	-	-	-
Householder under 65	2,267	1,005	1,263	-	-	-	-	-	-	-
Householder 65+	529	482	47	-	-	-	-	-	-	-
Three people	1,699	224	527	947	-	-	-	-	-	-
Four people	1,464	67	160	614	624	-	-	-	-	-
Five people	946	12	66	146	466	256	-	-	-	-
Six people	398	2	10	21	72	217	77	-	-	-
Seven people	187	1	4	5	30	44	74	28	-	-
Eight people	67	-	-	-	3	17	17	21	8	-
Nine or more people	65	-	-	-	2	7	12	15	19	10

Source: 2007 U.S. Census Current Population Survey (CPS)

Homelessness

HUD defines a "homeless" person is an individual who lacks a fixed, regular, and adequate nighttime residence; an individual who has a primary nighttime residence that is supervised by a publicly- or privately-operated shelter designed to provide temporary living accommodations; an institution that provides a temporary residence for individuals intended to be institutionalized; or, a public or private place not designed for, or ordinarily used as, regular sleeping accommodations for human beings. This definition of homelessness does not include individuals imprisoned or detained pursuant to an act of Congress or state law.

In accordance with HUD guidelines, Connecticut conducted its first ever "point-in-time" count of the sheltered and unsheltered homeless populations on the night of January 30,

2007. In the final report *Connecticut Counts 2007*,[3] volunteers counted 3,325 homeless households. In accounting for the homeless sheltered population, *Connecticut Counts 2007* does not incorporate into the results residents of transitional housing programs that are not specifically designated for homeless people. For example, residents of mental health, substance abuse, and child welfare programs counted only if the program specifically serves homeless people.

Authors of the report emphasize that one should not interpret the final count as a representation of the full scope of homelessness, but the study is important as a baseline measure to compare the effectiveness of future initiatives to end homelessness. In fact, the Connecticut Coalition to End Homelessness and the Reaching Home Campaign (both sponsors of *CT Counts 2007*) prefer to give the public a more holistic perspective. They estimate that in a given 12-month period, approximately 33,000 individuals (including 13,000 children) in Connecticut experience homelessness to varying degrees. This figure encompasses those who are struggling on the brink of losing their homes in addition to those that experience homelessness.

The results indicate that just over two-thirds of sheltered adults in families were between ages 22 and 39, compared to the majority of sheltered single adults (57%) who were between 40 and 59 years old. Interestingly, 72% of sheltered single adults are male, whereas 83% of sheltered adults in families are female. This suggests that most homeless women belong to families as single mothers. Similar trends prevail in the unsheltered population, where 80% of single adults are male and 74% of adults in families are female.

To better trace the roots of homelessness, surveyors interviewed the homeless about the primary reason for leaving their last permanent residence. The results appear in Table 9.

The Department of Social Services has historically reported the leading causes of homelessness as alcohol/drug abuse, unemployment, and insufficient income. Across all groups in the *CT Counts 2007* survey, "rent problems" was the number one reason cited as the cause of homelessness. Although rather vague, the reason "rent problems" refers to a household's failure to make periodic housing payments. This failure could be attributed to a number of financial or housing problems such as a lack of affordable housing supply in Connecticut. In addition to forces in the housing market, rent problems could be caused by personal issues such as substance abuse or unemployment. Another popular choice for respondents was the "other" category, which could also be interpreted in a number of ways, not the least of which could be a problem with alcohol or other drug abuse. At the same time, chemical dependency may trigger several of the above scenarios—especially family/friend conflict, eviction, or hospitalization. Among single adults, a striking 13% of sheltered and 14% of unsheltered persons left their place of

[3] See http://www.ctreachinghome.org/pointintimereport07.pdf.

permanent residence to go to jail, and once released were forced into poverty and homelessness. It is common for de-incarcerated persons to have difficulty finding a job and an affordable housing unit after they are released; many eventually return to jail.

Table 9: Reason Left Last Residence								
	Sheltered				Unsheltered			
	Single Adults	%	Adults in Families	%	Single Adults	%	Adults in Families	%
Rent Problems	518	24%	139	31%	180	25%	11	29%
Evicted for a reason other than rent problems	248	12%	60	13%	99	14%	2	5%
Conflict with family or friends	396	19%	83	19%	120	17%	5	13%
Overcrowding	47	2%	22	5%	18	3%	1	3%
Domestic Violence	72	3%	73	16%	28	4%	5	13%
Went to prison or jail	271	13%	22	5%	101	14%	1	3%
Went into the hospital	105	5%	0	0%	4	1%	0	0%
Housing condemned	20	1%	9	2%	8	1%	1	3%
Fire	11	1%	6	1%	6	1%	0	0%
Other	619	29%	97	22%	136	19%	4	11%
Unknown	148	7%	16	4%	134	19%	13	34%

Source: CT Counts 2007

The survey volunteers inquired where the homeless have slept in the last 30 days. Respondents were given the opportunity to list more than one location. Their responses appear in Table 10.

It should not be surprising that the sheltered population displayed a strong preference for either an emergency shelter or some type of transitional housing in the 30 days prior to the survey. Those unsheltered remained in the same condition or opted to stay with relatives or friends rather than enter into an emergency or transitional shelter. Difficulty arises when one attempts to analyze the precise fraction of households that resided in

each of the above locations as seemingly over 100% of the sample population responded because each household could identify more than one location.

Table 10: Where Slept in Last 30 Days								
	Sheltered				**Unsheltered**			
	Single Adults	**%**	**Adults in Families**	**%**	**Single Adults**	**%**	**Adults in Families**	**%**
Non-housing*	103	5%	4	1%	389	55%	11	29%
Emergency Shelter	1147	54%	211	47%	164	23%	4	11%
Transitional Housing for Homeless Persons	454	21%	167	38%	2	0%	2	5%
Psychiatric Facility	18	1%	2	1%	2	0%	0	0%
Substance Abuse Treatment Facility	141	7%	6	1%	16	2%	0	0%
Hospital	78	4%	2	1%	24	3%	1	3%
Jail/prison	49	2%	2	1%	24	3%	0	0%
Domestic Violence Situation	20	1%	16	4%	4	1%	3	8%
Living with Relative or Friend	201	10%	55	12%	180	25%	11	29%
Rental Housing, Own Apartment or House	125	6%	46	10%	22	3%	1	3%
Hotel or motel	47	2%	7	2%	39	6%	2	5%
Other	110	5%	10	2%	65	9%	4	11%
Unknown	96	5%	7	2%	95	13%	12	32%

*Non-housing includes street, park, car, bus, station, parking garage, campground, woods, abandoned building, etc.
Source: CT Counts 2007

A regularly reported measure of homelessness in Connecticut comes from the Department of Social Services' *Annual Homeless Shelter Demographic Report*. The latest report states that from October 2006 to September 2007, 13,779 people used available emergency shelters in the state. However, in the same period, these shelters had to turn away people 34,026 times. The three cities with the highest "turned away" rates among reporting shelters were New Haven, East Hartford, and Hartford; all turn-aways number in the thousands annually.

Of the total number of homeless clients served by homeless shelters from 2006-2007, 9,904 (72%) were single. There were 1,284 (9.3%) families that stayed in homeless shelters, and those families included 2,295 (16.7%) homeless children.
An accurate record of the chronically homeless is difficult to realize even with the best survey methodologies. *CT Counts 2007* surveyed those persons who have been without a permanent residence for various lengths of time. If respondents indicated that this period was greater than three years, researchers categorized them as "chronically homeless."

The results convey that an alarming 52% of unsheltered single adults were chronically homeless. The second highest rate (36%) occurred with sheltered single adults. It is important to note that single homeless adults also reported a high incidence of disability—be it mental, physical, or developmental. A high percentage, 40% of sheltered and 45% of unsheltered single adults, cited that they had some type of health condition that limits their ability to work, get around, care for themselves, or otherwise care for their needs. Further, 41% of sheltered and 26% of unsheltered adults were in need of mental health services at the time of the count. If disabled persons are systematically prone to long periods of homelessness, it suggests that current services may be insufficient and that the public and private sectors should expand the supply of supportive services and living accommodations for them. Table 11 displays the distribution of sheltered and unsheltered subpopulations. The largest group of sheltered people is chronic substance abusers, while the second largest group is severely mentally ill.

Table 11: Homeless Populations and Subpopulations in Connecticut				
Household Type	**Sheltered**		**Unsheltered**	**Total**
	Emergency Shelter	**Traditional Housing**		
Persons in Individual Households	1,941	1,060	503	3,504
Persons in Family Households with Children	899	558	214	1,671
Total Homeless Persons in Households	2,840	1,618	717	5,175
Subpopulation Type	**Sheltered**		**Unsheltered***	**Total**
Chronically Homeless	980		333	1,313
Severely Mentally Ill	1,310		169	1,479
Chronic Substance Abuse	1,701		221	1,922
Veterans	361		24	385
Persons with HIV or AIDS	226		33	259
Victims of Domestic Violence	387		29	416
Unaccompanied Youth less than 18 Years	360		7	367

*Provision of information on unsheltered homeless subpopulations was optional in the 2006 CoC application.
Source: Continuum of Care 2006

The Continuum of Care, a HUD-sponsored program, is a community-based, long-range plan that addresses the needs of homeless persons in order to help them reach maximum self-sufficiency. The plan, developed through collaboration with a broad cross section of the community, is based on a thorough assessment of homeless needs and resources. HUD recommends the Continuum of Care as a comprehensive and strategic approach to addressing homelessness. The application process for Continuum of Care funding includes an estimate of homeless populations and subpopulations for each state. One aspect of the Continuum of Care program is that it funds housing-related projects designed to serve the homeless population. Table 12 shows the funding awards received by Connecticut homeless housing programs in 2006.

Table 12: Continuum of Care Funding Awards by Program Component					
Program Component	**# of Projects**	**New Projects**	**Renewal Projects**	**Total**	**% of State Award**
Permanent Supportive Housing	71	$2,698,804	$13,249,512	$15,948,316	71%
Transitional Housing	24	$0	$5,428,338	$5,428,338	24%
Supportive Services Only	4	$0	$737,077	$737,077	3%
Homeless Management Information Systems (HMIS)	6	$23,045	$310,165	$333,210	1%
Grand Total	105	$2,721,849	$19,725,092	$22,446,941	100%

Source: Continuum of Care 2006

From October 2005 to September 2006, the DSS reports that about 36.2% of the clients served in Connecticut shelters were white. Black or African American and Hispanic individuals were the second and third highest concentrations with 35.3% and 25.9% shares respectively. As a percentage of the total population within each race, African-Americans and Hispanics displayed disproportionately greater need. Whereas CERC estimated the white population to be nearly 3 million in 2006, the black and Hispanic populations each fall under 450,000 persons. Relative to population size, 1.49% of African-Americans and 0.91% of Hispanics were homeless, while a much smaller percentage was whites. In sum, eight times as many African-Americans and five times as many Hispanics than whites experienced homelessness. Similar trends were uncovered in the point-in-time figures we display in Table 13.

Table 13: Homelessness by Race				
Race/Ethnicity of Head of Household	**Sheltered**		**Unsheltered**	
	Single Adults	**Adults in Families**	**Single Adults**	**Adults in Families**
Black or African American	28%	39%	19%	16%
White	52%	37%	49%	39%
Hispanic/Latino	18%	29%	14%	26%
Other or Unknown	18%	23%	29%	53%

Source: CT Counts 2007

As in other parts of the survey, respondents were able to check off any category in which they fit.

The *Connecticut Counts 2007* final report as well as the DSS annual report reveals that the state mimics certain national demographic trends with regard to the homeless population: most are single adults, half of whom have a behavioral health disability and half of whom have been homeless for longer than one year. Singles are mostly male, and

aging. Families are younger, have much lower levels of disability, and are homeless for shorter periods. Of those not yet homeless, at risk populations are families living below the federal poverty levels, individuals released from correctional institutions, women and children leaving domestic abuse shelters, people suffering from severe mental health or substance abuse problems, and young people no longer age-eligible for foster care or those leaving the juvenile justice system.

While shelters do not provide a solution to homelessness, they are crucial to a well-functioning society. Many of the homeless are in need of mental health services, substance abuse services, self-care assistance, HIV/AIDS treatment, and range of other types of counseling. Increasing the number of facilities that cater to these needs while at the same time providing temporary, dependable residence, is one major avenue to address the problem of homelessness.

Incarceration

The Connecticut Department of Correction's 2008 Annual Report states that there were 19,413 people incarcerated in the 18 Connecticut facilities. The number of admissions for the 2007/2008 fiscal year was 34,541 and the number of releases for the same period was 34,016. The average age for males is 33 and the average age for females is 34. Ten inmates are on death row, with the last execution being in 2005. Table 14 displays the demographic composition of the incarcerated population by gender, race/ethnicity, and age in Connecticut for 2002, 2003, and 2004. The data show that the largest subpopulation is African-American and overwhelmingly male. Most inmates are between the ages of 19 and 45 that are usually the most productive years of one's life.

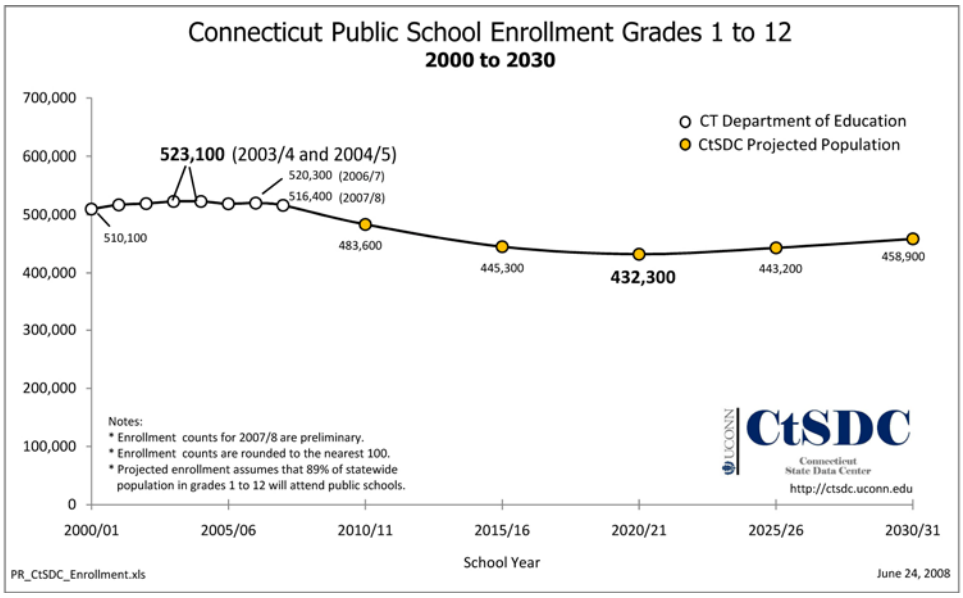
Table 14: Connecticut's Incarcerated Population				
		2002	**2003**	**2004**
Total		17,999	19,216	18,523
Gender	Male	16,760	17,786	17,150
	Female	1,239	1,430	1,373
Race/Ethnicity	Black	8,221	8,618	8,134
	White	4,867	5,409	5,208
	Hispanic	4,792	5,060	5,017
	Other	119	129	164
Age	Below 16	11	14	24
	16-18	739	752	639
	19-20	1,295	1,301	1,151
	21	770	816	703
	22-24	2,324	2,485	2,370
	25-27	1,897	2,144	2,189
	28-30	1,813	1,804	1,807
	31-35	3,032	3,172	2,963
	36-45	4,441	4,848	4,698
	46-60	1,511	1,710	1,803
	Above 60	166	170	176

Source: CT Consolidated Plan for Housing and Community Development 2005-2009

Student Population

The Connecticut State Data Center (CtSDC) created Chart 2 to show the past, present, and future of Connecticut's public school enrollment rate for grades 1 to 12. Chart 2 suggests a 17% decrease in the enrollment rate from the 2007/08 school year through 2020/21. From October 2006 through October 2007, 131 school districts (67%) experienced reduced enrollment or it was unchanged. For the same period, enrollment for the state as a whole dropped by 4,000 (0.7%). The CtSDC projects that enrollment will decline by 100,000 in grades 1 through 12 by 2020; however, it projects a net gain of 6% in K-12 population in the urban core and urban periphery from 2000 through 2030.

Chart 2: Connecticut School Enrollment Past, Present and Projected



Educational Attainment

In addition to the age distribution of a region's population, educational attainment measures the quality of training of the underlying population, and speaks to the overall quality of the labor force and the likelihood that high value-added and technology-focused job opportunities will be attracted to the area. Table 15 displays educational attainment levels by county, grouped into three major categories: less than high school (grades K-12), high school or more (high school graduate and any form of college schooling), and bachelor's degree or higher.

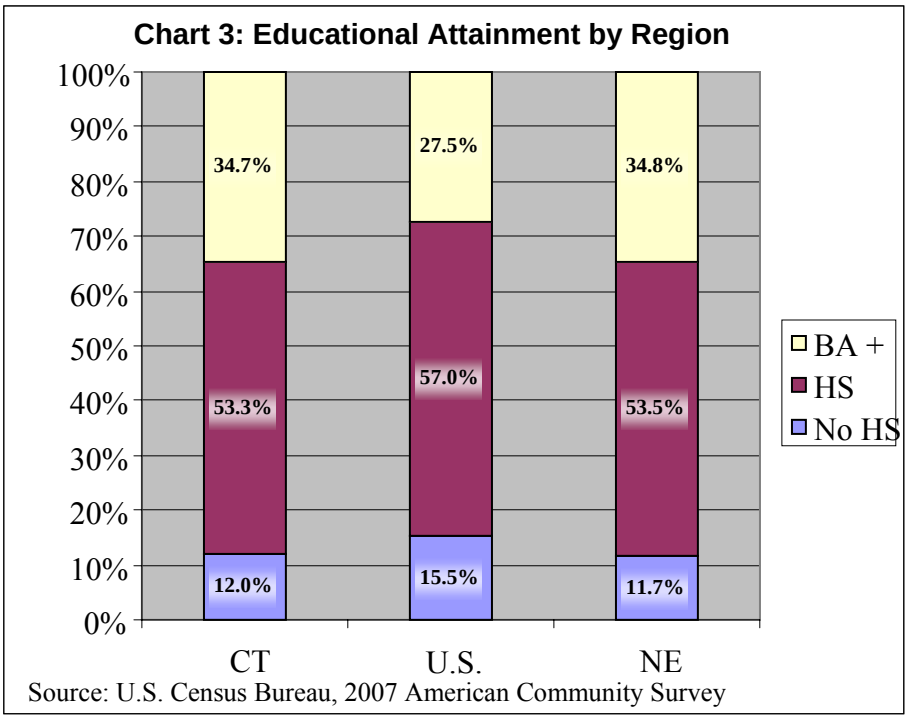
Table 15: Connecticut Educational Attainment

	Connecticut	Fairfield	Hartford	Litchfield	Middlesex	New Haven	New London	Tolland	Windham
Population Age 25 Years and Over	2,359,568	596,640	594,121	64,424	113,537	567,591	181,845	93,843	78,690
Less than 9th Grade	4.6%	4.9%	5.3%	3.6%	3.0%	5.0%	3.6%	1.6%	5.2%
Grades 9-12	7.4%	7.0%	8.2%	5.1%	5.3%	7.9%	7.2%	4.8%	10.4%
High School or more	***88.2%***	***88.0%***	***86.5%***	***91.4%***	***91.8%***	***87.1%***	***89.3%***	***93.6%***	***84.5%***
High School Graduate	29.5%	24.9%	29.1%	31.7%	30.1%	31.7%	33.5%	27.5%	38.6%
Some College, No Degree	16.5%	14.4%	15.8%	18.5%	17.7%	17.4%	18.8%	17.7%	17.5%
Associate Degree	7.5%	6.0%	8.1%	8.6%	8.1%	7.4%	7.9%	9.8%	7.5%
Bachelor's Degree or more	***34.7%***	***42.7%***	***33.5%***	***32.6%***	***35.9%***	***30.6%***	***29.1%***	***38.6%***	***20.9%***
Bachelor's Degree	19.3%	24.1%	19.2%	20.2%	19.0%	16.2%	15.2%	20.9%	12.1%
Graduate or Prof. Degree	15.4%	18.6%	14.3%	12.4%	16.9%	14.4%	13.9%	17.7%	8.8%

Source: U.S. Census Bureau, 2007 American Community Survey

While the range of attainment for high school education is relatively uniform—all counties are within 4.5 percentage points of the 89% mark—the population share for attainment of college degrees varies more widely with Fairfield County's populace who attain postsecondary degrees at two times the rate of residents in Windham County.

Chart 3 compares 2007 educational attainment levels on a regional scale, evaluating Connecticut (CT), New England (NE), and the United States. The level of educational attainment in Connecticut and New England exceeds the national average. Relative to the United States, Connecticut and New England have larger shares of their populations holding bachelor level or higher degrees.



HIV/AIDS

HIV/AIDS continues to be a major concern in Connecticut. The disease first appeared in the state during the early 1980s, and the number of HIV/AIDS cases continues to rise despite a slowing rate of growth. As of 2008, the Connecticut Department of Public Health reported there were 10,860 persons living with HIV/AIDS (PLWHA). However, this number is almost certainly an underestimate of actual HIV/AIDS cases in the state because HIV reporting was not required prior to 2002 and some PLWHA are not aware of their infection. Table 16 provides a sense of the trend in HIV/AIDS cases in Connecticut over the last year.

Table 16: Trends in HIV/AIDS Cases

Year	Reported AIDS	Reported HIV	Deaths	Prevalent HIV AIDS
1998	642	4	309	5,977
1999	580	3	315	6,378
2000	580	4	303	6,791
2001	553	3	288	7,164
2002	592	253	284	7,880
2003	688	253	270	8,497
2004	671	266	295	9,025
2005	569	732	253	9,478
2006	508	767	223	9,957
2007	418	772	219	10,426
2008	358	387	16	10,860

Source: CT Dept. Public Health 2008

The PLWHA population in Connecticut is concentrated in the three largest urban areas in the state: Hartford, New Haven, and Bridgeport. These three cities contain 4,998 PLHWA, which is 46% of the total PLWHA population in Connecticut. Table 17 provides specific numbers of PLWHA in selected Connecticut cities.

Table 17: PLWHA in Selected Cities

Town of Residence	People Living with HIV/AIDS
Bloomfield	77
Bridgeport	1,343
Bristol	89
Danbury	225
East Hartford	205
East Haven	69
Greenwich	69
Hamden	125
Hartford	2,075
Manchester	93
Meriden	218
Middletown	153
Milford	64
New Britain	404
New Haven	1,580
New London	192
Norwalk	352
Norwich	145
Stamford	543
Stratford	98
Torrington	64
Wallingford	64
Waterbury	701
West Hartford	79
West Haven	197
Windham	120
Other Towns	1,516
Total (Statewide)	**10,860**

Source: CT Dept. of Public Health 2008

Trends and Projections

Aging Population

As the state's population ages in place, young talent is not replenishing those retiring—the birth rate is below replacement and young adults continue to leave the state. Within twenty-two years (from 2000-2030), 374,534 more people (totaling 817,719) will be 65 years of age and older.[4] This is an increase of 75% from 2000. The troubling part is that this group will balloon from 14% of the overall state population in 2000, to 22% in 2030. There will be a larger number of people in the over 65 category, as well as a higher percentage of our population. In this same period—as the current 30 to 64 year olds move into the next age range—the 20-29 year olds are not staying in Connecticut to keep the relative shares constant.

The problem is two-fold: 85% of businesses surveyed in 2007 said that they have no strategy in place to offset the impending retirement of the baby-boomer generation,[5] and there is a talent shortage already. With the loss of this generation of employees goes a deep-rooted institutional knowledge that will take years for new workers to replace. Some ways firms have tackled this problem is to offer flextime to retirement age workers in order to keep them until they find replacements, or keep them on a short-term basis to teach the new wave of workers.[6]

There are only two ways to reverse this trend: rely solely on immigrants coming into the state or focus on keeping recent high school and college graduates in Connecticut. The future of the state hinges on whether thousands of young people will launch their educations, their graduate studies, and their careers in New England.[7] Moreover, it is crucial to find entry-level jobs that offer sufficient pay and upward mobility to entice young Connecticut students to stay. Without a steady wage and the ability to earn higher pay, graduates and other young adults are leaving the state due to the high cost of living that includes housing, energy and taxes among others.[8] Policies to stimulate more entry-level, non-service jobs are imperative to stem the tide of the graying Connecticut workforce.

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[4] Connecticut State Data Center. *CtSDC: 2010 to 2030 Population Projections – State-Wide Stand-Alone.* <http://ctsdc.uconn.edu/Projections.html>

[5] Boston.com – HR Center. *Aging workforce a challenge for most firms in the regions, NEHRA survey says.* Boston.com, HR Center. <http://www.boston.com/jobs/nehra/072307.shtml>

[6] Business Wire, *The New England Council releases studies on Connecticut's aging workforce.* 29 March 2007. <http://www.businesswire.com/portal/site/google/?ndmViewId=news_view&newsId=20070329005770&newsLang=en>

[7] Coelen, Stephen and Joseph Berger. *New England 2020: A forecast of educational attainment and its implications for the workforce of New England state.* http://www.nmefdn.org/uploads/NE_2020_FR.pdf.

[8] The Connecticut Business and Industry Association surveys have documented this phenomenon.

Migration

As the demographics of Connecticut change, minorities will assume a larger role in the future workforce. By 2012, 40% of young workers in Connecticut will be minorities; while by 2020, 50% of young workers in Connecticut will be minorities (footnote 6). The growing role for minorities should allow more opportunity for jobs and prosperity in the near future. However, high school graduation rates among working age (25-64) Hispanics in Connecticut is 70.1%, compared to 85.6% for blacks and 94.6% of whites.[9]

This trend continues in post-secondary education as well. There is an 18% gap between whites and minorities in the percentage of 25- to 64-year-olds with a bachelor's degree or higher in Connecticut, which is one of the largest gaps in the United States. Among the same population, 13% of Hispanics, and 16% of blacks, the largest minority populations in Connecticut, have a bachelor's degree or higher, compared with 41% of whites.[10] Moreover, 40% of the Hispanic population that began college completed it with a four-year degree compared to 56% of the white population (footnote 6).

This is a disturbing trend considering Connecticut's workforce will rely increasingly on minority groups to fill its ranks in the future. Educational policies need to reflect diversity in the workforce and embrace the changing demographics of our state. It is important to allow access to all citizens looking for a proper education. Although Connecticut's most available jobs over the next ten years require just on-the-job training, high-paying, stable jobs are available to those with some post-high school education.

Over a third (34%) of Connecticut's job openings in the next ten years require post-secondary education, while 38% require short-term on-the-job training.[11] However, the difference in average wage for those occupations requiring only short-term on-the-job training (most notably cashiers, retail salespersons and wait-staff) and those occupations requiring post-secondary education (such as registered nurses, accountants and lawyers) is close to $20 per hour (footnote 11). The incentive to pursue higher education is clear, yet there is still a gap in Connecticut minority achievement.

Since 2000, Connecticut has lost a higher percentage of its 25- to 34-year-old population than any other state in the nation. The state's population for that age cohort declined by 10.8% from 2000 to 2007 (Chart 4). The U.S. Census Bureau projects this lower percentage of working-age residents to continue through 2030.

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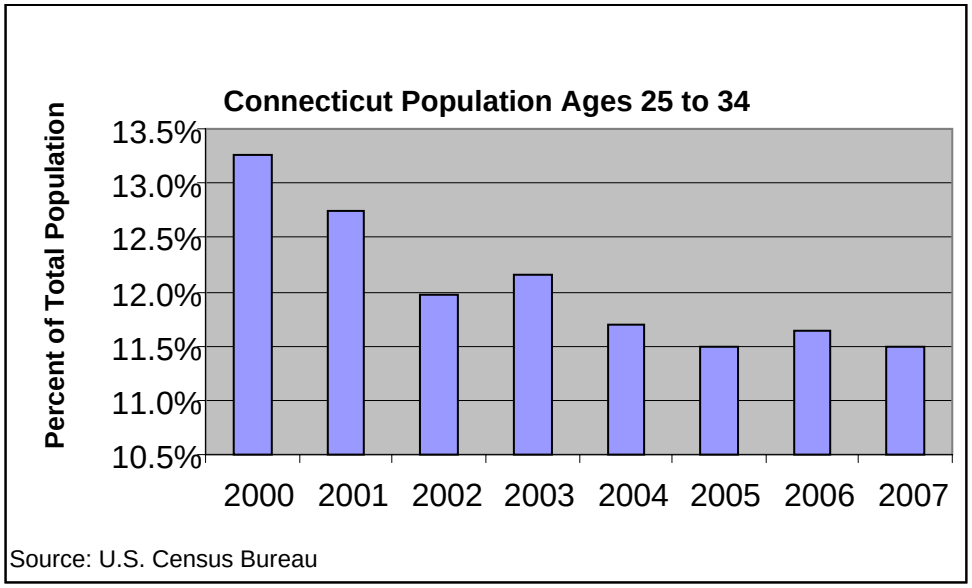
[9] US Census Bureau. *American Community Survey Public Use Microdata Sample,* http://factfinder.census.gov/home/en/acs_pums_2007_3yr.html.
[10] The National Center for Public Policy and Higher Education. *Measuring Up 2008.* http://measuringup2008.highereducation.org/print/state_reports/long/CT.pdf.
[11] Connecticut Department of Labor – Labor Market Information. *Connecticut Job Outlook by Training Level 2006-2016.* http://www.ctdol.state.ct.us/lmi/pubs/soaring_2006-16.pdf.

Chart 4: The Brain Drain



Maintaining a healthy proportion of working-age residents is critical to any state. Members of that group make an important contribution to the regional tax base, which helps support older and younger members of the population and the social and educational services they require.

A possible factor contributing to the loss of young workers includes Connecticut's relatively high housing prices. From 2000 to 2007, the median home sales price in Connecticut rose by 73.6%, and the median gross rent in the state increased by 26.8%. Many of Connecticut's younger working residents may have been drawn to other states with lower costs of living.[12]

SUMMARY

The State of Connecticut's population is growing slowly, but the workforce that Connecticut needs is moving away. Since the 1990 census, the urban population has moved into suburbia, baby boomers are retiring and moving to warmer climates, minority immigrant rates are rising, and young people (ages 25-44) are leaving in record numbers because the cost of living is too expensive. The largest generation in 1990 (ages 25-34) is still the largest generation in 2007 (ages 45-54); businesses will be struggling for workers once this generation moves on. Connecticut is on pace with New England educational attainment percentages and ahead of the nation's averages, but a focus on increasing these shares is paramount for the future of the state.

[12] Presentation by Peter Francese, February 15, 2008 at the CBIA Outlook Conference.

Appendix: Population Changes (Levels) by Town 1990, 2000, 2007

Table 1: Connecticut Population Estimates by Town for 1990, 2000, and 2007

Town	1990	2000	2007	Town	1990	2000	2007
Andover	2,540	3,036	3,181	Franklin	1,810	1,835	1,891
Ansonia	18,403	18,554	18,550	Glastonbury	27,901	31,876	33,169
Ashford	3,765	4,098	4,453	Goshen	2,329	2,697	3,168
Avon	13,937	15,832	17,333	Granby	9,369	10,347	11,215
Barkhamsted	3,369	3,494	3,665	Greenwich	58,441	61,101	61,871
Beacon Falls	5,083	5,246	5,770	Griswold	10,384	10,807	11,390
Berlin	16,787	18,215	20,254	Groton	45,144	39,907	42,324
Bethany	4,608	5,040	5,566	Guilford	19,848	21,398	22,373
Bethel	17,541	18,067	18,514	Haddam	6,769	7,157	7,800
Bethlehem	3,071	3,422	3,549	Hamden	52,434	56,913	57,698
Bloomfield	19,483	19,587	20,693	Hampton	1,578	1,758	2,118
Bolton	4,575	5,017	5,116	Hartford	139,739	121,578	124,563
Bozrah	2,297	2,357	2,444	Hartland	1,866	2,012	2,077
Branford	27,603	28,683	28,984	Harwinton	5,228	5,283	5,564
Bridgeport	141,686	139,529	136,695	Hebron	7,079	8,610	9,232
Bridgewater	1,654	1,824	1,884	Kent	2,918	2,858	2,952
Bristol	60,640	60,062	60,911	Killingly	15,889	16,472	17,710
Brookfield	14,113	15,664	16,413	Killingworth	4,814	6,018	6,443
Brooklyn	6,681	7,173	7,886	Lebanon	6,041	6,907	7,354
Burlington	7,026	8,190	9,143	Ledyard	14,913	14,687	15,097
Canaan	1,057	1,081	1,094	Lisbon	3,790	4,069	4,205
Canterbury	4,467	4,692	5,100	Litchfield	8,365	8,316	8,671
Canton	8,268	8,840	10,086	Lyme	1,949	2,016	2,076
Chaplin	2,048	2,250	2,528	Madison	15,485	17,858	18,793
Cheshire	25,684	28,543	28,833	Manchester	51,618	54,740	55,857
Chester	3,417	3,743	3,834	Mansfield	21,103	20,720	24,884
Clinton	12,767	13,094	13,578	Marlborough	5,535	5,709	6,351
Colchester	10,980	14,551	15,495	Meriden	59,479	58,244	59,225
Colebrook	1,365	1,471	1,529	Middlebury	6,145	6,451	7,252
Columbia	4,510	4,971	5,331	Middlefield	3,925	4,203	4,248
Cornwall	1,414	1,434	1,480	Middletown	42,762	43,167	47,778
Coventry	10,063	11,504	12,192	Milford	49,938	52,305	55,445
Cromwell	12,286	12,871	13,552	Monroe	16,896	19,247	19,402
Danbury	65,585	74,848	79,226	Montville	16,673	18,546	19,744
Darien	18,196	19,607	20,246	Morris	2,039	2,301	2,345
Deep River	4,332	4,610	4,673	Naugatuck	30,625	30,989	31,931
Derby	12,199	12,391	12,434	New Britain	75,491	71,538	70,664
Durham	5,732	6,627	7,397	New Canaan	17,864	19,395	19,890

East Granby	4,302	4,745	5,122	New Fairfield	12,911	13,953	14,100
East Haddam	6,676	8,333	8,852	New Hartford	5,769	6,088	6,736
East Hampton	10,428	13,352	12,548	New Haven	130,474	123,626	123,932
East Hartford	50,452	49,575	48,697	New London	28,540	25,671	25,923
East Haven	26,144	28,189	28,632	New Milford	23,629	27,121	28,439
East Lyme	15,340	18,118	18,690	Newington	29,208	29,306	29,619
East Windsor	10,081	9,818	10,617	Newtown	20,779	25,031	26,790
Eastford	1,314	1,618	1,789	Norfolk	2,060	1,660	1,652
Easton	6,303	7,272	7,366	North Branford	12,996	13,906	14,406
Ellington	11,197	12,921	14,426	North Canaan	3,284	3,350	3,352
Enfield	45,532	45,212	45,011	North Haven	22,247	23,035	24,002
Essex	5,904	6,505	6,753	North Stonington	4,884	4,991	5,212
Fairfield	53,418	57,340	57,548	Norwalk	78,331	82,951	83,456
Farmington	20,608	23,641	25,084	Norwich	37,391	36,117	36,432
Old Lyme	6,535	7,406	7,384	Stratford	49,389	49,976	49,015
Old Saybrook	9,552	10,367	10,539	Suffield	11,427	13,552	15,104
Orange	12,830	13,233	13,813	Thomaston	6,947	7,503	7,818
Oxford	8,685	9,821	12,527	Thompson	8,668	8,878	9,231
Plainfield	14,363	14,619	15,450	Tolland	11,001	13,146	14,631
Plainville	17,392	17,328	17,193	Torrington	33,687	35,202	35,451
Plymouth	11,822	11,634	12,011	Trumbull	32,016	34,243	34,752
Pomfret	3,102	3,798	4,165	Union	612	693	751
Portland	8,418	8,732	9,537	Vernon	29,841	28,063	29,620
Preston	5,006	4,688	4,902	Voluntown	2,113	2,528	2,612
Prospect	7,775	8,707	9,273	Wallingford	40,822	43,026	44,679
Putnam	9,031	9,002	9,292	Warren	1,226	1,254	1,384
Redding	7,927	8,270	8,840	Washington	3,905	3,596	3,671
Ridgefield	20,919	23,643	23,872	Waterbury	108,961	107,271	107,174
Rocky Hill	16,554	17,966	18,808	Waterford	17,930	19,152	18,775
Roxbury	1,825	2,136	2,319	Watertown	20,456	21,661	22,128
Salem	3,310	3,858	4,102	West Hartford	60,110	63,589	60,486
Salisbury	4,090	3,977	3,987	West Haven	54,021	52,360	52,676
Scotland	1,215	1,556	1,725	Westbrook	5,414	6,292	6,618
Seymour	14,288	15,454	16,240	Weston	8,648	10,037	10,200
Sharon	2,928	2,968	3,022	Westport	24,410	25,749	26,508
Shelton	35,418	38,101	40,011	Wethersfield	25,651	26,271	25,781
Sherman	2,809	3,827	4,110	Willington	5,979	5,959	6,139
Simsbury	22,023	23,234	23,659	Wilton	15,989	17,633	17,715
Somers	9,108	10,417	10,850	Winchester	11,524	10,664	10,748
South Windsor	22,090	24,412	25,940	Windham	22,039	22,857	23,678

Southbury	15,818	18,567	19,678	Windsor	27,817	28,237	28,754
Southington	38,518	39,728	42,142	Windsor Locks	12,358	12,043	12,491
Sprague	3,008	2,971	2,981	Wolcott	13,700	15,215	16,407
Stafford	11,091	11,307	11,786	Woodbridge	7,924	8,983	9,201
Stamford	108,056	117,083	118,475	Woodbury	8,131	9,198	9,654
Sterling	2,357	3,099	3,725	Woodstock	6,008	7,221	8,188
Stonington	16,919	17,906	18,343				

Source: 1990 and 2000 US Census, 2007 Connecticut Department of Public Health

B. Factors of Economic Growth

Housing Market and Housing Affordability

Housing and the Economy

Overview

The role of housing or rather the role of housing construction and maintenance as an economic driver is well understood and recognized. Construction activity is economic activity—goods and materials are produced, sold, and purchased and jobs are created—and the largest portion of most people's personal consumption is related to housing.

The National Association of Home Builders (NAHB) estimates that for every 100 single family homes built in a "typical U.S. metropolitan area," $16 million in local income and $1.8 million in taxes and other revenue for local governments are generated, and 284 local jobs are created.[1] These are "one-year impacts that include both the direct and indirect impact of the construction activity itself and the impact of local residents who earn money from the construction activity spending part of it within the local area" (footnote 1). These same 100 units will also generate $3.2 million in local income, $648,000 in taxes and other revenue for local governments, and 63 local jobs annually.

NAHB also estimates that "the one-year local impacts" of building 100 multifamily units in the "typical U.S. metropolitan area include, $7 million in local income, $710,000 in taxes and other revenue for local governments, and 133 local jobs" (one year impacts) (footnote 1). These same 100 units will also generate "$3.2 million in local income, $461,000 in taxes and other revenue for local governments, and 52 local jobs" (footnote 1).

As illustrated above, housing contributes to economic output in two ways: 1) new construction, remodeling, and real estate transaction fees; and 2) personal consumption of housing related goods and services (e.g. furniture, appliances, house cleaning, lawn care, etc.).

Home building and housing services account for approximately 15.24% of Connecticut's gross domestic product[2] – about $31 billion annually.

[1] "The Local Impact of Home Building in a Typical Metropolitan Area Income, Jobs, and Taxes Generated," National Association of Home Builders, October 2005.

[2] Housing's Contribution to Gross State Product: In-Depth Analysis, National Association of Home Builders September 6, 2005, Natalia Siniavskaia, Ph.D.

At fifteen percent of the state's economy, it is clear that housing is an important economic driver, however, equally important is the role housing plays as a facilitator of economic growth.

Above all else, to operate, businesses need people. Even the most automated factories have workers, and workers need a place to live. This simple, but often overlooked relationship was not lost on Samuel Colt. Colt, who understood that affordable, quality housing was an absolute necessity in attracting skilled workers "built a community surrounding the [Colt] factory that included housing, gardens, and a social hall and library."[3]

Times have, of course, changed. In Colt's day it was in the best interest of businesses to safeguard their large fixed investments (factories) and maintain their skilled workforce by investing in workforce housing. In today's global economy however, businesses are highly mobile and fixed investments are not as fixed as they once were; instead of investing in housing for their workers, companies locate where workforce housing is readily available. Mobility is not just true for businesses. Today's workforce is equally mobile. Advances in communications technology (the internet, email, cell phones, etc.) and the availability, diversity, and relatively low cost of transportation have made it possible for long-distance relationships to be maintained in a highly personal and near "real-time" way.

This new mobility does not change the fact that available and affordable housing are an absolute necessity for economic growth. What changes is "who" needs to make the investment. The reality is that neither businesses nor workers have to make the investment because they can relocate to where the housing is both available and affordable.

Housing as a Facilitator of Economic Growth

The relationship between the availability and affordability of housing and economic growth is fairly simple. In order for businesses to grow, they need skilled workers. As more workers move into a region, demand for housing increases.

Basic economic theory tells us that the quantity demanded rises as prices fall and that the quantity supplied rises as prices rise. When the quantity supplied exceeds the quantity demanded prices tend to fall and, conversely, when the quantity demanded exceeds the quantity supplied prices tend to rise.

[3] Coltsville Special Resource Study, U.S. Department of the Interior, National Park Service, www.coltsvillestudy.org, September 20, 2005

Further, the willingness of a producer to produce a good diminishes as the price the market is willing to pay for that good approaches the cost of producing and selling that good.

Affordability and Employment Growth

Section 8-39a of the Connecticut General Statutes (CGS) defines "Affordable Housing" as housing for which persons and families pay 30% or less of their annual income, where such income is less than or equal to the area median income for the municipality in which such housing is located, as determined by the United States Department of Housing and Urban Development (HUD).

In practical terms this means that for renters, rent plus utilities and any common charges paid by the tenant should not exceed 30% of their gross income and for homeowners, mortgage payments (principal and interest), plus property taxes due, private mortgage insurance (PMI), homeowners insurance, and utilities should not exceed 30% of their gross income.

The federal government, through HUD, the U.S. Census Bureau, and the Rural Housing Service (RHS), also considers annual housing costs (including utility payments) to be "affordable" if they do not exceed 30% of a family's annual income.

Affordability is also relative, relative not only to what a household can afford, but to what it can get for its money – "value" – and, generally speaking, households seek to maximize "value" and obtain the most housing they can afford. Therefore, according to the aforementioned definitions, housing can be affordable or unaffordable at any level of income.

The term "affordable housing" has most often been associated with "public" or "subsidized" housing for persons with incomes at or below 80% (low-income), 50% (very low-income), or 30% (extremely low-income) of a given area's median income (AMI)/median family income (MFI)—housing the private sector (aka the "market") is unable or unwilling to produce without some form of subsidy.

Increasingly, housing that the market is unable or unwilling to produce, without some form of subsidy, includes housing that is traditionally for those with incomes between 80% and 120% (and up to 140-150% in high cost areas) of AMI/MFI.

If housing that is affordable to households with incomes between 80% and 120% of AMI/FMI is not being produced, then the availability of existing housing in that price range diminishes. In keeping with the economic laws of supply and demand, scarcity increases prices.

This brings us to the situation facing Connecticut today. Housing prices and rents have increased faster than wages, and the overall supply of housing units has not increased sufficiently to meet the need—especially for those households with income at or below 120% of AMI/MFI.

These trends have great economic consequences for the state's economy and its prospects for future economic growth.

In their paper entitled "Sustaining the Mass Economy: Housing Costs, Population Dynamics, and Employment,"[4] Bluestone et al. show that there is a clear and significant statistical link between housing costs and net migration and employment growth. Based on this finding they conclude that "…to support employment growth and reduce out-migration, particularly of young workers, we need to find ways to increase the supply of housing so as to reduce the rate of price and rent appreciation" (footnote 4).

Another effect of high housing costs is that workers are forced to seek housing in lower cost areas, causing them to live farther from their places of employment. This leads to longer commute times. Rising fuel costs and limited mass transit options may make commuting difficult or even impossible and/or erode any costs savings that accrue from relocating.

In their paper entitled "The Effects of Housing Prices, Wages and Commuting Time on Joint Residential and Job Location Choices," So, Orazem, and Otto (2001) show that "housing choices of where to live and work involve trade-offs between wages, commuting time and living costs" (footnote 4) and that the probability of choosing the commuting option is negatively related to the commuting distance [and commuting time], with the probability going to zero when the one-way commute approaches one hour " (footnote 4). Factors such as the childcare needs and the level of education of an individual serve to shorten the one-hour tolerance. Child care needs can make commuting more costly and onerous because "coordinating childcare and job responsibilities is complicated when they are located 30 minutes apart" (footnote 4) and the level of one's education is both correlated to the value one puts on the time spent commuting and is "positively related to the ease of obtaining information on job openings across labor markets" (footnote 4). This strongly suggests that the young, skilled workers which Connecticut is desperate to attract are highly discouraged from coming to Connecticut by long commutes.

Another aspect of workers relocating from higher cost to lower cost areas is that, as noted by the Washington State Housing Partnership, "the spillover of housing demand from

[4] Sustaining the Mass Economy: Housing Costs, Population Dynamics, and Employment, Barry Bluestone, et al, Northeastern University, prepared for the Boston Federal Reserve/Rappaport Institute for Greater Boston Conference on *Housing and the Economy in Greater Boston: Trends, Impacts and Potential Responses*, May 22, 2006.

high income, job-rich areas to more affordable areas," causes a ripple effect, "because those affordable areas are tied to their own job base, [and] the rising prices caused by spillover demand push workers in a previously affordable area out, and they, in turn spill over to the next most affordable area."[5]

Housing costs in Connecticut are high and have increased sharply over the past several years in great part because the supply of existing housing is constrained. As noted above, scarcity increases prices. High housing costs encourage out-migration and discourage in-migration. High housing costs lengthen commutation distances and commutation time, which in turn puts upward pressure on wages and further encourages out-migration. As Bluestone states "…if we are to support employment growth and reduce out-migration, particularly of young workers, we need to find ways to increase the supply of housing so as to reduce the rate of price and rent appreciation."[6] Increasing the supply of housing clearly appears to be a major part of the solving both Connecticut's housing cost and employment growth problems.

If the answer is simply building more housing units why aren't they being built? If the demand for more housing truly exists, wouldn't the market be reacting to fill the need? As stated earlier, the willingness of a producer to produce a good diminishes as the price the market is willing to pay for that good approaches the cost of producing and selling that good. The cost of producing a unit of housing in Connecticut is high. The largest fixed cost for a housing producer is the cost of land, which in Connecticut is very expensive. The same size building lot can accommodate numerous types and sizes of housing. Producers will naturally put their resources toward those endeavors that provide the greatest return. Therefore, after making a sizable investment in a plot of land, a market driven producer of housing will seek to maximize their return by producing the size and type of housing that a) will have the highest profit margin and b) can be produced the fastest (because time is money). The Washington State Housing Partnership notes that homebuilders "still operate from the rule of thumb that the final price of a house should be between three and four times the price of the finished building lot."[7]

Affordable Housing and Wages

An issue often raised when discussing the affordability of housing in Connecticut is the concept of a "living wage." The fact that Connecticut is, relative to many other states, an expensive state in which to live is indisputable. Connecticut is at the end of the energy

[5] Jobs and Housing: "Can't Have One Without the . . .Other", The Housing Partnership in association with the Washington Association of Realtors, December, 2005
[6] Sustaining the Mass Economy: Housing Costs, Population Dynamics, and Employment, Barry Bluestone, et al, Northeastern University, prepared for the Boston Federal Reserve/Rappaport Institute for Greater Boston Conference on *Housing and the Economy in Greater Boston: Trends, Impacts and Potential Responses*, May 22, 2006
[7] Jobs and Housing: "Can't Have One Without the . . .Other", The Housing Partnership in association with the Washington Association of Realtors, December, 2005

pipeline and has little indigenous power generation, making energy in Connecticut more expensive than in other states. Demand for housing far exceeds supply that drives up the cost of housing across the board. To address the issue of housing affordability, some have called for the institution of a standard wage equivalent to the level of compensation needed to ensure residents pay no more than 30% of their earnings on housing. Though the goal of this effort is laudable as a solution to the affordability issue, it is not so simple because it does not get to the root of the problem, but merely attempts to address one of the consequences of the actual problem.

Since 1999, the state has published a self-sufficiency standard known as a "living wage." A self-sufficiency standard varies by household composition and geographic location. Therefore, the amount of money a family needs to be economically self-sufficient depends on family size and composition, the age of family dependents and where the family lives. For example, according to the most recent OPM/OWC report, "The Self-Sufficiency Standard For Connecticut" (written pursuant to C.G.S. Section 4-66e)[8], a single adult in Hartford with no children needs to earn $7.00 per hour to meet basic needs whereas an adult with a pre-school child will need to earn $15 per hour. With two children, that single adult would need to earn $21 per hour. In a two-adult household with two children, each adult would need to earn $11.25 per hour. In Stamford, the hourly wages for the aforementioned households range from $10.91 per hour to $29 per hour for a single wage earner and $15.18 per hour for dual wage earners with two pre-school aged children. The calculation of a living wage does not end with determining what a family's expenses are. Connecticut and the federal government provide low- and moderate-income families with significant subsidies to lower the wage required to meet the family's economic needs. The bottom line is that promulgating a single wage standard can be misleading and the application of a policy such as this could exacerbate the problems it seeks to remedy.

Meeting the Challenge of Affordable Housing and Economic Growth in Connecticut

There is no question a critical lack of quality affordable housing exists in Connecticut. Equally, it cannot be disputed that this lack of quality affordable housing has a negative effect on the state's economy and is constraining job creation. It is our contention, however, that the affordability problem is more one of critical disequilibria between supply and demand than the individual's economic ability to afford housing. The former directly influences/dictates the latter and as such the approach to remedying the affordability problem should be rooted in expanding the supply of quality affordable housing in Connecticut and not in overt manipulation of wage rates and/or the labor market. This "philosophy" is reflected in the state's *Consolidated Plan for Housing and Community Development* and *State Long-Range Housing Plan*. As stated above,

[8] http://www.wowonline.org/ourprograms/fess/state-resources/SSS/The%20Self-Sufficiency%20Standard%20for%20Connecticut%201999.pdf

nurturing economic growth requires a comprehensive and holistic approach. The affordability of housing is but one of several interconnected factors that form the foundation from which economic growth can occur. Other factors include transportation and education systems, healthcare access, energy, and the preservation and support of the state's culture and arts assets.

General Characteristics of Connecticut's Housing Market

Housing Supply: Trends and Current Picture

Housing supply is defined as the total available supply of housing units; the physical structures including apartments, condominiums, mobile homes, single- and multiple-household detached units.

Housing stock is the inventory of both occupied housing units and available vacant housing units. Housing units are classified as either renter or owner occupied. It is important to analyze the composition of the housing stock, the number of units available, to calculate vacancy rates. These rates are useful for making projections about the availability of housing and identifying how housing supply will meet demand in future years. For example, low vacancy rates may indicate a small number of available units to meet existing demand. Because vacant units are not always available units (e.g. seasonal or migratory homes), it is important to note that in this analysis, vacant units refer only to available housing units.

Current Household Trends

The most basic way to capture the statewide demand for housing is to profile current homeowners in the state. Table 1 provides the total number of households in each Connecticut county, and also gives a clear demographic picture of housing demand by family type.

Table 1: Household Types						
State/ County	**Total Households**	**Family - married couple**	**Family - male householder, no wife present**	**Family - female householder, no husband present**	**Householder living alone**	**Householder not living alone**
Connecticut	1,320,714	673,742	51,621	160,108	356,145	79,098
Fairfield	323,848	174,915	11,768	36,973	82,773	17,419
Hartford	337,162	160,169	13,804	46,906	97,979	18,304
Litchfield	73,732	41,583	2,407	6,929	19,440	3,373
Middlesex	64,770	34,934	2,487	5,201	17,733	4,415
New Haven	321,203	155,395	12,536	43,784	88,413	21,075
New London	102,995	52,945	4,286	10,955	27,993	6,816
Tolland	53,377	31,446	2,208	3,950	10,655	5,118
Windham	43,627	22,355	2,125	5,410	11,159	2,578

Source: ACS 2007

Differentiating between age cohorts is an important part of analyzing housing demand in Connecticut, a state which struggles to retain its young workforce population. Table 2 provides a percentage breakdown by age of householders in Connecticut.

Table 2: Age of Householder			
Age Group	**Total**	**Owner**	**Renter**
Under 35 years	16.71%	10.17%	31.98%
35 to 44 years	21.19%	21.19%	21.19%
45 to 54 years	23.18%	25.36%	18.08%
55 to 64 years	17.49%	20.18%	11.19%
65 to 74 years	10.41%	11.68%	7.44%
75 to 84 years	7.68%	8.37%	6.09%
85 years and over	3.34%	3.04%	4.03%

Source: ACS 2007

Charts 1 and 2 show household growth for each county from 1990 to 2007. Each county experienced positive growth over this period. The most significant growth occurred in the more urban counties of Connecticut: New Haven, Fairfield, and Hartford. For these three counties, the less drastic growth after 2000 should be noted.

Chart 1: Household Trend by County (a)

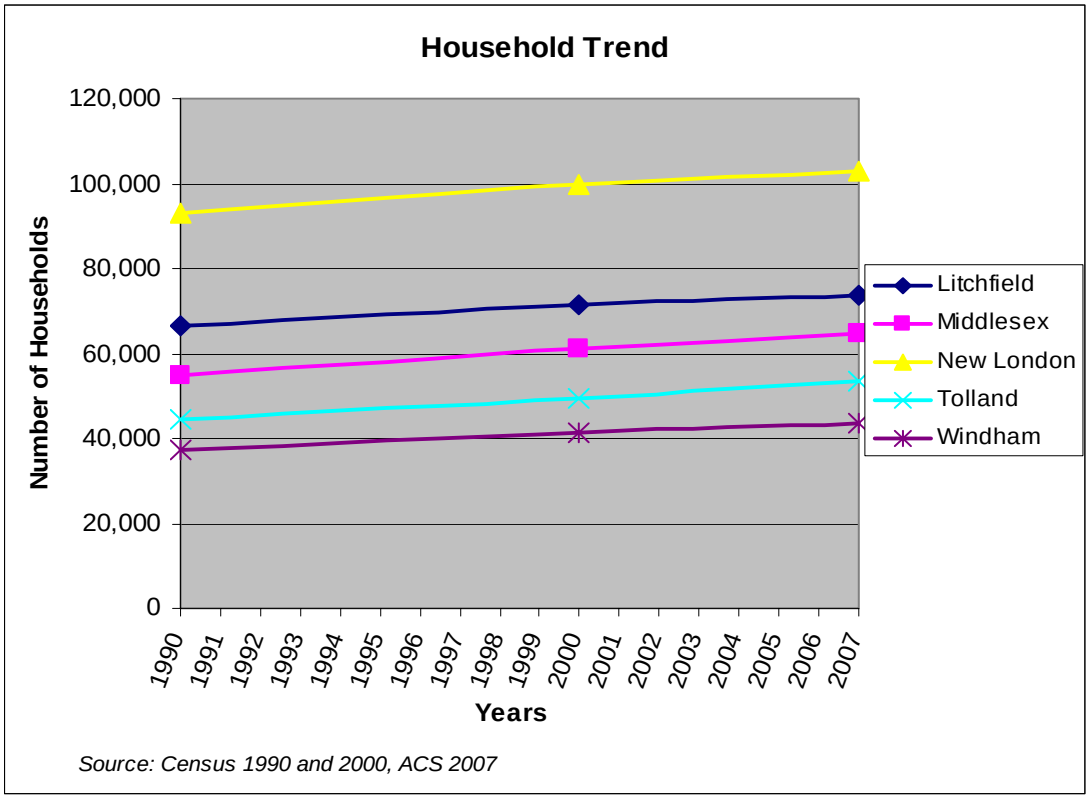
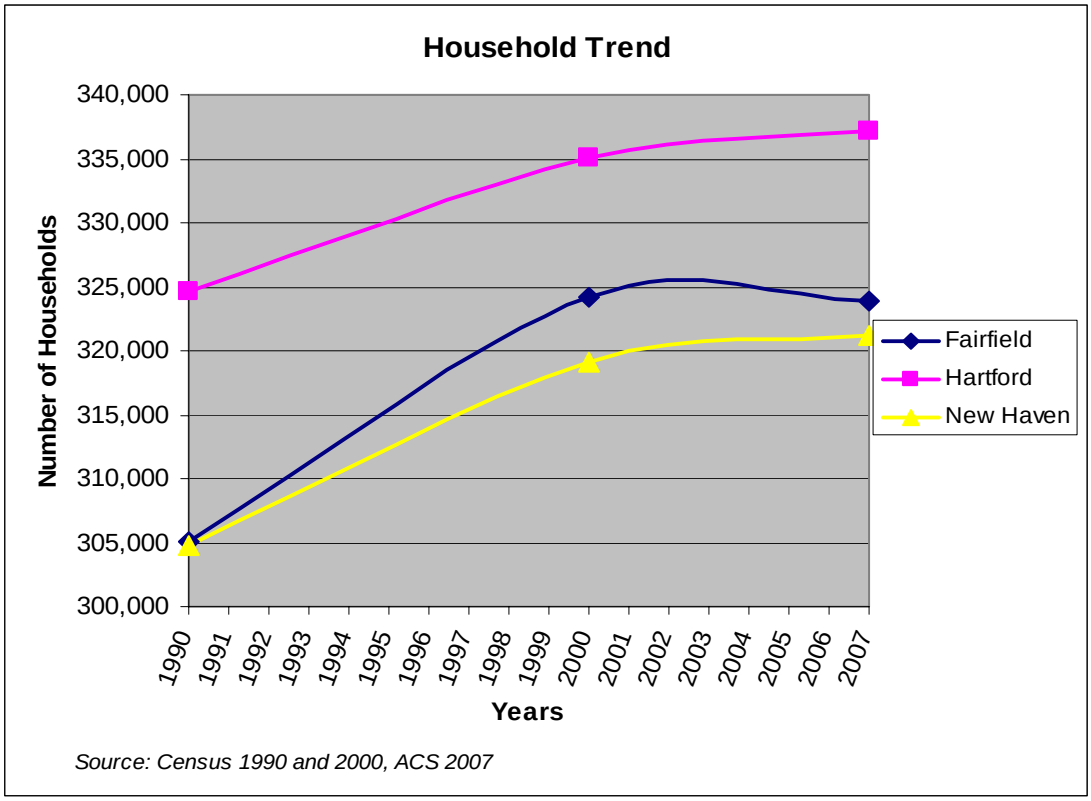


Chart 2: Household Trend by County (b)

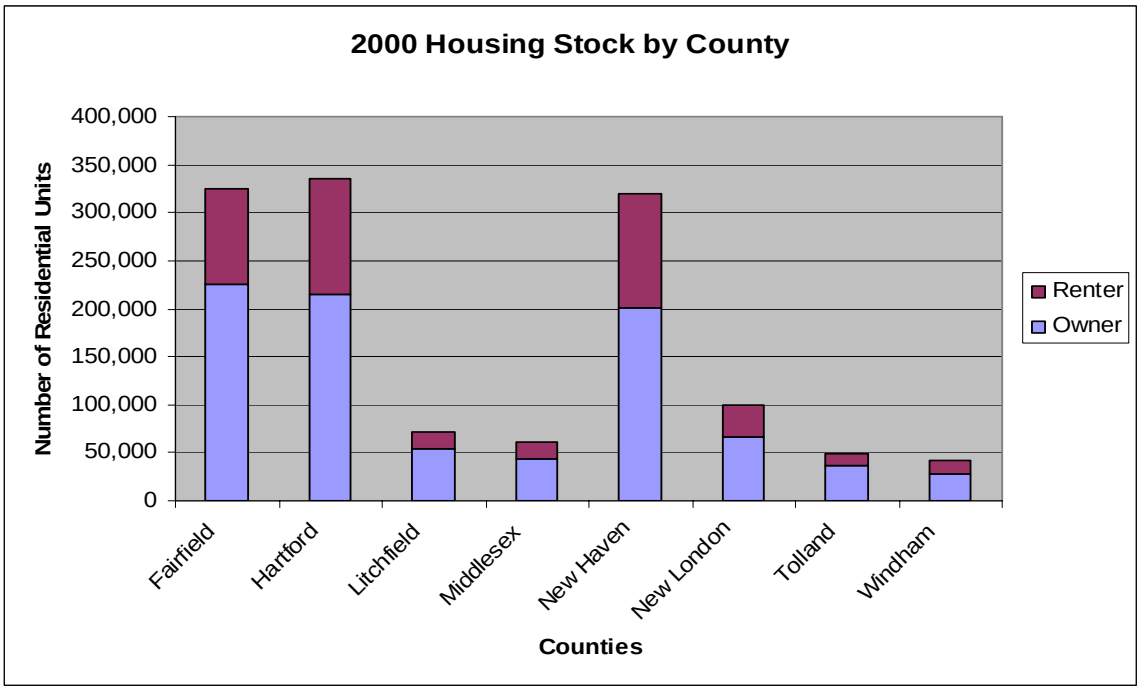


Source: Census 1990 and 2000, ACS 2007

Current Housing Stock

At the county level, there is some differentiation in housing stock trends. Hartford, Fairfield, and New Haven counties show decreasing growth in their overall stock relative to other counties in which growth remained constant. Chart 3 shows the ownership/rental breakdown for the 2000 baseline year. The bottom section of the bar denotes homeownership and the top section of the bar represents rentals.

Chart 3: 2000 County Housing Stock by Ownership and Rental



Source: Census 2000

Table 3 indicates that in 2007, Hartford, New Haven, and Fairfield Counties had the largest number of housing units according to DECD, and had the largest populations according to the U.S. Census.[9]

Table 3: Population and Housing Units by County in 2007		
State/County	**Population**	**Housing Units**
Fairfield	895,015	350,632
Hartford	876,824	367,078
Litchfield	188,273	83,596
Middlesex	164,150	72,351
New Haven	845,494	351,139
New London	267,376	117,422
Tolland	148,139	56,299
Windham	117,038	47,165
Connecticut	3,502,309	1,445,682

Source: U.S. Census, DECD

Table 4 shows the communities with the fastest growing housing stock between 2002 and 2007. Oxford showed the largest increase, and four of the ten towns with the fastest

[9] 2007 is the most recent year of data available from the American Community Survey (ACS) at the time of this writing.

growing housing stock are in rural Windham County. Conversely, Table 5 shows the ten communities with the slowest growing housing stock over this same period. New Britain was the single city to experience a net loss of housing stock during this period.

Table 4: Ten Towns/Cities Fastest Growing Housing Stock 2002-07			
Place/Town	**2002**	**2007**	**Percent Change**
Connecticut	1,401,802	1,445,682	3.1%
Oxford	3,612	4,392	21.6%
Sterling	1,238	1,441	16.4%
Hampton	734	842	14.7%
Goshen	1,560	1,769	13.4%
East Hampton	4,582	5,174	12.9%
Middlebury	2,589	2,880	11.2%
Canton	3,815	4,194	9.9%
Chaplin	927	1,017	9.7%
Brooklyn	2,806	3,066	9.3%
Ellington	5,639	6,158	9.2%

Source: DECD

Table 5: Ten Towns/Cities Fastest Growing Housing Stock 2002-07			
Place/Town	**2002**	**2007**	**Percent Change**
Connecticut	1,401,802	1,445,682	3.1%
Derby	5,603	5,634	0.6%
Hamden	23,675	23,797	0.5%
West Haven	22199	22302	0.5%
Westport	10,074	10,118	0.4%
Wethersfield	11,497	11,547	0.4%
Wilton	6,132	6,155	0.4%
East Hartford	21,265	21,331	0.3%
New Haven	52,849	52,903	0.1%
New Canaan	7,165	7,166	0.0%
New Britain	31,124	31,113	0.0%

Source: DECD

From 1990 to the present, population has grown slowly but continuously. The Connecticut State Data Center projects slow growth to continue in future years. In contrast to historical population data, employment has experienced drastic and cyclical fluctuations in growth.

Connecticut's housing inventory experienced modest growth in recent years. At the end of 2007, Connecticut had an estimated housing inventory of 1,445,682 units compared to 1,399,819 units in 2000, an increase of 3.3%. Among those units, 87% are in urban areas and 13% are in rural areas. The median size of Connecticut housing units is 5.6 rooms.

Tables 6 and 7 provide detail on the state's housing inventory. This inventory includes both single and multi-family units.

Table 6: Connecticut Housing Inventory				
	2006	**2007**	**Net Gain**	**Growth Rate**
One Unit	932,000	936,376	4,376	0.5%
Two Units	120,115	120,285	170	0.1%
Three and Four Units	126,882	126,931	49	0.0%
Five or more Units	248,039	249,924	1,885	0.8%
Other Units	12,185	12,166	-19	-0.2%
Demolitions	1,509	1,285	-224	-14.8%
Total Inventory	1,439,221	1,445,682	6,461	0.4%

Source: DECD

Table 7: Size of Housing Units		
Rooms	**# of Units**	**Percent**
1-3 Rooms	190,956	13.27%
4-5 Rooms	491,395	34.16%
6-7 Rooms	458,583	31.88%
8 Rooms or more	297,614	20.69%
Total	1,438,548	100.00%
Median (# rooms)	5.6	---

Source: 2007 American Community Survey

The most recent housing permit data from the U.S. Census Bureau reveals a net gain of 3,758 units to the state's housing stock in 2008. Table 8 provides a breakdown of permit activity by county.

Table 8: 2008 Housing Permits by County and by Type							
Permit-issuing State/County	**Total Units**	**1 Unit**	**2 Unit**	**3 and 4 Units**	**5 Units or More**	**Demolitions**	**Net Gain**
Connecticut	5,220	3,139	170	41	1,870	1,462	3,758
Fairfield	1,814	713	40	10	1,051	640	1,174
Hartford	1,039	686	68	9	276	129	910
Litchfield	261	249	8	4	0	43	218
Middlesex	355	215	4	3	133	44	311
New Haven	920	615	8	12	285	314	606
New London	363	308	28	3	24	216	147
Tolland	297	197	4	0	96	54	243
Windham	171	156	10	0	5	22	149

Source: U.S. Census Bureau

Table 9 presents an analysis of statewide housing trends with specific classifications of availability. Availability of housing is a critical component of the housing stock's ability to satisfy current demand and support future growth in population. On an average annual basis, the number of vacant units declined for both rental and ownership units between 1990 and 2000. Homeownership units are defined as condominiums, mobile, manufactured, single- and multiple-household detached residences.

Table 9: Housing Vacancy					
Connecticut	**1990**	**2000**	**2007**	**Change 1990 to 2000**	**Change 2000 to 2007**
Total Vacant Units	46,547	34,880	44,429	-11,667	9,549
Total Stock Occupied or Available	1,277,026	1,336,550	1,365,143	59,524	28,593
Vacancy Rate Total	3.6%	2.6%	3.3%		

Source: Census 1990 and 2000, ACS 2007

Table 10 shows vacant properties as classified by Census.

Table 10: Housing Stock Classifications					
Classification	**1990**	**2000**	**2007**	**Avg. Annual Change 1990 to 2000**	**Avg. Annual Change 2000 to 2007**
Vacant for Sale Units	13,927	9,305	12,533	-462	461
Vacant for Rent Units	31,211	25,575	31,896	-564	903
Vacant-Rented/Sold & Awaiting Occupancy	8,620	6,320	12,282	-230	852
Vacant-Occasional Use, Seasonal, Migratory	20,475	23,517	22,773	304	-106
Other Vacant Units	14,729	19,588	38,350	486	2,680
Total Vacant/Seasonal/Occasional Use Units	90,371	84,305	117,834	-607	4,790
Total Housing Units	1,320,850	1,385,975	1,438,548	6,513	7,510

Source: Census 1990 and 2000, ACS 2007

Table 11 shows the total housing stock for the state. Between 2000 and 2007, the number of ownership housing units increased and the number of rental housing units declined. During the 1990s, there was a net increase of 59,524 in total available units. Of this total, there was a net increase of 3,307 units in the rental-housing inventory. During 2000-2007, there was a decrease of 29,745 rental units. This loss is partially due to rental units being converted to owner-occupied units. This trend is the result of more credit becoming available after 2001 for renters to purchase units. Growth in the overall housing stock slowed in the most recent period.

Table 11: Total Housing Stock Statewide					
Housing Supply Available for Year-Round Occupancy	**1990**	**2000**	**2007**	**Change 1990 to 2000**	**Change 2000 to 2007**
Total Ownership Stock Except Sold but Not Occupied	822,817	879,034	937,372	56,217	58,338
Total Rental Units Except Rented but Not Occupied	454,209	457,516	427,771	3,307	-29,745
Total Stock Occupied or Available	1,277,026	1,336,550	1,365,143	59,524	28,593

Source: Census 1990 and 2000, ACS 2007

Connecticut vacancy rates are low compared to the national level. More than 91% of Connecticut's housing units are occupied (of these by owners 70% and by renters 30%). This implies a vacancy rate of 8.2%, as seen in Table 12; the nationwide vacancy rate is 12.1%.

Table 12: Housing Occupancy 2007		
	Number	**Percent**
Total Housing Units	1,438,548	
Occupied Units	1,320,714	91.8%
Vacant Units	117,834	8.2%
Housing Tenure	1,320,714	
Owner Occupied	924,839	70.0%
Renter Occupied	395,875	30.0%

Source: ACS 2007

Rental Housing

Table 13 shows the number of vacant units in relation to the total number of rental units available and the Census calculated vacancy rate. Despite the significant decline in the rental stock from 2000 to 2007, vacancy rates increased from the previous period due to the increase in number of vacant units.

Table 13: Number of Vacant Units in Relation to the Total Number of Rental Units					
Statewide Rental Units	**1990**	**2000**	**2007**	**Change 1990 to 2000**	**Change 2000 to 2007**
Vacant for Rent Units	31,211	25,575	31,896	-5,636	6,321
Total Rental Units Except Rented but Not Occupied	454,209	457,516	427,771	3,307	-29,745
Vacancy Rate – Rental	6.9%	5.6%	7.5%		

Source: Census 1990 and 2000, ACS 2007

Owned Housing

Table 14 shows vacancy rates of housing stock for ownership units significantly declined from the period 1990 to 2000, but rebounded slightly from 2000 to 2007.

Table 14: Vacancy Rates of Housing Stock for Ownership Units					
Connecticut	**1990**	**2000**	**2007**	**Change 1990 to 2000**	**Change 2000 to 2007**
Vacant for Sale Units	15,336	9,305	12,533	-6,031	3,228
Total Ownership Stock Except Sold but Not Occ.	822,817	879,034	937,372	56,217	58,338
Vacancy Rate Ownership	1.9%	1.1%	1.3%		

Source: Census 1990 and 2000, ACS 2007

Categories of Persons Affected

Elderly

Table 15 gives information on elderly Connecticut citizens (60 and older) who owned homes in 2007. Table 16 provides the same information for elderly renters in Connecticut.

Table 15: Elderly Homeowners in Connecticut

State/County	Householder 60 to 64 years	Householder 65 to 74 years	Householder 75 to 84 years	Householder 85 years and over
Connecticut	85,323	108,009	77,394	28,149
Fairfield	20,392	27,583	19,982	6,209
Hartford	20,870	27,606	20,279	6,861
Litchfield	5,677	6,592	3,806	1,999
Middlesex	5,021	5,420	3,240	2,243
New Haven	19,815	23,979	18,551	7,270
New London	6,709	8,894	7,012	1,823
Tolland	3,753	4,951	2,448	725
Windham	3,086	2,984	2,076	1,019

Source: ACS 2007

Table 16: Elderly Renters in Connecticut

State/County	Householder 60 to 64 years	Householder 65 to 74 years	Householder 75 to 84 years	Householder 85 years and over
Connecticut	18,427	29,464	24,090	15,944
Fairfield	5,482	8,843	4,749	2,599
Hartford	5,587	8,309	7,567	4,584
Litchfield	766	1,568	1,284	923
Middlesex	993	700	881	1,264
New Haven	4,161	7,784	5,737	4,631
New London	408	1,449	1,993	1,145
Tolland	499	279	916	328
Windham	531	532	963	470

Source: ACS 2007

The elderly population faces many challenges; the greatest is living independently and on a fixed income after retirement. This demographic is typically income-constrained, yet is forced to absorb increases in taxes, housing prices, and medical care costs. Demographic projections predict an astronomical increase in the elderly population in decades to come.

The Connecticut State Data Center predicts a 72% increase in the population age 65 and older, compared to a 3% *decline* in the population ages 20-64 from 2005 to 2030.

Table 17: Connecticut Population by Age, 2000 to 2030							
Age Group	**2000**	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
0 to 19 years	925,558	926,612	878,168	834,008	823,779	838,039	852,449
20 to 39 years	925,291	870,281	879,774	935,526	975,026	964,563	922,308
40 to 59 years	954,478	1,052,055	1,058,910	1,005,474	921,528	873,358	886,622
60 to 64 years	132,517	171,042	211,032	227,381	255,203	253,727	223,302
65+ years	470,185	474,935	506,202	571,496	647,238	740,303	817,719
Total	3,408,029	3,494,925	3,534,086	3,573,885	3,622,774	3,669,990	3,702,400

Source: CT State Data Center

Some citizens in the elderly population have more serious housing concerns as a result of long-term health problems. In the Comprehensive Housing Affordability Strategy (CHAS) published by the U.S. Department of Housing and Urban Development (HUD), elderly citizens who have mobility or self-care limitations are separated out from the rest of the elderly population. The CHAS tabulation defines households in this group as meeting one or both of the following criteria:

- One or more persons has a long-lasting condition that substantially limits one or more basic physical activity, such as walking, climbing stairs, reaching, lifting, or carrying
- One or more persons has a physical, mental, or emotional condition lasting more than 6 months that creates difficulty with dressing, bathing, or getting around inside the home

CHAS data also distinguishes between elderly households (one or more member is 62 to 74 years old) and extra elderly households (one or more member is 75 years or older). Table 18 provides CHAS data on elderly households with mobility or self-care limitations, separated by income level.

Table 18: Elderly Citizens with Mobility & Self-Care Limitations						
Income Thresholds	**Total Renters**	**Extra Elderly Renters**	**Elderly Renters**	**Total Owners**	**Extra Elderly Owners**	**Elderly Owners**
Household Income <30% MFI	34,565	10,100	6,570	14,040	7,480	2,760
Household Income 30%-50% MFI	16,050	5,025	2,670	17,100	8,680	3,765
Household Income 50%-80% MFI	12,465	2,715	1,550	21,880	7,705	4,325
Household Income >80% MFI	15,270	2,520	1,525	68,465	11,435	10,560

Source: CHAS 2000

Persons with Disabilities

Persons with disabilities may be afflicted with several physical, mental, and/or developmental conditions that constrain their possibilities for obtaining suitable housing. The disabled may require a single level home, special equipment to aid them in carrying out daily functions, or even a regular home nurse or family member to care for them. The disabled population also has varying levels of financial independence. Tables 19, 20 and 21 present the most recent number of physically disabled persons or who have a serious mental illness. These figures do not include persons who are homeless or institutionalized.

Table 19: Population with Any Disability by Age				
Age	**Male**	**Female**	**Total**	**Percent of Noninstitutionalized Population**
5 to 15 years	18,155	8,447	26,602	0.82%
16 to 20 years	9,921	5,390	15,311	0.47%
21 to 64 years	101,248	109,050	210,298	6.52%
65 to 74 years	23,971	29,344	53,315	1.65%
75 years and older	36,773	69,121	105,894	3.28%
Total	190,068	221,352	411,420	12.75%

Source: ACS 2007

Table 20 displays statewide and county data for citizens with any physical disabilities.

Table 20: Persons with Physical Disabilities				
State/County	**Male**	**Female**	**Total**	**Percent of Noninstitutionalized Population**
Connecticut	101,232	147,244	248,476	7.70%
Fairfield	21,265	30,667	51,932	1.61%
Hartford	28,625	41,835	70,460	2.18%
Litchfield	5,827	7,828	13,655	0.42%
Middlesex	5,119	5,824	10,943	0.34%
New Haven	22,699	38,692	61,391	1.90%
New London	10,527	11,206	21,733	0.67%
Tolland	3,465	4,956	8,421	0.26%
Windham	3,705	6,236	9,941	0.31%

Source: ACS 2007

Table 21 displays statewide and county data for citizens with any mental disabilities.

Table 21: Persons with Mental Disabilities				
State/County	**Male**	**Female**	**Total**	**Percent of Noninstitutionalized Population**
Connecticut	74,644	78,785	153,429	4.75%
Fairfield	16,058	15,044	31,102	0.96%
Hartford	21,502	22,537	44,039	1.36%
Litchfield	3,779	3,898	7,677	0.24%
Middlesex	3,300	3,272	6,572	0.20%
New Haven	16,491	21,586	38,077	1.18%
New London	7,572	7,274	14,846	0.46%
Tolland	2,615	2,148	4,763	0.15%
Windham	3,327	3,026	6,353	0.20%

Source: ACS 2007

One indicator of the large housing demand for persons with mental disabilities is the amount of temporary or mixed-use housing options available. The Department of Mental Health and Addiction Services (DMHAS) reports that there are 1,389 units of permanent, scattered site housing for persons with mental disabilities. That unit count is scheduled to increase to 1,415 by July 1, 2009. In addition to permanent housing, DMHAS provides temporary housing and financial assistance to persons with mental disabilities.

DMHAS, in partnership with other state agencies (DSS, OPM, DECD, and CHFA), has developed more than 400 units of supportive housing over the last two decades. Supportive housing is permanent, affordable housing linked to health, mental health, employment, and other supportive services. Supportive housing is a proven, cost-effective way to end homelessness for people with low income, as it provides chronically homeless people with a way out of expensive emergency public services and back into their own homes and communities.

Persons with HIV/AIDS and Their Families

HIV/AIDS continues to be a concern in Connecticut. The disease was first reported in the state during the early 1980s, and the number of HIV/AIDS cases continues to rise, though at a slowing rate. As of 2008, the number of persons living with HIV/AIDS (PLWHA) was reported by the Connecticut Department of Public Health to be 10,860 people. However, this number is almost certainly an underestimate of actual HIV/AIDS cases in the state considering the fact that HIV reporting was not required prior to 2002, and that some PLWHA are not aware of their infection. Table 22 gives a sense of the trend in HIV/AIDS cases in Connecticut over the last decade.

Table 22: Trends in HIV/AIDS Cases

Year	Reported AIDS	Reported HIV	Deaths	Prevalent HIV AIDS
1998	642	4	309	5,977
1999	580	3	315	6,378
2000	580	4	303	6,791
2001	553	3	288	7,164
2002	592	253	284	7,880
2003	688	253	270	8,497
2004	671	266	295	9,025
2005	569	732	253	9,478
2006	508	767	223	9,957
2007	418	772	219	10,426
2008	358	387	16	10,860

Source: CT Dept. Public Health 2008

The PLWHA population in Connecticut is extremely concentrated in the state's three largest urban areas: Hartford, New Haven, and Bridgeport. These three cities contain 4,998 citizens living with HIV/AIDS, which is 46% of the total PLWHA population in Connecticut. Table 23 provides specific numbers of PLWHA in selected Connecticut cities.

Table 23: PLWHA in Selected Cities	
Town of Residence	**People Living with HIV/AIDS**
Bloomfield	77
Bridgeport	1,343
Bristol	89
Danbury	225
East Hartford	205
East Haven	69
Greenwich	69
Hamden	125
Hartford	2,075
Manchester	93
Meriden	218
Middletown	153
Milford	64
New Britain	404
New Haven	1,580
New London	192
Norwalk	352
Norwich	145
Stamford	543
Stratford	98
Torrington	64
Wallingford	64
Waterbury	701
West Hartford	79
West Haven	197
Windham	120
Other Towns	1,516
Total (Statewide)	10,860

Source: CT Dept. of Public Health 2008

Housing Conditions

Statewide

Table 24 shows that Connecticut has a large inventory of older housing (built prior to 1980). This can be problematic for statewide housing conditions; the oldest housing stock may not have the improvements and amenities expected in today's market. The older units may lack complete plumbing or kitchen facilities for example. In 2007, approximately half of Connecticut's homes (49.7%) were between 28 and 67 years old. Almost one quarter of Connecticut's homes (24.3%) were at least 68 years old. Another 25.9% of Connecticut's homes are relatively new, having been built between 1980 and 2007.

Table 24: Age of Housing Stock

Year	Number	Percentage
1939 and earlier	349,953	24.3%
1940-1959	328,332	22.8%
1960-1979	387,329	26.9%
1980-1999	290,289	20.2%
2000 or later	82,645	5.7%
State Total	1,438,548	

Source: 2007 ACS

Table 25, which shows the year housing units were built for each county, further reinforces the fact that a disproportionately large share of Connecticut's housing units were built in 1939 or earlier.

Table 25: Year Structure Built

State/County	2005 or later	2000 - 2004	1990 - 1999	1980 - 1989	1970 - 1979	1960 - 1969	1950 - 1959	1940 - 1949	1939 or earlier
Connecticut	23,733	58,912	108,614	181,675	196,036	191,293	219,097	109,235	349,953
Fairfield	6,737	14,149	23,401	37,391	47,905	51,844	58,835	31,805	78,431
Hartford	4,022	13,425	23,088	45,828	45,747	50,040	62,032	31,357	88,225
Litchfield	1,395	3,904	8,394	12,037	12,441	8,318	8,966	5,764	22,002
Middlesex	1,374	4,247	9,101	9,882	10,906	9,988	8,250	3,542	14,898
New Haven	5,198	11,426	24,395	44,549	47,779	41,310	55,757	25,821	93,112
New London	3,232	5,531	9,782	17,298	16,202	14,667	13,288	5,580	30,987
Tolland	931	3,414	6,193	8,117	8,544	9,688	8,010	2,946	8,168
Windham	844	2,816	4,260	6,573	6,512	5,438	3,959	2,420	14,130

Source: 2007 ACS

Housing Cost

Statewide and County Costs

The American Community Survey (ACS) data shows that in 2007, occupied housing units in Connecticut totaled 1,320,714; one half of them were owner-occupied with mortgages. Nineteen percent of the units carried no mortgages and the remaining units were renter-occupied. Of the homeowners with mortgages, 25.1% carried monthly mortgages between $1,500 and $1,999, while 48.6% of owners were burdened with mortgages of $2,000 or more per month (see Table 26). A household paying $2,000 per month for principal and interest payments would need an annual income of $80,000 to not exceed 30% of gross income.

Table 26: Mortgage Status and Selected Monthly Owner Costs

	# Units	% Share
Housing Units with a Mortgage	664,729	
Less than $499	4,406	0.7%
$500 to $999	42,657	6.4%
$1,000 to $1,499	128,237	19.3%
$1,500 to $1,999	166,563	25.1%
$2,000 or more	322,866	48.6%
Median Monthly Mortgage Cost	**$1,971**	

Source: 2007 ACS

Table 27 shows that 93.6% of homeowners without a mortgage have housing-related costs of $400 or more each month.

Table 27: No Mortgage and Selected Monthly Owner Costs

	# Units	% Share
Housing Units without a Mortgage	**260,110**	
Less than $100	900	0.3%
$100 to $199	1,288	0.5%
$200 to $299	4,396	1.7%
$300 to $399	10,012	3.8%
$400 or more	243,514	93.6%
Median Monthly Housing Cost without a Mortgage	**$ 716**	

Source: 2007 ACS

The median monthly housing cost was $1,971 for mortgaged owners, $716 for non-mortgaged owners, and $931 for renters, according to the 2007 ACS. Table 28 shows that 47.5% of renters in Connecticut spent 30% or more of their household income on housing.

Table 28: Gross Rent as a % of Household Income		
	# of Households	**% Share**
Less than 15.0 percent	47,132	11.9%
15.0 to 19.9 percent	45,921	11.6%
20.0 to 24.9 percent	47,818	12.1%
25.0 to 29.9 percent	44,269	11.2%
30.0 to 34.9 percent	35,642	9.0%
35.0 percent or more	152,430	38.5%
Not computed	22,663	5.7%
Total Number of Renter-Occupied Households	395,875	

Source: 2007 ACS

Table 29 shows the distribution of existing single-family home sales for Connecticut by the number of bedrooms as well as median and mean sales price for 2007 on a quarterly basis.

Table 29: Existing Single-Family Home Sales by Number of Bedrooms					
Quarter	**2 or fewer Bedrooms**	**3 Bedrooms**	**4 or more Bedrooms**	**Median Price**	**Mean Price**
2007.Q1	10.5	50.3	39.2	$ 318,800	$ 360,200
2007.Q2	9.7	49.2	41.0	$ 348,900	$ 381,700
2007.Q3	10.6	49.0	40.4	$ 328,200	$ 365,600
2007.Q4*	11.4	50.2	38.4	$ 303,400	$ 350,300
* Preliminary					

Source: Connecticut Association of Realtors

Table 30 indicates total sales of single-family homes, condos, and co-ops[1] for Connecticut and its counties during 2007.

Table 30: Unit Volume Total Sales: Single-Family, Condominium and Co-Ops by County									
Quarter	**Connecticut**	**Fairfield**	**New Haven**	**New London**	**Middlesex**	**Litchfield**	**Hartford**	**Tolland**	**Windham**
2007.Q1	14,200	5,100	1,900	2,000	1,100	200	3,300	500	100
2007.Q2	19,300	6,700	2,300	1,800	1,700	600	4,900	1,300	100
2007.Q3	19,400	7,000	2,600	1,800	1,600	800	4,700	800	100
2007.Q4*	12,900	4,700	1,500	1,400	1,000	400	3,300	500	100
*Preliminary									

Source: Connecticut Association of REALTORS

Table 31 shows the median and mean home sales prices of existing single-family homes (not including condos or co-ops) in Connecticut and its counties in 2006 and 2007. The communities with the highest housing sales prices are primarily located in Fairfield County.

Table 31: Price of Existing Single-Family Home Sales by County									
	Connecticut	**Fairfield**	**New Haven**	**New London**	**Middlesex**	**Litchfield**	**Hartford**	**Tolland**	**Windham**
Median									
2006	$315,300	$498,400	$281,700	$264,000	$341,300	$247,500	$253,500	$264,800	$200,600
2007	$331,800	$515,400	$277,000	$267,700	$342,200	$244,400	$259,300	$270,300	$216,100
Mean (Average)									
2006	$356,800	$464,300	$313,600	$297,500	$369,900	$290,500	$288,900	$287,800	$210,200
2007	$368,300	$468,132	$308,377	$301,007	$369,159	$288,525	$297,321	$292,219	$234,722

Source: Connecticut Association of REALTORS

[10] A co-op is a housing community that is jointly owned and managed by those who live in it. Each member buys shares in this community, attends regular meetings to discuss maintenance, social events, or other community matters, and helps run the co-op. Members can participate in specific committees or be on the board. *Source: about.com: Apartment Living/Rental.*

Table 32 tracks the changes in median home prices for Connecticut broken out by number of bedrooms from 2006 to 2007. Only the four-bedroom class showed an increase, at 4.3%. The three-bedroom class showed the greatest decrease at 1.1%.

Table 32: Existing Single-Family Home Median Sales Prices by Number of Bedrooms			
	2 or Fewer Bedrooms	**3 Bedrooms**	**4 or More Bedrooms**
2006	211,900	279,400	455,400
2007	211,300	276,400	475,200
% Change 2006 to 2007	-0.3%	-1.1%	4.3%

Source: Connecticut Association of REALTORS

Median and Mean Home Sales Prices

As used in this section, the median sales price is the midpoint-selling price—half the homes sell for less, and the other half sell for more. The National Association of Realtors (NAR) generally believes that median price is the more accurate of the two, as using it reduces the probability of an outlier heavily skewing the results.

Table 33: Median Housing Prices in U.S. and CT										
Place	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2000-07 % change**	**2006-07 % change**
CT	$ 178,063	$ 181,563	$ 195,838	$ 221,288	$ 236,559	$ 271,500	$ 298,900	$ 309,200	73.6%	3.4%
U.S.	$ 124,176	$ 128,203	$ 135,480	$ 143,515	$ 151,366	$ 167,500	$ 185,200	$ 194,300	56.5%	4.9%

Source: 2007 ACS

Housing prices continue to rise. Table 33 shows that in Connecticut, the median sales price of a home increased to $309,200 in 2007, a 73.6% increase from $178,063 in 2000 and a 3.4% increase from $298,900 in 2006. In comparison, the U.S. median homes sales price increased 56.5% from 2000 to 2007 and experienced a 4.9% increase from $185,200 in 2006 to $194,300 in 2007.

Median gross rents are increasing and vary significantly across regions of the state. Table 34 below compares median gross rents between Connecticut and the United States. From 2000 to 2007, Connecticut rental rates increased 26.8%, outpacing the national gross rent growth rate of 21.6%.

Table 34: Median Gross Rent in CT and U.S.										
Place	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2000-07% Change**	**2006-07% Change**
CT	$ 734	$ 748	$ 741	$ 766	$ 811	$ 839	$ 886	$ 931	26.8%	5.1%
U.S.	$ 649	$ 669	$ 668	$ 679	$ 694	$ 728	$ 763	$ 789	21.6%	3.4%

Source: 2007 ACS

Table 35 shows percentage distribution of sales broken out by number of bedrooms for Connecticut and its counties at the end of 2007.

Table 35: Unit Volume Existing Single Family Home Sales by Number of Bedrooms for Connecticut and Counties by Percentage Distribution*					
State/County	**2 or Fewer Bedrooms**	**3 Bedrooms**	**4 or more Bedrooms**	**Median Price**	**Mean Price**
Fairfield	10.7	40.4	49.0	$ 498,700	$ 458,400
Hartford	9.0	54.2	36.8	$ 252,000	$ 291,400
Litchfield	10.8	60.0	29.2	$ 231,800	$ 279,700
Middlesex	15.7	48.6	35.8	$ 328,500	$ 355,000
New Haven	13.6	57.7	28.7	$ 255,500	$ 286,700
New London	14.9	57.0	28.0	$ 252,400	$ 284,300
Tolland	7.5	53.5	39.0	$ 264,200	$ 284,300
Windham	14.0	66.0	20.0	$ 210,000	$ 227,300
Connecticut	11.4	50.2	38.4	$ 303,400	$ 350,300

*Numbers are preliminary

Source: Connecticut Home Sales Report 2007 Q4

Table 36 shows median home prices for Connecticut and its counties broken out by bedroom size.

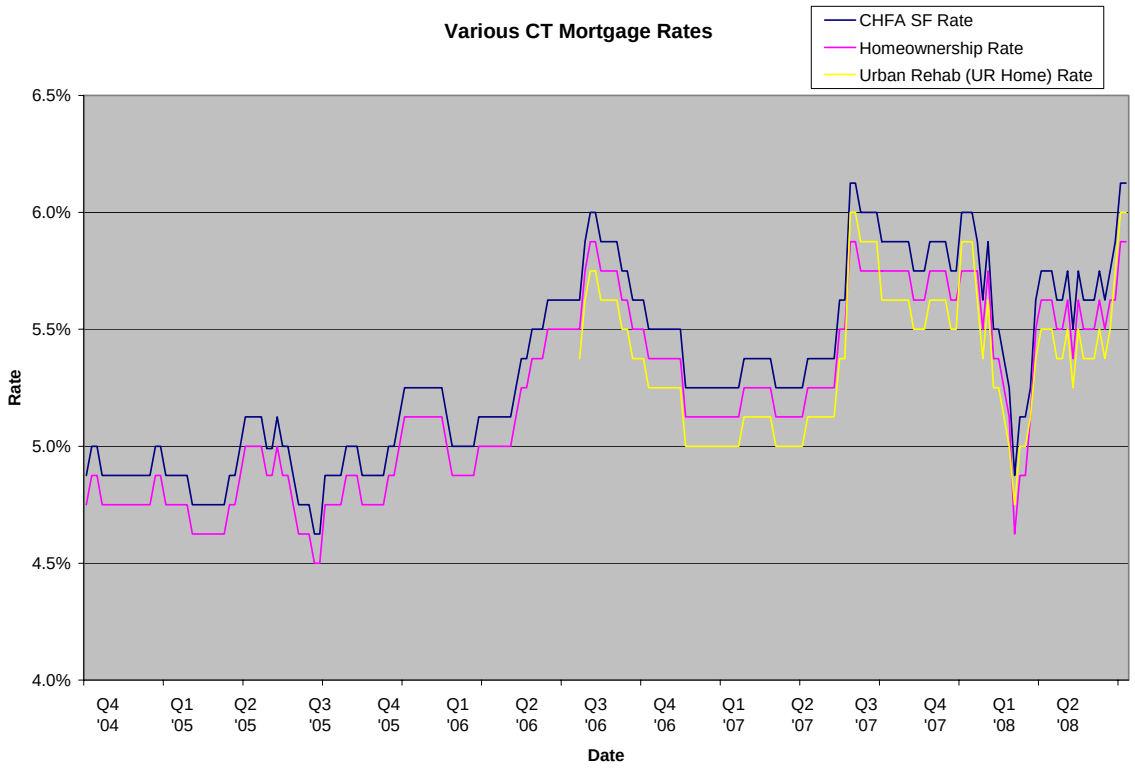
Table 36: Unit Volume Median Sales Price of Existing Single Family Home Sales by Number of Bedrooms for Connecticut and Counties*			
State/County	**2 or Fewer Bedrooms**	**3 Bedrooms**	**4 or More Bedrooms**
Fairfield	281,000	372,400	663,400
Hartford	181,700	232,000	354,500
Litchfield	163,300	225,000	355,600
Middlesex	219,100	312,200	436,800
New Haven	204,400	244,900	348,400
New London	180,000	246,000	330,600
Tolland	150,000	252,700	313,800
Windham	152,400	210,700	250,000
Connecticut	206,300	267,500	464,500
*Numbers are preliminary			

Source: Connecticut Home Sales Report 2007 Q4

Mortgage Rages – Past Several Years

Chart 4 depicts trends for various program mortgage rates in Connecticut.

Chart 4:



Source: CHFA 2008

Subprime Mortgage Crisis

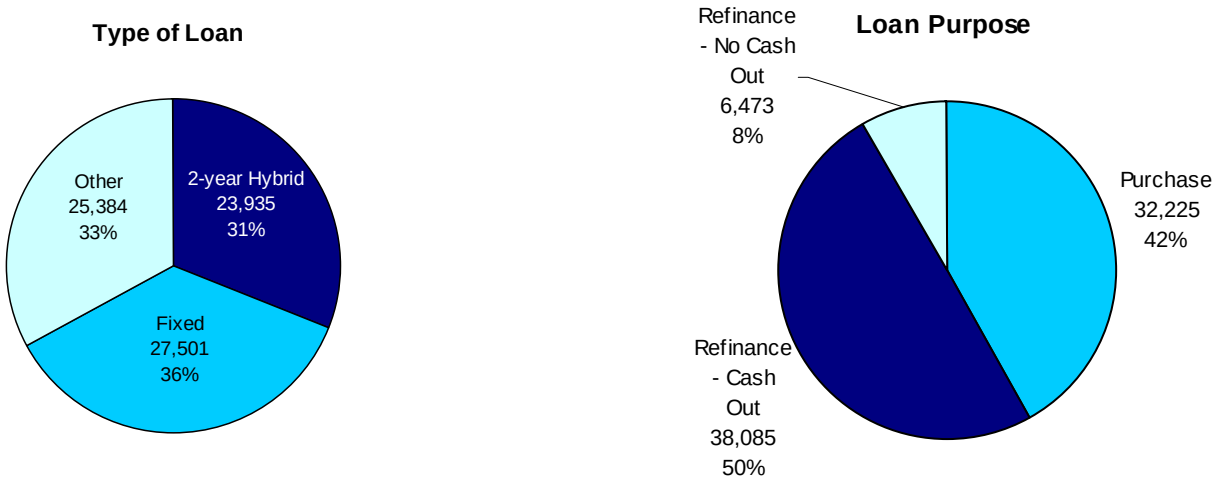
The need for affordable housing in Connecticut has been exacerbated by the subprime crisis which has prompted higher mortgage costs, delinquencies, and foreclosures for some homeowners. In some cases the demand for rental housing has become even higher as homeowners lose their homes and are forced back into the rental market. In addition, subprime mortgages can also affect owners of multi-family homes and their tenants.

In Connecticut, most subprime loans were originated between 2004 and 2006. During 2007, about 9,200 subprime loans were originated which is considerably less than the previous year when about 40,000 loans were originated. By the end of 2007, there were approximately 76,800 active subprime loans in Connecticut.

Loan Types and Purposes

About a third of the active subprime loans in Connecticut are two-year hybrids. The majority of people used their subprime loan to refinance a home and take cash out for other purposes.

Chart 5: Loan Type and Purpose

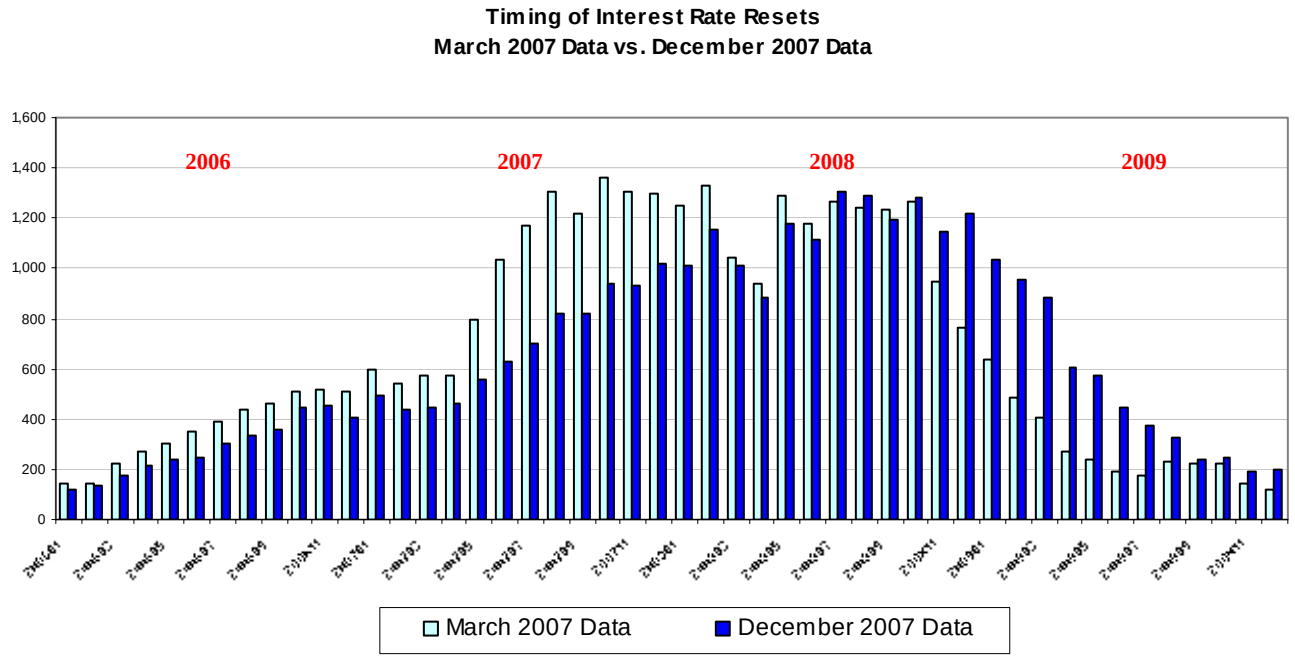


Source: First American Loan Performance, December 2007

Timing of Resets for Subprime Loans

Two-year hybrid loans are loans that have a fixed rate for two years and then reset to another rate in their third year. Many of these loans will continue to reset through 2008 and into the first quarter of 2009. Previous data indicated that most of these loans would be resetting through 2008. Updated date indicates that there will be more resets over a longer period.

Chart 6: Interest Rate Resets

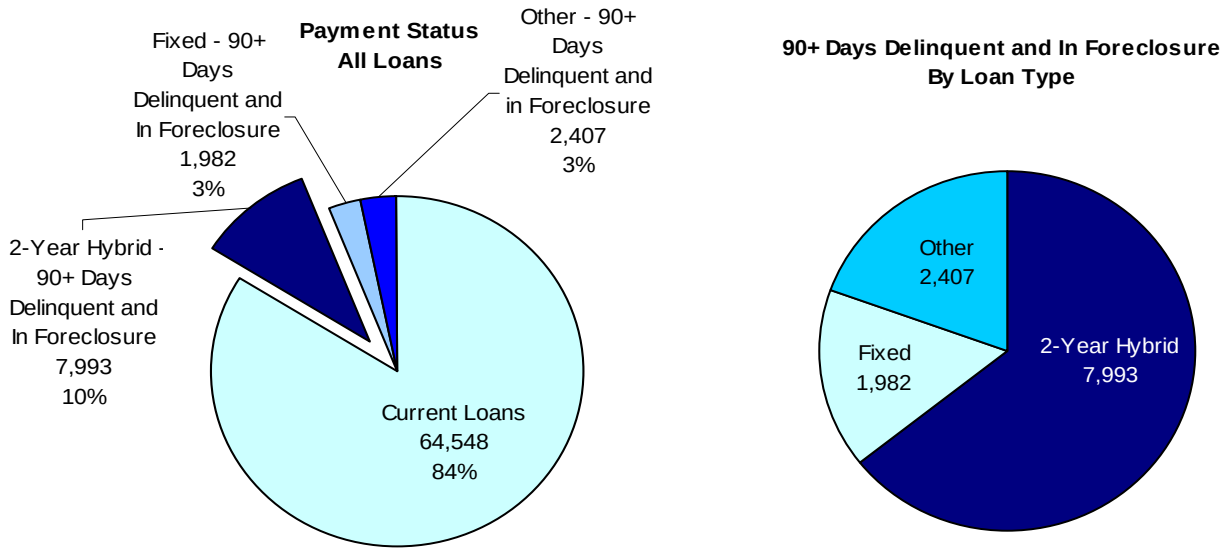


Source: First American Loan Performance, December 2007

Subprime Delinquencies and Foreclosures

About 15% of all subprime loans in Connecticut were seriously delinquent as of December 2007. Though only about 31% of all subprime loans are 2-year adjustable loans, these loans representated most of the seriously delinquent subprime loans in Connecticut.

Chart 7: Payment Status and Delinquent Loans

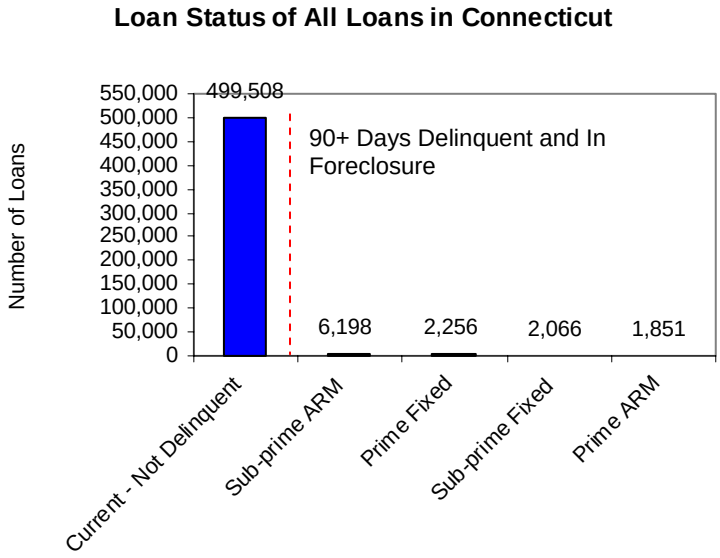


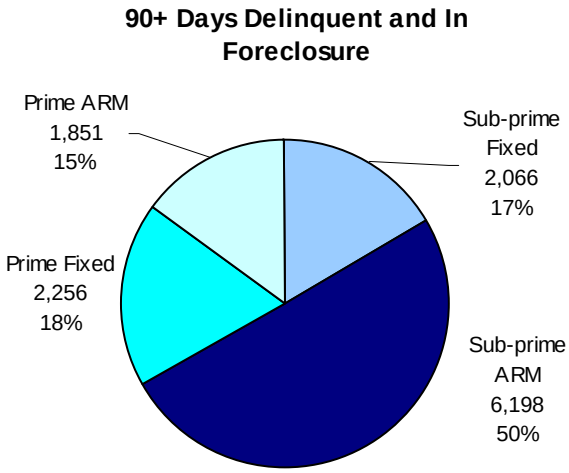
Source: First American Loan Performance, December 2007

Prime and Subprime Delinquencies and Foreclosures

Considering the full range of active loans in Connecticut, including prime and subprime loans, delinquencies and foreclosures are a small part of the whole and are concentrated mainly in the adjustable rate subprime loans. Though subprime adjustable rate mortgages are 6 % of all active loans in Connecticut, they represent 45% of all seriously delinquent loans. The table on the following page shows how Connecticut's seriously delinquent loan experience compares with other states.

Chart 8: Loan Status and Delinquent Loans





Source: Mortgage Banker's National Delinquency Survey, 4Q 2007

Table 37: Status of All Loans – United States, 4Q 2006 v. 4Q 2007							
4Q 2006				**4Q 2007**			
Rank	**State**	**# Loans**	**% Seriously Delinquent**	**Rank**	**State**	**# Loans**	**% Seriously Delinquent**
	United States	**43,481,836**	**2.21**		**United States**	**45,987,858**	**3.62**
1	Mississippi	231,951	5.30	1	Michigan	1,535,931	5.93
2	Ohio	1,434,657	5.12	2	Ohio	1,548,184	5.89
3	Louisiana	434,554	4.98	3	Indiana	880,951	5.57
4	Indiana	798,270	4.70	4	Mississippi	255,726	5.28
5	Michigan	1,517,299	4.17	5	Florida	3,585,614	5.19
6	Kentucky	413,675	3.13	6	Nevada	574,507	5.01
7	Georgia	1,554,568	2.97	7	Louisiana	479,735	4.09
8	Tennessee	808,857	2.92	8	Illinois	1,739,977	3.98
9	Pennsylvania	1,467,455	2.90	9	Georgia	1,690,823	3.97
10	Oklahoma	395,211	2.88	10	Rhode Island	141,797	3.90
11	Texas	2,903,440	2.85	11	Kentucky	446,646	3.86
12	South Carolina	612,660	2.75	12	California	5,956,487	3.83
13	Alabama	558,508	2.63	13	Alabama	616,958	3.73
14	Illinois	1,677,856	2.56	14	Tennessee	876,268	3.54
15	West Virginia	122,382	2.43	15	Maine	144,679	3.50
16	Colorado	990,505	2.41	16	Oklahoma	434,425	3.39
17	Iowa	343,381	2.35	17	Minnesota	925,044	3.39
18	Kansas	319,709	2.31	18	Wisconsin	622,755	3.38
19	North Carolina	1,319,967	2.31	19	Pennsylvania	1,558,949	3.34
20	Missouri	844,864	2.26	20	South Carolina	664,545	3.28
21	Arkansas	285,972	2.20	21	New Hampshire	203,666	3.24
22	Nebraska	205,010	2.19	22	Massachusetts	845,027	3.17
23	Wisconsin	567,488	2.18	23	Texas	3,148,587	3.16
24	Maine	132,716	2.11	24	New Jersey	1,292,704	3.10
25	Minnesota	897,375	1.97	25	Iowa	349,510	3.09
26	New York	2,027,327	1.92	26	Colorado	1,040,260	3.08
27	Rhode Island	135,426	1.82	27	Arizona	1,239,336	3.07
28	Massachusetts	797,615	1.74	28	Missouri	900,184	3.04
29	New Jersey	1,226,097	1.74	29	New York	2,052,243	3.02
30	Delaware	152,843	1.73	30	West Virginia	133,388	3.00
31	Florida	3,342,330	1.55	31	Delaware	178,768	2.95
32	Nevada	527,868	1.52	32	Kansas	340,925	2.84
33	New Mexico	242,963	1.49	33	Arkansas	311,869	2.71
34	**Connecticut**	**525,657**	**1.47**	34	North	1,414,575	2.62

					Carolina		
35	South Dakota	77,974	1.41	35	Nebraska	211,685	2.60
36	New Hampshire	188,313	1.41	36	Maryland	1,082,308	2.54
37	Utah	409,757	1.26	**37**	**Connecticut**	**545,765**	**2.53**
38	Vermont	60,575	1.21	38	Virginia	1,425,934	2.13
39	Maryland	1,048,196	1.19	39	District of Columbia	94,969	2.07
40	California	5,589,325	1.06	40	Vermont	67,201	2.00
41	District of Columbia	92,270	1.02	41	New Mexico	261,005	1.90
42	North Dakota	51,043	0.97	42	South Dakota	85,487	1.83
43	Idaho	250,574	0.95	43	Hawaii	185,177	1.73
44	Virginia	1,367,043	0.94	44	Idaho	268,029	1.60
45	Washington	1,153,256	0.90	45	Utah	444,645	1.58
46	Montana	128,554	0.88	46	Montana	138,354	1.53
47	Alaska	89,824	0.87	47	Washington	1,212,018	1.39
48	Arizona	1,128,660	0.85	48	North Dakota	65,065	1.37
49	Wyoming	67,189	0.78	49	Wyoming	70,888	1.36
50	Oregon	612,049	0.76	50	Oregon	649,826	1.32
51	Hawaii	171,716	0.66	51	Alaska	93,811	1.21

Source: Mortgage Banker's National Delinquency Survey

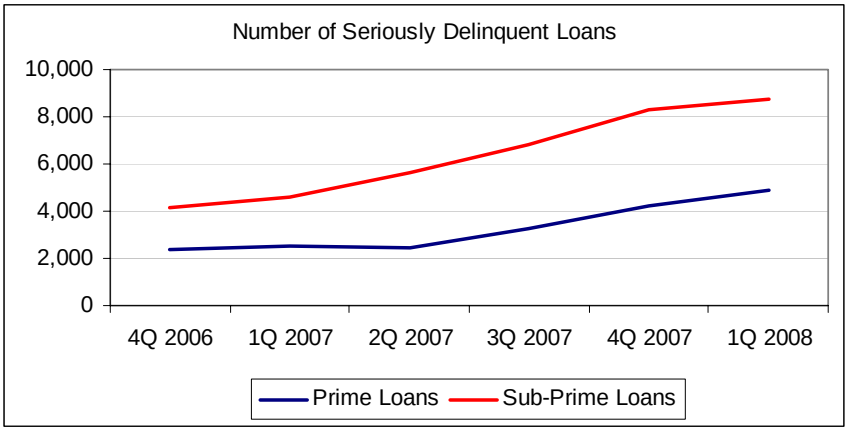
Connecticut Foreclosure Trends

Although foreclosures in Connecticut are at lower levels than in many other states, foreclosures are increasing. According to The Mortgage Banker's National Delinquency Survey, the total number of foreclosures has almost doubled over the past 18 months.

Table 38: Number of Loans 90+ Days Delinquent and in Foreclosure						
	4Q 2006	**1Q 2007**	**2Q 2007**	**3Q 2007**	**4Q 2007**	**1Q 2008**
Prime Loans	2,363	2,538	2,457	3,274	4,205	4,857
Subprime Loans	4,171	4,573	5,616	6,842	8,267	8,753
Total (including FHA and VA Loans)	7,684	8,093	9,107	11,213	13,718	14,931

Source: Mortgage Banker's National Delinquency Survey

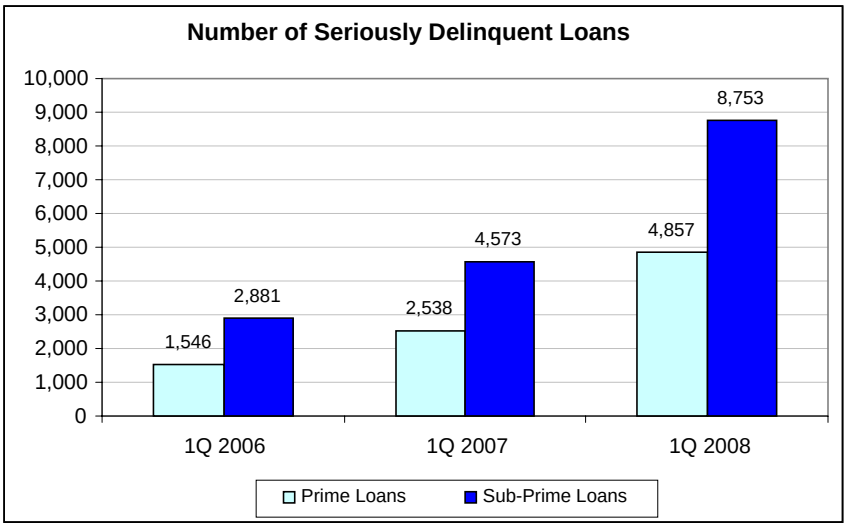
Chart 9: Seriously Delinquent Loans, 4Q 2006 – 1Q 2008



Source: Mortgage Banker's National Delinquency Survey

When looking at the number of seriously delinquent loans from the same quarter over a three year period, the increase in the number of seriously delinquent loans becomes apparent.

Chart 10: Seriously Delinquent Loans, 1Q 2006 – 1Q 2008



Source: Mortgage Banker's National Delinquency Survey

Housing Needs

Families Needing Housing Assistance

Low-Income Households

Table 39 shows the income distribution of households by household size, measured by number of persons.

Table 39: 2000 Household Income Distribution by Household Size						
	Household Size by Number of Persons					
2000 Area Median Family Income	1	2	3	4	5	6
Under 30% AMI (Extremely Low-Income)	9,445	51,247	56,622	46,208	13,941	3,189
31-50% AMI (Very Low-Income)	5,318	30,237	55,094	55,253	15,320	3,282
51-80% AMI (Low-Income)	3,798	30,540	70,028	73,920	21,572	5,279
81-120% AMI (Moderate Income)	2,961	25,678	70,047	105,314	41,244	8,388

Source: Census 2000 interpolation by DECD

In Table 40, HUD defines the various low-income levels at the specific percentages of AMI. The percentage of low-income renters (88.5%) is higher than that of owners (58.6%).

Table 40: 2000 Income Distribution by AMI and Homeownership			
Income Group	Homeowners	Renters	Total
Under 30% AMI (Extremely Low-Income)	77,635	136,839	214,474
31-50% AMI (Very Low-Income)	86,474	84,797	171,271
51-80% AMI (Low-Income)	225,502	230,590	456,092
81-120% AMI (Moderate Income)	284,503	151,553	436,056
All Homeowners	869,742	431,928	1,301,670

Source: Census 2000

Table 41: Households with Less Than 100% of AMI, Adjusted for Family Size					
	Total Number of Households	**Less Than 25% AMI**	**25% - 50% AMI**	**51% - 80% AMI**	**81% - 100% AMI**
1 Person Households	359,647	80,320	85,361	73,722	36,558
2 Person Households	427,724	24,194	51,055	74,496	48,007
3 Person Households	214,508	13,777	22,353	33,926	23,756
4 Person Households	201,234	9,807	16,005	28,989	23,114
5 Person Households	85,062	4,545	9,590	12,625	10,701
6 Person Households	23,553	1,742	2,495	4,551	3,332
7 Person Households	7,630	579	1,032	1,624	1,114
8 Person Households	2,768	304	460	511	189

Source: ACS 2007

Single Persons

Table 42 shows the number of single householders living in each county.

Table 42: Single Householders		
State/County	**Householder Living Alone**	**Householder not Living Alone**
Connecticut	356,145	79,098
Fairfield	82,773	17,419
Hartford	97,979	18,304
Litchfield	19,440	3,373
Middlesex	17,733	4,415
New Haven	88,413	21,075
New London	27,993	6,816
Tolland	10,655	5,118
Windham	11,159	2,578

Source: ACS 2007

Large Families

As defined by HUD, a large family is a household that has five or more people. Table 43 shows the number of large families in Connecticut.

Table 43: Large Families			
State/County	5 Person Household	6 Person Household	7 or More Person Household
Connecticut	83,250	25,010	11,383
Fairfield	24,175	7,198	3,517
Hartford	21,156	6,039	2,653
Litchfield	4,713	1,199	325
Middlesex	2,383	1,009	293
New Haven	20,080	5,818	3,030
New London	5,044	2,371	984
Tolland	3,158	470	138
Windham	2,541	906	443

Source: ACS 2007

Overcrowded Households

A household is considered overcrowded when the ratio of occupants to rooms exceeds one. For example, a house with six inhabitants and five rooms is considered overcrowded because there is more than one person per room. Table 44 shows overcrowding in each of Connecticut county by tenure (homeowner and renter). The number of overcrowded households is given, with the corresponding percentage of overcrowded households in the county. Fairfield County has the highest percentage of total overcrowding. The counties with the least amount of overcrowding are Tolland and Windham. The rental households in Fairfield, Hartford, and New Haven counties have significantly higher levels and percentages of overcrowding compared to owner-occupied households.

Table 44: Overcrowded Households						
	Owners		Renters		Total	
State/County	Overcrowded	%	Overcrowded	%	Overcrowded	%
Connecticut	8,094	0.6%	14,532	1.1%	22,626	1.7%
Fairfield	3,139	1.0%	4,859	1.5%	7,998	2.5%
Hartford	1,566	0.5%	3,932	1.2%	5,498	1.6%
Litchfield	471	0.6%	184	0.2%	655	0.9%
Middlesex	375	0.6%	338	0.5%	713	1.1%
New Haven	1,569	0.5%	4,265	1.3%	5,834	1.8%
New London	728	0.7%	647	0.6%	1,375	1.3%
Tolland	58	0.1%	166	0.3%	224	0.4%
Windham	188	0.4%	141	0.3%	329	0.8%

Source: ACS 2007

Lead-Based Paint Hazards

HUD requires the state to estimate the number of housing units with lead-based paint hazards—especially those inhabited by low- and moderate-income families. As accurate records are not kept that would provide a comprehensive evaluation of the overall status of lead hazards by household income, answering HUD's ultimate question is difficult. All that can be done at this point is to examine the potentially hazardous housing stock, locate what local statistics are available, and infer from regional trends.

The 2001 *National Survey of Lead and Allergens in Housing* concludes that 43% (plus or minus 12%) of housing units in the Northeast built before 1978 are likely to have significant lead-based paint hazards. This region has the highest incidence of lead-based paint in the country. Data specific to Connecticut is unavailable, although the data on the state's inventory of pre-1978 housing can be taken from the 2000 U.S. Census, which revealed a total of 1,083,485 pre-1978 units. It can be extrapolated from the national survey that 465,898 units (43%) are likely to be affected. The Centers for Disease Control and Prevention (CDC) reports that although lead-based paint was available for use in residential housing units as late as 1978, it was used more extensively in pre-1950 housing and contained a higher concentration of lead. This is compounded by the fact that older housing is more likely to be deteriorated and therefore contain flakes of lead-based paint hazards. Connecticut's pre-1950 residential stock is comprised of 459,188 units, or 32.3% of the total state housing stock.

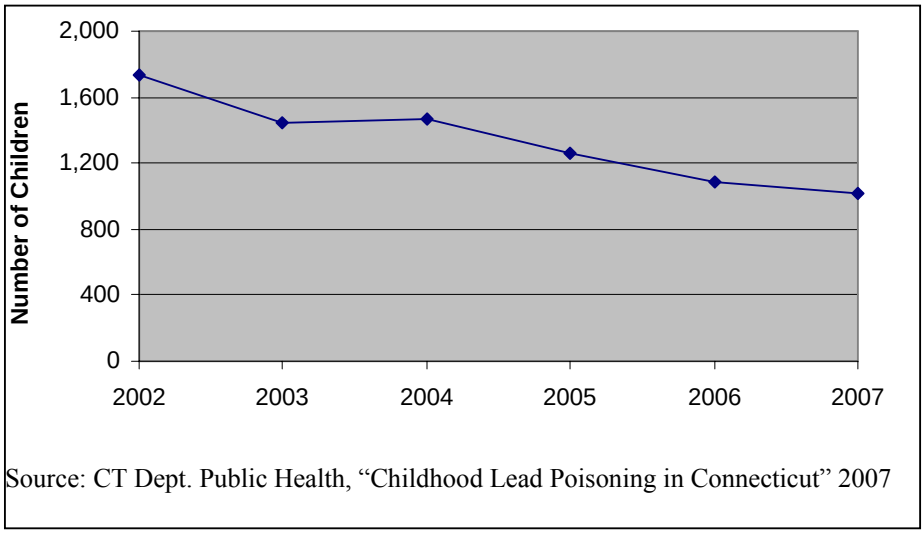
However, the fact that a home has "significant" lead-based paint hazards does not necessarily mean that members of such households will develop serious health problems. By far, the largest segment of the population that is affected by lead-based paint is that of children under the age of six. Children can easily ingest chipped lead-based paint and toxic dust particles through normal hand-to-mouth contact. Excess lead in a child's body is very harmful to both physical and mental development. In Connecticut, the most detailed statistics concerning the prevalence of lead-based paint hazards come from the Department of Public Health (DPH), which annually publishes the results from confirmed blood lead-level tests of children under age six by town. Table 45 appears in the DPH 2007 report and lists the 15 towns with the highest incidence of child lead poisoning. Only three towns (Fairfield, Stamford, and Norwalk) have incomes above the state median household income as estimated by the Connecticut Economic Resource Center (CERC) for 2008. The data therefore suggests a negative correlation between lead poisoning and income level, although the actual income levels of specific households with lead-poisoned children are not available.

Table 45: Children Under Six with Confirmed High Blood Lead Levels					
Location	**Number of Children with Confirmed Test**	**Cumulative Statistics**			
		≥ 10 µg/dL*		**≥20 µg/dL**	
		Number	**Percent**	**Number**	**Percent**
Bridgeport	6,131	185	3	34	0.6
Bristol	1,100	9	0.8	4	0.4
Danbury	1,667	10	0.6	1	0.1
East Hartford	1,157	9	0.8	0	0
Fairfield	1,238	3	0.2	0	0
Hamden	1,025	6	0.6	0	0
Hartford	5,560	120	2.2	22	0.4
Meriden	2,016	53	2.6	9	0.4
New Britain	3,032	44	1.5	11	0.4
New Haven	4,283	202	4.7	40	0.9
Norwalk	2,708	20	0.7	6	0.2
Stamford	2,993	20	0.7	7	0.2
Stratford	1,156	6	0.5	1	0.1
Waterbury	4,204	69	1.6	14	0.3
West Haven	1,174	19	1.6	3	0.3
Connecticut	71,627	1,020	1.4	208	0.3
* µg/dL = micrograms/deciliter (micrograms of lead per deciliter of blood)					

Source: CT Dept. of Public Health, Childhood Lead Poisoning in Connecticut 2007 Report

Time series data taken from the DPH report shows that fewer children experience lead poisoning, perhaps due to increasing efforts to raise awareness and widespread publication of feasible safety precautions. The number of children who were screened and confirmed to have high blood-lead levels decreased from 1,733 in 2002 to 1,020 in 2007. This implies that the number of homes with significant lead-based paint hazards is likewise shrinking.

Chart 11: Number of Children Under Six with High Blood Lead Levels



Source: CT Dept. Public Health, "Childhood Lead Poisoning in Connecticut" 2007

HUD's Comprehensive Housing Affordability Strategy (CHAS) data (Table 46) provides insight into the scope of households at risk for exposure to lead-based paint hazards by documenting those housing units with children under the age of six by tenure, year structure built, and household income level. Although this data is dated, we display it here to illustrate how updated versions of the same data may be used.

The lowest income households in homes that were built before 1949 and have children under age six are most susceptible to the dangers of lead poisoning. Combining renter households with children under age six (8,690) and owner households with children under age six (1,220) in this category totals 9,910. Other households at risk tend to have low income and/or old age that numbers 72,540 households, as indicated by the figures in bold. Of these, 39,030 are owner households, and 43,420 are renter households.

Table 46: Housing Unit by Presence of Children Under Six

Household Income	Tenure	Year Structure Built			Total
		1960-1979	1950-1959	Pre-1949	
<30% MFI	Owner	955	590	1,220	2,765
	Renter	6,750	3,745	8,690	19,185
30.1-50% MFI	Owner	1,815	1,235	2,255	5,305
	Renter	5,825	2,565	6,900	15,290
>50% MFI	Owner	36,590	22,180	32,775	91,545
	Renter	12,440	5,570	14,770	32,780
Total		64,375	35,885	66,610	166,870

Source: 2000 CHAS data tables A14A and A14B

In Connecticut, most communities have not established a Registry of Lead-Safe Housing. If such registries did exist statewide, they would provide an overview of how many pre-1978 units are relatively unsafe or at least worthy of investigation.

Substandard Housing Conditions

An important indicator of housing conditions is the number of housing units that have complete plumbing and kitchen facilities. Table 47 shows the number of occupied and unoccupied housing units that lack complete plumbing and kitchen facilities in Connecticut. There are more units in the state without kitchen facilities than units without plumbing facilities.

Table 47: Units Lacking Plumbing or Kitchen Facilities

State/County	Total Units	Units Lacking Complete Plumbing Facilities		Units Lacking Complete Kitchen Facilities	
		# Units	%	# Units	%
Connecticut	1,438,548	12,042	0.84%	14,359	1.00%
Fairfield	350,498	2,547	0.73%	3,606	1.03%
Hartford	363,764	3,210	0.88%	3,377	0.93%
Litchfield	83,221	780	0.94%	1,128	1.36%
Middlesex	72,188	489	0.68%	441	0.61%
New Haven	349,347	2,578	0.74%	3,880	1.11%
New London	116,567	1,309	1.12%	1,030	0.88%
Tolland	56,011	233	0.42%	273	0.49%
Windham	46,952	896	1.91%	624	1.33%

Source: ACS 2007

When one considers occupied housing units exclusively, the statewide percentage of units lacking complete plumbing facilities drops by more than half its original value. The data for occupied housing units shows the percentage of units lacking complete kitchen facilities declined by nearly two-thirds of its original value. These declines show that a disproportionate number of units lacking plumbing or kitchen facilities are vacant, which implies that housing condition is an important determinant of homeownership. The data shown in suggest that a disproportionate number of units in substandard housing condition are vacant, and that improving housing conditions across the state would result in a decrease in the vacancy rate.

Table 48: Occupied Units Lacking Plumbing or Kitchen Facilities					
State/County	Total Occupied Units	Occupied Units Lacking Complete Plumbing Facilities		Occupied Units Lacking Complete Kitchen Facilities	
		# Units	%	# Units	%
Connecticut	1,320,714	5,316	0.40%	4,851	0.37%
Fairfield	323,848	919	0.28%	1,123	0.35%
Hartford	337,162	1,912	0.57%	1,427	0.42%
Litchfield	73,732	449	0.61%	435	0.59%
Middlesex	64,770	265	0.41%	122	0.19%
New Haven	321,203	796	0.25%	1,165	0.36%
New London	102,995	306	0.30%	185	0.18%
Tolland	53,377	67	0.13%	107	0.20%
Windham	43,627	602	1.38%	287	0.66%

Source: ACS 2007

Homeless Needs

HUD defines a "homeless" person as an individual who lacks a fixed, regular, and adequate nighttime residence; an individual who has a primary nighttime residence that is supervised by a publicly or privately operated shelter designed to provide temporary living accommodations; an institution that provides a temporary residence for individuals intended to be institutionalized; or, a public or private place not designed for, or ordinarily used as, regular sleeping accommodations for human beings. This definition of homeless does not include individuals who are lawfully imprisoned or detained.

In accordance with HUD guidelines for proper homeless survey techniques, Connecticut conducted its second annual "point-in-time" count of the sheltered and unsheltered homeless populations on January 30, 2008. The findings from this event are revealed in the *Connecticut Counts 2008* report. According to the publication, volunteers counted a total of 3,444 homeless households. In accounting for the homeless sheltered population, *CT Counts 2008* does not incorporate residents of transitional housing programs that are not specifically designated for homeless people into their results. For example, residents of mental health, substance abuse, and child welfare programs were only counted if the program specifically serves homeless people.

The count is important as a baseline measure to compare the effectiveness of future initiatives to end homelessness. The Reaching Home Campaign (a sponsor of *CT Counts*) estimates that in 2001, approximately 33,000 individuals (including 13,000 children) in Connecticut experienced homelessness to varying degrees. This figure encompasses

those who are struggling on the brink of losing their homes in addition to those that experience homelessness.

The results indicate that two-thirds of sheltered adults in families were between ages 22 and 39, but among sheltered single adults, the majority, 59%, were between 40 and 59 years old. Interestingly, 72% of sheltered single adults are male, whereas 87% of sheltered adults in families are female. This suggests that most homeless women belong to families as single mothers. Similar trends exist in the unsheltered population, where 73% of single adults are male and 62% of adults in families are female.

To trace the roots of homelessness, surveyors interviewed the homeless about the primary reason for leaving their last permanent residence. The results appear in Table 49.

Table 49: Reason Left Last Residence

	Sheltered				Unsheltered			
	Single Adults	**%**	**Adults in Families**	**%**	**Single Adults**	**%**	**Adults in Families**	**%**
Rent Problems	611	27%	137	29%	74	13%	4	50%
Evicted for a reason other than rent problems	265	12%	63	13%	40	7%	0	0%
Conflict with family or friends	443	20%	111	23%	31	5%	0	0%
Overcrowding	48	2%	41	9%	10	2%	0	0%
Domestic Violence	95	4%	109	23%	8	1%	0	0%
Went to prison or jail	235	10%	5	1%	40	7%	0	0%
Went into the hospital	97	4%	4	1%	2	0%	0	0%
Housing condemned	43	2%	7	1%	3	1%	0	0%
Fire	14	1%	6	1%	2	0%	0	0%
Other	451	20%	69	14%	56	10%	1	12%
Unknown	305	14%	32	7%	362	61%	3	38%

Source: CT Counts 2008

The Department of Social Services (DSS) has historically reported the leading causes of homelessness as alcohol/drug abuse, unemployment, and insufficient income. Across all groups in the *CT Counts 2007* survey, "rent problems" was the number one reason cited

as the cause of homelessness. Although rather vague, the reason "rent problems" refers to a household's failure to make periodic housing payments. This failure could be attributed to a number of financial or housing problems such as a lack of affordable housing supply in Connecticut. In addition to forces in the housing market, rent problems could be caused by personal issues such as substance abuse or unemployment.

Additional prevalent choices for respondents were the "conflict with family or friends" and "other" categories. "Other" could comprise a number of factors, including a problem with alcohol or drug abuse, and chemical dependency may also trigger several of the aforementioned scenarios—especially family/friend conflict, eviction, or hospitalization. Among single adults, 10% of sheltered and 7% of unsheltered persons left their place of permanent residence to go to jail, and once released were forced into poverty and homelessness. It is common for de-incarcerated persons to have difficulty finding a job and an affordable housing unit after they are released; many eventually return to jail.

The volunteers also inquired where the homeless have slept in the last 30 days. Respondents were given the opportunity to list more than one location. Their responses appear in Table 50.

Table 50: Where Slept in Last 30 Days								
	Sheltered				**Unsheltered**			
	Single Adults	**%**	**Adults in Families**	**%**	**Single Adults**	**%**	**Adults in Families**	**%**
Non-housing*	85	4	2	0	203	34	3	38
Emergency Shelter	1244	55	197	42	23	4	0	0
Transitional Housing for Homeless Persons	576	26	213	45	0	0	0	0
Psychiatric Facility	32	1	0	0	0	0	0	0
Substance Abuse Treatment Facility	85	4	11	2	5	1	0	0
Hospital	42	2	1	0	3	1	0	0
Jail/prison	35	2	1	0	10	2	0	0
Domestic Violence Situation	18	1	28	6	2	0	0	0
Living with Relative/Friend	192	9	33	7	66	11	2	25
Rental Housing, Own Apartment or House	91	4	47	10	0	0	0	0
Hotel or motel	31	1	4	1	5	1	2	25
Foster Care	0	0	0	0	0	0	0	0
Other	56	2	17	3	16	3	1	12
Unknown	189	8	13	3	344	58	3	38
*Non-housing includes street, park, car, bus station, parking garage, campground, woods, abandoned building, etc.								

Source: CT Counts 2008

It should not be surprising that the sheltered population displayed a strong preference for either an emergency shelter or some type of transitional housing in the 30 days previous to the survey. Those unsheltered had remained in the same condition or opted to stay in a hotel or with relatives and friends rather than enter into an emergency or transitional shelter. Difficulty arises when an attempt is made to analyze the exact percent of households who resided in each of the above locations as seemingly over 100% of the sample population responded because each household could identify more than one location.

A regular measure of homelessness in Connecticut comes from the DSS *Annual Homeless Shelter Demographic Report*. The latest report states that from October 2006 to September 2007, 13,779 people used available emergency shelters in the state. However, in the same time period, these shelters had to turn away people 34,026 times. The three cities with the highest "turned away" rates among reporting shelters were New Haven, East Hartford, and Hartford; all number in the thousands annually.

Of the total number of homeless clients served by homeless shelters from 2006-2007, 9,904 (72%) of them were single. There were 1,284 (9.3%) families that stayed in homeless shelters, and those families included 2,295 (16.7%) homeless children.

An accurate record of the chronically homeless is difficult to come by even with the best of survey methodologies. *CT Counts 2008* surveyed those persons who have been without a permanent residence for various lengths of time. If respondents indicated that this period was greater than one year, or that homelessness occurred at least four times in the past three years, they were categorized as "chronically homeless." The results convey that an alarming 51% of unsheltered adults and 32% of sheltered adults were chronically homeless. It is important to note that single homeless adults also reported a high incidence of disability—be it mental, physical, or developmental. A high percentage, 41% of sheltered and 50% of unsheltered single adults, reported having some type of health condition that limits their ability to work, get around, and care for self or otherwise take care of their needs. Expanding the supply of supportive services and living accommodations for this population could reduce the rate of homelessness among disabled adults.

During FY 2006-07, DSS utilized various homeless assistance programs to support 45 emergency shelters with a total of 1,777 beds, serving more than 14,663 adults and children, plus six programs that provide advocacy, housing, and health services.

The Continuum of Care, a program sponsored by HUD, is a community-based, long-range plan that addresses the needs of homeless persons in order to help them reach maximum self-sufficiency. The program developed through collaboration with a broad cross section of the community and is based on a thorough assessment of homeless needs and resources. HUD recommends the Continuum of Care as a comprehensive and strategic approach to addressing homelessness. The application process for Continuum of Care funding includes an estimate of homeless populations and subpopulations for each state.

Table 51: Homeless Populations and Subpopulations in CT				
	Sheltered			
Household Type	Emergency Shelter	Transitional Housing	Unsheltered	Total
Persons in Households without Children	1,631	825	717	3,173
Persons in Households with Children	631	584	94	1,309
Total Homeless Persons in Households	2,262	1,409	811	4,482
Subpopulation Type	**Sheltered**		**Unsheltered**	**Total**
Chronically Homeless	596		427	1,023
Severely Mentally Ill	1,241		209	1,450
Chronic Substance Abuse	1,495		420	1,915
Veterans	330		106	436
Persons with HIV or AIDS	185		31	216
Victims of Domestic Violence	225		79	304
Unaccompanied Youth less than 18 Years	41		9	50

Source: Continuum of Care 2007

The Continuum of Care Program funds housing-related projects designed to serve the homeless population. Table 52 shows the funding awards received by Connecticut homeless housing programs in 2007.

Table 52: Continuum of Care Funding Awards by Program Component					
Program Component	# of Projects	New Projects	Renewal Projects	Total	% of State Award
Permanent Supportive Housing	86	$ 1,893,152	$16,178,518	$ 18,071,670	73%
Transitional Housing	24	$ 0	$ 5,418,333	$ 5,418,333	22%
Supportive Services Only	4	$ 0	$ 737,077	$ 737,077	3%
Homeless Management Information Systems (HMIS)	6	$ 63,358	$ 309,858	$ 373,216	2%
Grand Total	120	$ 1,956,510	$ 22,643,786	$ 24,600,296	100%

Source: Continuum of Care 2007

Table 53 depicts homelessness by race from the *CT Counts 2008* survey, which reveals disproportionately greater rates of homelessness among African-Americans and Hispanics. The 2007 ACS reports whites, Hispanics, and African-Americans as making up 74%, 10.9%, and 9% of the state's population, respectively.

Table 53: Homelessness by Race

Race/Ethnicity of Head of Household	Sheltered		Unsheltered	
	Single Adults	Adults in Families	Single Adults	Adults in Families
American Indian or Alaska Native	2%	1%	1%	0%
Asian	1%	0%	0%	0%
Black or African American	31%	38%	9%	25%
Hispanic/Latino (any race)	17%	28%	7%	0%
White	43%	36%	28%	50%
Other or Unknown	17%	19%	59%	50%

Source: CT Counts 2008

As in other parts of the survey, respondents could check off any and all categories in which they fit. The data of homelessness by race/ethnicity is unfortunately more difficult to analyze.

The *Connecticut Counts 2008* final report reveals that the state mimics certain national demographic trends with regard to the homeless population: most are single adults, half of whom have a behavioral health disability and half of whom have been homeless for longer than one year. Singles are also mostly male, and aging. Families are younger, have much lower levels of disability, and are homeless for shorter periods. Of those not yet homeless, at-risk populations include families living below the federal poverty guidelines, individuals released from correctional institutions, women and children leaving domestic abuse shelters, people suffering from severe mental health or substance abuse problems, and young people no longer age-eligible for foster care or those leaving the juvenile justice system.

While shelters do not provide a solution to homelessness, they are crucial to a well-functioning society. Many homeless people need mental health services, substance abuse services, self-care assistance, HIV/AIDS treatment, and a range of other types of counseling. Increasing the number of facilities that serve these needs while at the same time providing temporary, dependable residence, is one major avenue to address the problem of homelessness.

Other Special Needs

Populations with Other Special Needs

Connecticut also has a population of residents that are not homeless, but have special needs that may require service-enriched housing. This section estimates the number of people living in Connecticut that are elderly, frail elderly, persons with physical or mental disabilities, and domestic violence victims.

Elderly

Elderly refers to people age 62 and older. The 2007 ACS reported 572,456 elderly residents in Connecticut. This is 16.3% of Connecticut's total population. Some elderly persons require special adjustments, such as wheelchair-accessible entryways and single-level units. It is imperative that Connecticut pay special attention to elderly households that need modest, affordable living arrangements.

Frail Elderly

HUD, DECD, and ACS have varying definitions for "frail elderly." HUD defines frail elderly as people age 62 and older who have limitations in three or more life activities such as bathing, dressing, and housekeeping. DECD's Congregate Housing program has a separate definition for this population group—persons age 62 and over who have limitations in one or more life activities. The ACS questionnaire asks about two limiting activities. From the data collected by ACS, there were 31,710 frail elderly residents in Connecticut.

Persons with Disabilities

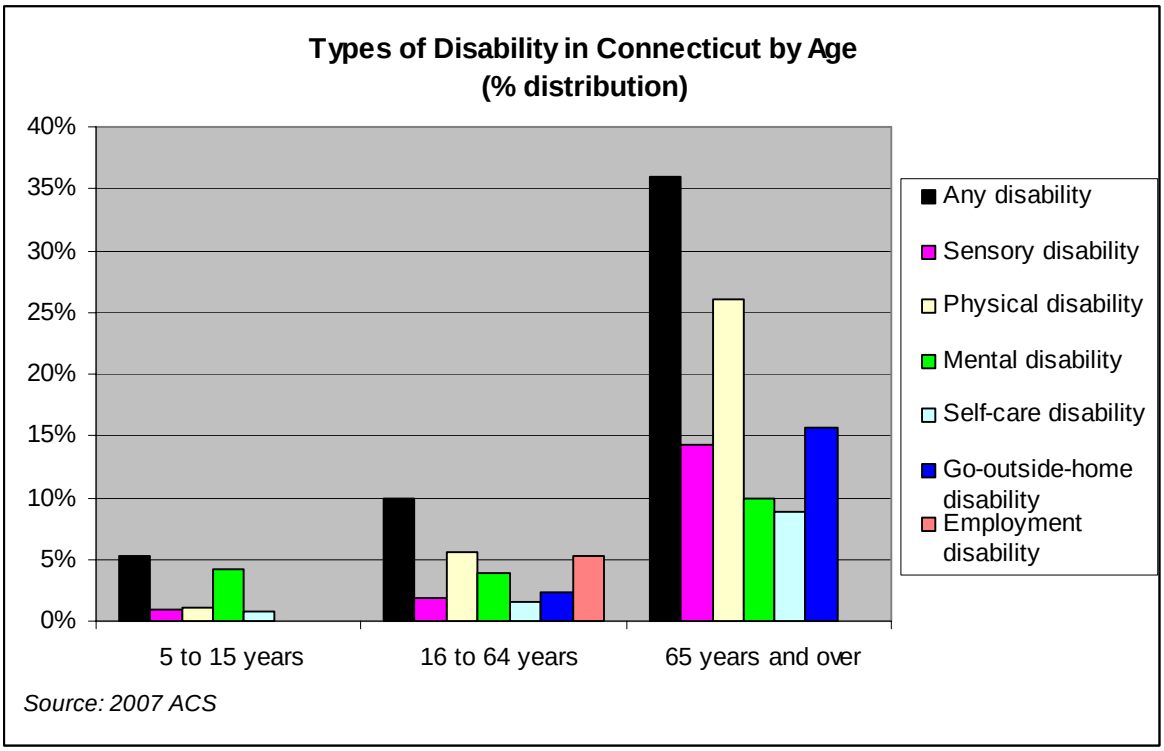
Persons with disabilities may have one or more physical, mental, and/or developmental conditions that constrain their possibilities for obtaining suitable housing. The disabled may require a single level home, special equipment to aid them in carrying out daily functions, or even a regular home nurse or family member to care for them. If their special needs are not met, many may become homeless. Financially, some are more independent than others. Table 54 indicates the most recent number of persons who are physically disabled or have a serious mental illness. These figures do not include those who are homeless or institutionalized.

Table 54: Disabled Population in Connecticut			
	Male	**Female**	**Total**
Physically Disabled			
5-15 years	3,905	1,738	5,643
16-20 years	1,052	883	1,935
21-64 years	54,920	70,444	125,364
65-74 years	16,105	22,647	38,752
75+ years	25,250	51,532	76,782
Totals	101,232	147,244	248,476
Mentally Disabled			
5-15 years	14,866	6,319	21,185
16-20 years	7,439	3,804	11,243
21-64 years	35,467	41,539	77,006
65-74 years	5,157	7,086	12,243
75+ years	11,715	20,037	31,752
Totals	74,644	78,785	153,429

Source: ACS 2007

The state's estimated number of physically disabled persons in 2007 was 248,476. Likewise the mentally disabled numbered 153,429. The severity of each disability varies. This data is difficult to assimilate into housing need calculations because there may be households with more than one disabled member or individuals with both a mental and a physical disability. Individuals who are homeless *and* disabled are not included in these totals. Chart 12 provides a percentage breakdown of the various types disabilities facing some state residents.

Chart 12: Types of Disability by Age



Domestic Violence Victims

According to the American Institute on Domestic Violence, 85-95% of nationwide domestic violence victims are female. Those persons who are victims of domestic violence are forced to turn outside of the home for shelter, safety, and support. Connecticut's lack of affordable housing seriously reduces the level of independence and mobility that abused women desperately need to uproot from their current situation. Often victims will have poor credit, rental, and employment histories as a result of their abuse. These factors further complicate the process of securing them new housing opportunities.

The 2008 National Census of Domestic Violence Services surveyed 16 out of 18 local domestic violence programs in Connecticut. It provides a snapshot of the adults and children served during one 24-hour period (September 17th). One hundred and sixty-one victims of domestic violence received housing services, while 441 adults and children sought non-residential advocacy and services such as individual counseling, legal advocacy, and children's support groups.

For fiscal year 2007-08, the Connecticut Coalition Against Domestic Violence sheltered 1,772 persons. There were 2,012 persons that requested shelter, but did not stay. Over 32% of people did not stay because of a lack of beds. Of the 2,012 people that needed a

safe place to stay, 1,252 persons were referred to other domestic violence shelters or homeless shelters. The CCADV is just starting to collect statistics on the living situation of domestic violence victims after they seek assistance from the CCADV. After living in a shelter, 81 victims have returned back to the previous abusive living situation. The leading reason is a lack of affordable housing. It is clear that Connecticut needs to expand its stock of transitional housing for victims of domestic violence and their children.

Persons with Alcohol or Other Drug Addiction

Table 55 shows alcohol and drug use trends in Connecticut for 2005 and 2006. The rate for substance dependence or abuse was higher in Connecticut than it is nationally. Additionally, the rates of persons needing but not receiving treatment for illicit drug problems or alcohol problems in Connecticut were 2.8% and 7.9%, respectively. Those numbers also exceed the national statistics of 2.5% and 7.3%, respectively.

Table 55: Percentages Reporting Pat Year Alcohol or Drug Dependence and Abuse

	Total	Age Group		
	12 Years or Older	12-17 Years	18-25 Years	26 Years or Older
Illicit Drug Dependence or Abuse*				
Connecticut	3.14	5.62	12.01	1.45
United States	2.83	4.65	8.14	1.66
Alcohol Dependence or Abuse				
Connecticut	8.48	5.94	23.07	6.57
United States	7.66	5.45	17.58	6.22
Alcohol or Illicit Drug Dependence or Abuse*				
Connecticut	10.09	9.06	28.64	7.38
United States	9.16	8.04	21.55	7.15

* Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2005 and 2006

Facilities and Services for Populations with Other Special Needs

Assisting Non-Homeless Persons Who Require Supportive Housing

The state of Connecticut offers various types of service-enriched housing (including supportive housing). The Department of Developmental Services (DDS) offers service-enriched housing to persons within the DDS system. As of March 2008, the total number of people receiving services from DDS was 15,193 and of the total, 5,649 people are enrolled in service-enriched housing. The number of DDS persons living in a campus style facility, the Southbury Training School or DDS Centers, is 770. Community Living Assignments (CLA), also known as group homes, house 3,163 persons. Community Training Homes are also supportive housing options for 395 DDS participants. Some persons receiving services from DDS are also involved with housing support from other state agencies. The Department of Mental Health and Addiction Services, the Department of Correction, and the Department of Children and Families provided housing support for 120 people. There were 419 people receiving housing support from Connecticut's elderly programs. One hundred and eleven people were in residential schools and 113 people were in other service-enriched housing programs while receiving DDS services.

The number of domestic violence victims who are not homeless but in need of special housing services is difficult to estimate. If they are not homeless, they may be still tolerating their abusive environment as silent victims.

Ensuring Persons Returning from Mental and Physical Health Institutions Receive Appropriate Supportive Housing

Numerous state programs offer service-enriched housing and supportive services for persons recovering from mental and physical health problems:

DMHAS provides several programs that cater to this target population. The Connecticut Mental Health Center, a collaborative endeavor of DHMAS and Yale University's Department of Psychiatry, has several social integration services that are designed to foster the recovery and community re-integration of the center's patients.

Shelter Plus Care, a HUD-funded rental assistance program administered by DMHAS, is designed to provide housing and supportive services to an estimated 940 persons per year who are homeless and disabled.

The DMHAS Housing Assistance Fund Program provides rental assistance in the form of monthly housing subsidy payments to persons with psychiatric disorders on a temporary basis as they wait for permanent subsidies.

DMHAS also has a General Assistance Recovery Supports Program (GA RSP), which is committed to helping State-Administered General Assistance (SAGA) recipients meet their basic needs. GA RSP promotes recovery, independence, employment, self-sufficiency, and stability by offering recovery support services including recovery housing, independent housing, bus passes, and personal care items.

The Bureau of Rehabilitation Services, a division of DSS, has a mission of creating opportunities that allow individuals with disabilities to live and work independently. The Bureau offers a variety of programs to assist individuals with significant physical and mental disabilities.

Future Housing Production and Preservation Needs

Overview

Purpose of Analysis

The availability and affordability of housing in Connecticut is critical for sustained economic growth and development. A detailed analysis of supply and demand trends in the Connecticut housing market and an estimate of the level of housing production needed to sustain economic growth in the state are essential for the development of growth policies and strategies. The following analysis of Connecticut's housing market and the state's demographic and employment characteristics, conducted by DECD and the Connecticut Housing Finance Authority (CHFA), explores the relationship between employment growth, demographic trends, and the availability and affordability of housing. The results of this analysis estimate the housing production level needed to adequately meet the estimated growing demand over the next five, ten, fifteen, and twenty years.

The purpose of this analysis is to articulate the aforementioned relationship between housing availability and affordability and sustained economic growth and to establish a baseline and methodology from which reliable estimates of future housing supply and demand can be produced, and further, from which future housing production need can be deduced.

Analytical Approach

The analysis at the heart of this study is based on the results of a housing supply and demand model (hereinafter, the model), adapted by DECD and refined jointly by DECD and CHFA. This model is based on "the Mayberry Model"[11] created by Bruce Mayberry and the New Hampshire Housing and Finance Authority for the State of New Hampshire. The basic framework of the Mayberry model was adapted for use with Connecticut counties using demographic and employment data from the 1990 and 2000 Census, the 2006 American Community Survey (ACS) data, employment data from the REMI Policy Insight model and the Connecticut Department of Labor, and population data from the Connecticut State Data Center (for further details about the specific functioning of the model and its contents, please see the Appendix).

The analysis conducted for this report consists of a baseline assessment, a housing supply and demand forecast, and an estimate of production need. The baseline assessment and housing supply and demand forecast are both composed of demographic, housing stock,

[11] "New Hampshire Housing Needs Study," Bruce C. Mayberry, July 2003, http://www.nhhfa.org/rl_docs/housingdata/housing_needs_assessment/HousingNeedsModel.xls

and cost burden trends, each of which is segmented at the state and county level. The estimated production need for housing units is further segmented by economic, demographic, and geographic characteristics in order address affordability issues. The period for this analysis is based on five-year projected intervals in order to be consistent with historical and projected data.

For the purposes of this report, DECD defines housing demand as the demand for all housing units (physical structures including condos, single- and multiple-household detached units, and apartments); affordable housing demand as that portion of housing demand for which annual costs (mortgage or rent payments) do not exceed 30% of an area's median income (AMI); housing supply as the total available supply of housing units (physical structures); housing production need as the differential between existing housing supply and housing demand; and affordable housing production as that portion of the housing production need for which annual costs do not exceed 30% of an area's median income (AMI), adjusted for household size.

Analysis Limitations

The model used in this analysis for housing supply and demand forecasts production and need estimates, creates relationships between employment, demographic, and housing trends to construct a housing baseline. The baseline does not identify current housing shortages or affordability issues relative to the population. Therefore, projections of production need are based on historic ratios that maintain the current relationships, not necessarily correct them. However, the model can be updated and adapted to account for a variety of scenarios to specifically address current issues in the housing market such as affordability and availability. The model assumes that Connecticut's economy will continue to grow, if slowly, and in the same geographic areas in which growth has occurred in the recent past.

Housing Trends Baseline

Overview

The housing baseline summary consists of current demographic, economic, employment, housing stock, and cost burden data. This provides a starting point that identifies existing housing supply and demand trends in Connecticut and its counties. Demographic and employment trends provide a baseline from which future projections are made. Changes in the demographic and employment data are a catalyst for changes in housing needs. Household classifications of the population by ownership and rental allow for a more accurate description of the current housing market. The analysis of the housing stock as a baseline indicator of overall supply sheds light on the market's ability to meet existing demand. An analysis of baseline cost burden data, for this initial model, is used to identify demographic and economic trends in the population.

From the change in the baseline housing stock, future housing need can be forecasted. Housing analysis is performed at the state and county levels to be consistent with the data sources available.

Demographic Trends and Current Picture

Statewide

Homeowner classification (renter or owner) specifies the different types of housing need at the baseline level. Statewide trends in the number of homeowners and renters are indicators of housing demand. Table 56 shows the statewide changes in the population and housing classifications. The average annual growth in the number of households slowed during the period 2000-2006 relative to the period 1990-2000. Those households categorized as renters declined annually by 3,989 in the period 2000-2006. This is inconsistent with the growth of total homeowners. The increase in Connecticut's homeownership rate from 2000 to 2006, 66.8% to 69.3%, and the subsequent decline in the rental rate from 33.2% to 30.7% indicate that an increasing number of people were purchasing homes during this period. The latter period also coincides with a time of extravagantly high subprime mortgage originations in the state.[12] During this time frame, Connecticut lost a large percentage of its renter population who were residents aged 25-34 years.

[12] Subprime Mortgage Task Force Update, Connecticut Subprime Mortgage Taskforce, http://www.chfa.org/mainpages/SubprimeMortgageTaskForceActivitiesReport6-26-08.pdf, June 26, 2008

Table 56: Household Ownership Classifications					
Classification	**1990**	**2000**	**2006**	**Avg. Annual Change 1990 to 2000**	**Avg. Annual Change 2000 to 2006**
Households	1,230,479	1,301,670	1,329,151	7,119	4,580
Owners	807,481	869,729	921,144	6,225	8,569
Renters	422,998	431,941	408,007	894	-3,989
Ownership percentage of Total	65.6%	66.8%	69.3%		
Rental percentage of Total	34.4%	33.2%	30.7%		

Source: Census 1990 and 2000, ACS 2006

The relationship between employment and working residents for a given area is used to identify housing demand. From 1990-2000, the state witnessed a decrease of over 28,000 working residents, although there was an increase in the state's total population. Only three counties (Fairfield, Hartford, and New Haven) actually experienced a decline in the number of their working residents during that period. Between 2000 and 2006, there was an increase of working residents, and another smaller increase in total population.

The ratios in Table 57 project the need for housing based on employment projections. There is a positive correlation between growth in employment and demand for housing, the extent of which depends on the ratio of employment to population and housing. In order for the state to sustain the growth of business, there is a critical need for housing.

Table 57: Relationship of Household to Workers and Private Sector Jobs			
Relationship of Households to Workers and Private Sector Jobs Statewide ratio of:	**1990**	**2000**	**2006**
Households to working residents	0.74	0.79	0.78
Number of working residents per household	1.36	1.26	1.29
CT private sector covered employment (in-state jobs) per Household	1.10	1.12	1.04

Source: Census 1990 and 2000, ACS 2006

By County

Employment changes in a specific county affect demographic trends in adjacent counties. Therefore, these spillover effects need to be accounted for by the commuting patterns of the population exhibiting this relationship between employment and the number of working residents in surrounding counties. Table 58 shows the commuting patterns of county residents relevant to employment in other counties. Working residents create demand for housing in the county in which they reside as opposed to the county in which they work.

Table 58: 2000 Commuting Patterns – Number of Workers Commuting Across CT Counties

	Counties Traveling To:								
From:	**Fairfield**	**Hartford**	**Litchfield**	**Middlesex**	**New Haven**	**New London**	**Tolland**	**Windham**	**Outside State**
Fairfield	335,375	2,145	3,034	465	21,895	249	179	55	54,736
Hartford	2,669	350,790	3,544	11,080	16,940	2,069	4,710	679	10,098
Litchfield	11,459	13,595	51,500	540	12,715	49	64	0	3,625
Middlesex	1,160	19,225	193	41,635	12,830	3,875	409	108	726
New Haven	50,970	21,414	8,970	8,564	290,105	1,365	355	63	5,254
New London	415	7,089	14	4,910	1,634	107,230	999	3,180	3,520
Tolland	254	35,090	79	1,268	1,265	1,485	26,765	2,944	1,950
Windham	99	3,819	24	385	330	8,190	4,290	30,830	5,799

Source: Connecticut Department of Labor

Housing Supply and Demand Forecast

Overview

DECD makes housing supply and demand projections from baseline indicators. The supply and demand framework has a historical basis from which housing production can be estimated. This analysis uses 2015 and 2025 as short- and long-term reporting years as these years coincide with available data sources.

Forecasted Demand vs. Actual Supply of New Housing in Connecticut

Table 59 compares estimated demand projections for housing based on projected employment growth to actual production that occurred for 2006. Actual production data was compiled from Census residential permit data. A side-by-side comparison for each county reveals discrepancies useful for identifying housing need. In Fairfield and New Haven counties actual 2006 production[13] was below forecasted production need. If we assume that housing production will not meet the demand in these counties, one can assume that the market will not meet the demand for housing. In the other counties production surpassed demand resulting in a housing surplus for that year.

Table 59: Estimated Demand Projections for Housing

	Forecasted Growth in Annual Residential Housing Needs 2006-2010	Total Residential Permits
State/County	**Employment Based Estimate**	**2006**
Fairfield	2,608	1,939
Hartford	1,961	2,305
Litchfield	22	541
Middlesex	241	634
New Haven	2,339	1,654
New London	866	1,006
Tolland	170	699
Windham	157	458
Connecticut	8,364	9,236

Source: 2006 Census data, CT Housing Model

[13] We use permits as a proxy for production.

Demographic Forecast (Estimated)

Employment and population growth at both the state and county level increases the demand for housing. Employment projections are subject to great fluctuation as a result of changing economic conditions, thus we analyze production results for a range of different scenarios. Population projections are typically more consistent, but are still subject to economic conditions.

Statewide

Table 60 shows Connecticut State Data Center population projections, which were used to generate a forecast of housing demand. The population projections are made on five-year intervals with respect to household population, group quarters population, and total population. The group quarters population refers to people living in an institution, college dormitory, or shelter.

Table 60: Statewide Population Projections			
	2010	**2015**	**2025**
Household Population	3,393,184	3,436,658	3,538,655
Group Quarters Population	127,472	127,472	127,472
Total State Population	3,520,656	3,564,130	3,666,127

Source: Connecticut State Data Center

REMI Policy Insight model projections of county-level employment were incorporated into the model. Employment data has a direct effect on population and the subsequent need for housing.

Employment data has a direct effect on population and the subsequent need for housing. For the period covering 2006 to 2015, Connecticut's employment growth is projected to be 0.78%. In Table 61, various employment scenarios generate a range of production needs for the state to account for the effects of a changing economic environment. Lower than expected employment projections will reduce the need for housing production.

Table 61: Production Need Based on Different Employment Scenarios				
Employment Growth Assumptions		**Total Annual Production Need**		
Annual Growth Rate	**Annual Employment Growth**	**Owner**	**Renter**	**Total**
1.08%	18,859	9,048	3,992	12,637
0.78%	13,457	6,220	2,744	8,604
0.48%	8,182	3,542	1,576	4,798
0.18%	3,032	886	410	1,016

Source: CT Housing Supply and Demand Model

Table 62 shows the statewide estimates of population for the year 2015 from each of the three methodologies. From the population projections, the model estimates total households that are further categorized as renters or owners. At the state level, employment projections are larger than population projections, a trend that is consistent with historical data. The difference in population is the result of the distinct methodological approaches from which to estimate demand for housing.

Table 62: Statewide Population Estimates Based on Three Projection Methods

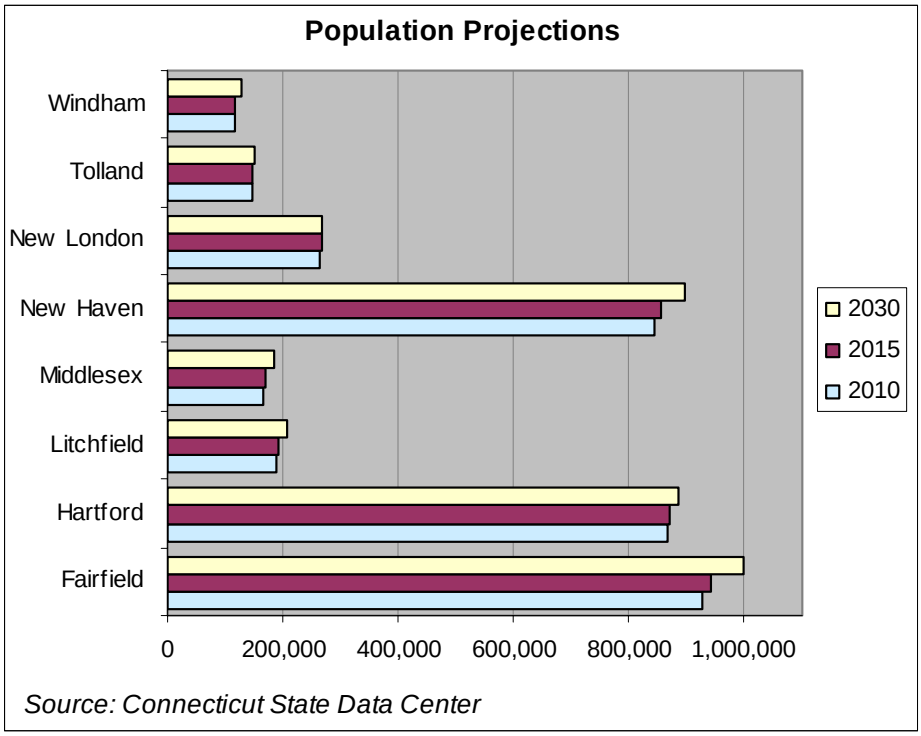
Statewide Total	2015 – State Employment Projection	2015 – County Employment Projection	2015 – Population Projection
Total Population	3,577,326	3,581,780	3,564,130
Households	1,383,940	1,383,345	1,376,182
Owners	958,402	958,030	954,288
Renters	425,538	425,314	421,894

Source: CT Housing Supply and Demand Model

By County

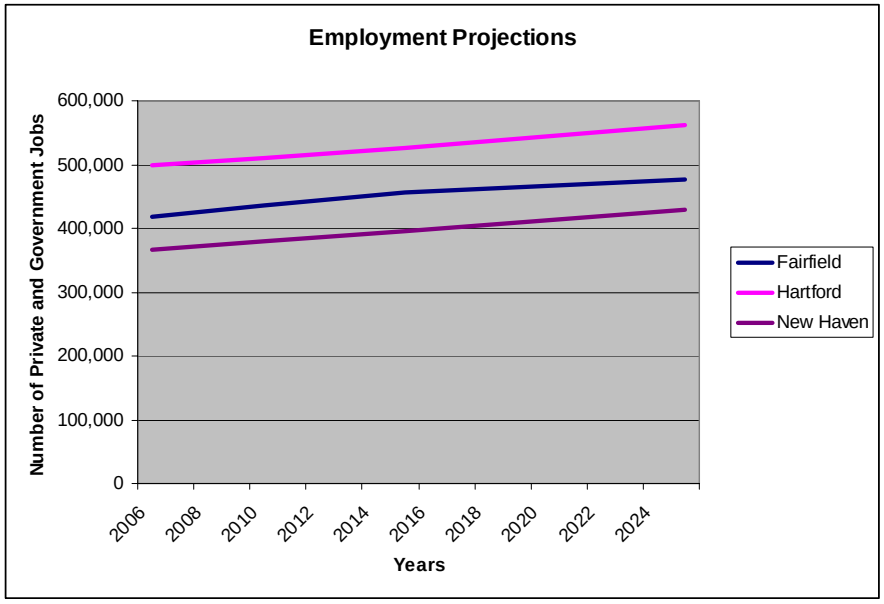
Chart 13 shows population projections for the years 2010, 2015, and 2030 for each Connecticut county. These projections are used for annual, short-term, and long-term reporting at the county and state level. This data is a key component for estimating housing production in future years, and shows where population pressure will be most significant. Fairfield and New Haven are expected to have the greatest growth in population. The other counties will continue to grow, but at a slower rate.

Chart 13: Country-Level Population Projections in 5-Year Intervals



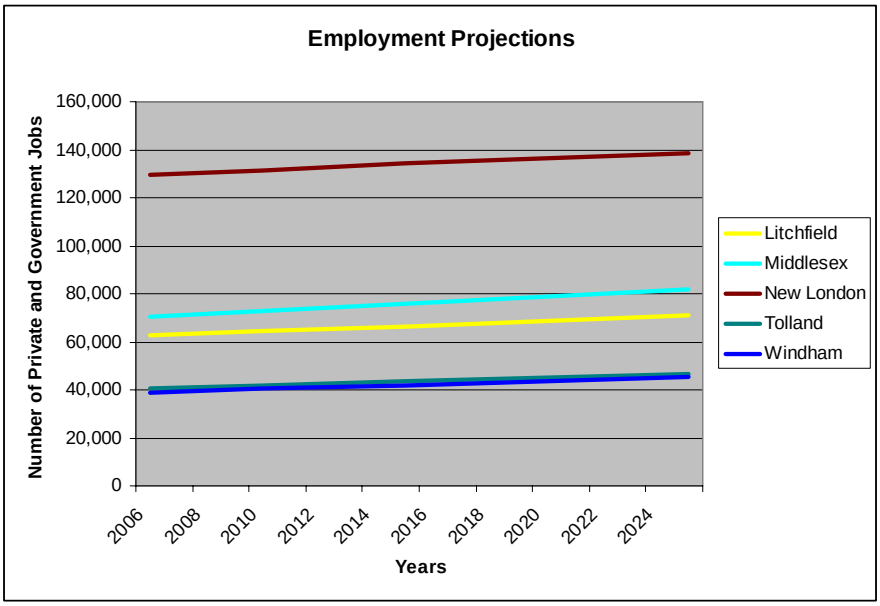
The following charts show employment growth and levels by county. Connecticut's employment is greatest in Fairfield, Hartford, and New Haven counties. The continual growth in employment in these counties reflects urbanization trends in employment and demography.

Chart 14: County-Level Employment (a)



Source: CT Housing Supply and Demand Model

Chart 15: County-Level Employment (b)



Source: CT Housing Supply and Demand Model

Housing Stock Forecast

The term housing stock refers to the total number of residential units both occupied and available to inhabit. This analysis identifies the number of future housing units needed based on three approaches; two are based on employment growth and the other is based on population growth. Historically, average household size in Connecticut has been relatively stable. With the Census/ACS data gathered from 1990, 2000, and 2006, the deviation from the mean was small. We maintain the assumption of a stable, average household through 2015.

Statewide

Table 63 reports the projected housing stock for 2015 suggesting a range of 1,435,231 to 1,443,236 units. Population projections are generally more conservative than employment projections, thus housing production projections based on population are lower than those using employment. It is important to understand that housing production estimates reported vary as a result of multiple methodologies.

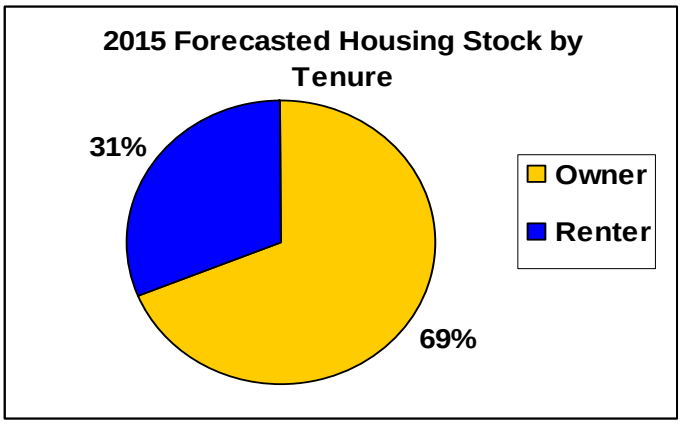
Table 63: Connecticut Housing Stock Forecasted for 2015

	State Total Housing Supply – 2015 Estimates for Resident Population		
	Employment-Driven: Maintain 2006 Share of State Employment	**Employment-Driven: Capture Share of Employment Growth Equal to 2000-2006 Share**	**Population-Driven: CT State Data Center Projections**
Owner	988,850	988,472	984,673
Renter	454,386	454,151	450,559
Total	1,443,236	1,442,623	1,435,231

Source: CT Housing Supply and Demand Model

Chart 16 shows the distribution for the total housing stock for 2015 in Connecticut. Owned households units account for 69% and rental units account for 31% of the forecasted units in 2015.

Chart 16: Ownership Proportions for State Projected Housing Stock



Source: CT Housing Supply and Demand Model

By County

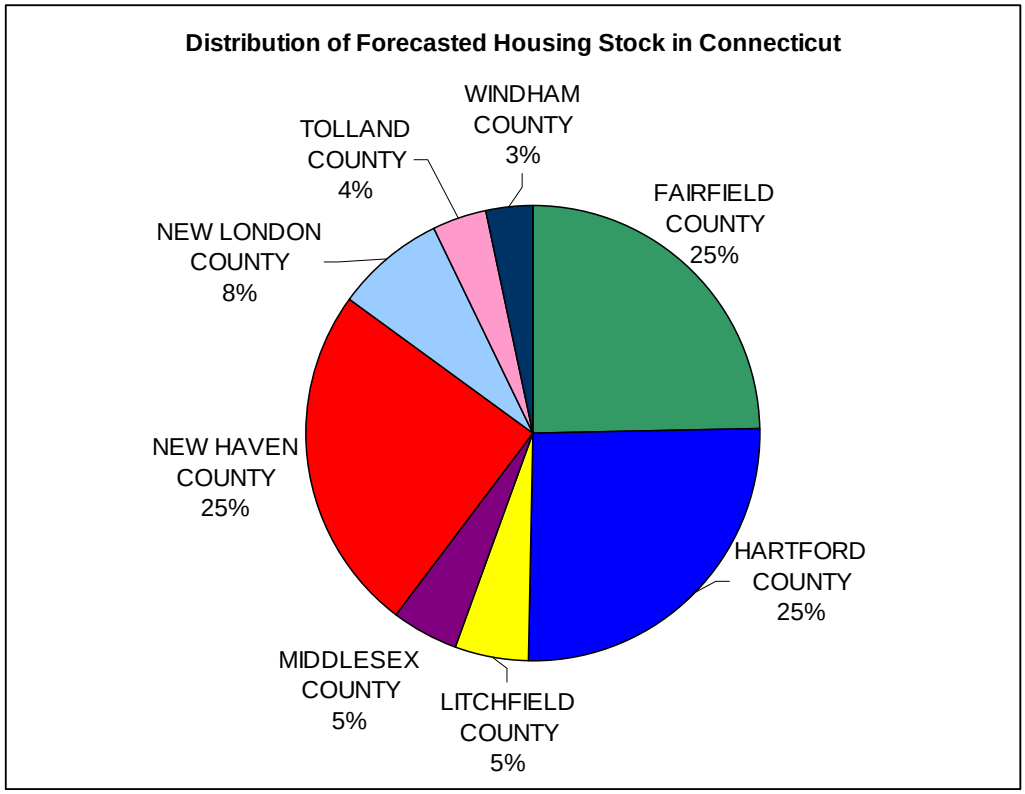
Table 64 shows the forecasted housing stock by county. The three methods used forecast the expected housing stock for 2015 by ownership.

Table 64: Forecasted Connecticut Counties Housing Stock for 2015				
		2015 Housing Supply Estimates for Resident Population		
County		Employment-Driven: Maintain 2006 Share of State Employment	Employment-Driven: Capture Share of Employment Growth Equal to 2000-2006 Share	Population-Driven: CT State Data Center Projections
Fairfield	Owner	248,214	251,590	255,977
	Renter	103,905	105,318	107,154
	Total	352,120	356,908	363,131
Hartford	Owner	246,074	242,774	235,407
	Renter	125,435	123,754	120,000
	Total	371,509	366,528	355,408
Litchfield	Owner	59,190	58,550	62,184
	Renter	17,845	17,652	18,747
	Total	77,035	76,202	80,932
Middlesex	Owner	50,973	50,949	52,976
	Renter	18,641	18,632	19,374
	Total	69,614	69,582	72,350
New Haven	Owner	229,390	230,514	225,443
	Renter	125,446	126,060	123,288
	Total	354,836	356,574	348,731
New London	Owner	80,020	79,138	76,519
	Renter	35,767	35,372	34,202
	Total	115,786	114,510	110,721
Tolland	Owner	42,486	42,184	42,991
	Renter	13,798	13,700	13,962
	Total	56,283	55,884	56,952
Windham	Owner	32,503	32,772	33,176
	Renter	13,550	13,663	13,831
	Total	46,053	46,435	47,007

Source: CT Housing Supply and Demand Model

Chart 17 represents the distribution of the projected 2015 housing stock in Connecticut. The urbanized counties of Connecticut—Fairfield, Hartford and New Haven—are projected to have 75% of the state's 2015 housing stock.

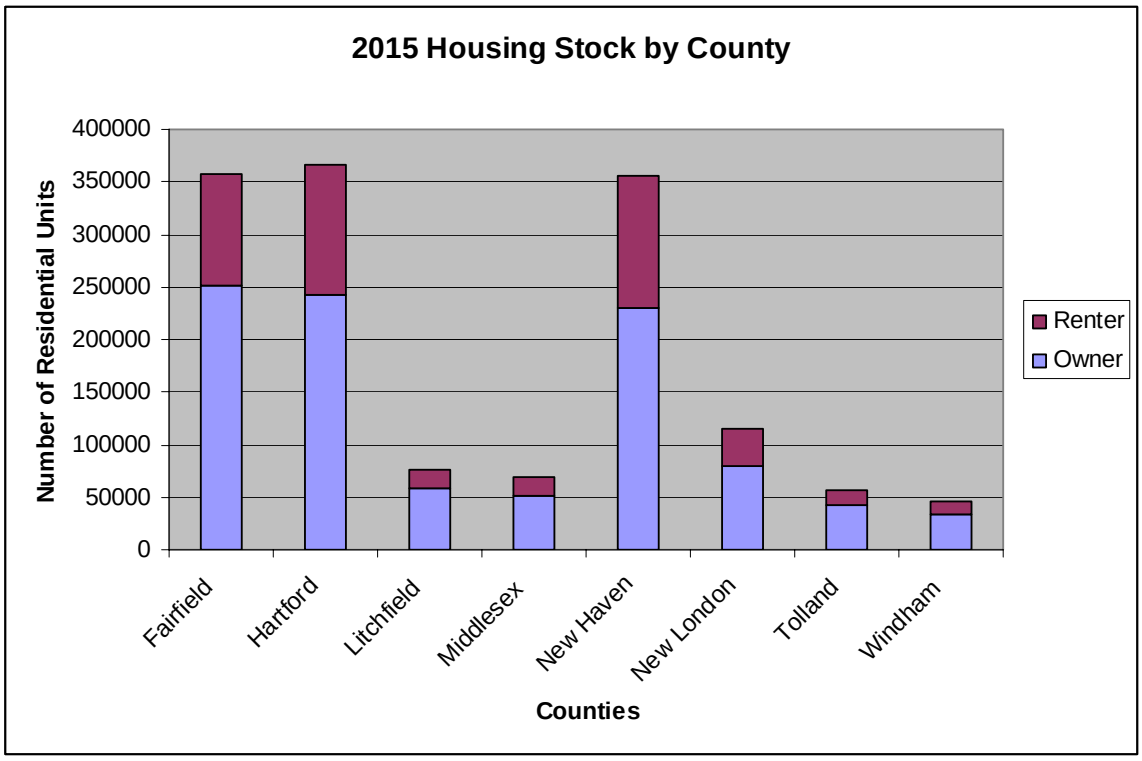
Chart 17: Connecticut Counties Distribution of Housing Stock for 2015



Source: CT Housing Supply and Demand Model

Chart 18 shows the distribution by units by ownership for each county. The lower section of the bar denotes homeownership forecasts and the upper section of the bar shows renter forecasts.

Chart 18: Ownership of Forecasted Housing Stock for 2015 by County



Source: CT Housing Supply and Demand Model

Production Need

Net production need is calculated as the difference between the future and existing stock, or the number of units that need to be added to the housing supply in order to meet future housing demand.

Short-Term Detailed Analysis

Statewide

Table 65 shows the distribution of net housing production needed at the county level for 2015. The net amount is the difference between the projected housing supply needed and the existing stock. Net production is differentiated by owner-occupied and rental housing needed to meet demand in each county. The rightmost table columns (A, B, and C) are further computations from the model that show the annual production needed to meet the projected 2015 housing need. Columns A and B contain the employment-driven methodologies and column C represents the population-driven methodology. For example, the population-driven projection suggests 52,183 homeownership units will need to be created to meet 2015 need. During the 2006-2015 period, each year 5,798 homeownership units should be created to say on track to meet the 2015 need. Overall, the state will need approximately 67,888 to 75,893 additional housing units (owner-occupied and rental) by 2015 to meet the growing needs. Each year between 2006 and 2015, 7,543 to 8,433 housing units will need to be created. Then in 2015, the housing need should be met and the market would be at equilibrium.

Table 65: State Net Production Need for 2015

	Net Production Need 2000-2015			**Average Annual Production Potential 2006-2015**		
	Employment-Driven: Maintain 2006 Share of State Employment (A)	**Employment-Driven: Capture Share of Employment Growth Equal to 2000-2006 Share (B)**	**Population-Driven: CT State Data Center Projections (C)**	**(A)**	**(B)**	**(C)**
Owner	56,360	55,982	52,183	6,262	6,220	5,798
Renter	19,533	19,298	15,705	2,170	2,144	1,745
Total	75,893	75,280	67,888	8,433	8,364	7,543

Source: CT Housing Supply and Demand Model

By County

Table 66 presents the net production need for rental and owner-occupied units by county. The net production need is positive for almost all counties. Litchfield County's negative employment growth from the 2000 – 2006 period impacts the forecast for that county and its housing production need. However, the other two forecast methods, by population and employment growth share, suggest there will be a small number of additional units needed. The data suggests the urban counties in Connecticut (Fairfield, Hartford, and New Haven) will experience the greatest need throughout the state.

Table 66: Net Production Need for 2015 by County							
		2000-2015 Estimated Housing Supply Requirements for Resident Population			Average Annual Production Potential 2006-2015		
County		**Employment-Driven: Maintain 2006 Share of State Employment (A)**	**Employment-Driven: Capture Share of Employment Growth Equal to 2000-2006 Share (B)**	**Population-Driven: CT State Data Center Projections (C)**	**(A)**	**(B)**	**(C)**
Fairfield	Owner	13,621	16,997	21,384	1,513	1,889	2,376
	Renter	5,059	6,472	8,308	562	719	923
	Total	18,681	23,469	29,692	2,076	2,608	3,299
Hartford	Owner	17,386	14,086	6,719	1,932	1,565	747
	Renter	5,247	3,566	-188	583	396	-21
	Total	22,633	17,652	6,532	2,515	1,961	726
Litchfield	Owner	1,020	380	4,014	113	42	446
	Renter	11	-182	913	1	-20	101
	Total	1,031	198	4,928	115	22	548
Middlesex	Owner	1,400	1,376	3,403	156	153	378
	Renter	800	791	1,533	89	88	170
	Total	2,200	2,168	4,936	244	241	548
New Haven	Owner	14,363	15,487	10,416	1,596	1,721	1,157
	Renter	4,948	5,562	2,790	550	618	310
	Total	19,311	21,049	13,206	2,146	2,339	1,467
New London	Owner	6,742	5,860	3,241	749	651	360
	Renter	2,331	1,936	766	259	215	85
	Total	9,072	7,796	4,007	1,008	866	445
Tolland	Owner	1,417	1,115	1,922	157	124	214
	Renter	516	418	680	57	46	76
	Total	1,933	1,534	2,602	215	170	289
Windham	Owner	411	680	1,084	46	76	120
	Renter	621	734	902	69	82	100
	Total	1,032	1,414	1,986	115	157	221

Source: CT Housing Supply and Demand Model

Long-Term Detailed Analysis

Forecasts were extended to 2025 for the long-term analysis of production need. This provides a way to begin planning for economic growth past 2015.

Statewide

Connecticut will continue to have a positive net production need in 2025. Forecasting to 2025 introduces more uncertainty and therefore broadens the range of expected housing production need. The total net production need suggested for the state ranges from 108,204 – 155,058 additional housing units. Table 67 shows the estimated housing supply requirements for 2025.

Table 67: State Net Production Need for 2025

	2000-2025 Estimated Housing Supply Requirements for Resident Population			**Average Annual Production Potential 2006-2025**		
	Employment-Driven: Maintain 2006 Share of State Employment (A)	**Employment-Driven: Capture Share of Employment Growth Equal to 2000-2006 Share (B)**	**Population-Driven: CT State Data Center Projections (C)**	**(A)**	**(B)**	**(C)**
Owner	110,549	109,169	80,153	5,818	5,746	4,219
Renter	44,509	44,262	28,052	2,343	2,330	1,476
Total	155,058	153,432	108,204	8,161	8,075	5,695

Source: CT Housing Supply and Demand Model

By County

Projecting to 2025, at the county level, the range of the net production need estimates from the three methods increased. Overall, each county expects positive net production need in 2025. The counties with smaller need are the rural counties: Litchfield, Middlesex, New London, Tolland, and Windham. The counties with greater need are Fairfield, Hartford, and New Haven. Table 68 provides specific data.

Table 68: Net Production Need for 2025 by County							
		2000-2025 Estimated Net Production Need for Resident Population			Average Annual Production Potential 2006-2025		
		Employment-Driven: Maintain 2006 Share of State Employment	Employment-Driven: Capture Share of Employment Growth Equal to 2000-2006 Share	Population-Driven: CT State Data Center Projections			
County		(A)	(B)	(C)	(A)	(B)	(C)
Fairfield	Owner	26,126	23,759	30,769	1,375	1,250	1,619
	Renter	10,293	9,303	12,237	542	490	644
	Total	36,419	33,062	43,006	1,917	1,740	2,263
Hartford	Owner	31,242	29,170	9,740	1,644	1,535	513
	Renter	12,306	11,251	1,351	648	592	71
	Total	43,548	40,421	11,091	2,292	2,127	584
Litchfield	Owner	4,302	3,979	6,775	226	209	357
	Renter	1,000	903	1,745	53	48	92
	Total	5,302	4,881	8,520	279	257	448
Middlesex	Owner	4,314	4,950	6,393	227	261	336
	Renter	1,866	2,098	2,626	98	110	138
	Total	6,179	7,048	9,019	325	371	475
New Haven	Owner	27,422	32,064	17,274	1,443	1,688	909
	Renter	12,086	14,624	6,539	636	770	344
	Total	39,508	46,688	23,813	2,079	2,457	1,253
New London	Owner	11,244	8,666	3,970	592	456	209
	Renter	4,342	3,190	1,092	229	168	57
	Total	15,587	11,856	5,062	820	624	266
Tolland	Owner	3,804	3,874	2,463	200	204	130
	Renter	1,292	1,314	856	68	69	45
	Total	5,096	5,188	3,319	268	273	175
Windham	Owner	2,095	2,708	2,769	110	143	146
	Renter	1,324	1,580	1,605	70	83	84
	Total	3,419	4,287	4,374	180	226	230

Source: CT Housing Supply and Demand Model

Conclusion

This analysis identifies the relationship between housing availability and affordability and sustained economic growth. The demographic and employment trends indicate an increasing level of demand pressure on housing supply. The report details the current level of housing stock and future production needed to adequately satisfy the increasing level of demand, taking into account a variety of different economic scenarios.

There is an overall need for housing in Connecticut, especially for affordable housing units. There will be an increasing demand for rental housing in the state, as there has been a depletion of rental properties as people continue to buy/convert properties. The current need is projected to grow with time to 2015 and 2025. Action must be taken to rectify this issue as it hinders Connecticut's economic growth.

Preservation

Affordable Units

In Connecticut there are about 1.3 million occupied housing units. Of those housing units about 70% are owner-occupied and the remaining 30% or 400,000 units are renter-occupied. About 117,000 rental units in Connecticut are considered affordable housing through federal or state financing or deed restrictions. The remaining 283,000 units in Connecticut are considered market rate units. Charts 19 and 20 show the distribution of housing in Connecticut.

Chart 19: Occupied Housing Units

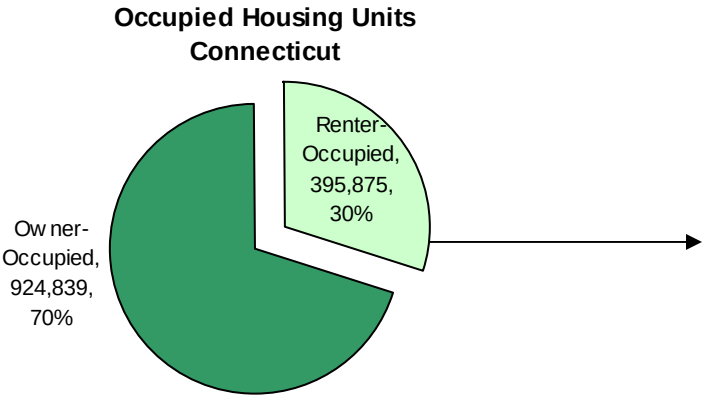
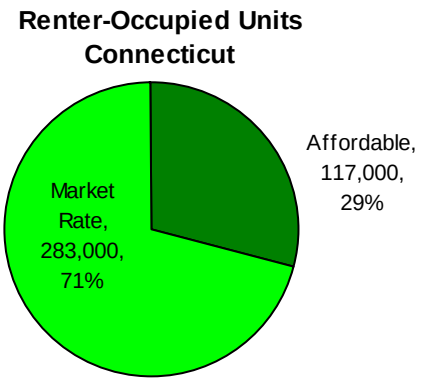


Chart 20: Renter-occupied Units

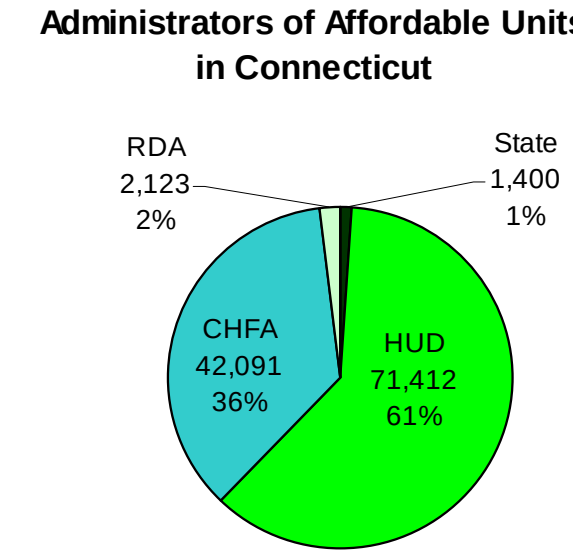


Sources: U.S. Census, American Community Survey 2007 and CHFA

Of the 117,000 affordable rental housing units in Connecticut about 41,000 are administered by the Connecticut Housing Finance Authority (CHFA) through mortgage

financing, tax credit financing, or through portfolio management. About 71,000 of the units are administered by HUD, about 2,000 units are administered by the United States Department of Agriculture's (USDA) Rural Development Agency. Chart 21 indicates the management of affordable housing in the Connecticut.[14]

Chart 21: Administrators of Affordable Housing in Connecticut

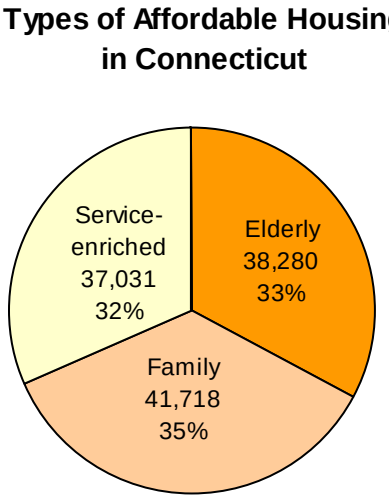


Source: CHFA

Of the 117,000 affordable units in the state, about a third of the units are elderly units, another third are family units and another third are service-enriched units.

[14] CHFA includes mortgage financing, tax credits and portfolio management HUD includes assisted units, tenant-based programs, LIPH and Section 202

Chart 22: Affordable Housing in Connecticut

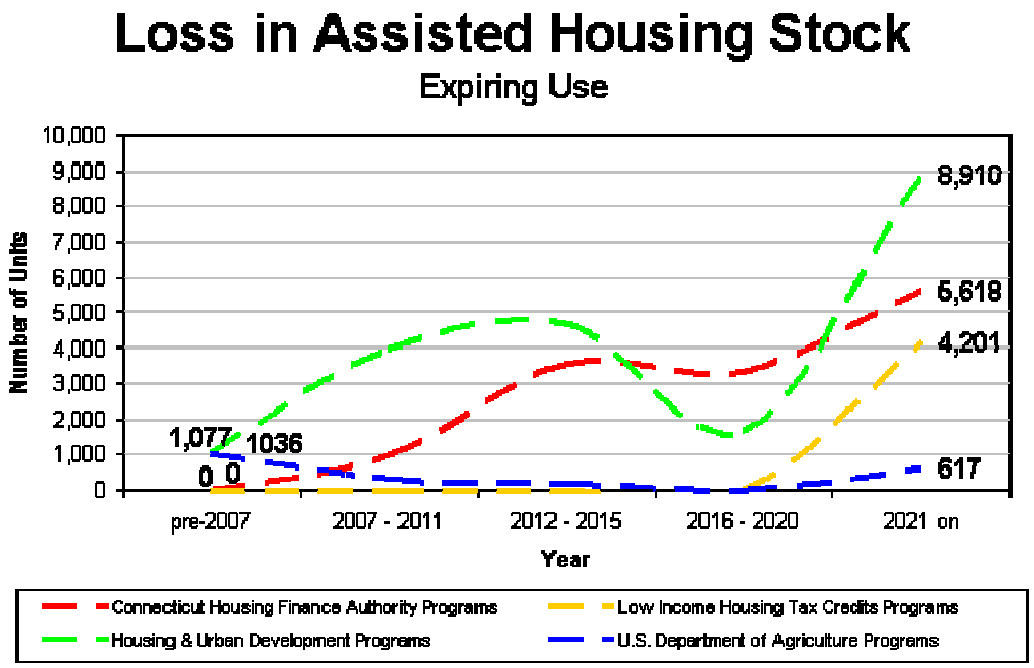


Source: CHFA

Expiring Units

Affordable housing is only required to stay affordable through restrictions that are put in place during financing, when receiving tax credits, or through other deed restrictions. Of the 117,000 affordable units in Connecticut, approximately 15,000 units will lose their requirement to remain affordable by 2015. Another 5,000 units will lose their requirement to remain affordable by 2020 and another 19,000 units will lose their requirement to remain affordable sometime after 2020. Chart 23 shows the expiration dates for affordable housing based on the administrator of the housing unit.

Chart 23: The Loss in Assisted Housing



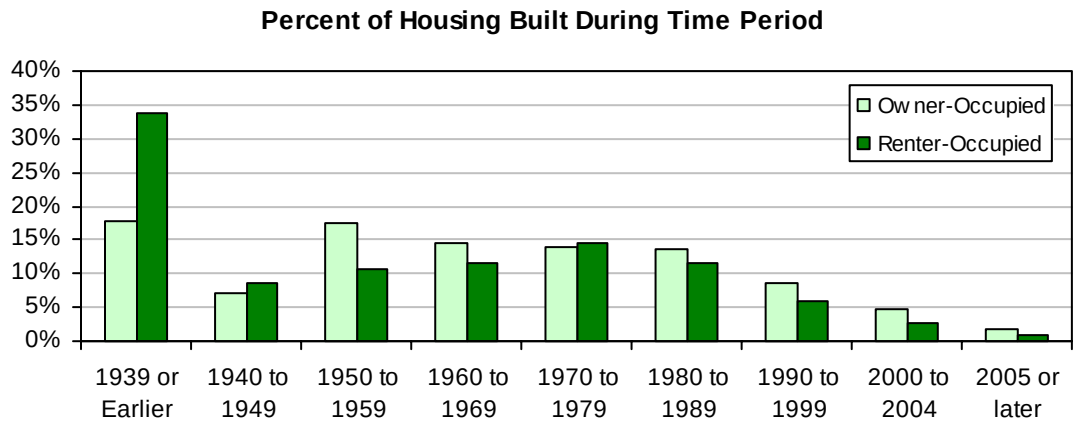
Source: CHFA

As these properties need repairs and are provided financing through one of these administrators, they will have affordable housing restrictions placed on them again for a number of years, usually an additional 30 years. Over the past several years, CHFA has been working to offer financing to many of these properties that are expiring in order to preserve the affordable housing that is currently in the market. By doing this, CHFA hopes to stabilize the affordable housing market in Connecticut while at the same time adding new affordable units through housing development programs.

Connecticut's Housing Stock

The housing stock of renter-occupied units is generally older than owner-occupied units. A third of renter-occupied housing was built before 1939 while 18% of owner-occupied units were built before 1939.

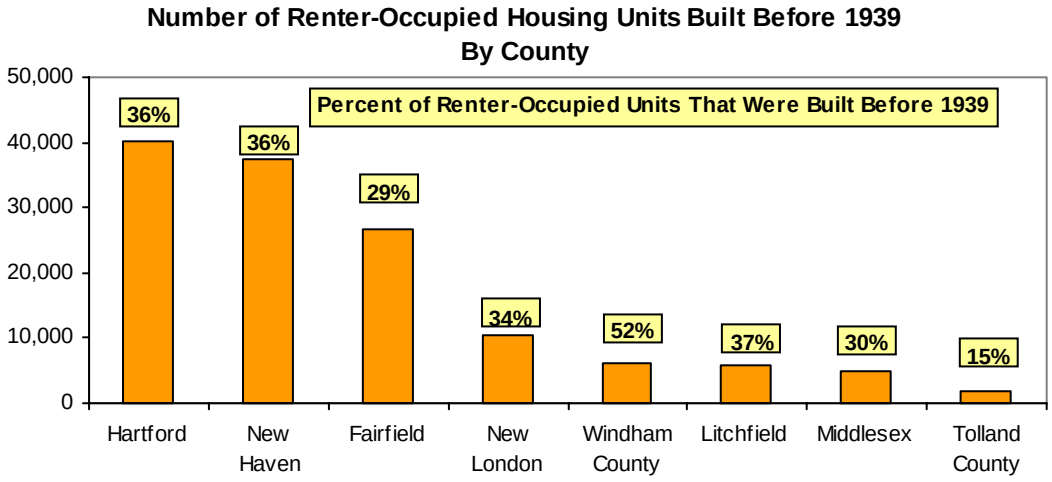
Chart 24: Percent of Housing Built in Various Periods



Source U.S. Census, American Community Survey 2007

There are nearly 135,000 renter-occupied housing units in Connecticut that were built before 1939. These units will need more frequent and possibly more expensive maintenance and repairs in the coming years. Most of the oldest renter-occupied units are in Hartford, New Haven, and Fairfield counties. However, Windham County has more than half of their total renter-occupied housing stock that was built before 1939.

Chart 25: Number of Renter-Occupied Housing Units Built Before 1939

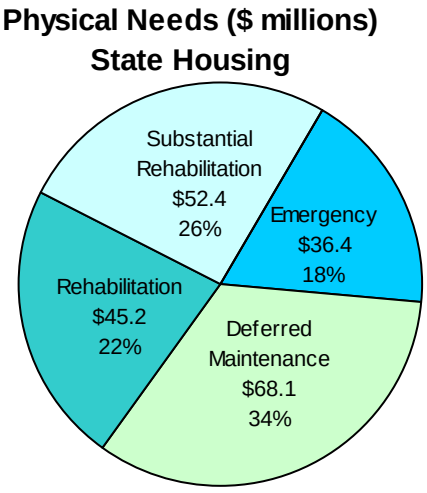


Source U.S. Census, American Community Survey 2007

Physical Deficiencies of State Housing

When looking at the state housing portion of CHFA's portfolio, there is about $202 million worth of physical needs for approximately 13,000 units of housing. Chart 26 shows the category of need that is necessary in these housing units.

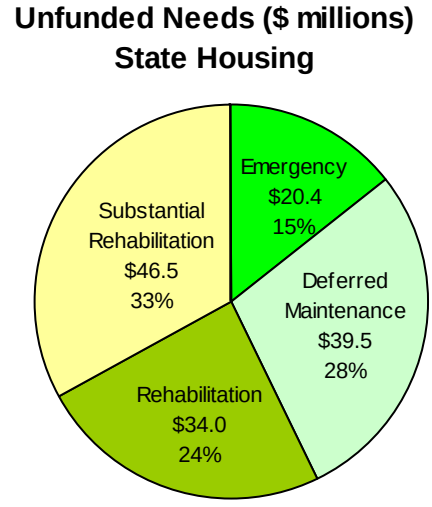
Chart 26: Physical Needs



Source: CHFA

It is anticipated that about $62 million of the physical needs in state housing can be funded either through reserves or through a loan. Therefore, there is an additional $140 million of unfunded needs. Chart 27 shows the various categories of unfunded needs.

Chart 27: Unfunded Needs



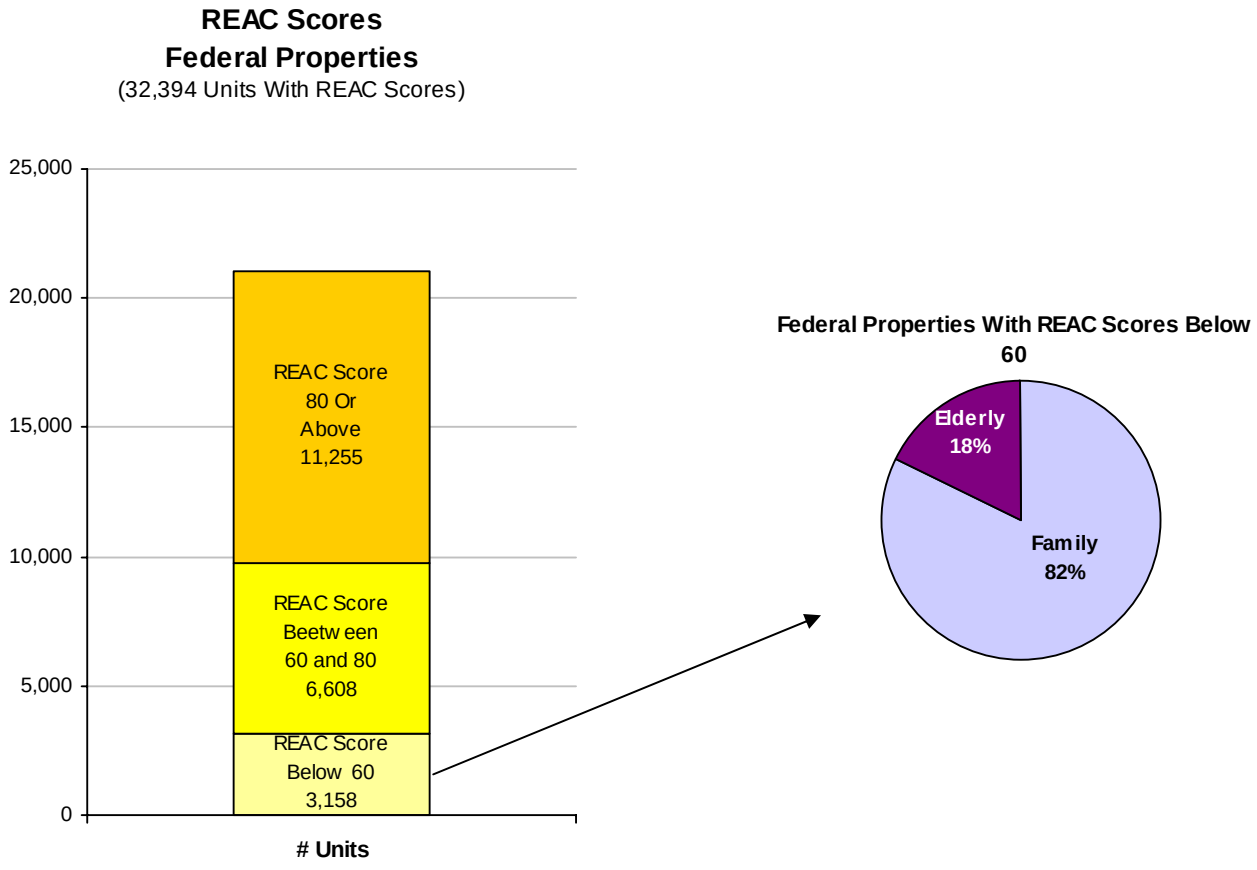
Source: CHFA

In general, elderly units tend to need less rehabilitation and maintenance than family units. Of the $202 million of physical needs in state housing, about 60% are family units and 40% are elderly units.

When examining federal housing, about 15% of the units have Real Estate Assessment Center (REAC) scores below 60 which indicate a deficiency and an immediate need for attention. Of the federal properties in Connecticut with REAC scores below sixty, 84% are family units and 16% are elderly units. Charts 28 and 29 show the distribution of REAC scores for federal properties and the type of housing units that are most in need of repairs.

Chart 28: REAC Scores for Federal Properties

Chart 29: Federal Properties with REAC Scores Below 60



Source: CHFA

Housing Affordability Assessment

"About 72% of Connecticut's 'top new jobs' through 2014 according to the state labor department are expected to pay less than $40,000 annually, indicating that affordable workforce housing will be an important economic issue in years to come. The wage needed to affordably rent a typical two bedroom apartment in Connecticut is now almost $44,000 a year."[15] Connecticut faces a significant need for affordable housing in each county. Based on the number of residents spending more than 30% of their income on gross rent in the 2007 ACS, a total of approximately 188,000 rental units need to be created throughout the state (Table 70). With proper policy incentives, rental units can be created to relieve the cost burden. The state's positive vacancy rate suggests available units that could be converted to affordable rental units. The necessary affordable rental units can also be created by lowering the cost burden of the rental units that currently exist and introducing new construction. To rectify the current affordable renter household need problem by 2015, approximately 23,500 units would have to be created annually. When the current deficit of available affordable rental housing is obsolete, the future need projections will be more acute.

Cost Burden Trends and Current Picture

Income Distribution

Table 69 shows the statewide distribution of households by income group and ownership for Connecticut in 2000. There are a larger number of renters in the low income groups relative to homeowners.

Table 69: 2000 Income Distribution by AMI and Home Ownership

Income Group	Homeowners	Renters	Total
Under 30% AMI	77,635	136,839	214,474
Under 50% AMI	164,109	221,636	385,745
Under 60% AMI	211,388	258,261	469,649
Under 80% AMI	311,976	315,387	627,363
Under 100% AMI	415,111	352,904	768,015
Under 120% AMI	510,005	382,143	892,148
All Homeowners	869,742	431,928	1,301,670

Source: Census 2000

Cross-tabulations of household income and household size provide greater segmentation of cost burden. Cross-tabulation provides detailed insight into demographic characteristics needed to construct an estimate of future housing supply and housing demand.

[15] Klepper-Smith, Don. Updated Perspectives on the Need for Affordable Housing within Connecticut. January 2008

Table 70 shows the statewide distribution of households by income range and household size. The income groupings are related to area median income (AMI) and are adjusted for family size. Family sizes are classified as the following:

- 1 person household = studio
- 2 person household = 1 bedroom
- 3 person household = 2 bedroom
- 4 person household = 3 bedroom
- 5 person household = 4 bedroom
- 6+ person household = 5 or more bedroom units.

The first three income ranges are the traditional HUD definitions.[16] The others were added to provide a broader spectrum of housing need, calculated according to the methodology provided in the Overview of HUD Public Housing Section 8 Income Limits.

These income groups span the spectrum of household income. With these income levels cross-tabulated with household size, the baseline housing need could be further identified. A low income level coupled with a high number of people in the household indicates a high level of existing need. In Table 70, a low-income level coupled with a high number of people in the household indicates the severest level of cost burden and starts to introduce the issue of housing overcrowding.

Table 70: 2000 Household Income Distribution by Household Size

2000 Area Median Family Income	Household Size by Number of Persons						Total Households
	1	2	3	4	5	6	
Less than 30% AMI	9,445	51,247	56,622	46,208	13,941	3,189	180,652
30-50% AMI	5,318	30,237	55,094	55,253	15,320	3,282	164,504
50-80% AMI	3,798	30,540	70,028	73,920	21,572	5,279	205,137
80-100% AMI	2,452	20,106	53,530	76,424	30,034	6,118	188,664
100-125% AMI	636	6,965	20,646	36,112	14,013	2,838	81,210
125-150% AMI	1,038	12,468	43,446	85,660	38,042	6,387	187,041
150-200% AMI	239	4,276	15,450	37,019	18,234	3,892	79,110
Greater than 200% AM	814	8,149	31,022	80,402	61,947	18,359	200,693
Total	23,740	163,988	345,838	490,998	213,103	49,344	1,287,011

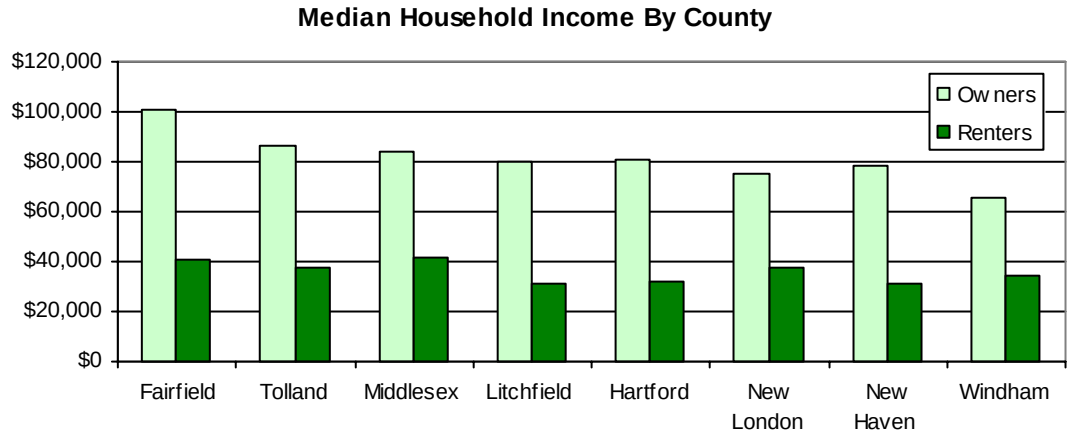
Source: Census 2000 interpolation by DECD

In general, renters tend to have lower income than homeowners. The 2007 median household income in Connecticut was about $66,000. However, people in owner-occupied housing had median household income of $83,000 while people in renter-occupied housing had median household income of about $35,000.

[16] See http://www.huduser.org/datasets/il/il07/FY07_StateIncomeLimits.doc.

The income disparity between owners and renters is highest in Fairfield County and lowest in Windham County. However, the difference between median incomes of owners versus renters is between $31,000 and $60,000 in each county, and is $48,000 in the state overall.

Chart 30: Median Household Income by County



Source U.S. Census, American Community Survey 2007

Cost Burdened Households

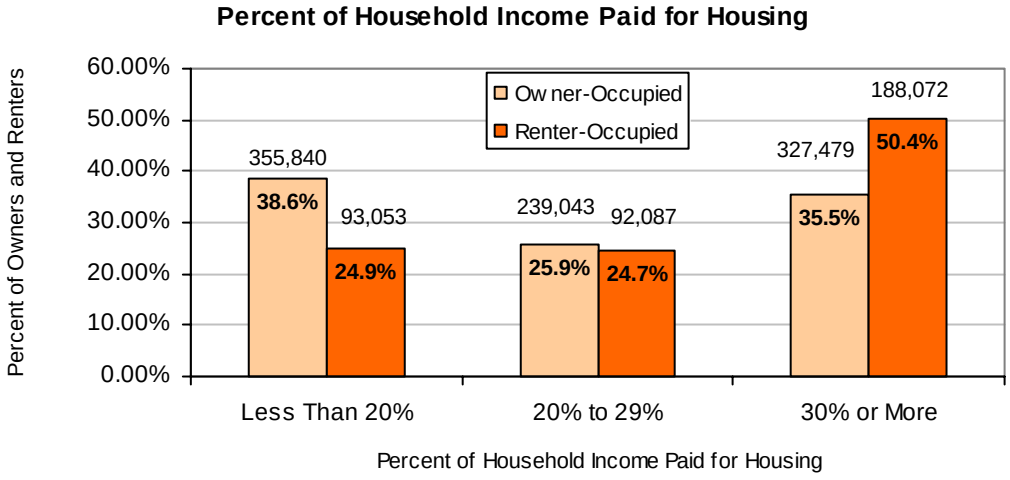
Households are considered cost burdened when 30% or more of their income is spent on housing costs. With nearly half a million households in Connecticut paying more than 30% of their incomes for housing, it is extremely important to preserve the affordable housing that is currently in Connecticut and add to the affordable housing stock in the state. This is especially true in certain target areas and towns such as New Haven and Fairfield counties, where the cost of living is generally higher than in other areas of the state.

Table 71: Owner and Renter Costs as Percentage of Median Income								
	Homeowner Costs as a % of Median HH Income				Renter Costs as a % of Median Income			
State/County	< 20%	20% – 29%	30% +	Unknown	< 20%	20% – 29%	30% +	Unknown
Fairfield	36.60%	23.70%	39.30%	0.40%	21.60%	24.90%	49.80%	3.70%
Hartford	40.70%	26.60%	32.20%	0.40%	26.20%	25.00%	44.30%	4.50%
Litchfield	39.10%	26.80%	33.80%	0.40%	29.70%	20.50%	41.00%	8.90%
Middlesex	38.10%	28.20%	33.70%	0.00%	24.70%	25.20%	46.80%	3.20%
New Haven	35.80%	28.00%	35.80%	0.50%	19.90%	22.60%	51.70%	5.70%
New London	41.70%	25.60%	32.70%	0.00%	21.40%	27.80%	47.40%	3.40%
Tolland	43.20%	28.10%	28.40%	0.40%	26.30%	24.30%	42.60%	6.80%
Windham	41.30%	28.30%	30.10%	0.40%	28.50%	21.60%	40.70%	9.20%
Connecticut	38.50%	26.30%	34.80%	0.40%	23.30%	24.20%	47.60%	4.90%

Source: CHFA

Renters are generally more likely to pay a greater portion of their incomes for housing than owners are. In 2007, half of the renter-occupied households paid more than 30% of their household income for housing while 36% of owners paid more than 30% of their household income for housing.

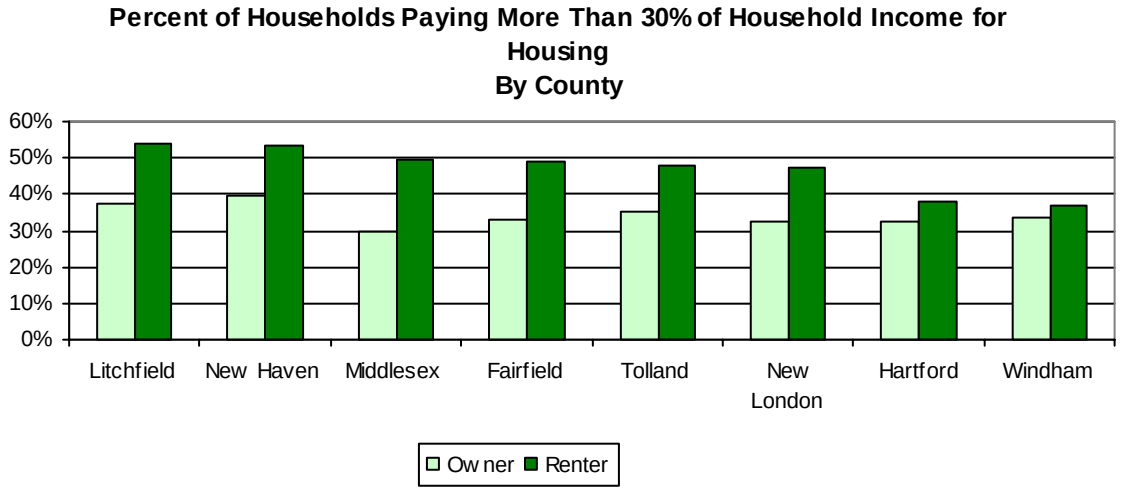
Chart 31: Percent of Household Income Paid for Housing



Source: U.S. Census, American Community Survey 2007

By county, there is a similar disparity between owners and renters with renters more likely to be paying more than 30% of their household income for housing.

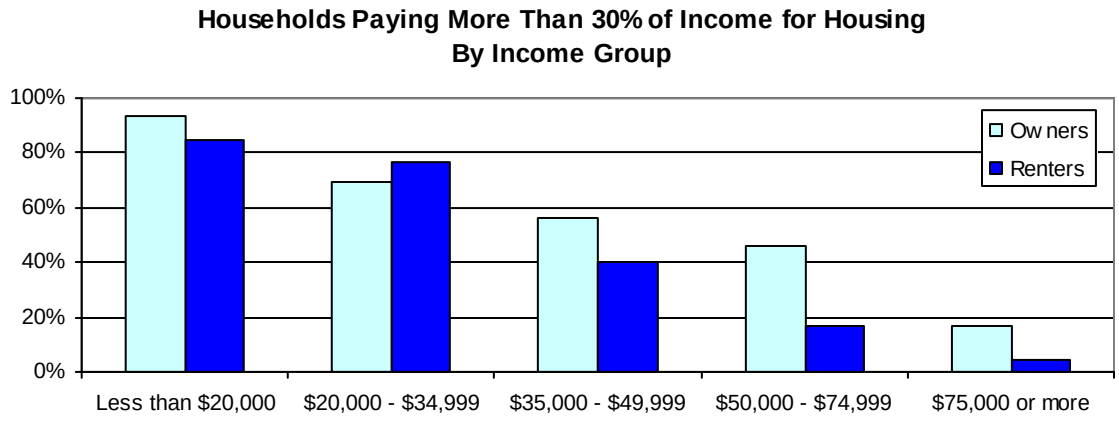
Chart 32:Households Paying More Than 30% of Their Income for Housing



Source: U.S. Census, American Community Survey 2007

What is most striking is that those households with the lowest incomes are the households that are most likely to be paying more than 30% of their incomes for housing. Almost all (93%) homeowners who earn less than $20,000 pay more than 30% of their household incomes for housing. For renters in this same income category, 85% pay more than 30% of their household income for housing. Of households receiving the highest incomes, ($75,000 or more), 4% of renters and 18% of owners pay more than 30% of their household incomes for housing.

Chart 33: Households Paying More 30% of their Income for Housing



Source: U.S. Census, American Community Survey 2006

Renters

Table 72 tracks the renter population with economic characteristics of excessive cost burden historically. The number of renters with excessive cost burden decreased from 1990 to 2000. However, the number of renters with excessive cost burden increased for households earning less than 30% of the area median income.

Table 72: Cost Burdened Rental Households			
Housing Cost Burden at 30%+ for Monthly Costs	**1990**	**2000**	**Change 1990-2000**
Renters - Total Pay 30%+ for Gross Rent	161,317	155,324	-5,993
Under 30% AMI	80,693	93,043	12,350
Under 50% AMI	123,471	133,902	10,431
Under 60% AMI	138,541	145,347	6,806
Under 80% AMI	155,473	151,878	-3,595
Under 100% AMI	159,202	153,772	-5,430
Over 100% AMI	2,095	1,504	-591

Source: Census 1990 and 2000

Table 73 shows the number and percentage of renters that have gross rent exceeding the HUD guideline of 30% for each county in Connecticut in 2007. For a renter household to be considered affordable, housing expenses should not exceed 30% of the household's total income. Fairfield County had the greatest gap and need for affordable housing, as 50.8% of renters were burdened with excessive housing costs. Several counties follow closely, with Windham County having the lowest percentage of burdened renters at 34.7%.

Table 73: Gross Rent Greater than 30% of Income			
State/County	**Total Number of Renters**	**Gross Rent Greater than 30% of Income**	**Percentage with Rent Greater than 30% Income**
Connecticut	395,875	188,072	47.5%
Fairfield	91,465	46,429	50.8%
Hartford	112,394	52,059	46.3%
Litchfield	15,755	6,664	42.3%
Middlesex	15,980	5,656	35.4%
New Haven	105,789	53,451	50.5%
New London	30,194	13,793	45.7%
Tolland	12,388	5,891	47.6%
Windham	11,910	4,129	34.7%

Source: 2007 ACS

Homeowners

Table 74 shows cost burden data for Connecticut homeowners, for whom there was at each income level an increase except for those homeowner households earning more than 100% of the AMI.

Table 74: Cost Burden Data for Connecticut Homeowners			
Housing Cost Burden at 30%+ for Monthly Costs	**1990**	**2000**	**Change 1990-2000**
Single Family Homeowners - Cost Burden @ 30%+	159,296	171,452	12,156
Under 30% AMI	33,676	39,480	5,804
Under 50% AMI	55,420	71,107	15,687
Under 60% AMI	65,932	86,184	20,252
Under 80% AMI	88,991	117,772	28,781
Under 100% AMI	116,598	138,916	22,318
Over 100% AMI	41,405	32,836	-8,569

Source: Census 1990 and 2000

For each county, the 1990-2000 distribution of households categorized by income and size is included in the housing baseline, which shows the current housing situation. Using cumulative distribution data, future housing production is segmented to meet the demand for specific housing characteristics such as size and affordability. County level data provides a more detailed account of the need for housing in specific locations. This information is useful to identify and help target areas of need for policy makers.

Table 75: Homeowner Costs Greater than 30% of Income			
State/County	**Number of Homeowners**	**Ownership Costs Greater than 30% of Income**	**Percentage with Costs Greater than 30% Income**
Connecticut	924,839	327,479	35.4%
Fairfield	232,383	91,456	39.4%
Hartford	224,768	73,533	32.7%
Litchfield	57,977	20,340	35.1%
Middlesex	48,790	15,712	32.2%
New Haven	215,414	80,106	37.2%
New London	72,801	23,482	32.3%
Tolland	40,989	12,301	30.0%
Windham	31,717	10,549	33.3%

Source: 2007 ACS

Table 75 shows the number and percentage of Connecticut homeowners that have housing costs exceeding 30% of their household income. Again, housing is considered affordable for homeowners when housing costs do not exceed 30% of the household income. The qualifying income for a median-priced home in Connecticut in 2008 was $69,000.[17] All eight counties have a current need for ownership housing units that are affordable for these overextended households. Fairfield County exhibits the greatest need, with 39.4% of homeowners being burdened by housing costs. Tolland County has the least need compared to the other counties, with 30% of homeowners being burdened.

Severe Cost Burden

Households are considered severely cost burdened when 50% or more of their income is spent on housing expenditures. Table 76 shows the number and percentage of severely cost-burdened renters and homeowners in Connecticut in 2007. The table shows that 23.8% of all rental households and 12.9% of all owner occupied households are severely cost burdened. There are almost four times as many cost-burdened homeowners with a mortgage, compared to those without a mortgage. The solution to the problem of cost-burdened renter households is to offer affordable housing.

Table 76: Connecticut Household Cost as a Percentage of Household Income

	Total	Severe Cost Burden	Mortgage	No Mortgage	Percentage of Severe Cost Burden
Renter	395,875	94,201	N/A	N/A	23.8%
Owner	924,839	119,051	94,840	24,211	12.9%

Source: 2007 ACS

Affordability Need

Affordable housing is a serious concern in the state of Connecticut. Despite the fact that Connecticut residents enjoy high median incomes relative to the rest of the country, the sharp increase in housing prices from 2000 to 2007 produced a significant affordability gap in the housing market. This gap has begun to close in recent years, but the effects of the housing bubble continue to be felt by Connecticut citizens.

Table 77 shows a comparison of housing affordability between the United States and Connecticut. There are six variables used to calculate the composite affordability index: median priced home, mortgage rate, monthly principal and interest payment, payment as a percentage of income, median family income, and qualifying income. The composite affordability index measures whether or not a typical family could qualify for a mortgage

[17] Klepper-Smith, Don. Updated Perspectives on the Need for Affordable Housing within Connecticut. January 2008

loan on a typical home. A typical home is defined as the national median priced, existing single-family home as calculated by the National Association of Realtors (NAR). The typical family is defined as one earning the median family income as reported by the U.S. Bureau of the Census. The prevailing mortgage interest rate is the effective rate on loans closed on existing homes from the Federal Housing Finance Board. These components are used to determine if the median income family can qualify for a mortgage on a typical home.

To interpret the index we give the following examples. An index value of 100 means that a family earning the median income has exactly enough income to qualify for a mortgage on a median-priced home. An index above 100 signifies that a family earning the median income has more than enough income to qualify for a mortgage loan on a median-priced home, assuming a 20% down payment. For example, a composite housing affordability index (HAI) of 120 means a family earning the median family income has 120% of the income necessary to qualify for a conventional loan covering 80% of a median-priced existing single-family home. An increase in the HAI, then, shows that this family is more able to afford the median priced home. The calculation assumes a down payment of 20% of the home price and it assumes a qualifying ratio of 25%. That means the monthly principal and interest payment cannot exceed 25% of the median family monthly income.

Table 77: Homebuyer Affordability Index – United States vs. Connecticut

	Median Priced Home	Mortgage Rates	Monthly P&I Payment	Payment as a % of Income	Median Family Income	Qualifying Income	Composite Affordability Index
United States							
2006	$ 221,900	6.58	$ 1,131	23.6	$ 57,612	$ 54,288	106.1
2007	$ 217,900	6.52	$ 1,104	22.4	$ 59,224	$ 52,992	111.8
Connecticut							
2006	$ 315,300	6.49	$ 1,593	25.2	$ 75,834	$ 76,464	99.2
2007	$ 265,900	6.52	$ 1,347	20.9	$ 77,428	$ 64,656	119.8

Source: Connecticut Association of Realtors

Table 78 shows the distribution of household incomes of Connecticut homeowners (in 2007 inflation-adjusted dollars).

Table 78: Household Income in the Past 12 Months			
	Total Occupied	**Owner Occupied**	**Renter Occupied**
Less than $5,000	2.02%	0.78%	4.92%
$5,000 to $9,999	3.03%	1.00%	7.76%
$10,000 to $14,999	4.05%	1.94%	8.99%
$15,000 to $19,999	4.24%	2.53%	8.25%
$20,000 to $24,999	4.19%	2.89%	7.25%
$25,000 to $34,999	7.97%	5.71%	13.27%
$35,000 to $49,999	12.35%	10.84%	15.88%
$50,000 to $74,999	18.04%	18.58%	16.77%
$75,000 to $99,999	13.85%	16.17%	8.44%
$100,000 to $149,999	16.32%	20.94%	5.54%
$150,000 or more	13.93%	18.62%	2.95%
Median Household Income	$65,967	$83,037	$34,634

Source: 2007 ACS

The National Low Income Housing Coalition (NLIHC) publishes an annual report, *Out of Reach*, which provides a comparison of wages and rents in various jurisdictions within each state.[18] Using the affordability standard that households should not pay more than 30% of their income on housing expenditures, the NLIHC calculates the wage a household must earn in order to afford various sized rental units based on each area's Fair Market Rent (FMR). The hourly wage necessary to afford a two-bedroom unit is called the housing wage. In the 2008 study, the housing wage for Connecticut was $21.11. In the 2009 study, Connecticut's housing wage increased to $21.60. Tables 79 and 80 compare selected *Out of Reach* data for the metro and non-metro jurisdictions within Connecticut for 2008 and 2009.

[18] See: http://www.nlihc.org/oor/oor2009/data.cfm?getstate=on&state=CT

Table 79: Out of Reach Income Data							
Type of Jurisdiction	**Name of Jurisdiction**	**Annual AMI**		**30% of AMI (Extremely Low-Income)**		**% of Median Renter Income Needed to Afford 2-Bedroom FMR**	
		2008	***2009***	***2008***	***2009***	***2008***	***2009***
State	Connecticut	$84,259	$87,678	$25,278	$26,303	109%	107%
Non-metro	---	$77,121	$80,056	$23,136	$24,017	94%	94%
Metro Area	Bridgeport	$81,100	$84,800	$24,330	$25,440	123%	122%
Metro Area	Colchester-Lebanon	$86,400	$91,400	$25,920	$27,420	86%	84%
Metro Area	Danbury	$104,500	$107,100	$31,350	$32,130	111%	112%
Metro Area	Hartford-West Hartford-East Hartford	$81,100	$85,100	$24,330	$25,530	102%	101%
Metro Area	Milford-Ansonia-Seymour	$81,600	$85,700	$24,480	$25,710	92%	90%
Metro Area	New Haven-Meriden	$78,300	$80,200	$23,490	$24,060	128%	121%
Metro Area	Norwich-New London	$77,400	$80,500	$23,220	$24,150	89%	89%
Metro Area	Southern Middlesex County	$93,900	$96,700	$28,170	$29,010	95%	96%
Metro Area	Stamford-Norwalk	$117,800	$122,300	$35,340	$36,690	113%	113%
Metro Area	Waterbury	$63,700	$66,900	$19,110	$20,070	113%	112%

Source: NLIHC, Out of Reach

Table 80: Out of Reach Housing Wage Data							
Type of Jurisdiction	**Name of Jurisdiction**	**Housing Wage for 2-Bedroom FMR**		**2-Bedroom Housing Wage as % of Mean Renter Wage**		**Estimated % of Renters Unable to Afford 2-Bedroom FMR**	
		2008	***2009***	***2008***	***2009***	***2008***	***2009***
State	Connecticut	$21.11	$21.60	128%	123%	53%	52%
Non-metro	---	$17.05	$17.69	159%	160%	47%	47%
Metro Area	Bridgeport	$22.52	$23.35	100%	96%	59%	58%
Metro Area	Colchester-Lebanon	$19.98	$20.73	142%	139%	43%	43%
Metro Area	Danbury	$27.90	$28.94	124%	119%	54%	54%
Metro Area	Hartford-West Hartford-East Hartford	$18.94	$19.63	122%	119%	50%	50%
Metro Area	Milford-Ansonia-Seymour	$20.67	$21.40	157%	155%	46%	46%
Metro Area	New Haven-Meriden	$21.96	$21.17	166%	153%	62%	57%
Metro Area	Norwich-New London	$17.81	$18.48	126%	124%	45%	45%
Metro Area	Southern Middlesex County	$20.46	$21.23	136%	140%	48%	49%
Metro Area	Stamford-Norwalk	$31.58	$32.75	140%	135%	56%	54%
Metro Area	Waterbury	$16.60	$17.19	126%	124%	56%	54%

Source: NLIHC, Out of Reach

The *Out of Reach* study estimates that more than half of Connecticut renters are unable to afford the fair market rate for a two-bedroom unit. This data is consistent with the "living wage," or self-sufficiency standard, mentioned earlier. Many state residents simply do not earn enough to live in the state without being burdened by housing costs.

Since 2005, HOMEConnecticut, an initiative of the Partnership for Strong Communities, has issued an annual report that analyzes housing affordability in each Connecticut town.[19] The study makes its calculations based on the median sales price of single-family homes and the median income of residents in the state's 169 towns. The goal of the study is to determine whether, in a given town, a home at median sales price for that town is affordable to a household earning the town's statistical median income. The 2007 HOMEConnecticut study shows that despite a downturn in the national housing market, the median sales price for a single-family home in Connecticut remains unaffordable for citizens in 84% of Connecticut towns.

To determine the affordability of a given town, the study calculated the "qualifying income"—the income necessary for a household to qualify for a mortgage. The study assumes that the household is earning the median household income, that they have no outstanding debt, and that they have reserved 10% of the purchase price for a down payment. The study also assumes that the household is looking at a median-priced home in that town. The formula used by HOMEConnecticut determines the qualifying income for a 4.5% fixed-rate, 30-year mortgage with a 1% annual property tax rate and $60 per month in property insurance. Once the qualifying income was calculated, it was compared to the town's actual median household income. A town was considered unaffordable if its median household income was lower than the qualifying income. Overall, 142 out of the 169 towns in Connecticut were considered unaffordable. Though this number represents an improvement from the 2006 study, in which 154 towns were unaffordable, unaffordable housing exists in most Connecticut towns.

Future cost burden trends allow us to segment demand for housing and provide insight to affordability. Understanding current affordability suggests what production the market may address and what production may need to be subsidized by the state.

The statewide projection of cost burden for renters and homeowners illustrates the housing affordability needs of the population in the year 2015. Tables 81 and 82 show the cost burden data for the baseline, 2015 projected data, and the change between the two data sets. The cumulative percentage distribution of income level is assumed to remain the same in the year 2015. The number of cost burdened renter and homeownership household units are projected to decrease in 2015. The 2006 statewide percentage of renter households was 48% and is projected to decrease to 36%. The 2006

[19] See: http://www.homeconnecticut.org/images/stories/pdf/2008_Affordability_Study/hc_2008_ctaffordability_study_all.pdf

statewide percentage of homeownership households was 35% and is projected to decrease to 19.7%. The decrease is expected to happen from changes in population and employment during 2006 to 2015. However, the number of households, renter and homeowner, that will still be cost burdened in 2015 needs to be addressed.

Table 81: 2000 Cost Burden Data and Projection for Renters-Statewide							
Tenure and Income	**2000 Census Cumulative**			**2015 Projections**			**Change 2000-2015**
Renters	**Total Renters**	**Cost Burden @ 30%**	**Percent with 30%+ Cost Burden**	**Total**	**Cost Burden @ 30%**	**Percent with 30%+ Cost Burden**	**Cost Burden @ 30%+**
Under 30% AMI	136,839	93,043	68.00%	133,660	90,881	68.00%	-2,162
Under 50% AMI	221,636	133,902	60.40%	216,487	130,791	60.40%	-3,111
Under 60% AMI	258,261	145,347	56.30%	252,261	141,970	56.30%	-3,377
Under 80% AMI	315,387	151,878	48.20%	308,060	148,350	48.20%	-3,528
Under 100% AMI	352,904	153,772	43.60%	344,706	150,200	43.60%	-3,572
All Renters	431,928	155,324	36.00%	421,894	151,716	36.00%	-3,608
	Within Income Range			*Within Income Range*			*Within Income Range*
Under 50% AMI	221,636	133,045	60.40%	216,487	130,791	60.40%	-3,111
50-80% AMI	93,751	17,976	19.20%	91,573	17,558	19.20%	-418
Over 80% AMI	116,541	3,446	3.00%	113,834	3,366	3.00%	-80

Source: CT Housing Supply and Demand Model

Table 82: 2000 Cost Burden Data and Projection for Ownership-Statewide							
Tenure and Income	**2000 Census Cumulative**			**2015 Projections**			**Change 2000-2015**
Renters	**Total Renters**	**Cost Burden @ 30%**	**Percent with 30%+ Cost Burden**	**Total**	**Cost Burden @ 30%**	**Percent with 30%+ Cost Burden**	**Cost Burden @ 30%+**
Under 30% AMI	77,635	39,480	50.90%	85,182	43,318	50.90%	3,838
Under 50% AMI	164,109	71,107	43.30%	180,062	78,019	43.30%	6,912
Under 60% AMI	211,388	65,932	31.20%	231,937	72,341	31.20%	6,409
Under 80% AMI	311,976	88,991	28.50%	342,303	97,642	28.50%	8,651
Under 100% AMI	415,111	138,916	33.50%	455,463	152,420	33.50%	13,504
All Renters	869,742	171,452	19.70%	559,582	110,310	19.70%	-61,142
	Within Income Range			*Within Income Range*			*Within Income Range*
Under 50% AMI	164,109	71,107	43.30%	180,062	78,019	43.30%	6,912
50-80% AMI	147,867	17,884	12.10%	162,241	19,622	12.10%	1,738
Over 80% AMI	557,766	82,461	14.80%	217,279	12,668	5.80%	-69,793

Source: CT Housing Supply and Demand Model

Barriers to Affordable Housing

Creation Barriers

Overview

Housing is a basic need of every person/family regardless of age, race, or income level. The lack of housing choices for all citizens affects the state's fiscal condition, the quality of life, and the vitality of our cities, towns and neighborhoods. The availability and quality of housing choices have substantial impacts on economic competitiveness, responsible growth, and the cost of infrastructure, not just roads and bridges, but also the cost of municipal services and local schools.

The state needs to raise the prominence of quality, affordable housing to the top of the local, state, and federal agendas. The affordable/workforce housing issue must reach beyond the development community and housing advocates to a broad range of constituents, including businesses, utilities, trade organizations, public and private sector employees, community leaders, and government officials.

Connecticut is the home of a highly educated and professional workforce. It is understood by many that the cost of housing is an important factor in Connecticut's ability to effectively attract and retain employees and businesses. Young workers are often forced to the leave the state because of high housing costs. A lack of affordable housing choices hinders business recruitment and expansion and is a key consideration in business location decisions.

Housing prices nationwide have increased dramatically over the past 15 years. A number of factors have contributed to the rising prices, including federal, state, and local regulations that affect land and housing development. While many regulations provide important public benefits, others may be outdated, excessive, unnecessary, or exclusionary. Various studies have found that obstructive regulations have contributed to rising housing costs and created roadblocks to quality affordable housing in most of our communities.

Regulations that affect housing prices occur in several categories, as a component of building codes, environmental stipulations, land use and zoning, impact fees, and administrative processes. The point at which a regulation/policy becomes a barrier is not always clear. Regulations, in general, should serve a greater public purpose; therefore regulations that raise housing costs must serve a greater public purpose. The regulations/policies that should raise concern are those which disproportionately impact low- and moderate-income individuals by deliberately or indirectly prohibiting or

discouraging the development of affordable housing, with little compensating public benefit.

The availability of workforce housing, both ownership and rental, plays an important role in growing and sustaining the state's economic future. It is recognized by many in the business and governmental sectors that barriers to the creation of a full range of housing choices exist on both the state and local levels. Improved integration of housing, zoning, and land use policies with economic development and transportation policies will strengthen the state's ability to compete in the global economy.

Given the level of public investment in infrastructure (transportation, etc.) and the need for housing choices that are affordable to the state's workforce, governmental decisions regarding policies, regulations, and financing should be mutually reinforcing. There has never been sufficient action at all levels of government to address the growing imbalance between economic growth (business expansion and recruitment) and the number of net new housing units available and affordable to workers and their families.

It is understood that high-density development actually is more efficient than low-density development. By their very nature, longer sewer lines and sprawling utility (water, gas, and electric) supply systems are more costly; traditional development patterns dictate expensive road construction. In addition, local governments must provide fire and police protection (as well as other services) over a larger area. In contrast, compact development benefits from economies of scale and geographic scope can potentially be less costly.

There is a need to educate the public to the benefits of greater affordable housing choices, mixed-use and mixed-income housing complexes, transit-oriented developments, and pedestrian-friendly communities and how these provide for economic growth. The bias against multifamily rental housing must be overcome if Connecticut is to meet its housing needs in an environmentally sustainable and economically realistic manner.

Quality of Life

"Quality of Life" is identified frequently as a major attraction for Connecticut residents and an important factor in job recruitment and retention. Each time a job is added, regardless of the attached wages, it is important to be able to have desirable and affordable housing within a reasonable (less than one hour) commuting distance. Worker retention, already a problem for some employers in both the public and private sectors, is likely to become an even greater problem if the cost and availability of housing do not improve.

It is in employers' self-interest to find ways to increase the supply and affordability of housing. A healthy community is one that has more of its workforce within its boundaries so that they have time to participate in its governmental, social, and economic processes.

Need for Regulatory Reform

Regulatory delays increase costs, reduce returns on investment, and cause investors to seek other opportunities. Regulations are often written without considering how much they will cost the developer. In evaluating any regulation or modification, it is important that both the costs and benefits be considered. It is only in this way that careful decisions can be made.

More than a century ago, the notoriously poor living conditions associated with tenement houses led not only to a movement to reform and improve such dwellings, but also to a movement to prevent further apartment construction. Opponents drew on two key tools to block new multifamily buildings: restrictive building codes that made multifamily construction uneconomical; and restrictive zoning—in particular, the creation of single-family-only districts.[20]

The need for regulatory reform has been recognized at the national, state, and local levels for many years. The U.S. Department of Housing and Urban Development (HUD) began exploring this issue in the early 1990s. HUD appointed the Advisory Commission on Regulatory Barriers to Affordable Housing in 1991 to study the impact of state and local regulations on housing prices. The Commission found that regulatory restrictions raise development costs in some communities by as much as 35 percent. A regulatory barrier is either a de jury or de facto action that prohibits or discourages the construction of affordable housing without sound reasons directly related to public health and safety. In June 2003, HUD created the America's Affordable Communities Initiative (AACI) to assist state and local governments address regulatory reform to increase the availability of affordable housing for America's workforce."[21]

Recent research analyzing density restrictions in local jurisdictions making up the 50 largest metropolitan areas, which encompass 48% of the population in these areas, concluded that:

- Residential developments with densities of more than 30 units per acre are prohibited in all but 12% percent of local jurisdictions; and

[20] Kenneth Baar, "The National Movement to Halt the Spread of Multifamily Housing, 1890-1926" *Journal of the American Planning Association,* Chicago: Winter 1992.
[21] "Creating a Task Force on Regulatory Barriers to Affordable Housing", U.S. Department of Housing and Urban Development, Office of Policy Development and Research – 2007.

- A hypothetical 2-story, 40-unit apartment property on five acres of land would be prohibited outright in about 30% of such jurisdictions.

- Such restrictions not only reduce the range of housing options available to local residents they tend to favor lower density over higher density developments, which in turn make housing more expensive.[22]

Property Values

Concerns that multifamily rental housing will lower the value of their single-family houses have driven many residents to oppose new apartment developments in or near their neighborhoods. Opponents of rental housing often argue that while people who own their homes are invested in the long-term success and safety of a community, people who rent apartments are merely short-term transients and therefore less desirable neighbors. Multifamily rental housing complexes, however, do not generally lower property values in surrounding areas.

- Pollakowski et al. in their 2005 study entitled the Effects of Mixed-Income, Multi-family Housing Developments on Single-family Housing Values state that "We find that large, dense, multi-family rental developments…do not negatively impact the sales price of nearby single-family homes;"[23] and,
- Joyce Siege states in The House Next Door that "In sum, the presence or proximity of subsidized housing made no difference in housing values as measured by relative price behavior in a dynamic market."[24]

The available research is fairly strong that multifamily rental housing:

- Does not impose greater costs on local governments;
- Does not increase traffic and parking problems;
- Does not reduce property values if well-designed and appropriate to the neighborhood;
- Does not inherently attract residents who are less neighborly or less involved in the community; and

[22] John M. Quigley and Larry A. Rosenthal, "The Effects of Land Use Regulation on the Price of Housing: What Do We Know? What Can We Learn?" *Cityscape*, Vol. 8, Nr. 1 (2005) and Edward L. Glaeser and Joseph Gyourko, "The Impact of Building Restrictions on Housing Affordability, *Economic Policy Review*, Federal Reserve Bank of NY, New York, NY: June 2003.
[23] Henry O. Pollakowski, David Ritchay, and Zoe Weinrobe, "Effects of Mixed-Income, Multi-family Housing Developments on Single-family Housing Values," Cambridge, MA: MIT Center For Real Estate, April 2005.
[24] Joyce Siegel, *The House Next Door*, Innovative Housing Institute, 1999.

- Has "not contributed significantly to the rise in school enrollments" and that "it is very unlikely that new multi-family housing has produced a negative fiscal impact on cities and towns."[25]

Barrett and Connery (footnote 91) argue that multifamily housing does not significantly add to school enrollments because most of the units (one- and two-bedrooms) produced in these complexes were never designed to house families with children. They argue that developers do so for the express purpose ensuring local officials that their developments will not hurt local fiscal matters. Barrett and Connery note that this approach ends up pitting fiscal policy against housing policy—that is, the kind of residential developments that are approved are not what might be required by local households, but rather to address a perception that multifamily housing will have an adverse impact on the local budget.

The fear that housing density will hurt property values seems to be primarily based on anecdotes. In contrast, as noted above, most research has come to a different conclusion. In general, neither multifamily rental housing, nor low-income housing, causes neighboring property values to decline.[26]

Zoning and Land Use Regulations as a Barrier

Zoning and land use regulations are frequently listed as barriers to the development of lower cost housing. Requirements such as height restrictions, density limitations, maximum lot coverage, minimum lot size, minimum setback requirements, street and right-of-way requirements add to development costs. Zoning and land use regulations are not the only barriers to quality, affordable housing choices, but do contribute to the problem.

Many communities have zoning and land us policies that make it difficult or impossible to develop multifamily and other types of housing that tend to be less costly. To discourage affordable housing, communities employ exclusionary zoning tactics, including large minimum lot requirements or density limitations that restrict multifamily housing development. Alternative forms of affordable housing such as accessory dwelling units and manufactured housing are often prohibited by zoning codes. Some communities impose high architectural standards or require developers to include attractive amenities that increase the costs and demand for housing in a community.

[25] Judith Barrett and John Connery (2003). "Housing the Commonwealth's School-Age Children," Citizens' Housing and Planning Association Research Study, August.
[26] Alexander von Hoffman, Eric Belsky, James DeNormandi, and Rachel Bratt, "America's Working Communities and the Impact of Multifamily Housing," Cambridge, MA: Joint Center for Housing Studies, 2004

It is not generally possible to identify the unique impacts of zoning and land use regulations or precisely where and when zoning and/or land use regulations impose regulatory barriers. The evidence suggests that zoning and land use regulations indeed are a barrier to higher-density multifamily housing. The evidence suggests a relationship between zoned capacity and housing production, and between higher-density zoning and multifamily housing production. Research has found that those communities that directly limit housing development generally have higher incomes, higher housing prices, lower densities, and fewer multifamily housing units than communities that do not impose such limits.

Zoning and land use regulations alone do not cause, nor can they solve the problem of affordable housing. Changes in zoning and land use regulations alone are not a sufficient policy response to the problem of housing affordability. Many factors beyond zoning can limit the quantity of multifamily housing stock. These include market conditions, land availability, the quantity and quality of public services, other planning goals (e.g., protecting open space or rural areas), and existing land-use patterns.

However, the rationale for restrictive zoning and land use policies is often based on concerns about the preservation of neighborhood character and desirability. With appropriate zoning, land use and design policies in place, however, a wide array of housing types can be incorporated into communities without compromising local design standards, property values or quality of life.

Regulatory and Administrative Processes as a Barrier

Regulatory processes are potential barriers to the development of lower cost housing. Professor May classifies regulatory process barriers as those posed by "regulatory approval processes," "regulatory practices," and "fragmented administrative structures."[27] According to Professor May, developers need to go through a "regulatory gauntlet" including a series of pre-application meetings, submission of application materials showing adherence to a number of regulations, a variety of special reports and studies, hearing processes, and approval conditions on the proposed development.

The delays in the local approval process increase development costs and hence have a negative impact on affordability. Additionally, meeting the conditions imposed as part of different approval processes, and accounting for the fees often associated with these processes, can add substantial costs to the project.

Housing developers seeking state or federal financial assistance face additional delays. Approval processes associated with government financial assistance pose additional

[27] Peter J. May, "Regulatory Implementation: Examining Barriers from Regulatory Processes" - Prepared for HUD Workshop on Regulatory Barriers, April 22, 2004, Washington D.C.

barriers for developers because of the various state and/or federal regulatory or policy conditions that need to be met. Typically, state and federal agencies offer financial assistance only for project sites that are ready to be developed. Therefore, lengthy local review procedures such as zoning, environmental reviews, etc. make land acquisition extremely challenging for affordable housing developers.

There are additional barriers associated with strict implementation of regulations as opposed to more "cooperative enforcement and facilitative practices" (footnote 27). Strict enforcement strategies can also increase the cost of housing by causing delays.

In addition to the time required by lengthy approval processes, the involvement of multiple agencies concerning different regulations poses further barriers. Duplication, inconsistencies between the requirements of different regulatory bodies, multiple review practices, and the cumulative impact of regulations are the major barriers associated with fragmented administrative process.

Complex administrative processes can also become a barrier by significantly increasing housing costs. Developers are often required to work with several different agencies to obtain approval for development, and coordination with these agencies can lead to significant delays in the permitting process. Administrative inefficiency and delays in permitting often increase developer costs and lead to higher than necessary housing costs.

Finally, NIMBY (Not In My Back Yard)-related community opposition, though not a part of the regulatory processes per se, comes into play during the fulfillment of public hearing and community meeting requirements mandated by some regulatory processes.

Building Codes as a Barrier

Building codes can be considered as another potential barrier to lower cost housing.[28] Like zoning and land use, the regulation of building construction is an exercise of police powers delegated to the municipalities from the state.

These codes are generally enforced at the local level by means of periodic inspections. An existing property that is rehabilitated typically will have to satisfy building, plumbing, mechanical, and sister codes as well as the fire and hazard codes, etc. It should be noted that building codes designed to regulate new construction sometimes create an expensive and unrealistic burden on developers interested in rehabilitating existing buildings.

In May 1997, HUD published the Nationally Applicable Recommended Rehabilitation Provisions (NARRP) to serve as a model for the development of rehabilitation codes to

[28] David Listokin, Rutgers University and David Hattis, Building Technology Inc. "Building Codes and Housing" - Prepared for HUD Workshop on Regulatory Barriers, April 22, 2004, Washington D.C.

regulate work in existing structures. Similarly, in January 1998 after two years of work, New Jersey adopted its rehabilitation code. Since then, rehabilitation codes have been adopted by Maryland, New York, Rhode Island, Minnesota and Delaware.

The overall goal of the rehabilitation codes is to encourage the reuse of older buildings. These new codes are based on two principles:

- Predictability that clear rehabilitation codes would foster the accurate prediction of improvement standards and costs; and

- Proportionality, in that a sliding scale of requirements is established depending on the level and scope of the rehabilitation activity, from repairs to reconstruction.

A 2006 study by Burby, Salvesen, and Creed provided the first systematic empirical evidence that New Jersey's rehabilitation code stimulated rehabilitation activity.[29] The authors compared New Jersey's success to similar neighboring state communities to determine the full impact of renovation-friendly codes.

Their study controlled for varying influences that could contribute to an increase in renovation activity, such as a strong economy, low interest rates, or a shortage of development sites in the suburbs. The authors found that New Jersey's rehabilitation code was responsible for increased residential rehabilitation activity from 1998 to 2002, by more than 100 rehabilitation projects per year per community in comparison with communities without rehabilitation codes.

Exactions and Impact Fees as a Barrier

At one time, infrastructure was funded almost entirely by government because infrastructure generally tends to serve a public purpose and to accelerate private investment. Today, budgetary constraints, the economy, and public opposition to higher taxes have whittled down the public dollars available for infrastructure development. Thus, part of the burden of constructing capital facilities has shifted from the public sector to the private sector.

Impact fees, on-site land dedication requirements, and requirements for the construction of infrastructure and public facilities are different forms of exactions that have a potentially negative impact on the affordability of housing. To the extent that the fee or

[29] Raymond J. Burby, David Salvesen, and Michael Creed (2006). "Encouraging Residential Rehabilitation with Building Codes: New Jersey's Experience," *Journal of the American Planning Association*, Volume 72, Issue 2 June, pp. 183-196.

exaction exceeds the land developer's proportionate share of the facility's cost, the levy is an unconstitutional taking of property.[30]

Fees and exactions are direct charges or dedications collected on a one-time basis as a condition of an approval being granted by the local government. Fees can be categorized in three classes:

- Development impact fees which are levied on new development to cover the cost of infrastructure or facilities necessitated by that development;
- Permit and application fees which cover the cost of processing permits and development plans; and
- Regulatory fees.

Impact fees may pose barriers to affordability especially in communities where a flat fee per housing unit is charged instead of sliding scale fees based on the cost of the unit. The price tag for the construction of public facilities and infrastructure can take up a substantial portion of the project budget and thereby of the public subsidy as well. On-site land dedications can also affect affordability because the total cost of the project including land acquisition cost is divided between a fewer number of units.

Environmental Regulations as a Barrier

There is not much information about the impact of environmental regulations on the price of housing.[31] Environmental regulations can potentially increase project costs through delays, consultant fees, and additional items for site improvement in the project budget, such as environmental site assessment requirements. Often permitting and processing procedures that take very long periods of time, thereby forcing developers to pay higher interest costs in carrying their land, as well as other project costs.

Environmental laws and regulations can and do impact the supply of land and cost to develop housing at a given price. According to Kiel (footnote 98), there are few empirical studies that attempt to quantify the impact. Kiel concludes from her literature review that little is truly known about the impact of environmental regulations on the price and quantity of housing. Kiel notes, "Most, if not all, economists would say that the increase in the price of inputs, along with any increase in delays and/or uncertainty, would decrease the supply of new housing to the market, thus increasing the price of new housing. And most, if not all, economists also would say that improvements in the environment due to regulation should increase the demand for housing in areas that have

[30] Callies, David. "Exactions, Impact Fees and Other Land Development Conditions." Proceedings of the 1998 National Planning Conference.
http://web.archive.org/web/20050205032224/http://www.asu.edu/caed/proceedings98/Callies/callies2.html>
[31] Katherine A. Kiel, College of the Holy Cross "Environmental Regulations and the Housing Market: A Review of the Literature" - Prepared for HUD Workshop on Regulatory Barriers, April 22, 2004, Washington D.C.

experienced the improvement, which would increase price. Many economists have estimated the price increase, with some attributing the increase to changes in supply and others to changes in demand..."(footnote 31, pp 20-21).

Economic Impacts

Local officials and citizens have made many communities increasingly inhospitable to virtually all new development over the past several decades. Regulations have been passed that are intended, at least in part, to increase the difficulty of obtaining permits and slow the pace of new development. These regulations have harmful economic impacts on towns, cities, and the state.

Some of the impacts are relatively immediate: a loss in construction jobs and local construction-related spending; a decline in vacancy rates leading to increased rents and house prices; lengthening commutes as workers seek lower housing costs; and wear and tear on local and state roads and highways. In the longer run, high housing costs put upward pressure on wages for local businesses and government workers, forcing businesses to make decisions to locate or relocate elsewhere. Finally, as some families decide to leave the area altogether for lower housing costs, the available workforce shrinks and growth stalls.

A 2005 study found that improvements in permit processes can help a community promote economic development, lower business costs, and create jobs both within the construction sector and throughout the local economy.[32] Increased tax collections can provide a revenue source that can help finance the costs of the systems and procedural improvements needed to accelerate permit approval.

These land use regulations result in inelastic supply, impeding the ability of the market to respond to an increase in demand. Greater demand for housing therefore leads to higher prices for all housing—new and existing—rather than greater production of housing units. Higher prices reduce the share of housing that is affordable to average-income households. One study concludes that in the Boston region, housing prices might have been 23-36% lower by 2004 if regulation had not reduced new permits since 1990.[33]

Regulations and the resulting high house prices lead to a lower quality of life for the region's residents. The search for affordable housing leads many households to outer suburbs, leading to long commutes which ultimately cause increased congestion and infrastructure costs, and lower air quality. Long commute times leave workers less time

[32] National Economic Consulting "The Economic Impact of Accelerating Permit Processes on Local Development and Government Revenues" - Prepared for American Institute of Architects December 7, 2005.
[33] Glaeser, Edward L., Jenny Schuetz, and Bryce Ward (2006). "Regulation and the Rise of Housing Prices in Greater Boston," Cambridge: Rappaport Institute for Greater Boston, Harvard University and Boston: Pioneer Institute for Public Policy Research.

for their families and to participate in volunteer and social activities in their communities. High housing prices increase wages local businesses must pay to retain workers.

Housing supply restrictions that result in high housing prices mean that businesses have either to pay higher wages or move out of state to a place with lower housing costs and wages. In addition to wage pressure, high housing prices increase the difficulty of attracting and retaining workers. Because wages have been unable to keep up with housing costs, businesses, universities, hospitals, and other employers in high-cost states report increasing difficulty in attracting and retaining high-quality employees.[34]

SUMMARY

Housing relates to economic development through new construction and real estate fees, as well as the consumption of housing-related goods and services. The existing supply of housing in Connecticut is constrained, but the cost of producing a unit is high, therefore new developments of large homes are now the norm, instead of starter, single-family homes being built across the state. Connecticut's population is projected to grow by 140,000 between 2010 and 2025; however, employment growth is projected to slow, reducing the need for housing in the long-term. Fairfield, Hartford, and New Haven counties have a declining growth of stock, while rural towns (mostly in Windham County) are growing the most. Connecticut still has a sizeable special needs population—the elderly, those with disabilities and health issues, and abuse victims—which requires affordable and adequate housing throughout the state. This echoes the fact that affordable housing is deficient in Connecticut, based on the number of low-income families; while renting is becoming a more common option among young adults. Without the availability of affordable housing, homeowners will bear a greater burden of taxes in Connecticut, and the flight of young adults out-of-state will continue to adversely affect the labor market.

[34] Carman, Edward C., Barry Bluestone, and Eleanor White. 2003. Building on Our Heritage: A Housing Strategy for Smart Growth and Economic Development. Report and Recommendations for the Commonwealth Housing Task Force. Boston, MA: Center for Urban and Regional Policy, Northeastern University.

Transportation

Transportation systems are critical to the well being of individuals, the productivity of businesses, and in general the overall health of economies. Transportation provides the means for commuting to work, the purchase and delivery of goods, and recreational opportunities. The many benefits and impacts of transportation systems can be summarized as direct user and economic benefits, indirect and induced business impacts, and finally construction and maintenance spending impacts.

Direct User Benefits: all modes of transportation — including roads, rail, air, and water — provide direct benefits to users. These immediately realized benefits might be reduced congestion costs, ease of access, comfort, safety, reduced travel times and/or travel costs.[1]

Direct Economic Benefits: these benefits lead to monetary benefits for some users and non-users (individuals and businesses) within a geographic area. For affected businesses there may be *Economic Efficiency Benefits* in terms of production cost and product quality and availability stemming from changes in labor market access and the cost of obtaining, as well as supplying, inputs to customers and obtaining outputs from intermediaries. For affected residents, benefits may include reduced costs for obtaining goods and services, an increased variety of work and recreational opportunities associated with greater locational accessibility, and reduced pollution that adds to the amenity value of the area (footnote 1).

Induced Impacts: includes *Indirect Business Impacts* for suppliers to directly affected businesses. *Induced Business Impacts* result from the extra spending (which originates from reduced cost of travelling) on other goods. There are also *Other Induced Impacts*, which come from shifts in the broader population and business location patterns, and land use and the resulting land value patterns. These shifts may also affect government costs and revenues (e.g., parking revenues and taxes). These changes will ultimately affect income, wealth and/or "wellbeing" — both overall and for particular groups of people in the affected geographic area (footnote 1).

Construction and Maintenance Spending Impacts: there is a short-term economic impact associated with the construction of transportation facilities and services, and other long-term impacts associated with maintenance and operation of facilities and services (footnote 1).

These benefits and impacts show that Connecticut's economic future is directly linked to its transportation system. As such, Connecticut's existing transportation system needs to

[1] Connecticut Center for Economic Analysis, "The Impact of the Regional Transit Strategy on the Capitol Region of Connecticut: A Dynamic Impact Analysis," January 2001.

be thoroughly evaluated so that future goals may enhance its strengths and overcome its weaknesses. Following is an assessment of Connecticut's transportation system by the Connecticut Center for Economic Analysis. The assessment is divided into focused sections on Connecticut's maritime industry, railway system, bus system, highway system, aviation system, and bikeway/pedestrian system.

Connecticut's Maritime Industry

The ports of Connecticut are "niche" ports; that is, they are cargo-specific ports specializing in bulk, liquid bulk, breakbulk and neobulk operations.[2] They serve their customers through public and private terminals via pipelines, highways, rail, and warehousing and distribution facilities. They also provide ferry system facilities and accommodate the public's ferry transportation needs.[3]

Economic Impacts

The four components of the Maritime Cluster are:[4]

- Maritime Transportation – These activities include "the movement of freight and passengers through Connecticut's ports and involve ports, ships, ferries, and inland transportation linkages."
- Maritime Manufacturing and Services – These activities include "the construction, engineering and servicing of waterborne vessels including nuclear submarines, powerboats and sailboats, and the manufacturing of supporting marine components."
- Maritime Recreation – These activities include "boating and sport fishing and involve marinas, boat dealerships and marine retailers."
- Commercial Fishing – These activities include "the production, harvesting, processing and retail of finfish, shellfish and lobster."

[2] Muller, Gerhardt, "Intermodal Freight Transportation," 4th Edition, pp. 450 and 469 - "Bulk Cargo – cargo that is unbound as loaded and carried aboard ship, it is without mark or count in a loose unpackaged form, and has homogeneous characteristics"; "Breakbulk – to unload, sort, and reload some/all contents of a vehicle in transit; to reduce a large shipment of a single commodity to many small shipments, which then are dispersed to various buyers"; "Neobulk – shipment of bulk and other forms of homogeneous types of cargo in the same vehicle."

[3] Yim, Joan, and Parsons Brinkerhoff, "Connecticut's Ports: Transportation Centers for People and Goods," Connecticut Maritime Coalition, May 2002.

[4] Michael Gallis and Associates et al., "Strategic Cluster Initiative - Final Report," July 2000.

Table 1: Economic Impact by Maritime Cluster Component (1997)

Component	Businesses	Jobs	Payroll	Sales
Transportation	63	1,399	$69.7 million	$771.7 million
Manufacturing & Services	17	8,927	$418.9 million	$1.6 billion
Recreation	203	1,292	$37.4 million	$204.3 million
Commercial Fishing	66	607	$27.4 million	$32.5 million
TOTALS	**349**	**12,225**	**$553.4 million**	**$2.61 billion**

Source: Connecticut Maritime Coalition, "Connecticut's Ports: Transportation Centers for People and Goods," May 2002.

Connecticut's maritime businesses and activities benefit the state by:

- Strengthening linkages to global trade;
- Attracting a skilled workforce;
- Increasing productivity and personal income;
- Reducing costs of goods and services for inland industries;
- Revitalizing waterfront cities;
- Relieving congestion on interstate highways, in particular, Interstate 95; and
- Strengthening a superior quality of life and environment by reducing congestion, pollution, and highway accidents.

Table 2: IMPLAN Economic Impacts[5] of Connecticut Seaports

IMPLAN Economic Impacts of Connecticut Seaports

(Results based on Employment data for 1997)

Description	Direct Impacts	Indirect Impacts	Induced Impacts	Total Impacts
Employment (jobs)	10,452	5,130	7,182	22,765
Output ($1995 mil.)	$1522.689	$531.523	$567.667	$2,621.867
Personal Income ($1995 mil)	$531.409	$210.460	$223.515	$965.385
Total Value Added ($1995 mil)	$792.857	$307.456	$371.125	$1,471.639
Other Property Income ($1995 mil)	$209.050	$72.420	$107.655	$389.126
Indirect Business Taxes ($1995 mil)	$52.397	$24.575	$40.154	$117.127

Source: Connecticut Center for Economic Analysis, "The Economic Impact of Connecticut's Deepwater Ports: An IMPLAN and REMI Analysis," May 2001.

Table 1 in the appendix to this section presents the port-related industries in Connecticut, their estimated degree of dependency on the seaports, and a sectoral employment estimation. Some sectors that generate the greatest numbers of employment include local trucking without storage, shipbuilding/repairing, and scrap/waste materials, with degree of port dependency estimated at 40%, 20%, and 60% respectively. Some sectors that have 100% port dependency for employment include refined petroleum pipelines, petroleum bulk stations and terminals, and refrigerated warehousing and storage.

Port Usage

According to the U.S. Army Corps of Engineers, Connecticut's ports collectively handled 19.3 million short tons in 2006. This places Connecticut 34th among the states in waterborne traffic, right after Hawaii, South Carolina, and Massachusetts.

[5] Connecticut Center for Economic Analysis, "The Economic Impact of the Arts, Film, History and Tourism Industries in Connecticut," December 2006, p. 11: **"**Economic benefits generally separate into three types of economic impact: *direct*, *indirect*, and *induced*. *Direct impact*s are those arising from the initial spending by the industry studied, such as payroll for employees and contract workers, goods and services purchases, and rent and permit fees. Direct impacts include the jobs in the industries under consideration. *Indirect impacts* arise as the businesses and governments that supply the goods, services, permits, rents, and other things to an industry in turn buy goods and services from other places. *Induced impacts* represent the additional income earned and spent by workers and business owners due to their participation in and support of a particular industry."

Table 3: Connecticut's Waterborne Tonnage (In Units of 1,000 Tons)

Year	Totals	Shipping		Receiving		Intrastate
		Domestic	Foreign	Domestic	Foreign	
2006	19,340	1,187	213	10,344	5,701	1,894
2005	19,617	795	245	11,687	4,923	1,967
2004	20,075	1,055	363	11,927	4,560	2,170
2003	18,579	892	118	11,223	4,850	1,496
2002	17,610	862	310	10,263	4,798	1,377
2001	18,267	872	37	11,653	4,397	1,308
2000	18,959	1,021	3	11,729	4,748	1,458

Source: US Army Corps of Engineers, Waterborne Statistics.

The State Pier of New London has provided accommodations for cruise ship arrivals that offer passengers day trips in historic New London. The Port has been visited eight times in the last five years representing total passenger capacity of approximately 14,800. Table 4 shows the number of visitors to New London over the past five years.

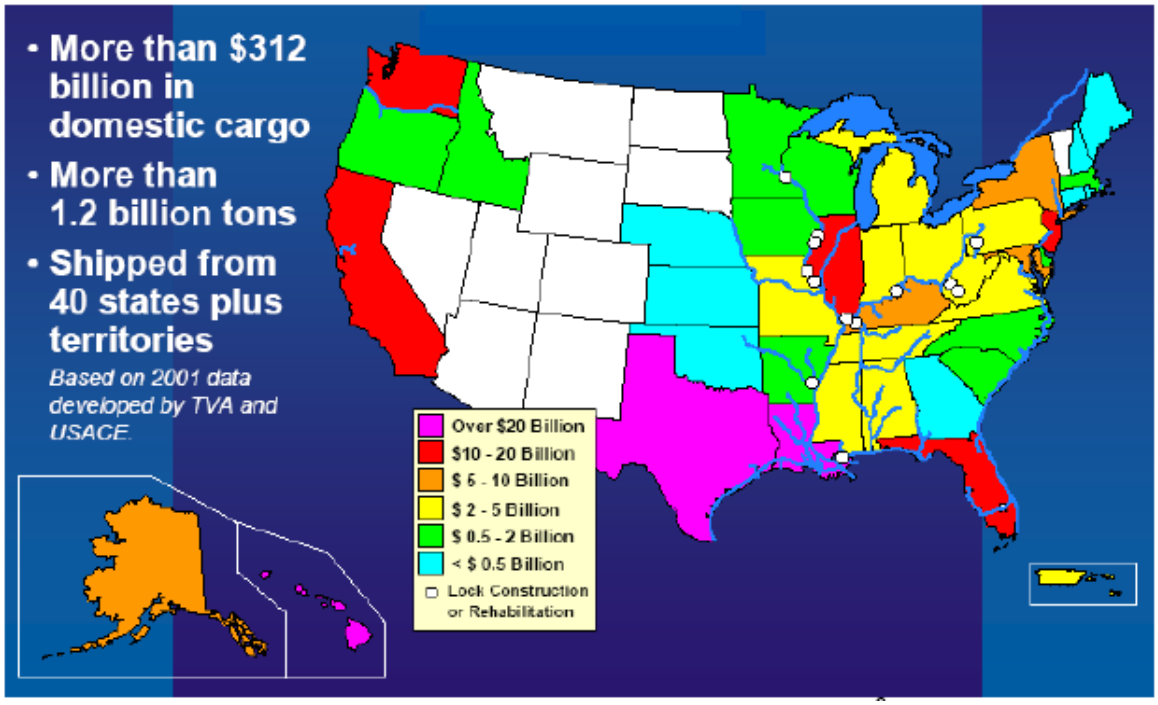
Table 4: Total Arriving Capacity, State Pier of New London

Year	Maasdam	Orion	Veendam	Explorer of the Seas	TOTAL
FY 2004	1,200	0	0	0	*1,200*
FY 2005	1,200	212	0	0	*1,412*
FY 2006	1,200	0	0	0	*1,200*
FY 2007	1,200	0	0	0	*1,200*
FY 2008	1,200	0	1,200	12,400	*14,800*

Source: CT Cruise Ship Task Force

Figure 1 shows how Connecticut compares to other states in the use of the waterway system. Connecticut is one of eight states shipping/receiving less than $.0.5 billion in domestic cargo.

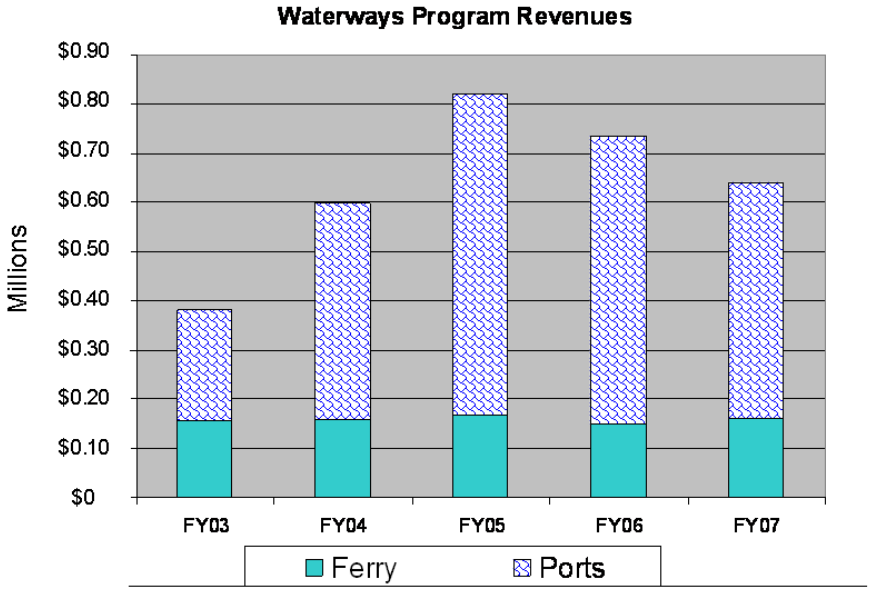
Figure 1: States' Use of Waterways for Shipping



Source: David V. Grier, U.S. Army Corps of Engineers, Institute for Water Resources.

Figure 2 shows the trends in ferry and port revenues from 2003 to 2007.

Figure 2: Ferry and Port Revenues, 2003-2007



Source: ConnDOT Bureau of Aviation and Ports, Presentation to Governor's Commission on the Reform of the DOT, September 2007.

Connecticut's Major Ports

Of the top 150 ports in the United States ranked by tonnage, in 2006 New Haven ranked 51st and Bridgeport ranked 76th.

Table 5: Tonnage for Connecticut's Ports

Year	Rank	Port Name	Total	Domestic	Foreign	Imports	Exports
2006	51	New Haven, CT	10,897,052	7,306,754	3,590,298	3,377,740	212,558
	76	Bridgeport, CT	5,388,604	3,229,064	2,159,540	2,159,540	0
2005	52	New Haven, CT	10,931,485	7,903,802	3,027,683	2,783,030	244,653
	74	Bridgeport, CT	5,482,056	3,627,963	1,854,093	1,854,093	0
2004	52	New Haven, CT	10,855,934	7,789,159	3,066,775	2,703,512	363,263
	75	Bridgeport, CT	5,671,230	3,972,984	1,698,246	1,698,246	0
	144	Stamford, CT	1,021,449	1,021,449	0	0	0

Source: US Army Corps of Engineers, Waterborne Statistics.

The ports' primary cargo (footnote 3):

- Bridgeport handles primarily coal, gasoline, fuel oil, sand and gravel, paper and paperboard.
- Primary cargos handled at New Haven include coal, gasoline, fuel oil, naphtha and solvents, asphalt products, sand and gravel, zinc, glass and glass products, steel, copper, cement and concrete, and fabricated metal products. In 2001, New Haven received 65% of the state's fuel oil and gasoline.
- New London's chief cargo has traditionally been gasoline and in more recent times, lumber and copper as well.

The ports' fuel storage capacity as of 2002 (footnote 3):

- Fuel storage capacity in Bridgeport Harbor is 1,697,560 barrels representing 11.6% of the state's capacity.
- New Haven's fuel storage capacity is 9,935,870 barrels or 67.9% of the state's capacity.
- New London's fuel storage capacity is 1,118,970 barrels or 7.6% of the state's capacity.

Table 6: Warehousing, Storage and Intermodal Connections

Operator	Warehousing	Open Storage	Railway Connection	Highway Access	Fuel Handling
Bridgeport	Approximately 20 acres outside storage/staging area. 130,000 square feet dry storage space. 85,000 square feet of refrigerated warehouse space.[6]	20 acres of outside storage/ staging area	Conrail 1 mi. from terminal	0.5 mi. to I-95	Pequannock River Industrial Area No. 2 fuel oil facility
New Haven	14 warehouses (500,000 sq. ft.)	56 acres	Providence & Worcester RR	0.25 mi. to I-95	12+ facilities (approx. 200 tanks) Jet Lines Pipeline – Fuel To Bradley Airport & Westover Air Force Base, Westover MA
New London	100,000 sq. ft. (commodities are handled on both sides of the Thames River)	10 acres	New England Central RR (direct access to both U.S. & Canadian rail networks)	1 mi. New London to I-95 3 mi. Groton to I –95	Amerada Hess, Groton

Source: Connecticut Maritime Coalition, "Connecticut's Ports: Transportation Centers for People and Goods," May 2002.

Connecticut's ports have limited land for cargo storage (laydown area) space and consequently continue to miss opportunities for sea transportation business. Instead, goods are transported by truck. The Connecticut Maritime Commission estimates 80,000 truck trips per year on I-95 could be eliminated if this cargo was transported through Connecticut's ports.[7] The seaports need capital investment to expand storage capacity, and to increase intermodal connections between water and land transport (highway and rails).

[6] Connecticut's Department of Transportation, "Port of Bridgeport," July 22, 2008, http://www.ct.gov/dot/cwp/view.asp?A=1380&Q=259718.
[7] Connecticut Maritime Coalition, "Ports: Dependence on waterborne transportation is increasing," July 10, 2008, http://www.ctmaritime.com/ports.html.

Connecticut's Ferry Systems

In a 2000 survey of ferry operators, the Connecticut Maritime Coalition determined that of the four major operators reporting annual figures to the Federal Highway Administration (FHWA), there were over 2.1 million passenger boardings and nearly 852,000 vehicle boardings of ferries servicing Connecticut's ports.[8] See Table 2 in the appendix for passenger and vessel boardings by operator.

The ferry routes provide (footnote 3):

- *Essential* services to island communities that have no alternative travel modes. This is the case with travel to Fishers Island. The routes out of New London to Martha's Vineyard and other vacation islands are other forms of essential service that generally peak during the summer tourism season.
- *Complementary* service. That is, people and vehicles are carried from origin to destination in a more direct route than land-based alternatives. The service from Port Jefferson, New York to Bridgeport is an example of complementary service.
- *Optional* service, which the FHWA defines as providing "an equally direct route as land-based alternatives, but may provide other advantages (e.g., a coastal commuter boat running parallel to congested highways)."[9] The high speed ferry system proposed by the Connecticut Maritime Coalition between Connecticut and New York City is an example of an alternative form of service for those who wish to avoid the congestion of I-95.[10]

In 2001, the Connecticut Department of Transportation conducted a study on the state's ferry systems. Following are the operations, service levels, and fares found through the study:

Bridgeport-Port Jefferson Ferry:[11]

- The Bridgeport-Port Jefferson Ferry operates out of the Port of Bridgeport across Long Island Sound to Port Jefferson on Long Island.
- In 1999, the ferry service carried approximately 800,000 passengers, 342,000 cars, and 3,000 vehicles in other categories.
- In the summer months it provides 16 daily round trips and in the winter it provides 11 daily round trips.
- The one-way fare for a car is $34.50, a motorcycle is $18.50, and vehicles other than cars cost $40.50 to $88.00. The fare for a passenger in a car is $9.20 and $12.25 for an adult foot passenger.

[8] Yim, Joan, and Parsons Brinkerhoff, "Connecticut's Ports: Transportation Centers for People and Goods – Executive Summary," Connecticut Maritime Coalition, May 2002.
[9] U.S. Department of Transportation, National Ferry Database CD-ROM, System Navigation – Routes, 2001.
[10] Connecticut Maritime Coalition, "Transportation: Take a look beyond Connecticut's Highways," 10 July 2008, http://www.ctmaritime.com/transportation.html.
[11] Connecticut Department of Transportation, "Intrastate Passenger Commuter Ferry Study," March 2001.

Port of New London Ferries (footnote 11):

- These passenger ferries serve Long Island (New York), Block Island (Rhode Island), Glen Cove (New York), and Fishers Island (New York).
- The Fishers Island Ferry, operated by the Fishers Island Ferry District, makes 44 scheduled trips per week in the summer months, with a minimum of five trips per day and a maximum of 11 trips per day on Fridays and Sundays. In the winter months this service makes 34 trips per week, with an average of five per weekday, six on Fridays, and four each on Saturday and Sunday.
- The cost for a car is $10, bicycle $5, passenger $4, children and senior citizens $2, and trucks are $1.25 per foot length, with a minimum fee of 15 feet ($18.75).
- In 1997, Fishers Island Ferry transported approximately 156,400 passengers, 40,900 cars, and 4,900 trucks.

Cross Sound Ferry (footnote 11):

- The ferry operates between New London and Orient Point, Long Island. Cross Sound Ferry operates seven vessels for this service, with six that can carry automobiles, trucks, motor homes, buses, and walk-on passengers, while the seventh is a passenger-only high speed ferry.
- In 1999, the fleet carried 1.2 million passengers, 360,000 cars, and 12,000 trucks.
- In the summer months they make a combined total of 26 daily round trips and in the off-season they make eight round trips.
- The one-way fare for automobiles is $34, motorcycles is $22, and for trailers, tractor trailers, motor homes, buses, and campers it is $2.25 per foot, with a $3 surcharge. The one-way fare for a passenger is $10, and $2 for bicycles.

Fox Navigation (footnote 11):

- Fox Navigation provides fast ferry service between New London, Connecticut and Glen Cove, New York.
- The trip takes approximately two hours and 15 minutes and costs $59, or $89 for the round trip.
- The service operates seven days a week with two round trips per day. The service carries an average of 50 people per trip, with approximately 10% of the passengers transferring to the Amtrak rail service in New London.
- Foxwoods Casino operates a shuttle bus that meets the incoming ferry in New London and transports the ferry patrons to their casino.
- In the summer months there is seasonal service to Martha's Vineyard, with a one-way trip for $59 and a round trip for $89.

Connecticut River Ferries (courtesy of DOT):

- The Department of Transportation operates two ferry services crossing the Connecticut River between Rocky Hill and Glastonbury, and between Chester and Hadlyme.

- These ferry services operate seasonally, generally between the months of April and December, dependant on river conditions
- Each service offers transportation of passengers, vehicles and bicycles for a nominal fee ($3.00 per vehicle, reduced to $2.00 for commuter with coupons, and $1.00 for walk-on pedestrians and bicyclists).
- In a typical year, these ferries will provide over 28,000 crossings and transport over 50,000 vehicles and over 10,000 additional walk-on pedestrians and bicyclists.

Through the ferry system, Connecticut's maritime industry can further provide congestion relief and energy efficient transportation options to its residents. One plan would reduce traffic on I-95 with a high-speed ferry system between Bridgeport, Stamford and Wall Street (footnote 8). The number of potential daily ferry passenger users on such a system can be estimated in the range of 50 to 100 trips daily (25 to 50 in each direction), with a yearly use of 12,750 to 25,500 (footnote 10).

Dredging

In the United States, less than half the states have direct transportation access to the ocean through deepwater ports. Connecticut has three. Yet Connecticut's maritime advantage is slowly eroding as its deepwater ports are on an extremely critical timeline to be dredged. As port channels grow shallower, depth dictates the size of ships that are able to safely enter ports to offload goods. Larger ships will be unable to use ports and cargo will need to be transported by alternative methods, most likely over highways, thus increasing highway congestion, maintenance, and pollution. The Texas Transportation Institute (TTI) found that 70 trucks are needed to carry the equivalent dry cargo load (1,750 short tons) as one barge, and 144 trucks are needed to carry the equivalent liquid cargo load (27,500 BBL) as one barge.[12] TTI also found safety, hazardous material, and infrastructure advantages to maritime transport compared to rail or highway transport.

Connecticut's deepwater ports need maintenance dredging to assure safe navigation for vessels calling upon the ports of Bridgeport, New Haven and New London. In addition, maintenance dredging is needed along the Thames River to meet the needs of the U.S. Department of Defense (footnote 3).

The New England Division of the Army Corps of Engineers routinely updates the development of the Long Island Sound Dredge Material Management Plan (LIS DMMP) as well as Connecticut dredging projects such as Bridgeport Harbor. The LIS DMMP project was to begin the public "scoping" process in spring 2007 but was delayed. If an LIS DMMP is not in place by June 2013, both the Western LIS and Central LIS disposal

[12] Texas Transportation Institute, "A Modal Comparison of Domestic Freight Transportation Effects on the General Public," November 2007.

sites will be closed. The estimated cost of the LIS DMMP is approximately $15 to 16 million. The Army Corps of Engineers reported that there is an estimated 1.5 million cubic yards of material to be removed from the Bridgeport Harbor channels. There appears to be sufficient Contained Aquatic Disposal (CAD) cell locations within the harbor to handle all dredged material.[13]

Connecticut's Railway System

In June 2007, there were 575 route miles of railroad track in Connecticut. In addition, there were 657 highway-rail grade crossings, including 370 public motor vehicle crossings, 278 private motor vehicle crossings, and nine pedestrian crossings. The state owns 325 bridges on active, inactive and abandoned rail rights of way.[14]

Figure 3: Railroad Map of Connecticut

Source: Association of American Railroads, "Railroad Service in Connecticut," 2006.

Passenger Rail

Connecticut is served by three passenger rail operations (footnote 14):

- The New Haven Line (NHL) commuter service operates between New Haven, Connecticut and Grand Central Terminal in New York City with connecting branches to New Canaan, Danbury, and Waterbury.

[13] Connecticut Maritime Coalition, Annual Report, 2007.
[14] Connecticut Department of Transportation, "Transportation in Connecticut: The Existing System," June 2007.

- The Shore Line East (SLE) commuter service operates between New Haven and New London with two special SLE express trains that operate west of New Haven to Bridgeport and Stamford.
- Amtrak intercity passenger service is provided along the Northeast Corridor (NEC) between New York and Boston, and the inland route between New Haven and Springfield, Massachusetts.

New Haven Line

The New Haven Line (NHL) is one of the busiest commuter transit systems in North America, and ridership has increased roughly 5% per year since 2005.[15] The state has made efforts to integrate train travel with local bus service routes to facilitate travel in urban areas as Stamford and New Haven.

- ConnDOT and the Metropolitan Transportation Authority (MTA) of New York jointly oversee and subsidize the operation of the NHL. ConnDOT owns the 235 track miles of the NHL between New Haven and Greenwich and the three branch lines within Connecticut and is responsible for all capital improvements in Connecticut. Metro-North Railroad (MNR) is the contract operator under an agreement with ConnDOT and MTA (footnote 14).

- The New Haven Line consists of the New Haven main line and the Waterbury, Danbury, and New Canaan branch lines. There are 36 station stops on the Connecticut portion of the NHL. There are approximately 250 scheduled weekday trains, 143 Saturday trains, and 132 Sunday and holiday trains (footnote 14).

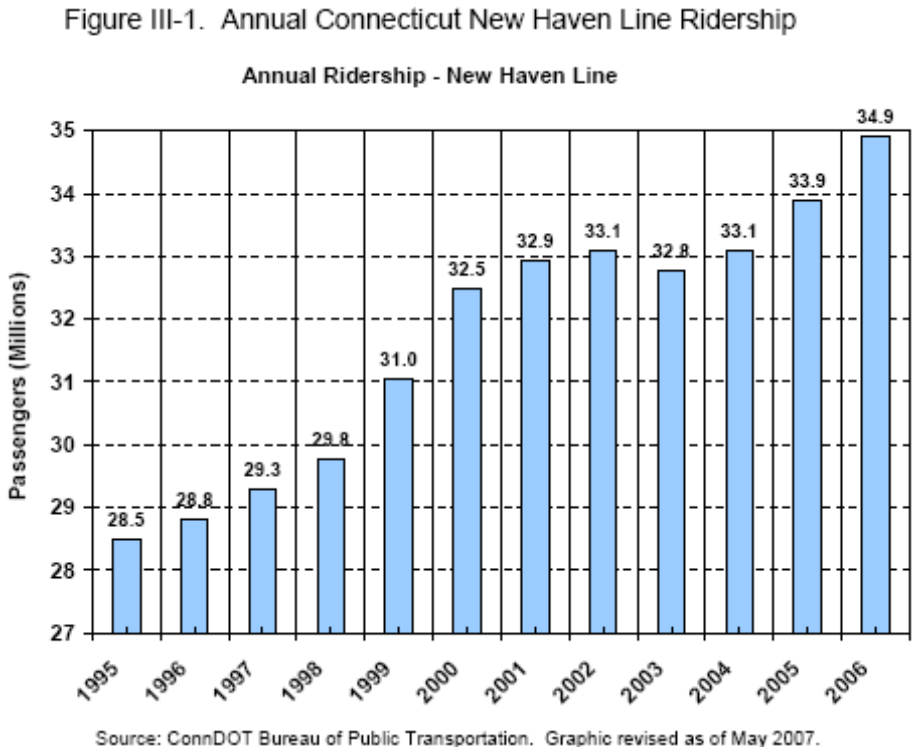
- The NHL service is a vital transportation link that relieves traffic on the most congested portion of I-95 between New Haven and New York and provides easy access to New York City. Based on the 2000 Census journey-to-work data, the NHL captures about 81% of the work trips bound for New York City. Nearly 80,000 one-way passenger trips are made on this segment each weekday (footnote 14).

- As shown in Figure 4, annual ridership on the NHL increased significantly since 1995. In 2006, total NHL ridership was approximately 34.9 million — an increase of 3% over the previous year. Of this number, 22.6 million rail passengers used Connecticut stations. Forty-nine percent of NHL passengers were rush-hour commuters to Manhattan. Fifty-one percent of those customers are "reverse commuting" from Manhattan and the Bronx to suburban employment

[15] Connecticut Department of Transportation, "Governor Rell Hails Public Transit Ridership Increases More than 2.7 Million New Riders in 2006," March 2006, http://www.ct.gov/dot/cwp/view.asp?A=1373&Q=332922.

centers in Connecticut and New York, traveling during off-peak hours, or taking trips in the region without passing through Manhattan (footnote 14).

Figure 4: Annual Connecticut New Haven Ridership



Source: Connecticut Department of Transportation, "Transportation in Connecticut: The Existing System," June 2007.

- Intermediate ridership on the NHL — those customers who do not begin or end their trips at Grand Central Terminal in New York City — makes up 14% of all trips taken. In 2006, intermediate train travel within Connecticut on the NHL increased by more than 6% (footnote 14).

- The NHL carried 33,219,666 passengers at a deficit/passenger cost of $2.64 in fiscal year 2003. The net deficit on NHL for fiscal year 2003 was $87,820,690.[16] See Table 3 and Table 4 in the Appendix for total commuter rail data.

- A new train station is scheduled to be built in Fairfield, the first addition to the NHL in over 50 years. Originally slated to include an office building, hotel, restaurants, and a recreation park, the Fairfield Metro Center will be a rail station only (as of May 2009).[17]

[16] Connecticut Department of Transportation, "Operations Statistics for the Biennium," SFY 2002/2003.
[17] Reid, Chip, "A Big Taste of Progress by a Little Street," The Fairfield Sun, July 24, 2008.

- The state made a commitment to rehabilitate this line by purchasing new M-8 passenger cars scheduled for use in 2010. The cars feature state of the art accommodations for commuters including power outlets for lap-top use.[18] Concurrent with this plan is a new rail yard maintenance facility to be built in New Haven.

Shore Line East (SLE)

- ConnDOT contracts with Amtrak to operate the SLE commuter rail service between New Haven and New London, a service area that is located within Amtrak's Boston Division of the North East Corridor (NEC). ConnDOT provides passenger equipment and funding for the operation and oversees Amtrak's performance as a service provider (footnote 14).

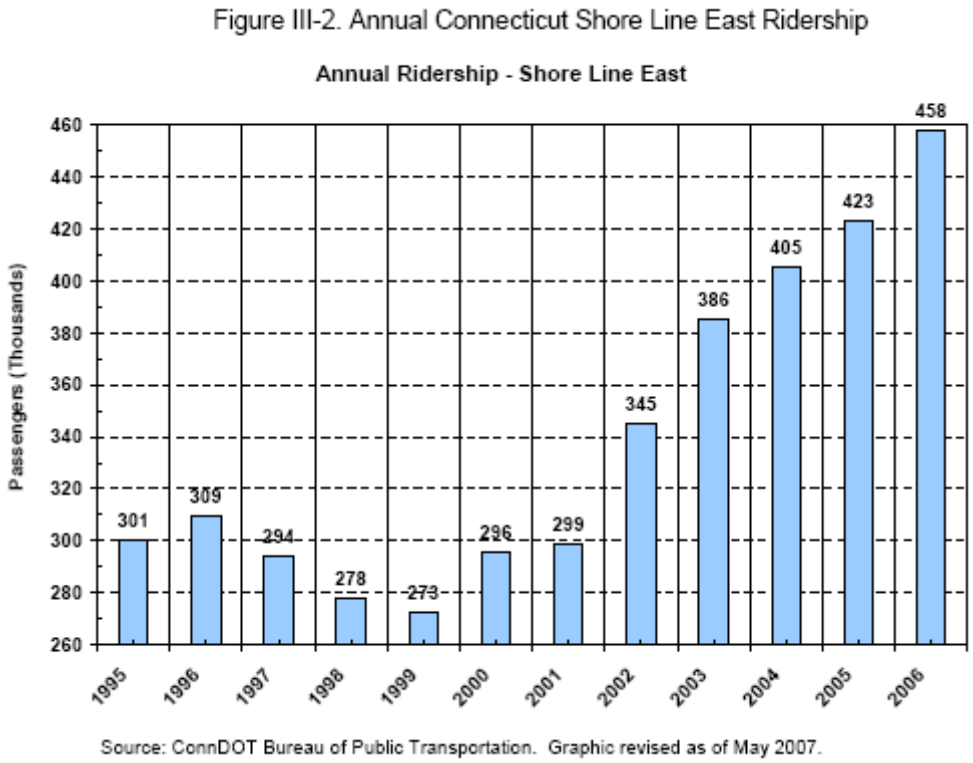
- There are seven passenger stations north and west of New Haven with connecting service to the NHL. The Shore Line East system provides 25 scheduled weekday peak-period trains that operate between New Haven and New London (footnote 14).

- Figure 5 shows that annual ridership on SLE increased from 296,000 in 2000 to 423,000 in 2005. From 2005 to 2006 total annual ridership on SLE increased 8% to 458,000 (footnote 14).

- The SLE service carried 379,096 passengers in fiscal year 2003 at a deficit/passenger cost of $16.83. The net deficit on SLE for fiscal year 2003 was $87,820,690 (footnote 16). See Table 3 and Table 4 in the Appendix for total commuter rail data.

[18] Connecticut Department of Transportation, "Connecticut Department of Transportation.& Metro-North Railroad Showcase New M-8 Rail Car Interior," May 2008, http://www.ct.gov/dot/cwp/view.asp?Q=415974&A=1373.

Figure 5 Annual Connecticut Shore Line East Ridership



Source: Connecticut Department of Transportation, "Transportation in Connecticut: The Existing System," June 2007.

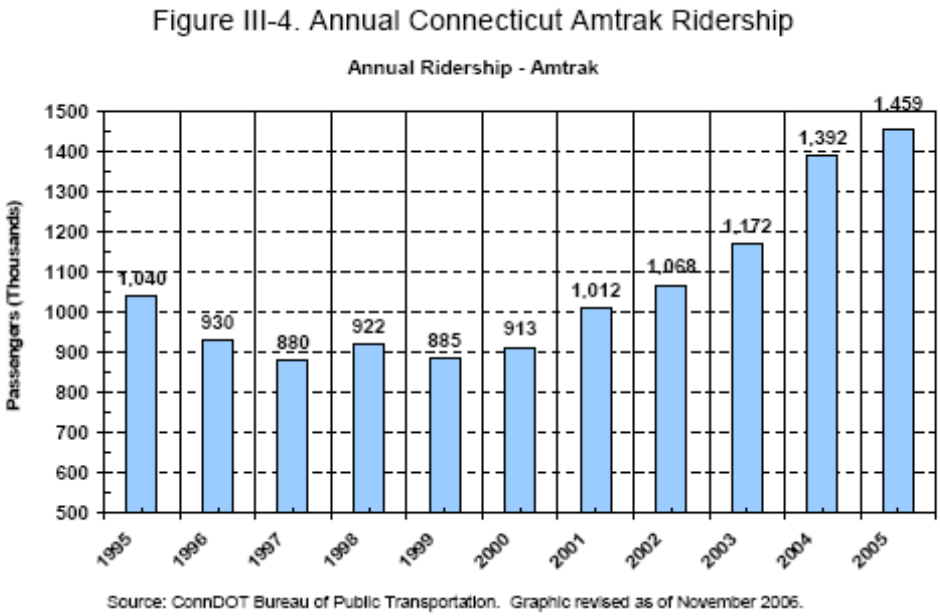
Amtrak Intercity Rail Service

- Amtrak provides intercity rail service through Connecticut along the NEC (Boston-New York City-Washington D.C.) and along the New Haven-Springfield Line (New Haven-Hartford-Springfield). Amtrak operates over its own right of way east of New Haven and between New Haven and Springfield, and over the ConnDOT-owned NHL between New Haven and Greenwich (footnote 14).

- Amtrak's intercity service serves 12 rail-passenger stations in Connecticut (footnote 14). See Table 5 in the appendix for a list of these stations and Amtrak Connecticut ridership by station for FFY 1999 through FFY 2005.

- As shown in Figure 6, from FFY1999 to FFY2005, total Amtrak ridership at stations in Connecticut increased from 884,860 to 1,459,068, or about 65% (footnote 14).

Figure 6: Annual Connecticut Amtrak Ridership



Source: Connecticut Department of Transportation, "Transportation in Connecticut: The Existing System," June 2007.

Governor Rell identified commuter rail service between New Haven through Hartford to Springfield, Massachusetts as a key component in meeting the goals of improving and sustaining the regional economic vitality and improving regional livability. In addition to serving commuters traveling between the towns and cities along the corridor, the service could provide a connection to Bradley International Airport, existing Metro-North and Shore Line East Commuter Rail in New Haven, and links to the proposed New Britain-Hartford Busway.[19]

Train Power

Trains on the New Haven Main Line and New Canaan Branch are electrically powered using an AC system. Traction power to propel the trains arrives from overhead wires, known as catenary. From Woodlawn to Grand Central Terminal, the New Haven Line (NHL) uses 650 volts DC current, supplied by a third rail. Connecticut chose the AC system because it is more efficient for the higher speeds and traffic levels envisioned for the New York, New Haven & Hartford Railroad Line than the system chosen by the New York Central for its 1904 electrification of Grand Central Terminal (footnote 14). As a result of the differing systems, dual-power passenger railcars are required to operate on the New Haven Line. The dual-power passenger railcars are more expensive than cars operating on one type of power.

[19] Connecticut Department of Transportation, "New Haven - Hartford - Springfield Commuter Rail Implementation Plan: Existing Conditions," March 2003.

Passenger Rail Stations

- Fifty stations provide access to the various passenger rail services in Connecticut. NHL commuter rail service is provided by MNR at 36 stations, and SLE commuter rail service is provided by Amtrak at seven stations. Northeast Corridor intercity rail service is provided by Amtrak at an additional seven stations (footnote 14).

- More than 16,700 parking spaces are available at the state's 50 rail stations. The number of parking spaces provided at each station varies from approximately 20 spaces at Seymour's NHL station to more than 1,000 at the New Haven, Bridgeport, Greenwich, Stamford, Westport, and Fairfield stations (footnote 14).

- On both the NHL and SLE lines, the parking utilization rate is extremely high, exceeding 80% for both systems. On the Waterbury Branch, utilization ranges from a high of 72% to a low of 10%. On the Danbury Branch, utilization ranges from a high of 90% to a low of 58%. On the New Canaan Branch, utilization ranges from 88% to 82%. On the SLE Branch, utilization ranges from a high of 113% to a low of 22% (footnote 14).

Rail Freight

- Rail freight service in Connecticut is provided by the following railroads: CSX Corporation, Providence & Worcester Railroad Company, Housatonic Railroad Company, Springfield Terminal Railroad, Connecticut Southern Railroad, Branford Steam Railroad, New England Central Railroad, Naugatuck Railroad, Central New England Railroad, and Pan Am Railways (footnote 14).

- Most rail shipments entering Connecticut fall within a limited range of bulk commodities: crushed stone, lumber, rolled paper, steel, chemicals, and waste products (footnote 14).

- Rail freight from the west was rerouted due to the Poughkeepsie Bridge outage in 1974. Shipments from the west are now generally routed via Selkirk, New York, and then pass through either the Oak Point Yard in New York City or the West Springfield Yard, before reaching much of the state's rail network (footnote 14).

- In recent years, annual rail shipments originating or terminating within the state have amounted to 50,000 carloads carrying about three to four million tons (footnote 14).

Table 7: Freight Railroad Traffic in Connecticut

Tons Originated 2006		
	Tons	%
Waste & Scrap	1,194,048	52%
Nonmetallic Minerals	880,276	39
Chemicals	97,520	4
Glass & Stone Products	95,960	4
–	–	–
All Other	9,920	<1%
Total	2,277,724	100%

Tons Terminated 2006		
	Tons	%
Nonmetallic Minerals	880,276	43%
Lumber & Wood Prod.	268,540	13
Primary Metal Products	260,160	13
Pulp & Paper	132,040	7
Chemicals	125,840	6
All Other	362,936	18
Total	2,029,792	100%

Source: Association of American Railroads, "Railroad Service in Connecticut," 2006.

Table 8: CT Railroad Service and Employment

Facilities	Number of Freight Railroads	8
	Miles Operated (Excluding Trackage Rights)	390
Traffic	Total Carloads of Freight Carried	42,522
	Total Tons of Freight Carried	3,609,724
Employment and Earnings	Rail Employees Living in State	2,174
	Freight Employees Only	185
	Total Wages of Rail Employees	$142,131,000
	Freight Employees Only	$10,722,000
	Average Per Freight Rail Employee:	
	Wages	$58,000
	Fringe Benefits	$22,500
	Total Compensation	$80,500
Railroad Retirement	Railroad Retirement Beneficiaries	2,798
	Railroad Retirement Benefits Paid	$42,661,000

Source: Association of American Railroads, "Railroad Service in Connecticut," 2006.

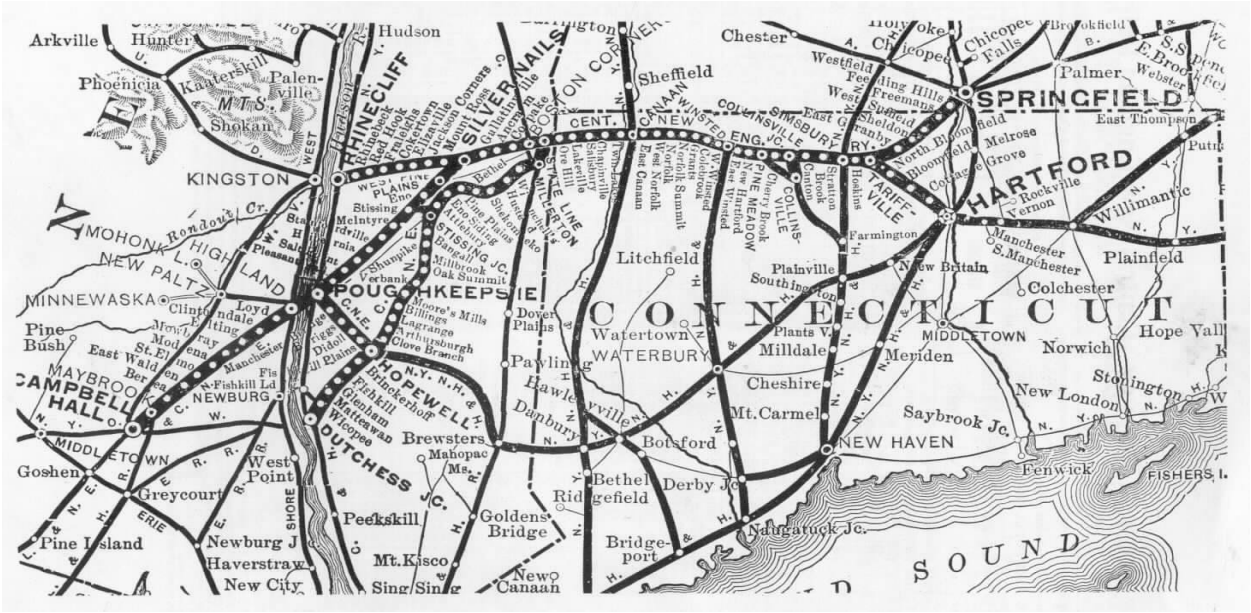
- A method for increasing rail freight service is to double stack rail freight cars. Currently there is no double-stack rail freight service in Connecticut. ConnDOT can work to provide clearance for double-stack operations on the Springfield Line between Springfield and Cedar Hill Yard in North Haven, perhaps in connection with a partnership with Norfolk Southern or CSX to upgrade service into Connecticut. Cedar Hill Yard has ample space for rail freight expansion, is directly accessible to I-91, and is remote from surrounding residential development.[20]

[20] Connecticut Public Transportation Commission, "2007 Annual Report and Recommendations," 2007.

Poughkeepsie Railroad Bridge

The Poughkeepsie Railroad Bridge provided a route for rail freight over the Hudson River from New York into Cedar Hill Yard in New Haven (Figure 7).

Figure 7: Poughkeepsie Railroad Bridge and Surrounding Rail Tracks



Source: http://www.ubuyvacations.com/Railroad/PoughkeepsieBridgeAfterFire.html

In 1974, however, the bridge caught fire and has not been rebuilt. Currently rail shipments from New York to Stamford have to go north to Albany, then east and back south, at substantial additional cost. Consequently, rail freight into Connecticut and other New England states has decreased in favor of transportation by trucks. A 2002 study showed railroads handled only 5% of freight shipment in Maine, 2% in Connecticut, and 1% or less in Massachusetts, New Hampshire, Rhode Island and Vermont.[21]

Replacing the Poughkeepsie Railroad Bridge would improve the viability of freight transportation into Connecticut and other New England states. The Texas Transportation Institute estimates 16 railcars can carry the dry cargo equivalent of 70 trucks, and 46 railcars can carry the liquid cargo equivalent of 144 trucks (footnote 12). With increased rail freight transportation Connecticut would enjoy reduced costs for goods and a decrease in road congestion.

[21] Peirce, Neal and Curtis Johnson, "Road, Rail, Air, Water: Separate Worlds or One System?" http://www.newenglandfutures.org.

Currently the Poughkeepsie Railroad Bridge is being converted into the world's longest elevated pedestrian and bicycle path and is set to open to the public in August 2009.[22]

Connecticut's Bus System

Connecticut's bus system is a vital component of the overall transportation infrastructure. Bus systems are important for:[23]

- Providing vital transportation links for the low-income, young, elderly, mobility limited, and transit dependent;
- Increasing transportation alternatives for all residents;
- Fulfilling statewide goals of improved air quality and quality of life; and
- Reducing highway congestion.

Bus Transit in Connecticut

ConnDOT's Bureau of Public Transportation, through the Office of Transit and Ridesharing, oversees and financially supports bus and ridesharing services. Through Connecticut Transit (CTTransit), 14 active local transit districts, private bus operators, and four ridesharing brokerages, ConnDOT is able to deliver five types of service (footnote 14). They are:[24]

- Fixed route service provides traditional urban bus service, operating on a fixed route with regularly scheduled service;
- Express service makes one or few stops before proceeding non-stop to an end destination (e.g. commuter express bus services);
- Commuter connections from rail services to residential and employment centers;
- Demand responsive and Dial-a-Ride services provide as-needed service within a system's service area (e.g. Americans with Disabilities Act (ADA) paratransit services and non-ADA paratransit services); and,
- Flex route provides similar service as demand responsive service, however, boardings are at pre-arranged times within a system's service area.

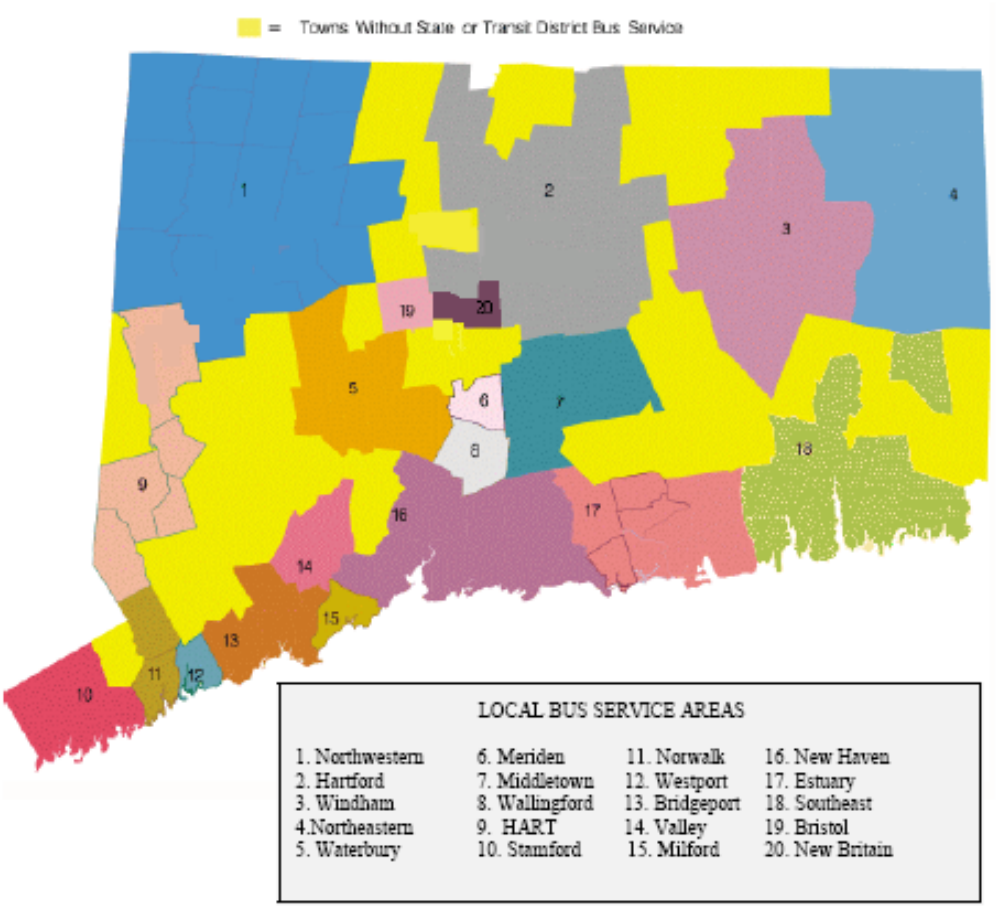
There are different levels of bus systems in Connecticut: (footnote 23):

- Two major urban systems (Hartford and New Haven);
- Three large urban systems (Bridgeport, Stamford and Waterbury);
- Four medium urban systems (Danbury, New Britain, Norwalk and Southeast Area Transit (SEAT));

[22] Marano, Greg, "Walkway work takes first step," Poughkeepsie Journal, 28 May 2008, http://www.poughkeepsiejournal.com/apps/pbcs.dll/article?AID=2008805280336.
[23] Urbitran Associates, Inc, "Connecticut DOT Statewide Bus System Study - Executive Summary," July 2000.
[24] Transportation Strategy Board, "Moving Forward," January 2007.

- Six small urban systems (Bristol, Meriden, Middletown, Milford, Wallingford and Westport);
- Five rural systems (Estuary, Northeastern, Northwestern, Valley and Windham); and,
- One express bus network.

Figure 8: Connecticut's Local Bus Service Areas



Source: Urbitran Associates, Inc., "ConnDOT Statewide Bus System Study - Executive Summary," July 2000.

CTTransit, consisting of eight divisions, is the largest transit operation in the state and is owned by the state. Three divisions (Stamford, New Haven, and Hartford) are operated and managed by First Transit Inc. The remaining five divisions (Waterbury, New Britain, Bristol, Meriden, and Wallingford) are operated under contract with private bus operators. CTTransit provides fixed route and express services. ADA paratransit services are contracted out by CTTransit to various organizations located within the respective service areas (footnote 24).

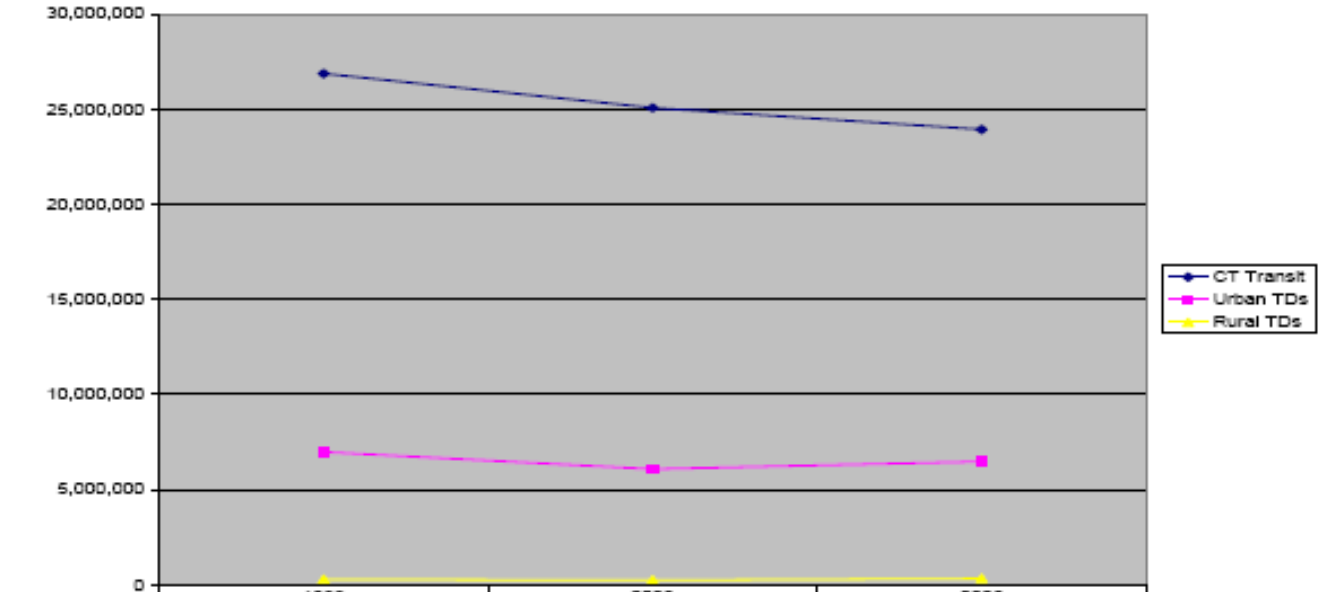
Bus Ridership

In state fiscal year 2006 (footnote 14):

- Urban fixed-route systems provided more than 32.7 million passenger trips;
- About 80% of those trips occurred in the eight CTTransit service areas;
- More than 706,000 trips occurred on the federally-mandated ADA paratransit services for the disabled;
- Dial-a-ride services transported more than 37,000 passengers. Rural services provided 335,000 trips; and,
- Commuter Express services provided more than 1.5 million passenger trips.

Figure 9 displays ridership on CTTransit, urban and rural transit routes from 1999 to 2006. Figure 9 shows that bus transit ridership among urban and rural routes have experienced an increase from 2003, while ridership on CTTransit services has declined (footnote 24).

Figure 9: Ridership on CTTransit, and Urban and Rural Transit Routes



	1999	2003	2006
CT Transit	26,875,449	25,064,730	23,934,138
Urban TDs	6,987,692	6,078,668	6,477,133
Rural TDs	293,148	240,371	331,919

Bus Rapid Transit

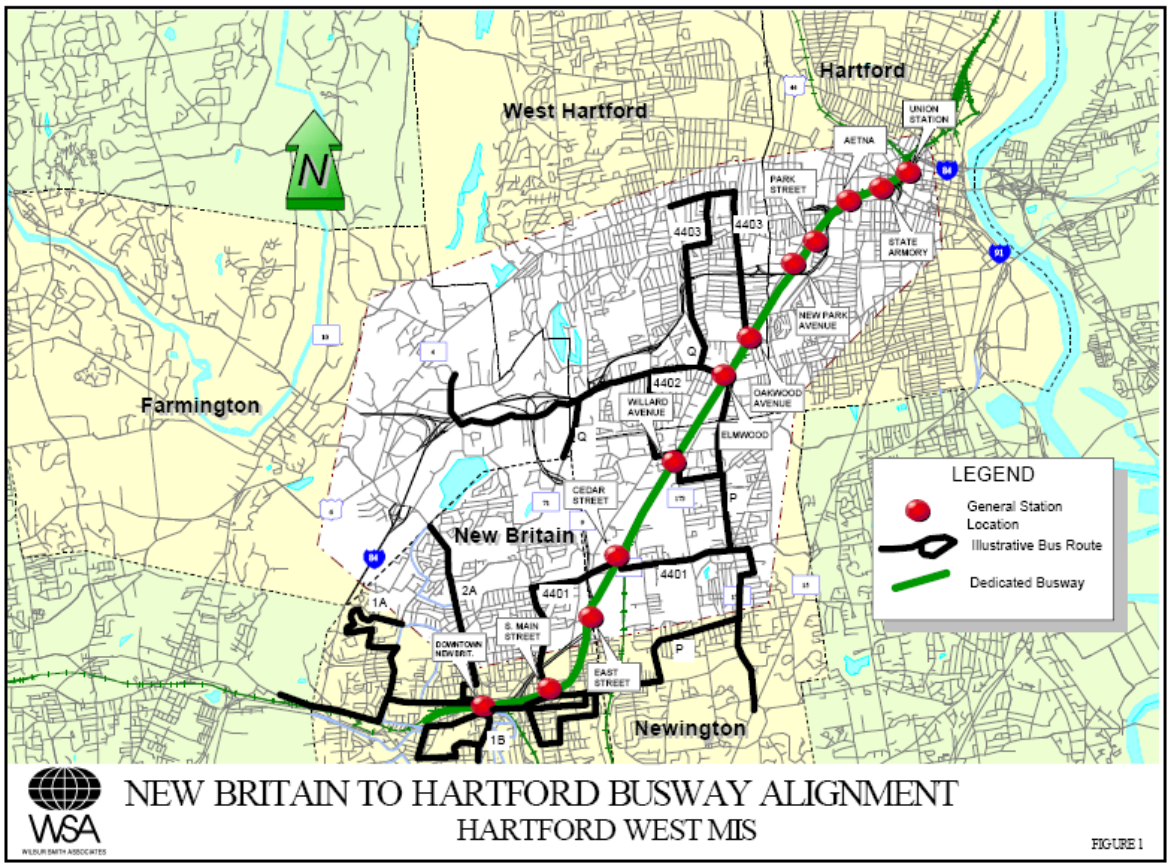
Bus rapid transit (BRT) is defined by the Federal Transit Administration (FTA) as a "flexible, high performance rapid transit mode" (footnote 24). ConnDOT has a number

of BRT projects in various stages of development, the most advanced of which is the busway running between New Britain and Hartford.

- The New Britain-Hartford Busway is one of 10 demonstration projects in the country approved by the FTA in 1999. The project consists of two-way, nine-mile exclusive busway with 12 online stations linking downtown New Britain and Hartford's Union Station (footnote 24).

- The New Britain-Hartford Busway will be built on active and inactive rail rights of way and offer four types of service: express, shuttle, neighborhood collectors, and feeder bus. Figure 10 presents a map of the planned route (footnote 24).

Figure 10: New Britain – Hartford Rapid Bus Transit



Source: Connecticut Department of Transportation

- Construction on the New Britain-Hartford Busway may begin in 2009 and the busway is scheduled to be completed by 2012.[25]

[25] Connecticut Department of Transportation, "New Britain-Hartford Rapid Transit – Project Schedule," July 31, 2008, http://www.ctrapidtransit.com/ct_schedule.asp.

- Other BRT proposals include the Hartford East Busway, which would provide service from Hartford to East Hartford, Manchester and Vernon, and the Griffin Line Busway, which would provide service from downtown Hartford to Bradley International Airport (footnote 24).

- The Norwalk-Greenwich corridor is one of the most congested areas in the United States. The Southwest Regional Planning Agency conducted a study in April 2008 to assess the feasibility and impact of a high-speed bus system, which could greatly reduce the number of single occupancy vehicle trips. The proposed bus system would utilize existing highway infrastructure and Route 1.[26]

Environmental Impacts

- According to ConnDOT's 2007 Master Transportation Plan, Connecticut is a leader in adopting ultra-low sulfur diesel fuel buses.[27]

- Connecticut has conducted pilot programs with lower emission diesel and electric hybrid buses that have successfully improved fuel efficiency by 15 to 20% (footnote 26).

- CTTransit partnered with a local Connecticut business leader in fuel cell technology to build one of the first operating hydrogen fuel cell buses in the nation.

- CTTransit's new delivery of 40 foot clean diesel buses are 90% "greener" than the older buses they replaced. CTTransit has also switched to using biodiesel in three divisions (Stamford, New Haven, and Hartford).[28]

- Connecticut has equipped the major urban center buses, including the entire Hartford bus fleet, with bike racks.[29] Passengers thus have the option of biking to bus stops rather than driving.

Operating Deficiencies

- Table 9 shows in fiscal year 2003, Connecticut's total bus transit operated at a $2.56 deficit per passenger. This represents an increase of 38.9% from the 2000 deficit per passenger ratio of $1.84.

[26] Southwest Regional Planning Authority, "Bus/Rapid Transport Study Report," April 2008.
[27] Connecticut Department of Transportation, "2007 Master Transportation Plan," January 2007.
[28] Connecticut Transit, "CTTRANSIT leads the way with environmentally-friendly transit," February 4, 2008, http://cttransit.com/Press/Display.asp?PressID={1CC84229-30CE-4859-BBEF-538B908E60F0}.
[29] The Office of Governor M. Jodi Rell, "Governor Rell: Bicycle Racks Installed on CTTRANSIT Buses in Hartford Increase Mobility in Region, " July 31, 2008, http://www.ct.gov/governorrell/cwp/view.asp?A=2791&Q=391614&pp=12&n=1.

- Table 9 shows from fiscal years 2000 to 2003, total bus transit revenues decreased by 3.4%, whereas expenses increased by 18.6%.

Table 9: Total Bus Transit in Connecticut

CTTRANSIT, EXPRESS BUS, TRANSIT DISTRICTS, ADA, DIAL-A-RIDE AND SHUTTLE SERVICES

	SFY 2003	SFY 2002	SFY 2001	SFY 2000	% CHANGE 00-03
revenue	$ 31,235,331	$ 33,470,678	$ 33,317,461	$ 32,347,495	-3.4%
expense	$ 122,155,526	$ 117,015,198	$ 110,774,000	$ 102,990,507	18.6%
net deficit	$ 90,235,410	$ 83,561,228	$ 77,456,538	$ 70,643,009	27.7%
cdot share	$ 82,344,111	$ 76,245,203	$ 71,415,963	$ 64,323,455	28.0%
passenger trips	35,279,303	37,032,607	38,993,230	38,356,438	-8.0%
deficit/passenger	$2.56	$2.26	$1.99	$1.84	38.9%
cost/passenger	$3.46	$3.16	$2.84	$2.69	29.0%
operating ratio	25.6%	28.6%	30.1%	31.4%	

Source: Connecticut Department of Transportation, "Operations Statistics for the Biennium – Statewide Bus and Rail System Summary," SFY 2002/2003.

- Table 10 shows the operating deficiencies based on type of service for 2003. The deficit per passenger ranged from $1.89 on CTTransit Hartford, New Haven, Stamford services, to $8.17 on rural transit systems and $11.02 on dial-a-ride services.

Table 10 Total Bus Transit in Fiscal Year 2003

SFY 2003

	CTTRANSIT HNS MGMT.	CTTRANSIT PRIVATE OPERATORS	EXPRESS BUS PRIVATE OPERATORS	URBAN TRANSIT DISTRICTS	RURAL TRANSIT DISTRICTS	ADA SERVICES	DIAL-A-RIDE SERVICES	OTHER SERVICES	TOTAL SFY2003
revenue	$ 19,028,460	$ 2,072,109	$ 926,268	$ 6,840,115	$ 293,226	$ 1,461,320	$ 250,480	$ 363,353	$ 31,235,331
expense	$ 66,290,369	$ 7,878,647	$ 2,016,352	$22,506,020	$ 2,257,900	$ 14,377,127	$ 4,543,725	$ 2,285,386	$122,155,526
net deficit	$ 47,261,909	$ 5,477,938	$1,090,084	$15,665,905	$ 1,964,674	$12,915,807	$ 4,293,244	$ 1,565,849	$ 90,235,410
cdot share	$ 47,261,909	$ 5,182,204	$1,090,084	$13,649,560	$ 610,194	$ 11,769,503	$ 1,298,069	$ 1,482,588	$ 82,344,111
passenger trips	25,064,730	2,137,740	366,338	6,078,668	240,371	570,452	389,573	431,431	35,279,303
deficit/passenger	$1.89	$2.56	$2.98	$2.58	$8.17	$22.64	$11.02	$3.63	$2.56
cost/passenger	$2.64	$3.69	$5.50	$3.70	$9.39	$25.20	$11.66	$5.30	$3.46
operating ratio	28.7%	26.3%	45.9%	30.4%	13.0%	10.2%	5.5%	15.9%	25.6%

Source: Connecticut Department of Transportation, "Operations Statistics for the Biennium – Statewide Bus and Rail System Summary," FY 2002/2003.

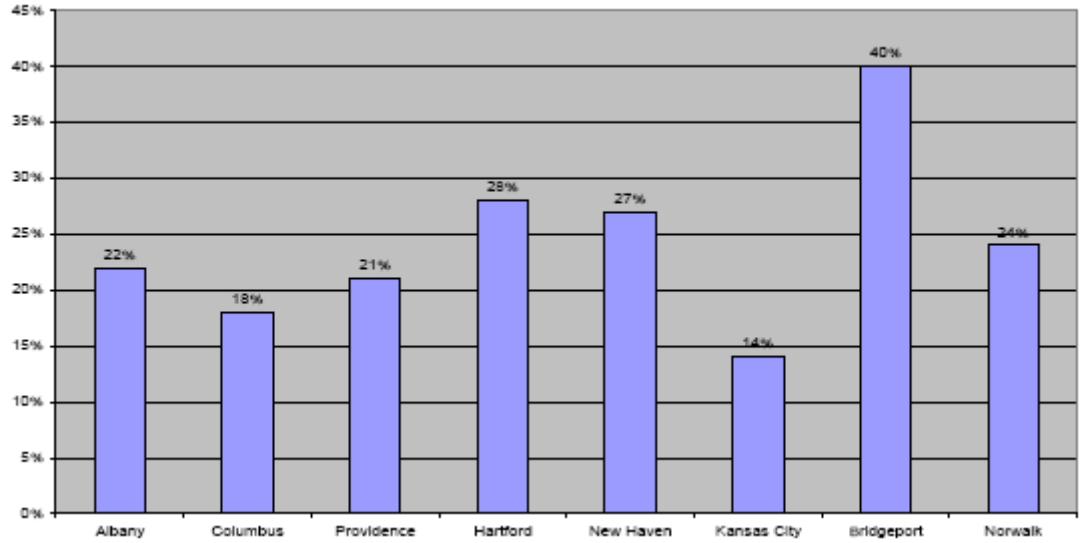
- The operating deficiencies for fiscal years 2000 to 2002 are presented in Tables 6, 7, and 8 in the Appendix.

Fare Box Ratios

One measure of the operating efficiency of bus transit is the percentage of operating costs paid for by fares, known as the fare box ratio (footnote 24). A higher recovery rate indicates more revenue from passengers offsetting the deficit that ConnDOT has to subsidize.

- Currently the fare box ratios of Connecticut's bus system compares well to other cities in the nation, as shown in Figure 11. This operational efficiency indicates that there is a comparatively large demand for bus service in Connecticut.

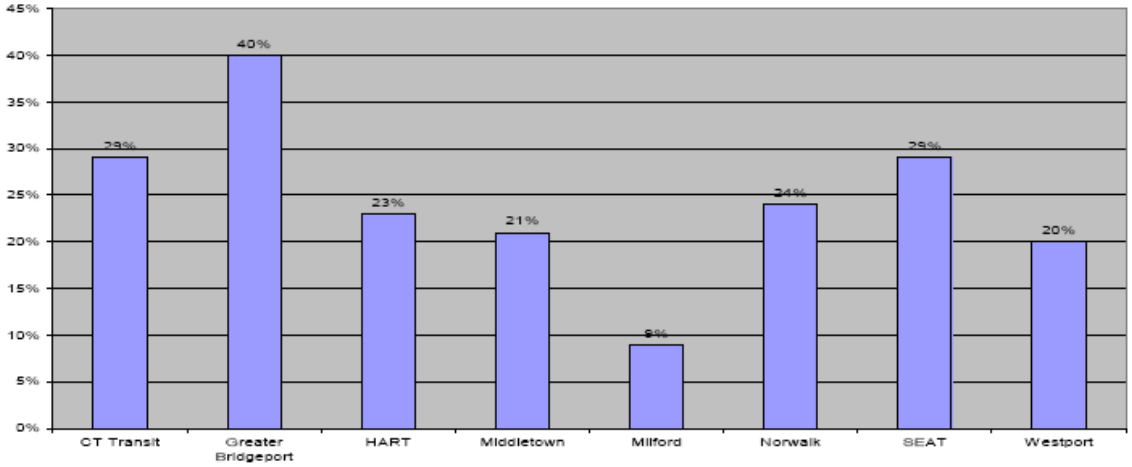
Figure 11: Fare Box Ratios for National Peers



Source: Transportation Strategy Board, "Moving Forward," January 2007.

- Within Connecticut, however, fare box ratios vary widely depending upon the area and the type of service, as demonstrated by a comparison of the state's fixed route services in Figure 12.

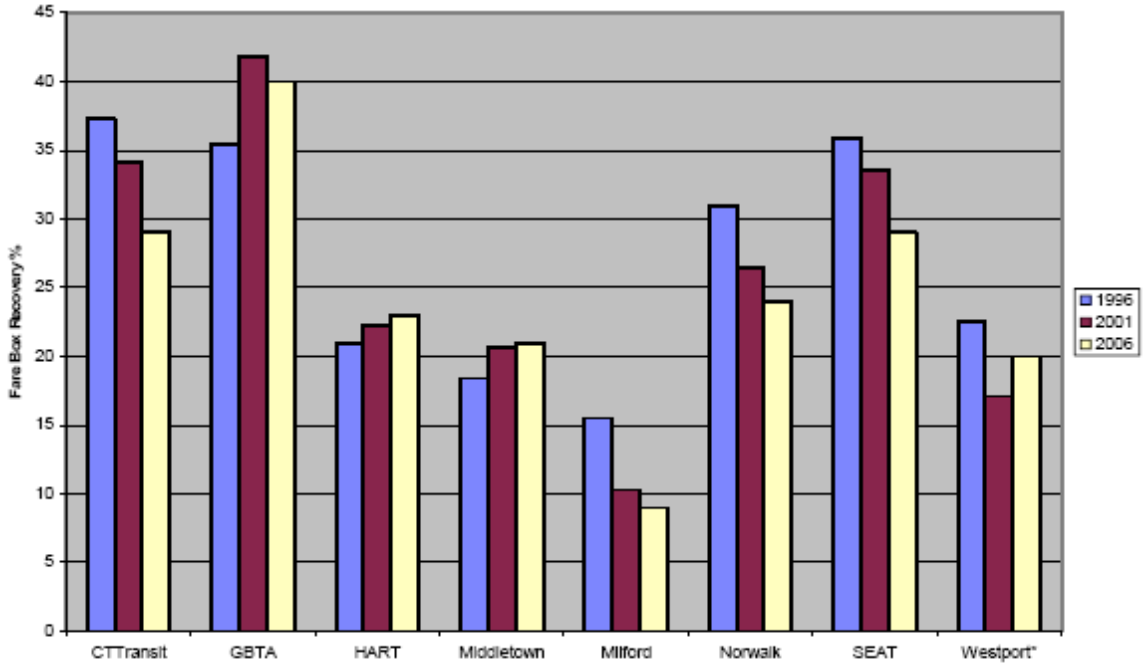
Figure 12: Fare Box Ratios within Connecticut



Source: Transportation Strategy Board, "Moving Forward", January 2007.

- Figure 13 shows the change in fare box recovery rates from 1996 to 2006.

Figure 13 2007 Fare Box Recovery Rates



Source: Transportation Strategy Board, "Moving Forward," January 2007.

- Over that 10-year period, fare box ratios have improved in urban areas such as Harford and Bridgeport, while in other areas such as Norwalk and Milford they have declined. Hartford has taken significant initiatives to improve the fuel efficiency of its fleet, which may account for the improvement in its operational

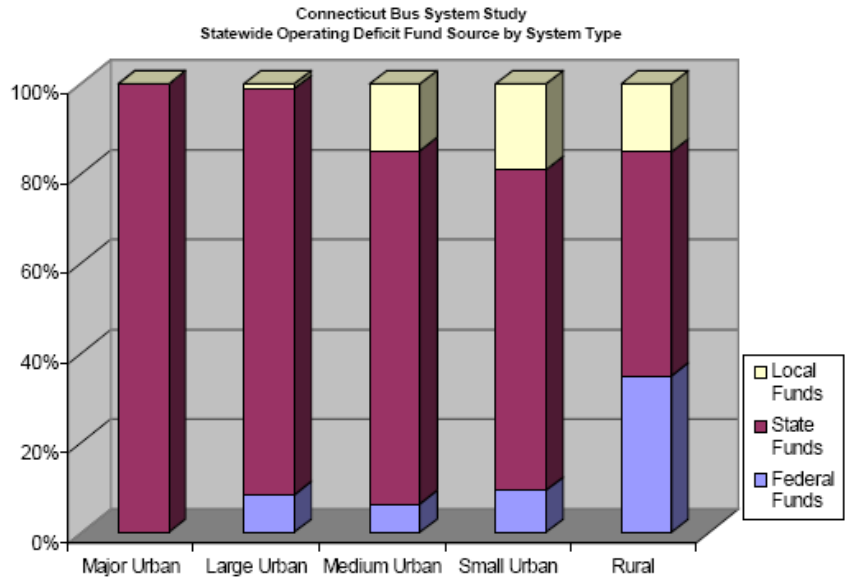
efficiency. Bridgeport is another area with traditionally high recovery rates (almost 40%) due in part because of the high demand for the service from a relatively low-income population.

- CTTransit, the ConnDOT-operated bus service, experienced an overall decline in operational efficiency for the 10-year period shown in Figure 13.

- Connecticut might expect to see an overall increase in the operating deficit due to rising fuel prices. However, this deficit might also be offset by increased demand from passengers seeking more affordable means of transportation.

- All bus systems rely upon government funding to cover the portion of expenses not covered by the fare box, or the operating deficit. Figure 14 shows the distribution of federal, state, and local funding for different bus systems in 1998.

Figure 14: Federal/State/Local Funding Breakdown



Source: Urbitran Associates, Inc., "Connecticut DOT Statewide Bus System Study - Executive Summary," July 2000.

Funding for Connecticut's Bus System

- Connecticut residents and visitors used bus transit for over 35 million trips in SFY 2005, reducing congestion, stress, and delay suffered by other road travelers. In that same year, the Urban Mobility Report of the Texas Transportation Institute found that public transportation in three Connecticut urban areas saved 1.6 million

hours of delay for other road travelers in 2003, at a cost savings to them of $26.8 million.[30]

- Despite the benefits of Connecticut's public transportation, the state investment in bus operations and capital is insufficient to maintain current services, much less to make service improvements or add service capacity to better serve current and new customers. Table 11 shows that Connecticut needs an additional investment of $120.6 million in one-time capital spending, and about $30 million additional in the annual operating budget for its public bus systems (footnote 30).

Table 11: Connecticut's Needed Investment

INVESTMENT	OPERATIONS	CAPITAL
Current Bus Services -Unmet Needs	$10, 319, 885	$74, 895, 250
Expanded Bus Services	$9, 591, 516	$29, 793, 000
New Interregional-Commuter Express Services	$10, 046, 085	$15, 900, 000
TOTAL	$29, 957, 486	$120, 588, 250

Source: Connecticut Association for Community Transportation, "Transportation in Connecticut: Don't Miss the Bus," Dec 2006.

- The life cycle of an average bus is typically 12 years. The state expects to replace over 300 buses in 10 years (by 2017) at a cost of an estimated $130 million (footnote 26).

- In 2006, almost $1.6 million in federal funds that three bus systems were eligible to receive for capital costs could not be accessed because of the lack of state funds for the required 20% match (footnote 30).

- According to figures developed by Urbitran Associates (the consulting firm that performed the 2000 ConnDOT Statewide Bus System Study), the overall average hours of service of 11 Connecticut urban bus systems' fixed routes is less than half the hours of service needed to maximize bus ridership. Increasing transit ridership should be a top priority in Connecticut (footnote 23).

[30] Connecticut Association for Community Transportation, "Transportation in Connecticut: Don't Miss the Bus," December 2006. The "three Connecticut urban areas" were not specified in the report.

Connecticut's Highway System

Roads

Connecticut has 21,193 miles of public roads. ConnDOT is directly responsible for overseeing all design, construction, maintenance, and improvements for the 3,731 miles of state-maintained roads consisting of state routes and roads, stubs, bypasses, and ramps serving as main lines. This includes 960 miles of Interstate and other National Highway System (NHS) roads in Connecticut. ConnDOT is also responsible for 3,844 state bridges (footnote 14). Table 9 in the appendix presents a detailed description of public roads.

Monitoring

The current Intelligent Transportation Systems (ITS) involving cameras, traffic flow monitoring detectors, Variable Message Signs (VMS), Highway Advisory Radio (HAR) transmitters, and coordinated signal systems have been installed and operated within the last five to 10 years (shown in Figure 1 in the appendix). ConnDOT presently has more than 142 miles of freeway traffic management systems on I-95, I-91, I-84, and Route 2 including 294 cameras, 93 VMS, and 11 HAR stations (footnote 14).

Rest Areas

For the convenience of the motoring public, ConnDOT maintains seven highway rest areas that have parking facilities, lavatories, vending machines, picnic tables, and K-9 areas. Most have telephones, information booths, and seasonal dumping facilities for recreational vehicles (RVs). The highway rest areas do not have restaurants, fuel, or convenience store facilities on the premises.

Connecticut has 23 highway commercial service areas that offer fuel and restaurant or convenience store facilities in addition to lavatories, telephones, and parking facilities. Ten of these facilities are adjacent to I-95, three are adjacent to I-395, and 10 are adjacent to Route 15. These facilities are open 24 hours a day, 365 days a year. There is currently no continuous law enforcement or security operation to prevent undesirable activities. There have been instances of vandalism, theft and even robberies at some locations, and there is a perception of a potentially dangerous environment for the motorist (footnote 14).

Congestion

Travel on Connecticut's Interstate highways continues to grow at a significant rate, although there has been very little expansion of the system in recent years. From 1990 to 2004, vehicle travel on the state's interstate highways increased by 23% from 7.8 billion

miles driven annually to 10.1 billion miles. Yet during the same 1990 to 2004 period, total lane miles on Connecticut's interstate system increased by 3% from 1,789 lane miles to 1,848 lane miles. Thus, vehicle miles of travel increased at a rate eight times faster than the addition of new capacity.[31]

This increase in traffic on Connecticut's interstate highways has increased traffic congestion levels. The Federal Highway Administration considers any interstate highway that carries more than 80% of its design capacity to be congested, because at this level, vehicles experience significant delays in traffic flow. More than one half, or 56%, of Connecticut's 302 miles of urban interstates are considered congested because they carry traffic levels that result in significant delays during peak travel hours (footnote 31).

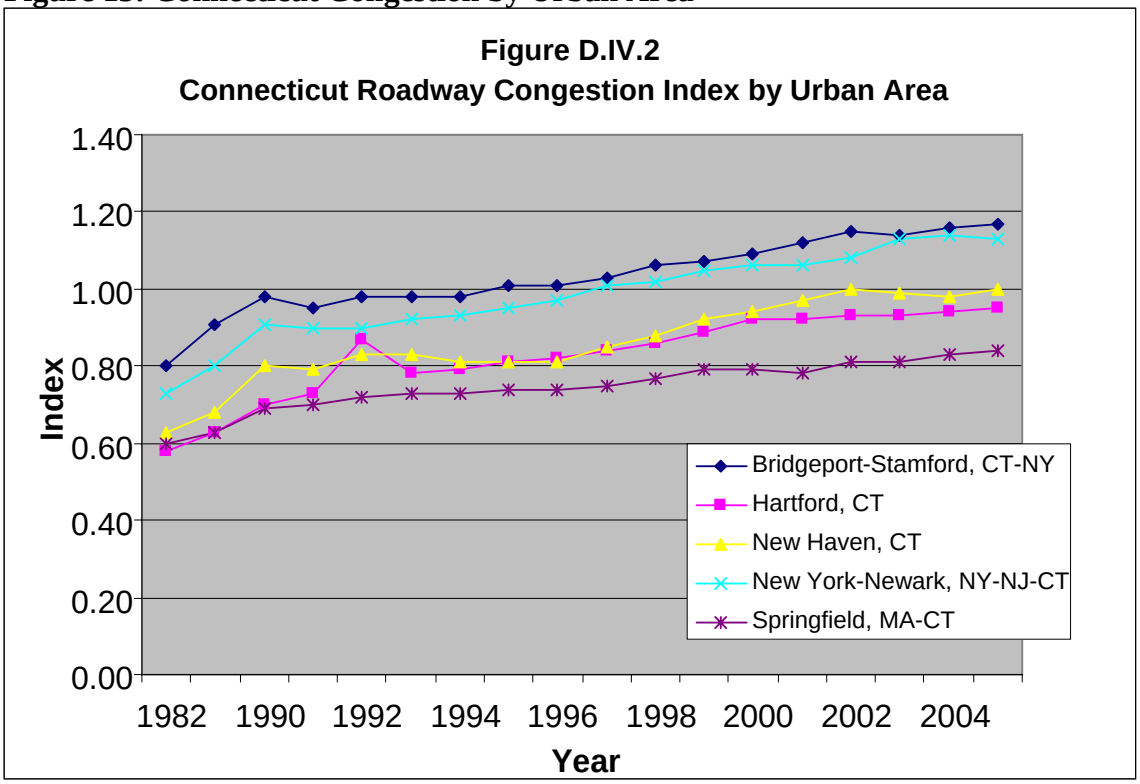
A study conducted by three planning agencies on Hartford's metropolitan region found that in 2005, I-84 was the most congested corridor with 1,183 hours of delay per day and daily traffic volumes exceeding 170,000. The second most congested corridor in the region was I-91 North with 711 hours of delay per day and daily traffic volumes exceeding 140,000. Together I-84 and I-91 account for 85% of all congestion recorded in the Hartford metropolitan region.[32]

ConnDOT conducted a study on the congested roads of the southwest corridor, particularly I-95, and Routes 15 and 1. In October 1999, average daily traffic on I-95 was 135,100 vehicles, on Route 15 it was 70,800 vehicles, and on Route 1 it was 33,800 vehicles. Ten percent of the daily volume on I-95 was truck traffic. During the peak commuting periods, I-95 carried 9,000 vehicles per hour, Route 15 carried 7,000 vehicles per hour, while Route 1 carried 3,118 vehicles per hour. Congestion and delays are a regular occurrence on the southwest corridors (footnote 11).

Figure 15 shows the congestion index for five Connecticut urban areas. All areas have been steadily increasing since 1982. The congestion index for the Bridgeport-Stamford region remained greater than the congestion index for the entire NY-NJ-CT region from 1982 to 2005.

[31] TRIP, "The Interstate Highway System in Connecticut: Saving Lives, Time and Money," April 2006.
[32] Capitol Region Council of Governments, Central Connecticut Regional Planning Agency, Midstate Regional Planning Agency, "Transportation Monitoring & Management Report: Metropolitan Hartford Area: 2005," December 2007.

Figure 15: Connecticut Congestion by Urban Area



Source: U.S. Department of Transportation, Bureau of Transportation Statistics, "Annual Roadway Congestion Index," November 2007.

Road Capacity

Statewide, in 2005, 9% of all state routes exceeded their design capacity and 5% were approaching design capacity. In 2005, 14% of Connecticut's National Highway System (NHS) expressways and 22% of the NHS non-expressways were over design capacity and respectively, 15% and 7% of these systems were approaching design capacity. With the current funding and resources available, the portions of Connecticut's NHS and non-NHS routes that are over design capacity due to congestion will continue to grow (footnote 14).

Regionally, the percent of state-numbered route miles over design capacity in 2005 ranged from highs of 25% (45.36 miles) and 35% (50.27 miles) in the south western and greater Bridgeport planning regions, respectively, to lows of less than 1% in both the Northwestern and Litchfield Hills planning regions. For 2025, ConnDOT forecasts that state-numbered route miles over design capacity will range from highs of 43% (77.96 miles) in the south western planning region and 43% (61.65 miles) in the greater Bridgeport planning region to lows of less than 1% in the northwestern planning region and 2% (4.09 miles) in the northeastern planning region (footnote 14). Table 10 in the

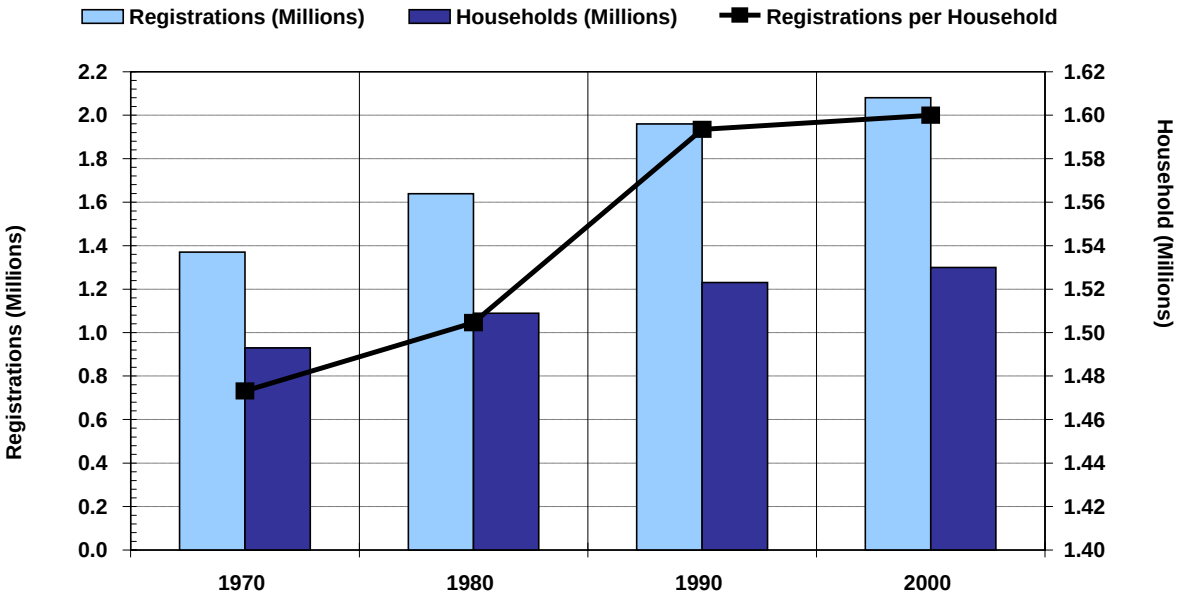
appendix shows the current and projected capacity status of state routes by planning region.

Motor Vehicle Ownership

Between 1990 and 2000, Connecticut's population increased 3.6% from 3,287,116 to 3,405,545. During this same period, motor vehicle ownership, reflected by the number of passenger vehicles registered in the state's cities and towns, increased by 5.9% from 1,963,809 to 2,080,612.[33]

The average number of vehicles available per household has been increasing. As shown in Figure 16, the ratio of registered passenger vehicles to population steadily increased from 1.47 vehicles per household in 1970 to 1.59 vehicles per household in 1990. From 1990 to 2000, the ratio of vehicles per household increased slightly from 1.59 to 1.60 (footnote 33).

Figure 16: Comparison of Passenger Vehicle Registrations to Households



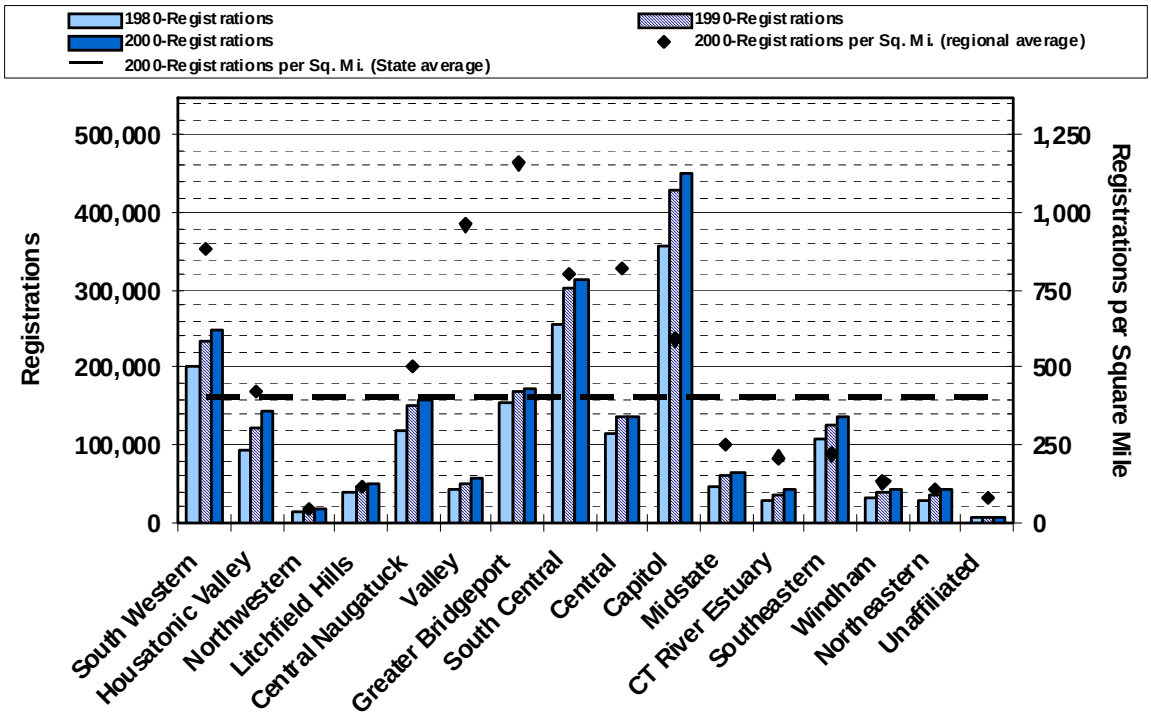
Source: 1970 Census, 1980 Census, 1990 Census, 2000 Census, and Connecticut Department of Motor Vehicles. Graphic revised as of April 2006

Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

[33] Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

From 1990 to 2000, passenger vehicle ownership increased more than 10% in the following regions: Connecticut River Estuary, Housatonic Valley, Northeastern, Windham, Valley and Northwestern. In 2000, passenger vehicle ownership was the highest in the Capitol and South Central regions and the lowest in the Northwestern Region. Additional information on passenger vehicle registrations in Connecticut appears in Figure 17 (footnote 33).

Figure 17: Passenger Vehicle Registrations by Planning Region



Source: Connecticut Department of Motor Vehicles - Class 1 Auto Registrations (Passenger Cars).
Projections for years following 2000 is not available. Graphic revised as of August 2004.

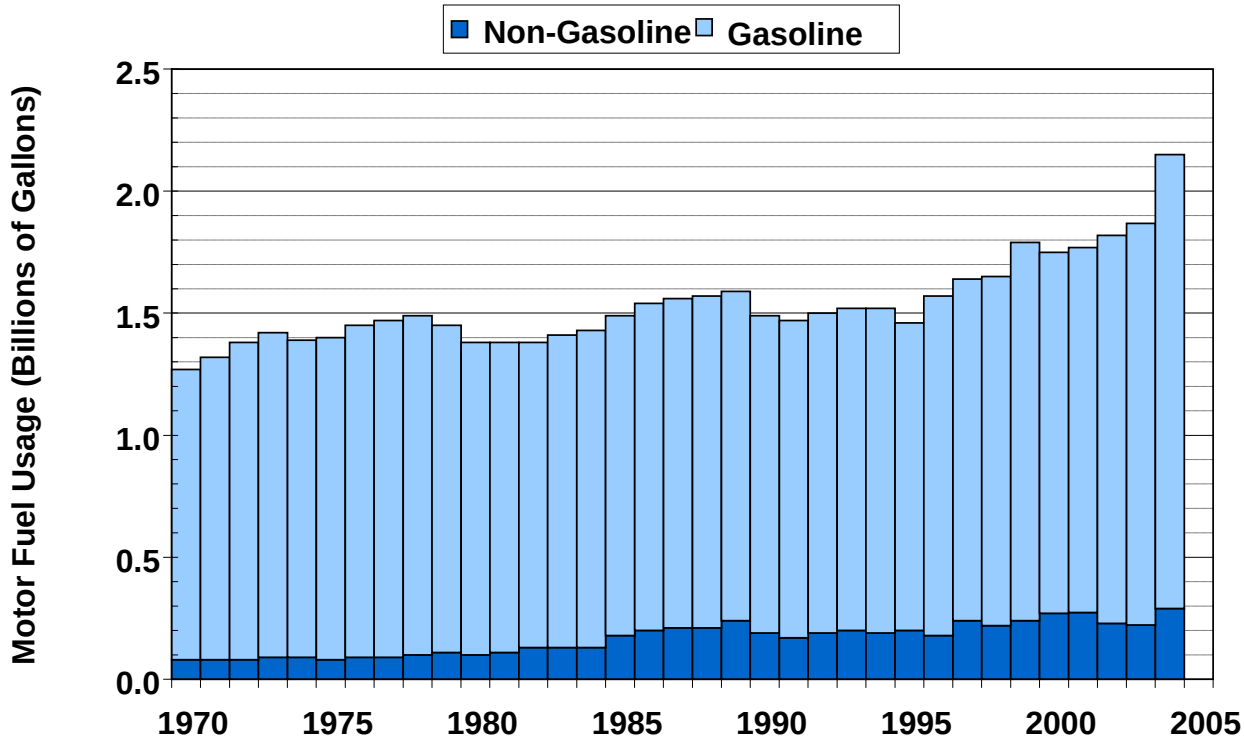
Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

Comparatively, the greatest numbers of vehicles per square mile in 2000 occurred in the greater Bridgeport (1,159) and valley (960) regions. The northwestern region averaged the lowest number of passenger vehicles per square mile (46) in 2000. The statewide average for vehicles per square mile in 2000 was 406 (footnote 33).

Auto Usage

In Connecticut, fuel vendors record the quantity of fuel sold and submit this information to the state for tax purposes. Figure 18 below presents historic motor fuel usage in Connecticut, including data comparing gasoline to non-gasoline fuel alternatives. This recorded fuel sales volume also serves as a measure of vehicle use (footnote 33).

Figure 18: Motor Fuel Usage in Connecticut

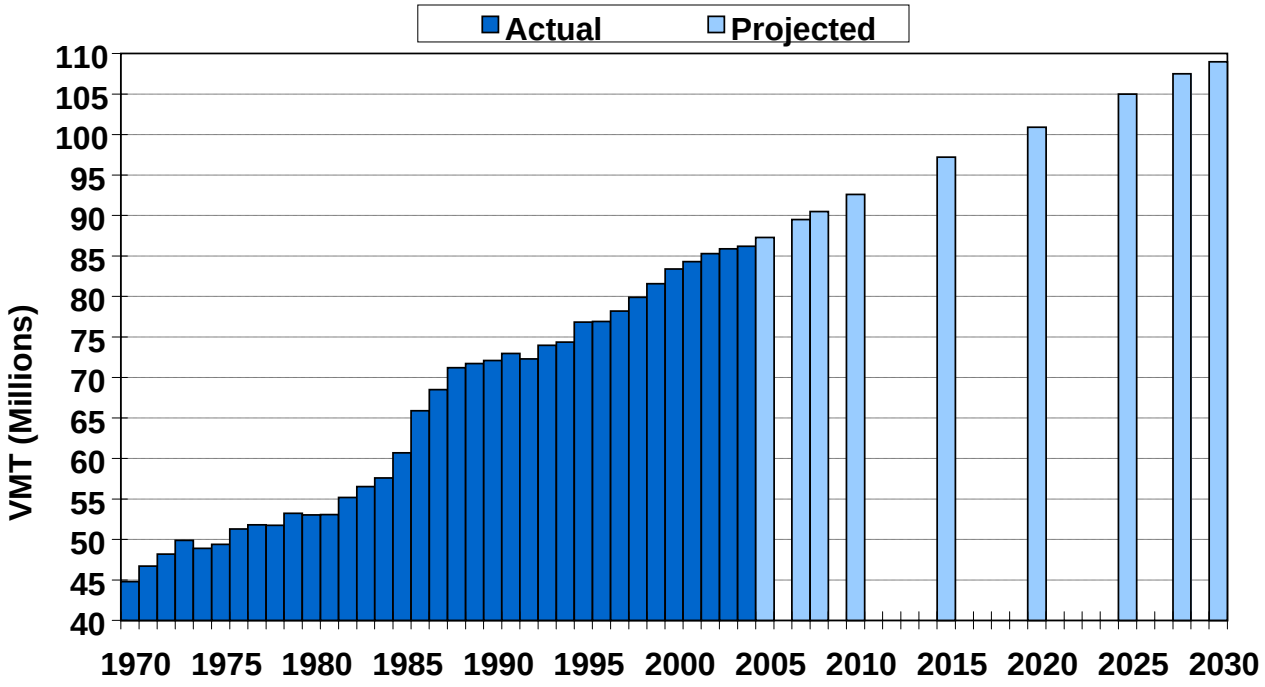


Source: Highway Statistics Table MF-21. Data following 2004 not yet available. Graphic revised as of April 2006.
Special Notes: As a result of revised estimation procedures, data from one year to another may not be comparable.

Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

Motor fuel usage in Connecticut peaked in 1989; this was due primarily to the rapid increase in the number of vehicles and growth in the number of vehicle miles traveled (VMT) in the state. Motor fuel consumption decreased slightly in 1990 and 1991 during the Gulf War. Since 1992, motor fuel consumption has been increasing gradually with a slight decrease again in 1995. Since 1995, motor fuel consumption in Connecticut has been increasing, with a peak of 1.79 billion gallons sold in 1999. In 2001, motor fuel consumption dropped slightly to 1.78 billion gallons (footnote 33).

Figure 19: Vehicle Miles Traveled (VMT) in Connecticut



Source: Years 1970 to 1977 derived from statewide fuel usage data; years 1978 to 2004 from Highway Performance & Monitoring System Data; years greater than 2004 are projected with ConnDOT Travel Model (Series 28). Graphic revised in October.

Special Notes: Data represents the average daily vehicle miles of travel. Some years are leap years. Model projections do not include Worchester UA VMT.

Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

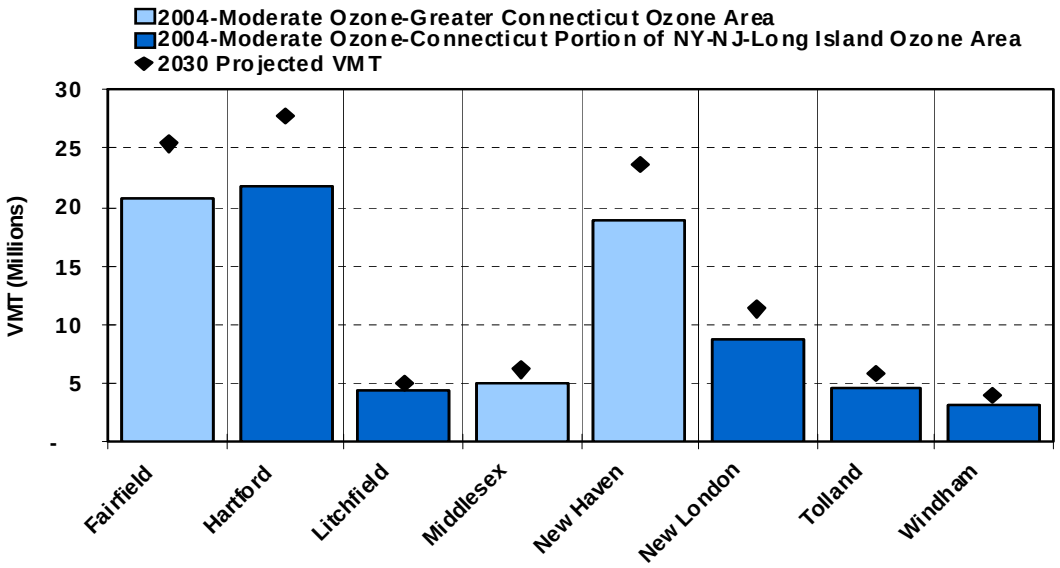
At present, significant amounts of time and money are being spent on research to develop alternative fuels, which are cleaner and less expensive than those presently in use. Three technologies that hold promise are hybrid, fuel cells, and electric vehicles. As cleaner and less expensive fuels make their way into the marketplace, the transportation industry will no doubt adapt to make use of them as it has in the past (footnote 33).

Figure 19 illustrates that daily VMT in Connecticut has been growing steadily since 1970. However, from 1990 to 2000, the rate of growth was approximately 17.4% over the 10 years, compared to approximately 36% from 1980 to 1990. In 2000, the total VMT in Connecticut was 83.4 million miles. Future projections call for continued slow growth in VMT as both the state and the national economy continue to grow. In 2030, the statewide VMT is anticipated to be 109 million miles. This represents an increase of 25.6 million miles or a 30.7% increase from the VMT in 2000 (footnote 33).

However, recent fuel hikes may alter these long-term projections. At the national level, highway VMT dropped from 2007 to 2008 due to high gas prices. The U.S. DOT

reported a decline of 20 billion miles from January to April, compared to the same period in 2007.[34]

Figure 20: Vehicle Miles Traveled (VMT) by County



Source: ConnDOT Travel Model (Series28). Graphic revised as of April 2006.

Special Notes: Data represents the Average Daily vehicle miles of travel. Graph shows June 2004 ozone non-attainment designations.

Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

On a county level, in 2004, as illustrated in Figure 20, Hartford County had the most vehicle miles traveled in the state: 21.7 million miles or 24.9% of the average daily statewide miles traveled. Comparatively, Windham County had the fewest with slightly less than 3.2 million miles or 3.7%, of the statewide average daily VMT (footnote 33). Table 12 shows how Connecticut ranked out of the 100 largest U.S. metropolitan areas by employment in 2005 and provides VMT per capita for 2005.

[34] Livable Streets Network, "Vehicle-Miles Traveled," July 30, 2008, http://www.livablestreets.com/streetswiki/vehicle-miles-traveled.

Table 12: 2005 VMT by Metropolitan Area

Metropolitan Area	VMT per capita, 2005	Rank
New Haven-Milford, CT	7,775.70	16
Bridgeport-Stamford-Norwalk, CT	8,560.20	23
Hartford-West Hartford-East Hartford, CT	9,273.50	40

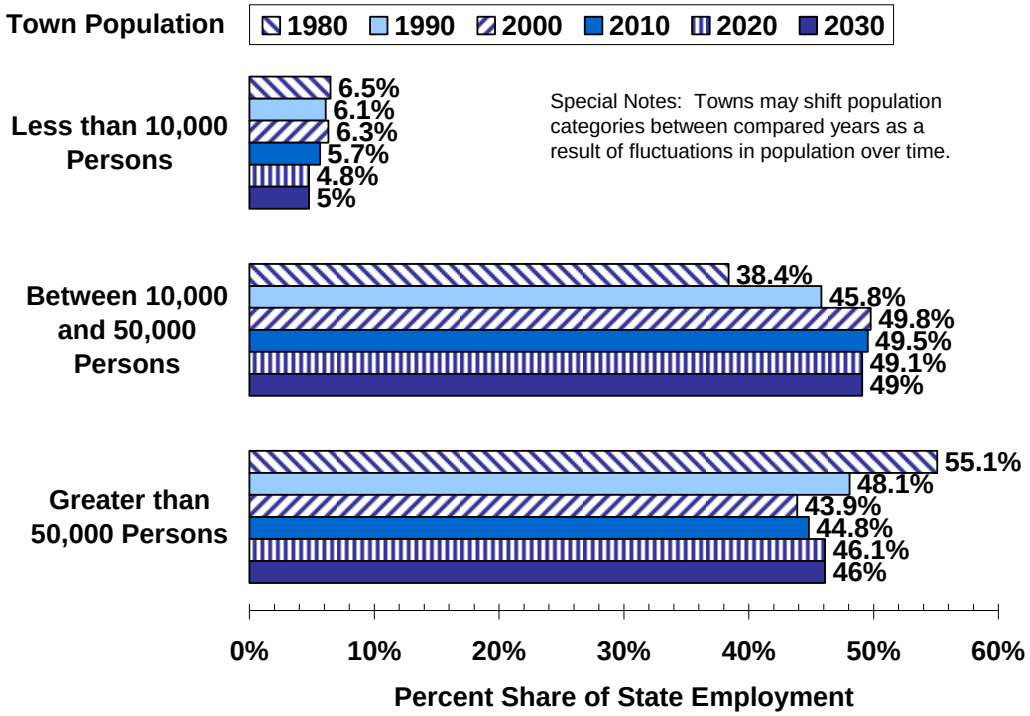
Source: Blueprint for American Prosperity, "Vehicle Miles Traveled".

Commuting

Getting people from their homes to their place of employment puts a critical demand on the transportation network. Increases in suburban employment have resulted in separation between home and worksite. This has resulted in increases in suburban travel, which has placed added strain on the transportation system beyond the urban center. Figure 21 shows that from 1990 to 2000, the percentage of total state employment located in towns with populations greater than 50,000 had decreased by 4% from 48% to 44% of the total state employment. During the same period, the percentage of total jobs located in towns with populations between 10,000 and 50,000 increased 4% from 46% to 50%; the employment share of towns with populations less than 10,000 remained virtually unchanged at 6%. It should be noted that during compared years, populations in a given town can fluctuate; this potentially leads to a shifting of towns between the population categories from one year to another (footnote 33).

From 2000 through 2030, ConnDOT projects a 2% increase (from 44% to 46%) in the fraction of state employment located in towns with populations greater than 50,000. This represents an insignificant increase (less than 1%) for towns with populations between 10,000 and 50,000 persons, and a small decrease (less than 2%) for towns with less than 10,000 persons (footnote 33).

Figure 21: Employment Share by Town Size



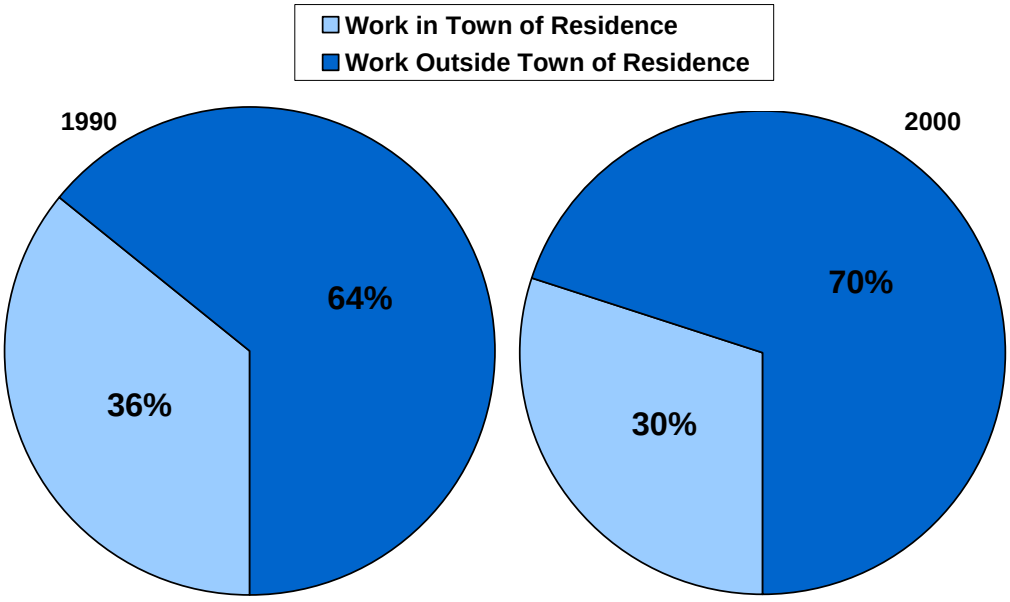
Source: 1980 Census, 1990 Census, 2000 Census, and ConnDOT Series 27B Landuse Projections. Data for years following 2000 is projected. Graphic revised as of August 2004.

Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

From 1980 through 2000, the shift of employment from central cities to suburban towns has been accompanied by an increase in the percentage of Connecticut's work force commuting to employment sites outside their towns of residence. Figure 22, shows that the number of workers who commuted to a job located outside their towns of residence increased overall by approximately 6% statewide from 1,071,800 in 1990 to 1,147,898 in 2000. During the same period, the number of workers living in Connecticut whose place of employment was located within their town of residence decreased by 18.1% from 601,642 to 492,925 (footnote 33). Table 11 in the appendix shows the commuting patterns of county residents relevant to employment in other counties for 2000. The largest cross county commuting took place from New Haven to Fairfield with 50,970 commuters and Tolland to Hartford with 35,090 commuters.

The aforementioned demographic changes have affected the amount of time it takes commuters to make trips. The average statewide commute increased 13.7% from 21.1 minutes in 1990 to 24.4 minutes in 2000 (footnote 33).

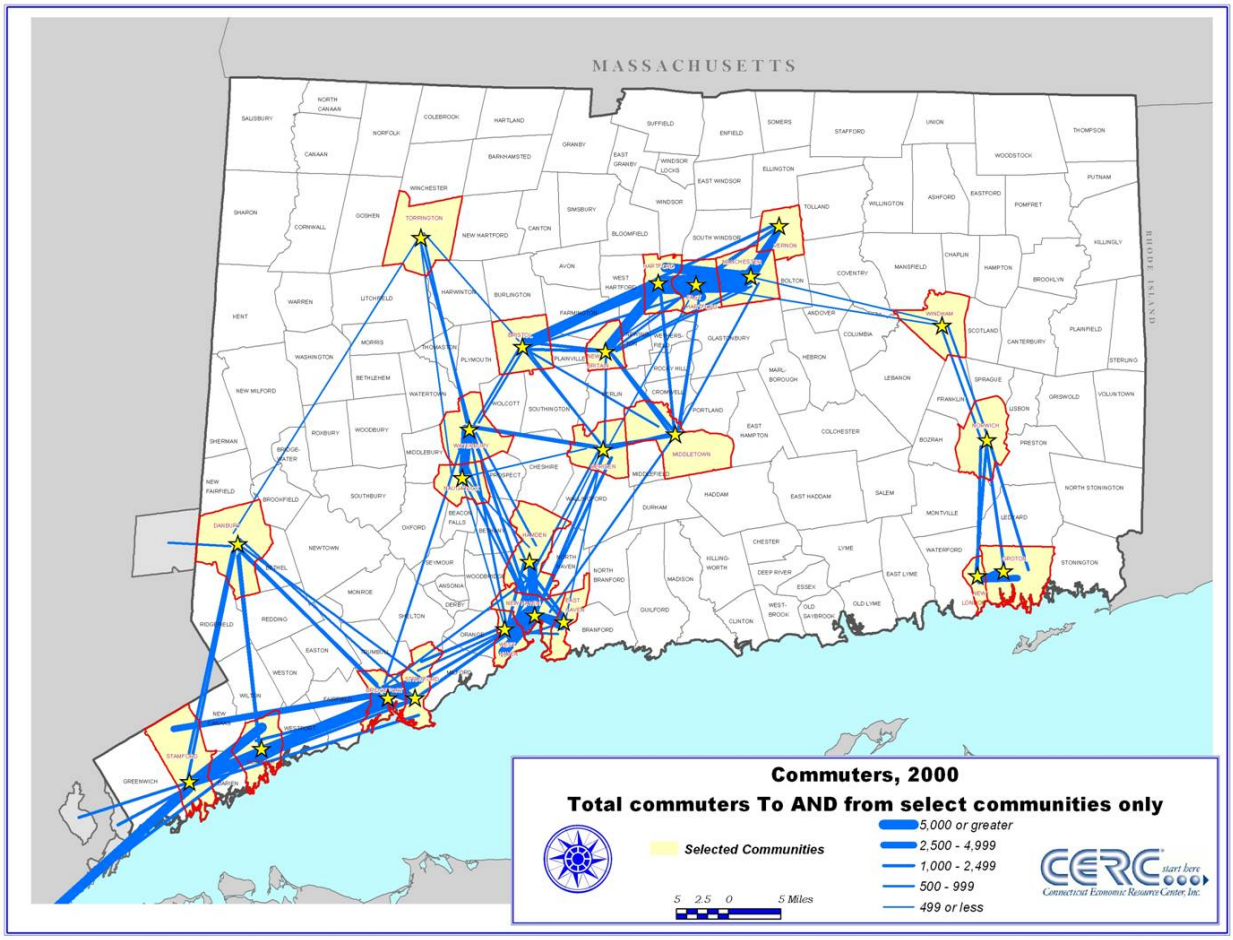
Figure 22: Comparison of Place of Employment to Residence



Source: 1990 Census and 2000 Census. Projections not available.
Graphic revised as of August 2004.

Figure 23 shows commuter volumes to and from select communities graphically. Figures 2 and 3 in the appendix show both the positive and negative change in commuters between 1990 and 2000.

Figure 23: Total Commuters To and From Select Communities



Source: Connecticut Economic Resource Center.

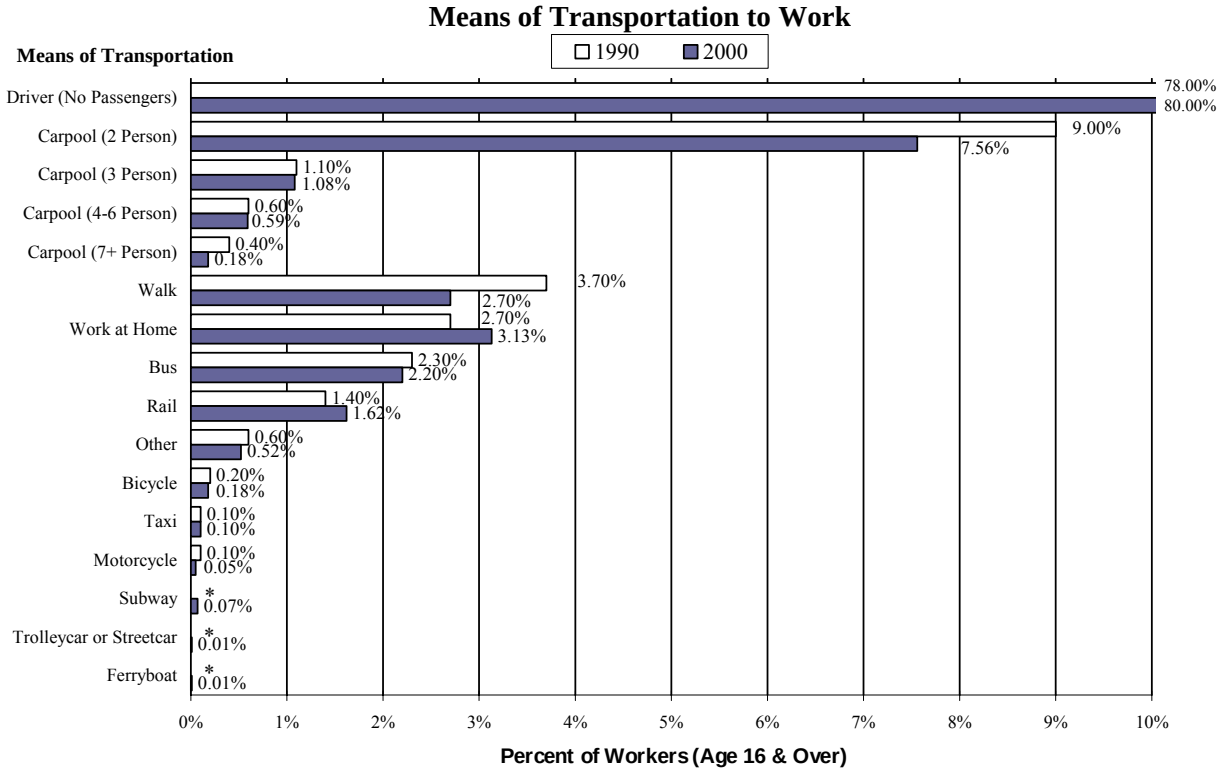
Information on the means by which persons in Connecticut travel to work is presented in Figure 24. This figure presents 1990 Census and 2000 Census data on means of transportation to work for Connecticut workers who are age 16 and older. In 1990, the private automobile was the primary means of getting to work. Of the workers commuting to work in a private automobile, 78% of the workers drove to work alone, 9% participated in two-person carpools, 1.1% participated in three-person carpools, 0.6 percent participated in 4 to 6 person carpools and 0.4% participated in carpools of seven or more persons. After the private automobile, walking was the next largest category (3.7%) followed by work at home (2.7%), bus (2.3%), rail (1.4%), other(0.6%), bicycle (0.2%), taxi (0.1%), and motorcycle (0.1%) (footnote 33).

In 2000, 80% of workers drove to work alone, 7.56% traveled in two-person carpools, 1.08% traveled in three-person carpools, 0.59% participated in 4 to 6 person carpools, and 0.18% traveled in a carpool of seven or more persons. After the private automobile,

work at home was the next largest category (3.13%) followed by walking (2.70%), bus (2.20%), rail (1.62%), other (0.52%), bicycle (0.18%), taxi (0.10%), and motorcycle (0.05%). Additionally, in 2000, 0.07% of workers used a subway to get to work, 0.01% used a trolley car or streetcar, and 0.01% used a ferryboat to get to work. Subway, Trolley car or Streetcar, and Ferryboat are new Means-to-Work categories that were listed in the 2000 Census (footnote 33).

A comparison of the 1990 to 2000 Means–to-Work census data indicates that in 2000, the private automobile continued to be the primary means of transportation to work. However, there was an increase (2%) in the percentage of workers driving alone and a decrease (1.69%) in the percentage of workers using carpools as a means of transportation to work. There also were increases in the percentage of workers working at home and traveling by rail and decreases in the percentages of workers riding the bus and walking to work (footnote 33).

Figure 24: Means of Transportation to Work in 1990 and 2000



Source:1990 Census, and 2000 Census Supplemental Survey. * The following categories: Trolley, Subway and Ferryboat were not available in the1990 census. The Census allows a person to select only one category as a means of transportation to work. It does not account for dual-mode trips to work. Data updated as of January 2006.

Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

The increase in the number of commuters driving alone to work occurred despite the higher cost compared with carpooling and transit. The continuing dispersion of employment and other services into the suburbs is a contributing factor to this behavior.

Another significant and somewhat related factor is the increasing number of women, particularly women with young children, in the labor force. Women now make more trips, by all modes, than men do and they are more likely to "trip-chain" — to link together a series of trips for different purposes in one outing. The increase in trip-chaining associated with providing child care and managing a household is directly related to the increase in the number of commuters driving alone (footnote 33).

Reducing the number of single occupancy vehicles has proved to be a difficult objective. Several factors contribute directly to a successful carpool. These include a large employer that serves as a "magnet," a long commuting distance (greater than 10 miles), and a work location where free parking is not readily available. Another factor which has been observed in other areas of the country and that may start affecting Connecticut commuters is the decision to avoid congestion and decrease travel times during the peak period by using High Occupancy Vehicle (HOV) lanes. Connecticut now has approximately 38 miles of HOV lanes in operation on I-84, I-384 and I-91extending northward and eastward from Hartford. These lanes carry approximately 7,100 commuters toward Hartford during the morning peak period (footnote 33).

Commuting by carpools and vanpools is facilitated in Connecticut through Rideshare, Rideworks, and MetroPool. In 1995, The Rideshare Company created Easy Street, a vanpool network service that currently operates in New York, Massachusetts, Rhode Island and throughout Connecticut. As of May 2007, approximately 3,000 Connecticut employees commuted in an Easy Street van each workday. Through Easy Street, in 2006, the number of cars on the road in Connecticut was reduced by 1,522 annually, and the number of vehicle trips by 696,000 annually, thus conserving 735,000 gallons of gasoline and cutting emissions by 13,000 tons.[35]

Rideworks and Metropool service the area between New Haven and Greenwich. MetroPool reported in their first quarterly report for fiscal year 2000 that they had 5,834 carpools and 33 vanpools.[36] Rideworks Fiscal Year 1999 annual report stated they have 2,233 carpools and 26 vanpools (footnote 11).[37]

Local bus service tends to be centered on urban areas. Express bus service primarily connects suburban towns with urban centers. While rail ridership increased during the past 10 years, bus ridership declined overall. The capitol region (greater Hartford area) has the heaviest use of bus service in the state. Bus ridership in the capitol region accounts for nearly 35% of the total bus ridership in the state. The median household income for bus riders is lower than for riders of any other mode of transportation, and

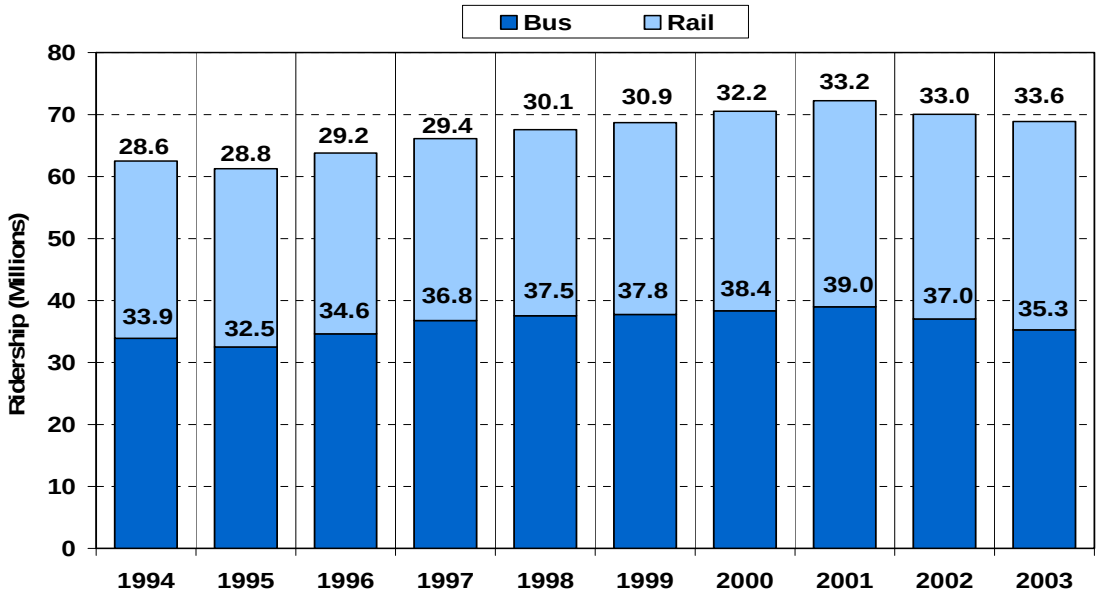
[35] The Rideshare Company, "Rideshare in the News," August 20, 2008, http://rideshare.com/rideshare_in_the_news.html.
[36] Need updated MetroPool data
[37] Need updated Rideworks data

many bus riders have limited access to automobiles. Low household income and lack of auto availability continue to be significant factors in the use of bus service (footnote 33).

Rail commuters in Connecticut historically have been destined mainly for New York City. Data, however, indicates that the number of people traveling in the reverse commute direction (New York to Connecticut) and within Connecticut is increasing. The most heavily traveled segment of rail line in Connecticut is between Norwalk and Greenwich, the area of residence for the majority of the state's rail commuters who work in Manhattan. Rail service provides the most convenient means of traveling to Manhattan, and it captures most of the commuter market to that destination. Rail ridership between Connecticut towns is increasing, and although it still remains a small percentage of total rail ridership, it represents a growth component that is a priority for the state (footnote 33).

Figure 25 shows the relative share of transit passengers carried by bus and by rail in 1994 through 2003. The figure compares annual passenger volumes for bus and rail for SFY1994 through SFY2003 and is the latest available data from ConnDOT. It shows that bus passenger volumes decreased from 33.9 million in SFY1994 to 32.5 million in SFY1995, increased annually from 32.5 million in SFY1995 to 39 million in SFY2001, and then decreased to 37 million in SFY2002 and to 35.3 million in SFY2003. In comparison, rail passenger volumes increased annually during this period from 28.6 million in SFY1994 to 33.6 million in SFY2003 (footnote 33).

Figure 25: Comparisons of Annual Passenger Volumes for Transit Modes (SFY1994-SFY2003)



Source: ConnDOT Bureau of Public Transportation's "Operations Statistics". Graphic Revised as of September 2004.

Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

Telecommuting programs provide multiple benefits because they allow greater schedule flexibility and reduce commuting times to zero for the participants, while at the same time they save fuel and reduce congestion for everyone. Telecommute Connecticut estimates there are more than 158,000 telecommuters in Connecticut, compared to an estimated 85,260 in December 2001; this equates to an 86% increase. On an average day, Telecommute Connecticut finds telecommuting eliminates nearly 60,000 automobiles from Connecticut's roads.[38] Because of the continuing development of communications technology and increasing costs of fuel, this mode of employment will play a growing role in addressing the demand for transportation services (footnote 33).

Goods Movement

The freight transportation industry in the United States has undergone dramatic changes in the last 20 years. Developments in "containerization," shifts in the manufacturing industry to "just-in-time" delivery, the deregulation of the rail, trucking and aviation industries, and the development of new trading patterns in a global economy have led to

[38] Telecommute Connecticut, "Telecommuting Fact Sheet," July 22, 2008, http://www.telecommutect.com/press/tc_fact_sheet.php.

consolidation and restructuring within, and partnerships between, all freight transportation modes (footnote 33).

The development of an extensive cross-country expressway network, the trend toward larger and heavier trucks, more time-sensitive shipping requirements, increasing competition, and railroad branch line reductions have contributed to the trucking industry attracting a large market share of goods movements. However, while the number of truck trips is increasing, the length of such trips is decreasing. Many shippers are using more cost-effective rail, air, or water transport for the long-haul portion of freight delivery, with trucking firms supplying the pick-up and delivery portion of trips rather than supplying end-to-end service. Thus, short-haul truck/intermodal traffic has increased dramatically in recent years and is expected to continue to increase (footnote 33).

Truck transport of intermodal freight will continue to impact Connecticut, however. This is attributable to its small geographic area and close proximity to some of the nation's largest ports, intermodal rail facilities, and airports (footnote 33).

Table 13 presents freight shipments that have either an origin or a destination in Connecticut. As Table 13 portrays, trucks move a large percentage of the tonnage and value of shipments, followed by water and rail tonnage and air value (footnote 33).

Table 13: Freight Shipments To, From, and Within Connecticut 1998, 2010, and 2020

CONNECTICUT	Tons (millions)			Value (billions $)		
	1998	2010	2020	1998	2010	2020
State Total	117	165	200	80	154	248
By Mode						
Air	<1	<1	<1	8	18	30
Highway	89	126	155	67	127	205
Other*	2	3	3	<1	<1	1
Rail	12	17	22	2	4	7
Water	15	19	20	2	4	5
By Destination/Market						
Domestic	95	129	151	64	120	188
International	22	36	49	16	35	60

Note: Modal numbers may not add to totals due to rounding. * The "Other" category includes international shipments that moved via pipeline or by an unspecified mode.
Source: Office of Freight Management Operations, Federal Highway Administration, *Freight Transportation Profile—Connecticut Freight Analysis Framework,* November 2002.

Source: Connecticut Department of Transportation, "Transportation in Connecticut: Trends & Planning Data," June 2006.

Data from the United States Department of Transportation (USDOT) show that trucks currently carry approximately 76% of the freight in Connecticut. USDOT projects this share to grow to 77.5% by the year 2020, even as rail traffic grows from a 10.3% share to 11%. *Although all modes will experience growth in volume, USDOT and/or ConnDOT anticipate that trucking will provide the majority of service, regardless of state policies and programs.* However, the extent to which significant increases in fuel prices will impact trucking and other freight transportation modes is unknown at this time (footnote 33).

The Interstate highway system carries the most interstate truck movements. Of these corridors, I-95 between New York and New Haven carries the greatest volume. I-91, especially from Meriden to Hartford, carries a high volume because a portion of the I-84 east-west movement joins with the north-south movement. Other routes, for example U.S. 6, U.S. 7, CT 2, and CT 8, provide regionally important truck accessibility (footnote 33).

Truck traffic moving to and from Connecticut accounted for 6% of the average annual daily truck traffic (AADTT) on the Freight Analysis Framework (FAF) road network.

Approximately 5% of truck traffic involved in-state shipments, and 14% involved trucks traveling across the state to other markets. About 75% of the AADTT were not identified with a route-specific origin or destination[39] (and see footnote 33).

Table 12 in the appendix shows the top five commodity groups shipped to, from, and within Connecticut by all modes. The top commodities by weight are nonmetallic minerals and petroleum or coal products. By value, the top commodities are chemicals or allied products and secondary traffic. Secondary traffic is defined as freight flows to or from distribution centers or through intermodal facilities. No commodities are assigned to this intermediate step in the transportation process (footnote 33).

Comparative Statistics

In the study *17th Annual Report on the Performance of State Highway Systems* the Reason Foundation measured the performance of all state-owned roads and highways from 1984 to 2006.[40] The report uses indicators from 12 different categories, including traffic fatalities, congestion, pavement condition, bridge condition, highway maintenance costs, and administrative costs, to calculate effectiveness and performance in each state. Table 12 shows how Connecticut ranks in these 12 categories and overall.

In 2006, Connecticut ranked 35th out of all states in overall cost-effectiveness and performance, which is an improvement from 39th in 2005. Connecticut is 43rd in urban interstate congestion, with 62% congested. The state ranked 1st in rural interstate road conditions and 26th in urban interstate road conditions. Connecticut ranks 43rd in deficient bridges —32.8% of the state's bridges are deemed structurally deficient or functionally obsolete. Connecticut ranks 42nd in total disbursement per mile of responsibility, up from 44th in 2005. Connecticut's fatality rate per 100 million vehicle miles traveled is 0.95, which places it 4th in the nation for least fatalities per million vehicle miles traveled.

[39] Office of Freight Management and Operations, Federal Highway Administration, U.S. Department of Transportation, "Freight Transportation Profile: Connecticut Freight Analysis Framework," November 2002.
[40] See http://www.reason.org/news/show/1003049.html.

Table 14: Comparison of Connecticut's State-owned Highways and Roadways Effectiveness and Performance

Categories	Results 2006	Results 2005	Rank 2006	Rank 2005	Change in Rank 05-06
Total Receipts* per Mile of Responsibility	337,208	344347	45	43	-2
Capital Disbursement per Mile of Responsibility	133,118	140322	39	42	3
Maintenance Disbursement per Mile of Responsibility	41496	37668	43	42	-1
Administration Disbursement per Mile of Responsibility	15,883	14564	38	40	2
Total Disbursement per Mile of Responsibility	300,419	356,230	42	44	2
Urban Interstate, Percent Poor Condition	3.64	3.97	26	27	1
Rural Interstate, Percent Poor Condition	0.00	0.00	1	1	0
ROPA**, Percent Poor Condition, 2006	0.61	0.61	29	30	1
ROPA**, Percent Narrow Lanes	1.22	1.22	12	11	-1
Urban Interstate, Percent Congested	62.38	65.6	43	44	1
Bridges, Percent Deficient	32.80	34.18	43	43	0
Fatality Rate per 100 Million Miles Driven	0.95	0.87	4	2	-2
Overall Performance	1.23	1.28	35	39	4

*Receipts include all sources (fed and state taxes, gasoline, bond capital and interest, tolls.)

**Rural Other Principal Arterial System

Source: Reason Foundation, "17th Annual Report on the Performance of State Highway Systems (1984-2006)," July 2008.

Connecticut's Aviation System

The Connecticut aviation system is comprised of 153 landing areas that are licensed by the state and/or the Federal Aviation Administration (FAA). The landing areas open to the public are licensed as Commercial and those not open to the public are licensed as Restricted Landing Areas (RLA). Connecticut's 153 active aviation landing areas include 55 airports, seven seaplane bases, and 92 heliports. There are 23 airports (one includes a seaplane base) open for public use, while 32 airports, six seaplane bases, and 92 heliports are for private use. Of the 23 public-use airports, six are owned by the state, four by municipalities, and 13 are privately owned airports that are open to the public.[41]

Table 15 shows the economic benefit, both direct and indirect, that these facilities provide for the communities they serve (footnote 5).

[41] Connecticut Department of Transportation, "Connecticut Statewide Airport System Plan," June 2006.

Table 15: Economic Impact of State and Municipal Airports

Airport Name	Economic Benefit	Year study complete
Bradley International	3,876,000,000	2004
Hartford-Brainard	37,199,086	1997
Groton-New London	167,346,112	1995
Waterbury-Oxford	50,000,000	2004
Windham	9,779,452	1997
Danielson	NA	NA
Tweed-New Haven Regional	140,600,000	2001
Igor-Sikorsky Memorial	58,553,984	1993
Danbury Municipal	NA	NA
Meriden-Markham	5,418,600	1997

* How Economic Benefit is measured was not defined in the report.
Source: Connecticut Department of Transportation, "Connecticut Statewide Airport System Plan," June 2006.

Enplanements

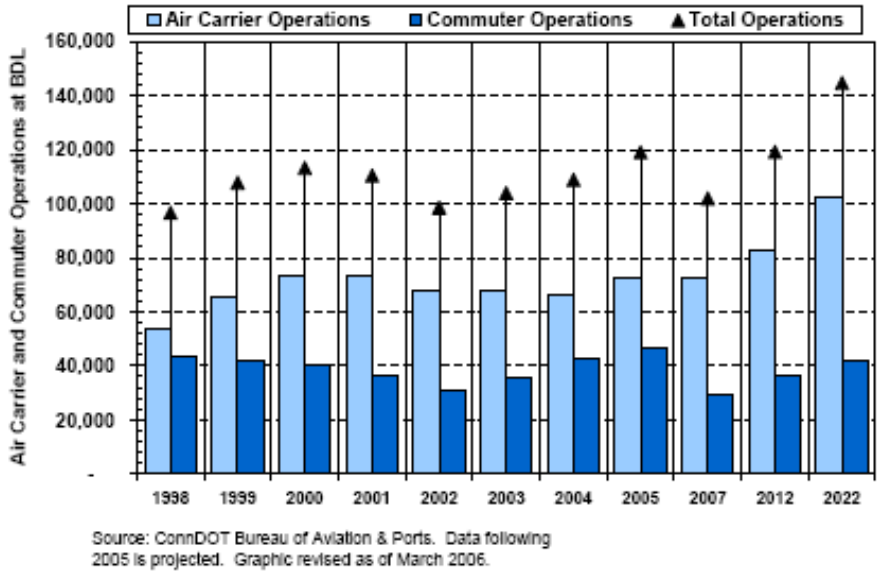
In 2006, Bradley International Airport (BDL) handled 3,409,938 enplanements, placing it 52nd among U.S. airports. The second busiest airport in Connecticut, Tweed New Haven Regional Airport (HVN), handled 38,144 enplanements in 2006, ranking it at 282 nationwide.[42] With their current terminal configuration, BDL can accommodate approximately 1,700 and HVN approximately 180 enplanements per hour in the peak hour (footnote 40). See Table 13 in the Appendix for 2001 through 2006 enplanements at Connecticut's seven largest airports.

Aircraft Operations

Aircraft operations are defined as take offs or landings, where each is a separate operation. Table 14 in the Appendix shows annual operations[43] in 2000 and 2004 for Connecticut's 23 public-use airports. Connecticut's total public-use annual operations in 2000 were 1,026,294; the effects of September 11, 2001 decreased 2004 annual operations to 852,430. In 2004, over 50% of the operations in the state took place at state-owned airports, with municipal airports accounting for 30% and privately run airports totaling 20% (footnote 40). Figure 27 shows air carrier and commuter operations at BDL that projects operations at BDL will increase in the coming years (footnote 14).

[42] Federal Aviation Administration, "Passenger and All-Cargo Statistics," July 2007.
[43] An operation is a landing or a departure from an airport.

Figure 27: Air Carrier and Commuter Operations at BDL



Source: Connecticut Department of Transportation, "Transportation in Connecticut: The Existing System," June 2007.

Airport Capacity

Table 15 in the appendix shows airport capacity, operations, and percent of capacity reached for Connecticut's public airports.[44] Table 15 shows Connecticut's airport operations range from 11,000 at Stonington Airpark to 263,000 at BDL. The annual operation as a percent of total capacity ranges from less than 1% at three airports to 56% at BDL. The FAA recommends that a detailed analysis of airport capacity should be performed for airports at 60% capacity, and capacity improvements should be in place when an airport reaches 80% capacity (footnote 42).

To handle future capacity issues, more than 2,000 acres of commercial and industrial master-planned land sits in the four towns adjacent to BDL.[45]

Based Aircraft

Tables 16 and 17 in the appendix show the number of based aircraft at BDL and public-use airports respectively. In 1990, there were 83 based aircraft at BDL; by 1995 the

[44] Airport Operational Capacity: the FAA defines operational capacity in terms of annual service volume (ASV). This is a reasonable estimate of the maximum number of operations that can occur at an airport in a year, and it takes into account the differences in runway use, aircraft mix, weather patterns, etc. that would be encountered in a year's time. As annual operations approach the ASV of an airport, aircraft delays will increase rapidly. Source: "Connecticut Statewide Airport System Plan," June 2006.

[45] Bradley Airport Development League, Department of Economic and Community Development Testimony, January 2008.

based aircraft at BDL had risen to 94, but declined to 83 in 2003. In 2003 there were 1,766 aircraft based at Connecticut's public-use airports (footnote 40). Of the 1,766 based aircraft, state-owned airports accounted for 39%, municipal airports accounted for 35%, and privately run airports accounted for 26%.

Runways

BDL has three runways serviced by a network of 16 taxiways. This network of pavement comprises an equivalent of 70 linear miles of road pavement (footnote 14). The characteristics of these runways are listed in Table 14. Table 18 in the appendix lists runway characteristics for all of Connecticut's public-use airports. Table 19 in the appendix lists runway characteristics for the four major airports near BDL: Logan International Airport (BOS), La Guardia Airport (LGA), John F. Kennedy International (JFK), and Newark Liberty International (EWR). As Table 16 shows, BDL has the same aircraft capacity as these other major airports.

Table 16: Runway Characteristics at BDL

Runway	Length (Feet)	Width (Feet)
Bradley International Airport (BDL)		
6-24	9,510	200
15-33	6,847	150
1-19	4,268	100
Source: ConnDOT Bureau of Aviation & Ports. Data is as of October 2006.		

Source: Connecticut Department of Transportation, "Transportation in Connecticut: The Existing System," June 2007.

Parking

At BDL surface parking is provided on-airport for passengers, visitors, and employees. On-airport parking consists of a state-owned parking garage, Short-Term Parking Lot B, Long-Term Parking Lots 1, 2, 3, 4, 5A, 5B (with shuttle service), and an employee parking lot (also with shuttle service). The number of public parking spaces available on-airport is 7,830. Table 20 in the appendix shows the total number of parking spaces, including handicap spaces, available in each BDL lot by category. In addition to on-airport parking, 11 privately owned, off-airport parking lots operate "valet" parking services using shuttle vans to the terminals (footnote 14).

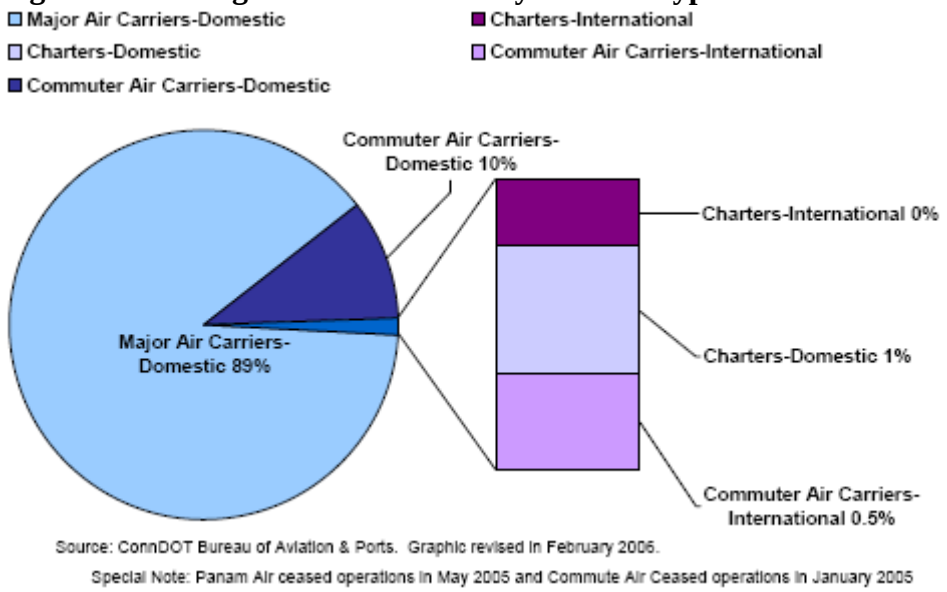
The short- and long-term parking lots are revenue-generating and are privately managed by APCOA Bradley Parking Company, LLC, under contract with ConnDOT. In a study conducted by the Connecticut General Assembly in 2000, it was found that revenue from

BDL parking exceeds $8 million per year and is the largest single source of airport income.[46] The dependence on parking revenues creates incentives against providing public transportation to/from BDL.

Carriers

Figure 28 shows passenger traffic at BDL in 2005 by carrier type. It shows that 89% of the passenger traffic was Major Air Carriers-Domestic, 10% was Commuter[47] Air Carriers-Domestic, 1% was Charters-Domestic and 0.5% was Commuter Air Carriers-International (footnote 14).

Figure 28 Passenger Traffic at BDL by Carrier Type

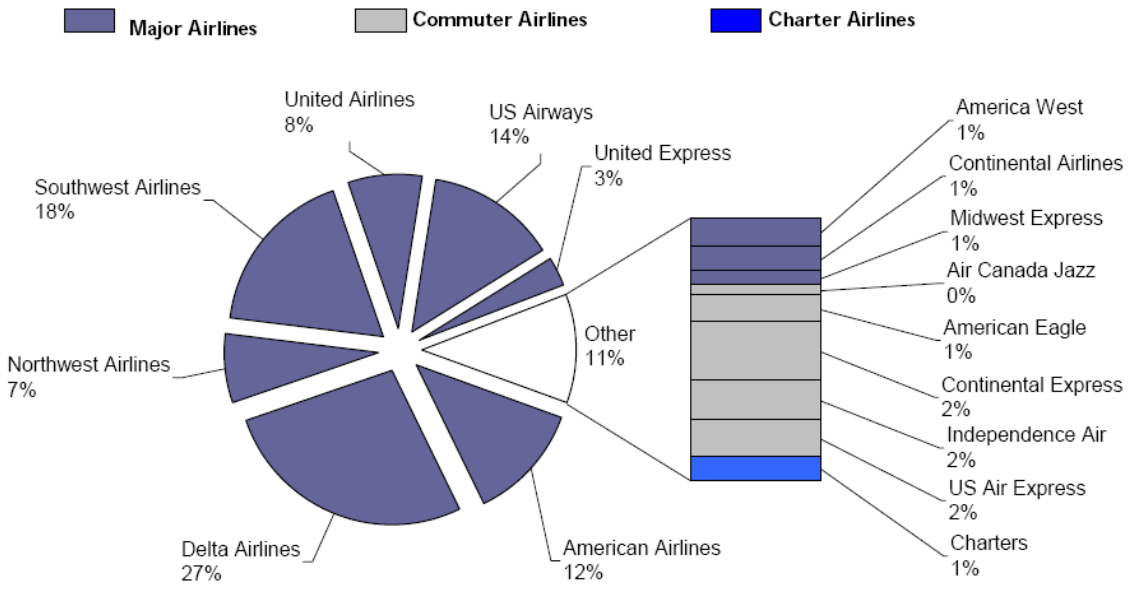


Connecticut Department of Transportation, "Transportation in Connecticut: The Existing System," June 2007.

In terms of total annual passenger activity by airline, Figure 29 shows that Delta led the other airlines in 2005 with 27% of the market, followed by Southwest (18%), US Airways (14%), American Airlines (12%), United with 8% and Northwest with 7%. Three other airlines (America West, Continental, and Midwest) accounted for 3% of the total annual passenger activity at the airport. The commuter airlines, as a group, accounted for 8%, and charter airlines accounted for approximately 1% of total passenger activity at BDL (footnote 14).

[46] Connecticut General Assembly, "Bradley International Airport," July 24, 2008, http://www.cga.ct.gov/pri/archives/2000bradleyreportappenF.htm.
[47] Air Carrier Fitness Division, Department of Transportation, "How to Become a Commuter Air Carrier," August 2002: Commuter Air Carrier – small planes with a capacity of 60 or fewer seats.

Figure 29: Passenger Activity by Carrier type at BDL



Source: ConnDOT Bureau of Aviation & Ports. Graphic revised in March 2006.

Special Note: Panam Air ceased operations in May 2005 and Commute Air Ceased operations in January 2005

Connecticut Department of Transportation, "Transportation in Connecticut: The Existing System," June 2007.

Virtually all of the jet service from BDL is to hub cities of the various airlines. The major cities to which jet service from BDL is provided as of April 2007 are listed in Table 21 in the appendix. Commuter destinations to which service is provided from BDL include Buffalo, Montreal, Toronto, Philadelphia, Newark, New York (John F. Kennedy International), and Rochester (footnote 14).

The events of September 11, 2001 affected most long-haul services from BDL. The effect of September 11, 2001 on monthly passenger activity at BDL is shown in Figure 30, which presents data from 1998 through 2005, showing that passenger activity dropped off sharply after the terrorist attacks but has since recovered to pre-September 11 levels (footnote 14).