



**Central Naugatuck Valley
REGIONAL PLAN
OF CONSERVATION &
DEVELOPMENT
2008**



Town Center
THOMASTON

Farm
BETHLEHEM

Taft School
WATERTOWN

Town Hall
WOLCOTT

Lake Quassapaug
MIDDLEBURY

Antique Shop
WOODBURY

Prepared by the
**Council of Governments of the
Central Naugatuck Valley**

Grand Street
WATERBURY

Naugatuck River
NAUGATUCK

The Meeting Place
PROSPECT

Heritage Village
SOUTHBURY

Farmington Canal Trail
CHESHIRE

Beacon Mill Village
Apartments
BEACON FALLS

Golf Course
OXFORD



June 13, 2008

To Officials and Residents of the Central Naugatuck Valley Region:

The Regional Plan of Conservation and Development sets a planning framework for the future of the Central Naugatuck Valley Region. Under state statutes, regional planning organizations are required to prepare the plan every ten years.

This is the fourth plan prepared for the region. The last one was adopted by the Council of Governments of the Central Naugatuck Valley (COGCNV) in 1998. The document is advisory, intended to analyze trends and identify issues related to the region's physical development and conservation, and to recommend policies to address regional issues. The plan seeks to promote consistent and coordinated decision-making within the region. The document was prepared in-house by COGCNV staff, with guidance from COGCNV's Regional Planning Commission.

On behalf of COGCNV, I would like to thank the many people who contributed their time and suggestions to the development and review of the plan.

Sincerely,

Susan A. Cable
Chairman

Central Naugatuck Valley Region

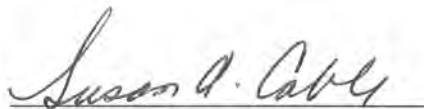
Regional Plan of
Conservation and Development

Council of Governments of the Central Naugatuck Valley
Waterbury, Connecticut

Certification of Adoption

This Plan was adopted at a legally convened meeting of the
Council of Governments of the Central Naugatuck Valley

On June 13, 2008



Susan A. Cable, Chairman



Michael Bronko, Secretary

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Three River Farm, Woodbury
Photo Courtesy of Chris Wood

I. INTRODUCTION

INTRODUCTION

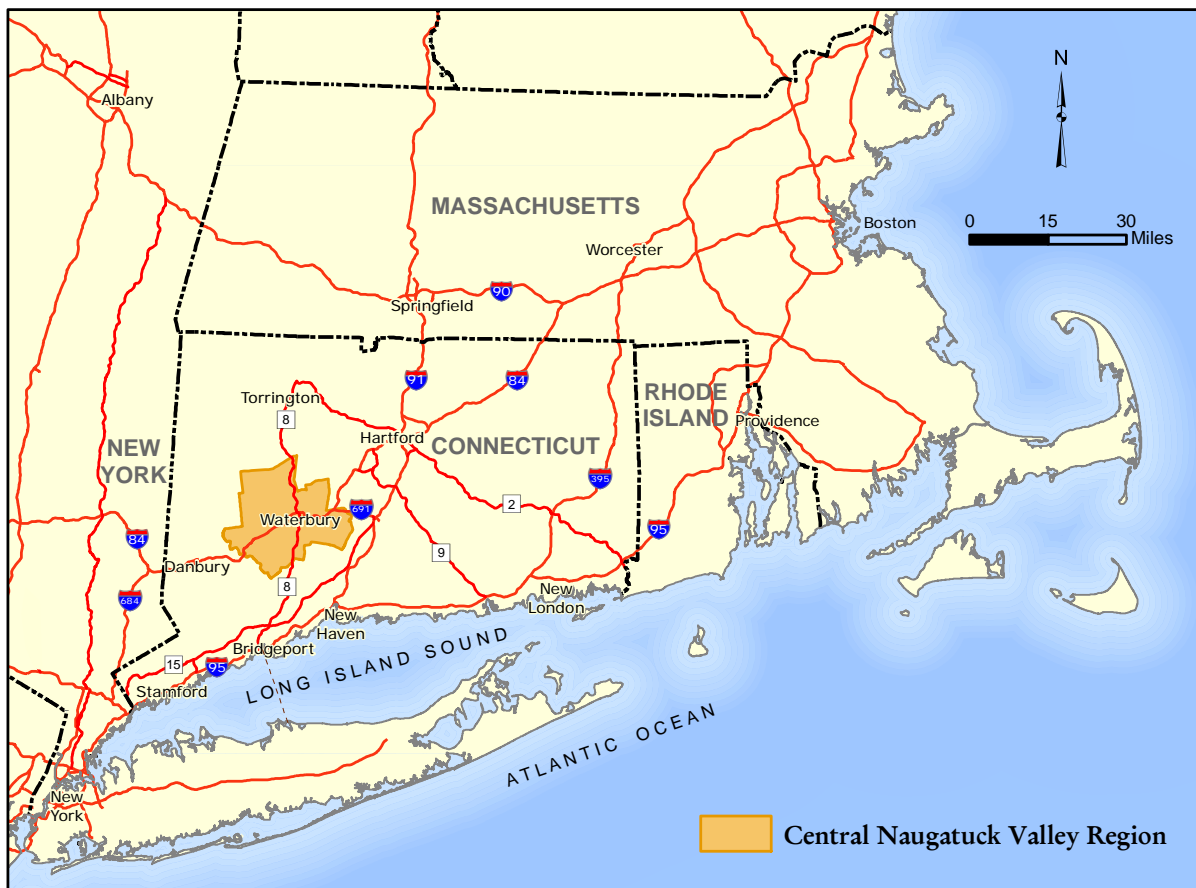
The Central Naugatuck Valley Region encompasses 311 square miles in west-central Connecticut. The region consists of the city of Waterbury and twelve surrounding municipalities.

The Regional Plan was prepared by the Council of Governments of the Central Naugatuck Valley (COGCNV). COGCNV consists of the chief elected officials of the

member towns. The Regional Planning Commission, comprised of two locally appointed representatives from each municipality, is COGCNV's regional planning group. COGCNV serves as:

- The state-defined regional planning organization (RPO).
- The federally-defined metropolitan planning organization (MPO) for transportation planning in the region.

Figure 1.1 Regional Location



WHY PREPARE A REGIONAL PLAN?

There are both legal and practical reasons for preparing a Regional Plan of Conservation & Development. State Statute 8-35a mandates that regional planning agencies prepare such a plan:

At least once every ten years, each regional planning agency shall make a plan of development for its area of operation, showing its recommendations for the general use of the area including land use, housing, principal highways and freeways, bridges, airports, parks, playgrounds, recreational areas, schools, public institutions, public utilities, agriculture and such other matters as, in the opinion of the agency, will be beneficial to the area.

Any regional plan so developed shall be based on studies of physical, social, economic and governmental conditions and trends and shall be designed to promote with the greatest efficiency and economy the coordinated development of its area of operation and the general welfare and prosperity of its people.

Such plan may encourage energy-efficient patterns of development, the use of solar and other renewable forms of energy, and energy conservation. Such plan shall be designed to promote abatement of the pollution of the waters and air of the region.

The regional plan shall identify areas where it is feasible and prudent

- 1. to have compact, transit accessible, pedestrian-oriented mixed use development patterns and land reuse, and*
- 2. to promote such development patterns and land reuse and shall note any inconsistencies with the following growth management principles:*
 - (A) Redevelopment and revitalization of regional centers and areas of mixed land uses with existing or planned physical infrastructure;*
 - (B) expansion of housing opportunities and design choices to accommodate a variety of household types and needs;*
 - (C) concentration of development around transportation nodes and along major transportation corridors*

to support the viability of transportation options and land reuse;

(D) conservation and restoration of the natural environment, cultural and historical resources and traditional rural lands;

(E) protection of environmental assets critical to public health and safety; and

(F) integration of planning across all levels of government to address issues on a local, regional and state-wide basis. The plan of each region contiguous to Long Island Sound shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound.

On the practical side, a Regional Plan of Conservation & Development provides a metropolitan perspective for addressing development and conservation issues. It provides planning linkages between towns. Moreover, some development issues and functions can be addressed more effectively at the regional level. Many issues — water quality, water supply, transportation, economy — transcend municipal boundaries. Economic competition is on a global scale, and the smallest geographic area for competing on the global stage is the metropolitan area or region. And finally, we live in a regional community. Each town in the region relies on other towns within the region for employment, housing, retail, healthcare, and other services and needs.

WHAT IS A REGIONAL PLAN OF CONSERVATION & DEVELOPMENT?

A Regional Plan of Conservation & Development presents general recommendations for the future physical development of a region and its municipalities. Its purpose is to recommend policies that will guide the region in responding to future change.

A Regional Plan of Conservation & Development is an advisory document that is intended to:

- Evaluate conditions, trends, and issues of regional significance.
- Recommend policies that will address regional issues.
- Promote consistent decision-making.

HOW WILL THE PLAN BE USED?

The Plan will guide COGCNV in setting priorities, reviewing state, regional and local proposals, implementing programs, and assisting member communities. The Regional Plan is used by COGCNV to review:

- Subdivisions abutting municipal boundaries (CGS 8-26b).
- Zone changes within 500 feet of a municipal boundary (CGS 8-3b).
- Local plans of conservation & development.
- Funding for municipal economic development projects (CGS 32-224).
- Projects that request federal or state funding.
- Proposals to establish an intermunicipal district.
- Proposals submitted by member municipalities.

Recommendations in the Plan are also meant to guide residents and decision makers when:

- Considering conservation and development activities in the region.
- Preparing local plans of conservation and development.
- Mitigating intermunicipal impacts.

RELATIONSHIP BETWEEN LOCAL, REGIONAL, & STATE PLANS

Each municipality in the region has a local plan of conservation and development. These plans address local issues and are the most specific. Municipal implementation is accomplished by land use regulations, operating and capital improvement budgets, and land acquisition. Municipal plans must be updated every ten years.

At another level, the *State Conservation and Development Policies Plan 2005-2010* is much broader due to its geographic scope. The State Plan is updated every five years. Recommendations in the State Plan guide major state initiatives and local and regional projects involving state funding in excess of \$200,000.

The Regional Plan falls between these two. It is, by necessity, more specific than the State Plan and more gen-



Waterbury Mayor Jarjura and Thomaston First Selectwoman, Maura Martin, at COG Meeting

eral than the local plans. Implementation of the Regional Plan must typically rely on consensus and education.

State statutes specify that all three types of plans address the same six growth management principles listed as (A) through (F) in the statute citation in the “Why Prepare a Regional Plan?” section in this chapter.

Further State statutes require a review of consistency between a town plan and regional and state plans of conservation and development. As part of its review of a municipal plan, RPOs are required to compare the local plan with those of neighboring municipalities. Regional plans must be reviewed for consistency with the state plan. While consistency is often achieved, the creative tension



COG Meeting with Legislators



Regional Household Hazardous Waste Collection, Naugatuck

in areas where the plans disagree is indicative of different perspectives on the appropriate development of a particular area. The local plan typically is the most influential with its connection to local zoning. For this reason, the Regional Plan places a great deal of emphasis on local plans and local zoning.

EXISTING EXAMPLES OF REGIONAL COOPERATION

Regional efforts at cooperation are already evident in the sharing of resources for solid waste management — including recycling and hazardous waste — water supply, waste water treatment, transit, public safety, emergency planning and operations, and social services. Regional cooperation will continue to occur and will expand when each community sees benefits from participation. COGCNV will continue to provide services and facilitate cooperation at the regional level as needs and opportunities arise.

2. REGIONAL HISTORY

OVERVIEW

Native American tribes hunted in the area that is now the Central Naugatuck Valley Region, but except for temporary camps, none established permanent settlements. European settlers later purchased land from the tribes. In the seventeenth century, settlers from Farmington, seeking land for farming, purchased a large tract in the Naugatuck River Valley, called Mattatuck at the time. Settlers from Stratford bought land from two tribes in the Pomperaug River Valley — the Southbury, Woodbury, Bethlehem area.

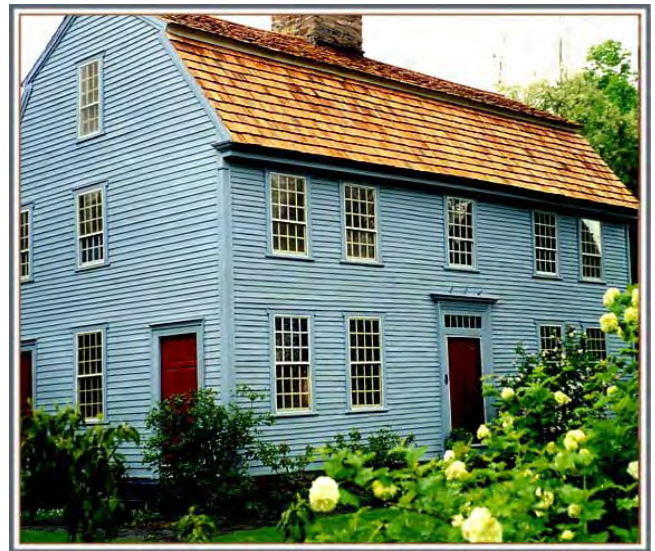
The present day towns evolved from this common beginning. As the region's population grew in the eighteenth century, residents of outlying sections petitioned the General Assembly for the right to establish their own Congregational parishes to avoid long treks in the winter to attend church.

In the nineteenth century, major industrial enterprises developed in Waterbury, Naugatuck, and Thomaston, assisted by the area's mechanical ingenuity and the waterpower available from the Naugatuck River and its tributaries. By the time of the Civil War, the valley was a national leader in the manufacture of brass and brass-related products including clocks, buttons, munitions, and machines. The railroad enabled raw materials to be shipped here, and finished products to markets. A network of trolleys connected residential neighborhoods in Waterbury and the surrounding towns, transporting workers to the burgeoning factories. The economic growth of the industrial centers, supported by the agricultural productivity of the surrounding towns, brought prosperity to the region.

Following World War II, auto ownership led to residential growth in the region's outer lying farming communities. With the shift from rail to highway for goods movement,

and widespread auto ownership, industrial and business centers began to emerge in suburban towns around Waterbury. Brass production left the region, moving closer to the ore mines, and plastics replaced brass in many products. Despite these jolts, the innovations from the brass industry enabled local manufacturers to evolve into state-of-the-art precision metal fabrication firms. Health services, banking, business services, educational services, as well as fabricated metal products, now dominate the region's economy.

The region has become much more economically diversified since World War II, and recent technological changes have added to the dispersal of population and employment. While these trends have changed the character of the region, Waterbury is still its social, cultural, and institutional center.



Glebe House, Circa 1750, Woodbury
Photo courtesy of the Seabury Society for
the Preservation of the Glebe House, Inc

Table 2.1 National Register of Historic Places, Central Naugatuck Valley

Municipality	Historic Site	Historic Bridge/Dam	Historic District
Beacon Falls	<ul style="list-style-type: none"> • Home Woolen Company 	<ul style="list-style-type: none"> • Depot Street Bridge 	
Bethlehem	<ul style="list-style-type: none"> • Celeb Martin House • Joseph Bellamy House 		<ul style="list-style-type: none"> • Bethlehem Green Historic District
Cheshire	<ul style="list-style-type: none"> • First Congregational Church of Cheshire 		<ul style="list-style-type: none"> • Cheshire Historic District • Farmington Canal Lock • Marion Historic District (partial)
Middlebury	<ul style="list-style-type: none"> • Josiah Bronson House • Tranquillity Farm 		<ul style="list-style-type: none"> • Middlebury Center Historic District
Naugatuck	<ul style="list-style-type: none"> • Bronson B. Tuttle House • Salem School • U. S. Post Office - Main 		<ul style="list-style-type: none"> • Naugatuck Center Historic District
Oxford	<ul style="list-style-type: none"> • Wooster Sawmill and Gristmill Site 	<ul style="list-style-type: none"> • Stevenson Dam 	<ul style="list-style-type: none"> • Quaker Farms Historic District
Prospect	<ul style="list-style-type: none"> • David Hotchkiss House 		<ul style="list-style-type: none"> • Prospect Green Historic District
Southbury	<ul style="list-style-type: none"> • Aaron Bronson House • Bullet Hill School • Plaster House • Rueben Curtis House • Wheeler Admin. House and Theodore F. Wheeler Wheelwright Shop • William Hurd House 		<ul style="list-style-type: none"> • Hurley Road Historic District • Little Pootatuck Brook Archaeological Site • Russian Village Historic District • Sanford Road Historic District • South Britain Historic District • Southbury Historic District No. 1 • Southbury Training School
Thomaston	<ul style="list-style-type: none"> • Hose, Hook and Ladder Truck Bldg • Thomaston Opera House • Trinity Church 	<ul style="list-style-type: none"> • Reynold's Bridge 	
Waterbury	<ul style="list-style-type: none"> • Benedict Miller House • Beth El Synagogue • Bishop School • Elton Hotel • Enoch Hibbard House and George Granniss House • George S. Abbott Building • John Kendrick House • Matthew and Willard Factory • Palace Theatre • Stapleton Building • Waterbury Brass Mill Site • Waterbury Union Station • Webster School • Wilby High School 	<ul style="list-style-type: none"> • Sheffield Street Bridge • Washington Ave. Bridge 	<ul style="list-style-type: none"> • Bank Street Historic District • Downtown Waterbury Historic District • Hamilton Park • Hillside Historic District • Lewis Fulton Memorial Park • Overlook Historic District • Riverside Cemetery • Waterbury Clock Company • Waterbury Municipal Center District • Waterbury Center Historic District
Watertown	<ul style="list-style-type: none"> • Roderick Bryan House 	<ul style="list-style-type: none"> • Skilton Road Bridge 	<ul style="list-style-type: none"> • Watertown Center Historic District
Wolcott	<ul style="list-style-type: none"> • Southwest District School 		<ul style="list-style-type: none"> • Wolcott Green Historic District
Woodbury	<ul style="list-style-type: none"> • David Sherman House • Glebe House • Jabez Bacon House 	<ul style="list-style-type: none"> • Minortown Bridge 	<ul style="list-style-type: none"> • Hotchkissville Historic District • Woodbury Historic District No. 1 • Woodbury Historic District No. 2

**Figure 2.1 National Register of Historic Places
Central Naugatuck Valley Region**



Source: National Register of Historic Places, December 2007

For more information go to:

http://www.cultureandtourism.org/cct/lib/cct/CT_National_Register_of_Historic_Places.doc

This map does not include state or local historic district.

COMMUNITY ORIGINS (in chronological order)

Waterbury (then called Mattatuck) was one of the first settlements in the region. Settlers from Farmington acquired the land area bordered by Farmington, Derby, Woodbury, and Southbury from Native Americans. Later expansions included Watertown, Plymouth, and parts of Wolcott, Middlebury, Oxford and Prospect.

Woodbury, the other early settlement in the region, was settled by families from Stratford. At one time, the Town encompassed Woodbury, Southbury, Bethlehem, and parts of Oxford, Middlebury, and Washington. Woodbury was named a town in 1686.

Cheshire was settled along the Quinnipiac River and in the southern portion of the town by farmers from Wallingford. The town was incorporated in 1780.

Watertown was originally the Wooster Swamp area of Mattatuck. It developed into the Westbury area and was incorporated in 1780 from Waterbury.

Southbury split from its original township, Woodbury, due to travel distances necessary to attend religious services. Southbury, was incorporated in 1787.

Bethlehem was settled about 1740 following the 1703 North Purchase by Woodbury. The Town of Bethlehem was incorporated in 1787.

Wolcott was incorporated in 1796 from Waterbury and the part of Farmington which became Southington. It

became Wolcott to honor Lieutenant Oliver Wolcott who cast the deciding vote in favor of its establishment.

Oxford drew its early residents from Derby, Stratford, and New Haven around 1680. Oxford was incorporated in 1798 using land from Derby and Southbury.

Middlebury was incorporated in 1807 due to the difficulty of crossing the Naugatuck River in winter to get to church. Middlebury took its name in recognition of its origins from the three “burys”, Southbury, Woodbury, and Waterbury.

Prospect was incorporated in 1827 from Cheshire and Waterbury. Known as Columbia prior to its incorporation, the town was renamed Prospect because of its many vistas offering a “prospect” view.

Naugatuck, originally part of Mattatuck, was incorporated as Naugatuck in 1844 from parts of Waterbury, Bethany, and Oxford.

Beacon Falls was incorporated in 1871 from portions of Bethany, Oxford, Naugatuck, and Seymour. The name originates from a waterfall on Beacon Hill.

Thomaston was originally formed as the parish of Northbury in Mattatuck. The parish included Plymouth. Thomaston, named for clockmaker Seth Thomas, split off from Plymouth in 1875.

OTHER SOURCES

More information on the history of the Central Naugatuck Valley region can be found in:

Connecticut, A Fully Illustrated History of the State from the Seventeenth Century to the Present, Albert Van Dusen, Random House, New York, 1961.

Historic Preservation in Connecticut, Volume IV, Western Uplands: Historical and Architectural Overview and Management Guide, Geoffrey Rossano, Connecticut Historical Commission, Hartford, 1996.

These materials, and other information on the history of towns in the region, can be found at local libraries and the Mattatuck Museum.



Edgewood Cemetery, Wolcott

3. DEMOGRAPHIC TRENDS

POPULATION TRENDS

As of 2006, the Central Naugatuck Valley Region (CNVR) had 281,895 residents according to U.S. Census estimates — an increase of 9,301 people (3.4%) since 2000 and 20,814 (8.0%) since 1990. The region is growing faster than the state, with a rate of 8.1% between 1990 and 2006 compared to 6.6% for Connecticut as a whole.¹

The City of Waterbury is home to well over a third of the region's population (see Table 3.1). Waterbury's population generally remained stable (-1.6%) between 1990 and 2006. In contrast, the Connecticut cities of Hartford (-11.0%), New Haven (-5.0%), and Bridgeport (-2.7%) lost population, while Stamford experienced population growth (10.4%). Excluding Waterbury, the population of the CNVR grew 14.8% between 1990 and 2006.

Among Connecticut's 15 planning regions, Central Naugatuck Valley ranks ninth in regional population growth between 2000 and 2006. Out of the eight regions with populations over 200,000, the CNVR ranks third in the state for regional growth after the Central Connecticut (New Britain - Bristol), and Housatonic Valley Regions (Danbury).

REGIONAL POPULATION GROWTH

Between 1990 and 2006 the southwest quadrant of the CNVR grew the most rapidly — the towns of Oxford and Southbury. Oxford experienced intense growth between 1990 and 2006, growing by 41.7%. From 2000 to 2006 Oxford led the state in population growth, increasing 25.3%. The region's pace of population growth has picked up since 2000. Even the City of Waterbury, which lost 1,690 people between 1990 and 2000, has managed to retain its population since 2000 (see Table 3.2).²

Between 1990 and 2003, the number of births in the CNVR declined 15.4%, while the number of deaths rose 8.5%.³ As a consequence, population growth from natural increase (births minus deaths) dropped 48.1% (see Figure 3.1). Nevertheless, most towns in the CNVR have many more births than deaths. The main exception is Southbury, with annually more deaths than births due to age-restricted housing (Heritage Village). As more unrestricted housing is constructed within Southbury, this trend should moderate. As other towns, specifically Oxford, build large scale age-restricted housing developments, they too may experience more deaths than births.

Table 3.1 CNVR Population

Geographic Area	2006 Estimate	2000 Census	1990 Census
CNVR	281,895	272,594	261,081
Waterbury	107,251	107,271	108,961
Remainder of Region	174,644	165,323	152,120
Beacon Falls	5,700	5,246	5,083
Bethlehem	3,577	3,422	3,071
Cheshire	28,833	28,543	25,684
Middlebury	7,132	6,451	6,145
Naugatuck	31,872	30,989	30,625
Oxford	12,309	9,821	8,685
Prospect	9,264	8,707	7,775
Southbury	19,686	18,567	15,818
Thomaston	7,916	7,503	6,947
Watertown	22,329	21,661	20,456
Wolcott	16,269	15,215	13,700
Woodbury	9,757	9,198	8,131

Source: U.S. Census Bureau, 1990 Census, 2000 Census, and 2006 Estimates

Table 3.2 Amount of CNVR Population Growth

Geographic Area	Numerical Population Change		
	2000-2006	1990-2000	1990-2006
CNVR	9,301	11,513	20,814
Waterbury	-20	-1,690	-1,710
Remainder of Region	9,321	13,203	22,524
Beacon Falls	454	163	617
Bethlehem	155	351	506
Cheshire	290	2,859	3,149
Middlebury	681	306	987
Naugatuck	883	364	1,247
Oxford	2,488	1,136	3,624
Prospect	557	932	969
Southbury	1,119	2,749	3,868
Thomaston	413	556	969
Watertown	668	1,205	1,873
Wolcott	1,054	1,515	2,569
Woodbury	559	1,067	1,626

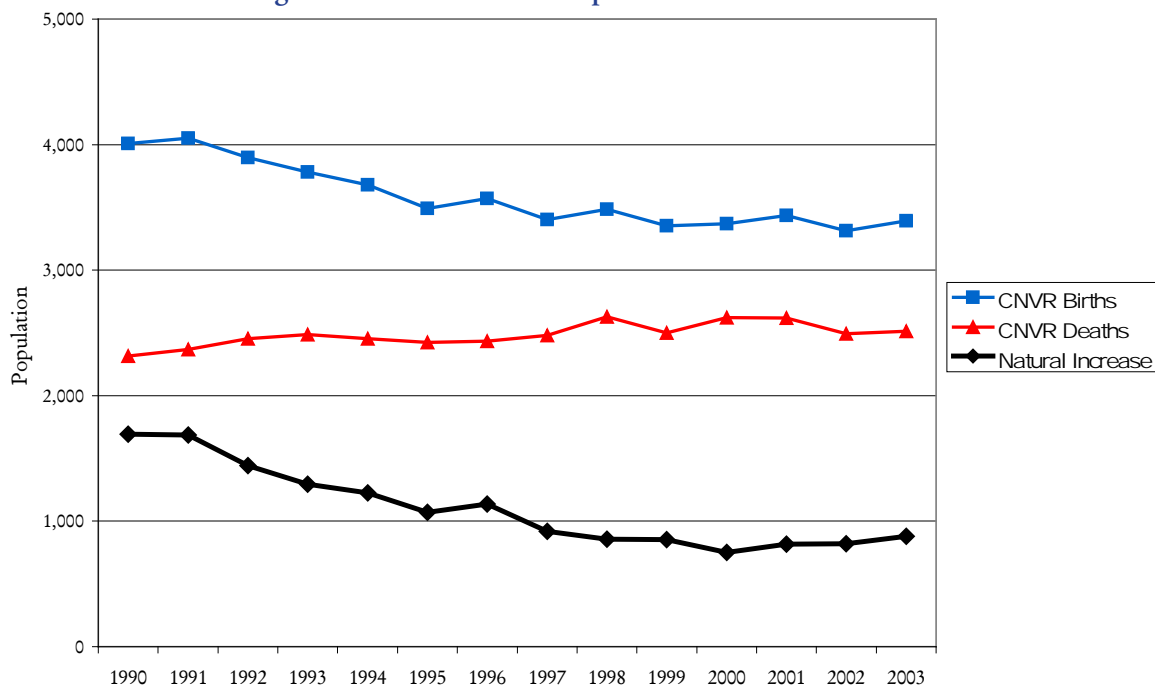
COGCNV Staff Analysis based upon U.S. Census data

Table 3.3 Rate of CNVR Population Growth

Geographic Area	Percent Change in Population		
	2000-2006	1990-2000	1990-2006
CNVR	3.4%	4.4%	8.0%
Waterbury	0%	-1.6%	-1.6%
Remainder of Region	5.6%	8.7%	14.8%
Beacon Falls	8.7%	3.2%	12.1%
Bethlehem	4.5%	11.4%	16.5%
Cheshire	1.0%	11.1%	12.3%
Middlebury	10.6%	5.0%	16.1%
Naugatuck	2.8%	1.2%	4.1%
Oxford	25.3%	13.1%	41.7%
Prospect	6.4%	12.0%	19.2%
Southbury	6.0%	17.4%	24.5%
Thomaston	5.5%	8.0%	13.9%
Watertown	3.1%	5.9%	9.2%
Wolcott	6.9%	11.1%	18.8%
Woodbury	6.1%	13.1%	20.0%

COGCNV Staff Analysis based upon U.S. Census data

Figure 3.1 CNVR Natural Population Increase



Source: CT Department of Public Health

Middlebury and Bethlehem — similar to Southbury — have experienced low population growth from natural increase, with only slightly more births than deaths. As CNVR residents age, natural population decline (deaths exceeding births) may become more common.

During the 1990s, natural increase kept the CNVR from losing population even though more people left the region than migrated to it (see Table 3.4). Waterbury experienced the greatest out-migration, losing 8,162 more people than gained from in-migration. Out-migration is responsible for the population drop seen in Waterbury between 1990 and 2000. Although Naugatuck and Beacon Falls did not lose population, they too experienced a net migration loss. Intraregional migration may have blunted the impact on the region's population size. Many of those leaving Waterbury relocated locally. Southbury and Cheshire experienced the greatest net in-migration during the last decade.

Since 2000, the region has attracted more people than it has lost. Between 2000 and 2004, 4,743 more people moved to the CNVR than left. Waterbury continued to lose more people to out-migration, though the rate of loss has halved since 2000. All other CNVR municipalities experienced net migration gains.

IMMIGRATION

A noticeable amount of the in-migration between 1990 and 2000 was driven by immigration. As of 2000, the CNVR was home to 24,475 foreign born residents⁴, an increase of 29.4% from 1990.⁵ Waterbury continues to be the region's gateway, with more than half of the CNVR's foreign immigrants. Although the region is home to many immigrants from Europe (12,011), most of these residents immigrated to the United States prior to 1980. Recent immigration has been predominately from Latin America. In 2000, CNVR residents born in Central America, South America, the Caribbean, or Puerto Rico totaled 15,356.⁶ The vast majority of Latin American immigrants and Puerto Rican migrants live in Waterbury. A majority of the region's Hispanic population (55.5%) were born outside the 50 U.S. states, mostly in Puerto Rico. Also since 1990, the CNVR experienced immigration from Asia (4,282) and a small immigration from Africa (686).⁷

Table 3.4 CNVR Migration 1990-2000

Geographic Area	Natural Increase	Net Migration	Population Growth
CNVR	12,924	-1,411	11,513
Waterbury	7,220	-8,910	-1,690
Remainder of Region	5,704	7,499	13,203
Beacon Falls	404	-241	163
Bethlehem	108	243	351
Cheshire	954	1,905	2,859
Middlebury	38	268	306
Naugatuck	2,314	-1,950	364
Oxford	696	440	1,136
Prospect	294	638	932
Southbury	-1,197	3,946	2,749
Thomaston	392	164	556
Watertown	729	476	1,205
Wolcott	565	950	1,515
Woodbury	407	660	1,067

COGCNV Staff Analysis based upon CT Department of Public Health and U.S. Census data

POPULATION PROJECTIONS

The Central Naugatuck Valley Region is projected to experience slowing growth over the the next twenty years. Between 2005 and 2025, the region can expect to gain over 17,000 new residents and reach a population of 300,000. Population growth will be 6.1% over this twenty-year period — a more robust rate than the state as a whole. The U.S. Census Bureau projects that Connecticut's population will grow 5.1% during the same time period. Waterbury's population is projected to remain steady, while the surrounding towns absorb most of the region's growth (see table 3.5). Due to declining natural increase, the future population growth in the CNVR will be dictated by migration. Migration to, from, or within the CNVR will be influenced by the economic health, housing affordability, transportation infrastructure, and quality of life of the region and its municipalities.

Table 3.5 Population Projections

Geographic Area	2006 Estimates	Population Projections				
		2010	2015	2020	2025	2030
CNVR	281,895	289,677	295,440	298,748	299,445	296,535
Waterbury	107,251	108,714	108,772	108,119	107,060	105,713
Remainder of Region	174,644	180,963	186,668	190,629	192,385	190,823
CT	3,504,809	3,577,490	3,635,414	3,675,650	3,691,016	3,688,630

COGCNV Staff Analysis based on U.S. Census Bureau Projections

AGE

The region continues to age. In 2000 the median age of CNVR residents was 37.5 years, three years older than in 1990.⁸ Overall, in 2000 the CNVR was older than the national median age of 35.3, but almost the same as the Connecticut median age of 37.4. As of 2000, Southbury was the region's oldest municipality with a median age of 45.7 years. Waterbury was the region's youngest municipality with a median age of 34.9 years. Excluding Waterbury, the median age of the CNVR was 40.0 years in 2000.

By the year 2000 the post World War II “baby boomers” had begun entering the 45-64 age group. This age group rose 26.9% since 1990 and comprised 22.8% of the region's population in 2000. The “baby boomlet” of school-aged children 5-17 grew 21.1% over the decade. Adults aged 35-44 grew a moderate 14.6%, while the 65 and older age group only grew by 1.1%. There was a substantial decline during the 1990's in the number of young adults aged 18-24 (-22.7%) and adults aged 25-34 (-23.1%). The proportion of preschoolers (under the age of 5) also declined (-3.9%).



Pond Place Medical Center, Prospect

The aging of the baby boomers and the size of their age group will lead to increased demands for elderly services such as senior recreation, transportation, home health services and medical care into the future. At the same time, the growth of the retiree population will in turn reduce municipalities' abilities to pay for services. The decline of the number in adults aged 18-34 and preschool children may compound this problem. There will be fewer employed taxpayers and less economic vibrancy due to the lack of young workers and fewer entrepreneurs. If national trends towards couples marrying later and having fewer children continue, the lack of younger adults and fewer children could lead to a decline in regional population as the baby boomers begin to die off. The decline in the number of young adults could affect the region's economic growth.

Table 3.6 CNVR 1990 - 2000 Age Distribution

Age Range	2000		1990		Percent Change
	Total	Percent of Total	Total	Percent of Total	
Under 5	18,209	6.7%	18,954	7.3%	-3.9%
5-17	52,040	19.1%	42,979	16.5%	21.1%
18-24	19,583	7.2%	25,322	9.7%	-22.7%
25-34	35,164	12.9%	45,702	17.5%	-23.1%
35-44	46,287	17.0%	40,399	15.5%	14.6%
45-64	62,033	22.8%	48,866	18.7%	26.9%
65+	39,278	14.4%	38,859	14.9%	1.1%
Total	272,594	100.0%	261,081	100.0%	4.4%
Median Age	37.5		32.7		14.7%

Source: U.S. Census Bureau, 2000 Census and 1990 Census



Woodland Regional High School, Beacon Falls

Figure 3.2 CNVR Age Cohorts 1990 and 2000

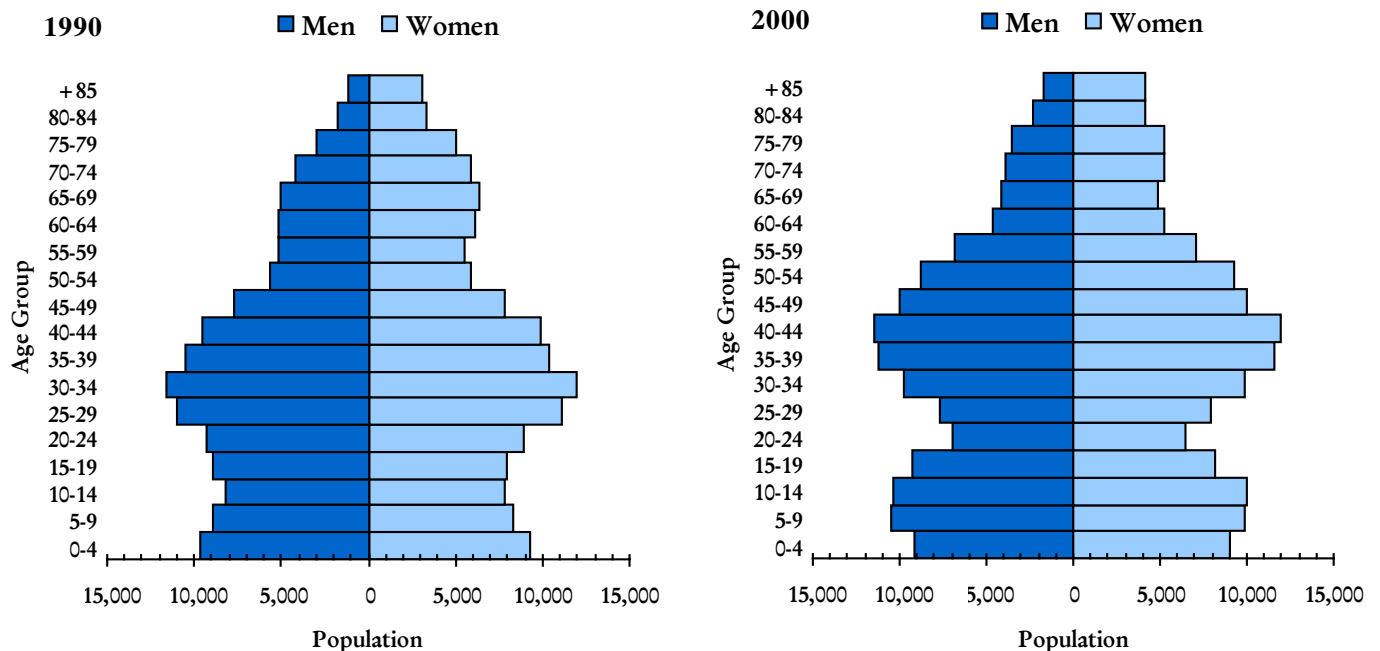


Table 3.7 2000 CNVR Racial and Ethnic Composition

Geographic Area	White	African American	Asian	American Indian	Other or Multiple Races	Hispanic ^a
CNVR	216,345	19,187	3,877	550	32,635	27,634
Waterbury	62,406	16,335	1,584	319	26,627	23,354
Remainder of Region	153,939	2,852	2,293	231	6,008	4,280
Beacon Falls	5,001	34	54	4	153	112
Bethlehem	3,320	9	27	2	64	22
Cheshire	25,105	1,270	743	44	1,381	1,097
Middlebury	6,207	21	83	4	136	79
Naugatuck	27,541	842	520	70	2,016	1,386
Oxford	9,452	50	65	16	238	180
Prospect	8,268	122	63	7	247	168
Southbury	17,844	80	214	13	416	296
Thomaston	7,268	44	37	8	146	109
Watertown	20,628	149	273	25	586	406
Wolcott	14,486	185	113	20	411	273
Woodbury	8,819	46	101	18	214	152

^aHispanic ethnicity regardless of race

Source: U. S. Census Bureau, 2000 Census



Playing at Bunker Hill Park, Waterbury

ETHNIC AND RACIAL COMPOSITION

According to the 2000 Census, 83.8% of CNVR residents identified themselves as white, 7.5% as black or African-American, 0.3% as American Indian and Alaska Native, 1.4% as Asian, and 4.8% as some other race or combination of races (see table 3.7). The region's non-white population was 44,060 and constituted 16.2% of the region's total population in 2000, a 63.7% increase from 1990. In 2000, 80.0% of the region's racial minority population lived in Waterbury, accounting for 32.9% of the city's total population. Cheshire had the second largest number of minority residents, representing 10.6% of its population, followed by Naugatuck with 8.2%. In the remaining CNVR towns, the minority population ranged from 2.1% to 3.7%.⁹

In 2000, people identifying themselves as Hispanics totaled 27,634 and comprised 10.1% of the CNVR's population. Between 1990 and 2000, the number of Hispanics in the region grew by 59.9%. As of 2000, 84.5% of the region's Hispanic population lived in Waterbury and constituted 21.8% of the city's population. Naugatuck and Cheshire were home to the second and third largest portion of the region's Hispanic population with 4.5% and 3.8%, respectively. The remaining 7.2% of the CNVR's Hispanic residents lived in the region's other towns.



Waterbury Green

Table 3.8 CNVR Households

Geographic Area	Number of Households 2000	Change Since 1990	Average Household Size 2000	Change Since 1990
CNVR	103,155	5.6%	2.64	-1.4%
Waterbury	42,622	-1.3%	2.52	-0.3%
Remainder of Region	60,533	10.4%	2.73	-2.6%
Beacon Falls	2,032	7.0%	2.58	-4.1%
Bethlehem	1,246	10.4%	2.75	-0.1%
Cheshire	9,349	10.8%	3.05	-0.9%
Middlebury	2,398	7.1%	2.69	-2.5%
Naugatuck	11,829	4.2%	2.62	-3.1%
Oxford	3,343	15.8%	2.94	-4.8%
Prospect	3,020	15.4%	2.88	-5.2%
Southbury	7,225	14.1%	2.57	0.9%
Thomaston	2,916	9.7%	2.57	-2.5%
Watertown	8,046	9.8%	2.69	-4.5%
Wolcott	5,414	14.4%	2.81	-4.9%
Woodbury	3,715	12.8%	2.48	-1.4%

Source: U. S. Census Bureau, 2000 Census

HOUSEHOLDS

As the CNVR ages, the size of its households has declined. In 2000, the average CNVR household size was 2.57 persons¹⁰, down from 2.62 in 1990¹¹ (see table 3.8). On average, CNVR households are larger and shrinking less slowly than the average Connecticut household. Average household size in the CNVR is still smaller and shrinking faster than the national average.

In 2000, Oxford had the region's largest households with an average size of 2.94 persons, down from 3.09 in 1990. Southbury had the region's smallest households with an average size of 2.41 persons in 2000, up from 2.34 persons per household in 1990. Southbury was the only town to experience growth in average household size in the CNVR during the decade. The trend was driven by growth in the town, particularly the construction of non-age-restricted single family houses.

The number of married couple households in the CNVR declined between 1990 and 2000. The proportion of all CNVR households that are comprised of married couple households (with or without children) also declined 4.5 percentage points from 57.0% to 52.5%. Similar percentage declines were observed in all towns except Southbury which had a larger proportion of married couple households in 2000 than in 1990. During the same timeframe, the number of single person, single parent householders, and non-family households in the CNVR all increased. In 2000, Waterbury had the highest proportion of single parent households (24.3%) and single person households (31.4%) (see Table 3.9). Beacon Falls had the highest proportion of non-family households (5.7%).

Table 3.9 CNVR Household Types

Municipalities	Single Person	2 or More Person Households		
		Married Couples	Single Householder / No Spouse	Non-Family Households
CNVR	25.9%	52.5%	16.9%	4.6%
Waterbury	31.4%	38.8%	24.3%	5.4%
Remainder of Region	22.1%	62.2%	11.7%	4.0%
Beacon Falls	23.0%	58.2%	13.1%	5.7%
Bethlehem	19.6%	65.7%	9.5%	5.3%
Cheshire	19.4%	68.5%	9.1%	3.0%
Middlebury	20.1%	67.3%	9.1%	3.5%
Naugatuck	24.9%	53.3%	16.8%	4.9%
Oxford	12.6%	73.8%	9.9%	3.7%
Prospect	15.1%	71.1%	10.4%	3.4%
Southbury	29.8%	59.8%	7.0%	3.3%
Thomaston	24.0%	57.5%	13.4%	5.1%
Watertown	21.7%	61.7%	12.8%	3.8%
Wolcott	18.0%	66.0%	12.5%	3.5%
Woodbury	25.4%	58.9%	10.4%	5.4%

Source: U.S. Census Bureau, 2000 Census

INCOME AND POVERTY

The regional median household income was \$49,855 in 1999¹² (see table 3.10). Cheshire was the wealthiest municipality, with a median household income of \$80,466. Oxford and Middlebury followed with median household incomes of \$77,126 and \$70,469. Waterbury was the poorest municipality with a median household income of \$34,285. Between 1989 and 1999 the income gap grew as the median household incomes in the CNVR's six wealthiest towns grew and incomes dropped in the remaining seven towns. In 1999, Cheshire's median household income was 2.3 times larger than Waterbury's, up from 1.9 times in 1989. When corrected for inflation, median incomes for households in the CNVR dropped 6.7% between 1989 and 1999.¹³

In 1999, 22,832 CNVR residents or 8.6% of the region's population assessed by the Census, lived in poverty.¹⁴ The CNVR had a greater incidence of poverty than Connecticut as a whole, which had a rate of 7.9% and a slightly lower incidence of poverty than the nation as a whole, which had a rate of 12.4%. The incidence of poverty in the CNVR had grown by 28.4% between 1989 and 1999.¹⁵ Statewide incidence of poverty also grew, but only 15.9%, while at the same time that incidence of poverty nationwide dropped by 5.5%.

The ranks of those just above the poverty line (earning no more than 150% of the poverty line), commonly called the working poor, numbered 16,597 or 6.2% of

Figure 3.3 Population Density
Central Naugatuck Valley Region

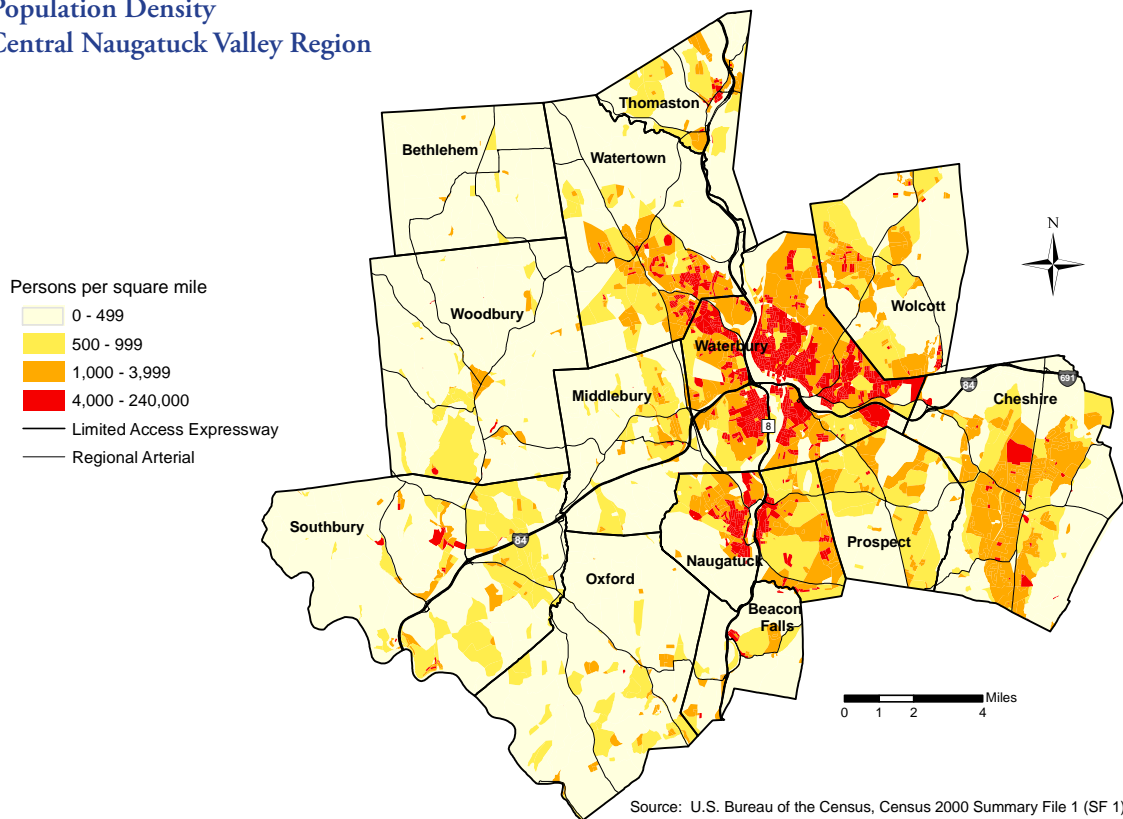
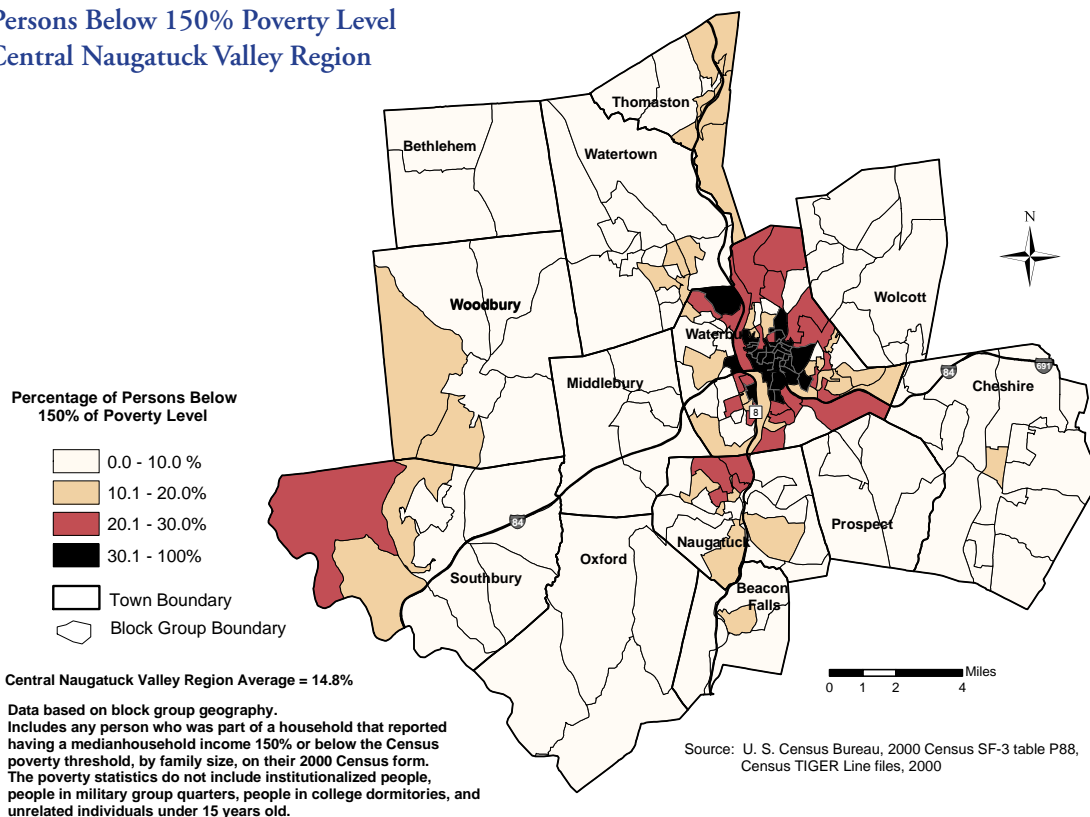


Figure 3.4 Persons Below 150% Poverty Level
Central Naugatuck Valley Region



the region's population in 1999, up from 4.4% in 1989. Most of the region's poverty is concentrated in Waterbury with 73.5% of the region's poor and 67.5% of the region's working poor living there in 1999. Nevertheless, poverty is a regional issue with growth in the number and percentage of CNVR residents living in poverty or near poverty being observed in all towns, except Bethlehem, Middlebury, Prospect, and Watertown between 1989 and 1999. In fact between 1989 and 1999 poverty rates grew faster outside of Waterbury as the relative percentage of regional poor living in Waterbury declined from 75.7% to 73.5%.

Overall, growing income disparities and incidence of poverty in the CNVR are trends that are continuing. They are regional issues of concern.

MAJOR DEMOGRAPHIC TRENDS

- Continued population growth, but slowing
- In-migration from other regions (Stamford, New Haven, and New York City)
- Increased and continued immigration from outside U. S.
- Aging population
- Shortage of young workers
- Shrinking households and families (empty nest / childless families)
- Growing income disparities between wealthy and poor
- Income growth not keeping pace with inflation
- Growing incidence of poverty and working poor
- Poverty growth outside Waterbury
- Increasingly racial and ethnic diversity in regional population
- Racial and ethnic isolation

Table 3.10 Median Household Income

Geographic Area	1999	1989 (in 1999 Dollars)*	Percent Change
CNVR	\$49,855	\$53,437	-6.7%
Waterbury	\$34,285	\$41,193	-16.8%
Remainder of Region	\$62,534	\$63,190	-1.0%
Beacon Falls	\$56,592	\$58,882	-3.9%
Bethlehem	\$68,542	\$64,740	5.9%
Cheshire	\$80,466	\$78,588	2.4%
Middlebury	\$70,469	\$66,815	5.5%
Naugatuck	\$51,247	\$53,834	-4.8%
Oxford	\$77,126	\$73,458	5.0%
Prospect	\$67,560	\$65,373	3.3%
Southbury	\$61,919	\$63,862	-3.0%
Thomaston	\$54,297	\$55,114	-1.5%
Watertown	\$59,420	\$61,741	-3.8%
Wolcott	\$61,376	\$65,443	-6.2%
Woodbury	\$68,322	\$67,897	0.6%

*Adjusted using the Consumer Price Index

Source: U.S. Census Bureau, 2000 Census, US Bureau of Labor Statistics, and COGCNV Staff Analysis

¹ U. S. Census Bureau, 2000 Census, SF-1

² U. S. Census Bureau, 2000 Census, SF-1

³ Connecticut Department of Public Health

⁴ U. S. Census Bureau, 2000 Census, SF-3 table P22

⁵ U. S. Census Bureau, 1990 Census, STF-3 table P036

⁶ U. S. Census Bureau, 2000 Census, SF-3 tables PCT20 and P21

⁷ U. S. Census Bureau, 2000 Census, SF-3 table PCT20

⁸ U. S. Census Bureau, 2000 Census, SF-1 table P12 and 1990 Census, SF-1 table P011

⁹ U. S. Census Bureau, 2000 Census, SF-1

¹⁰ U. S. Census Bureau, 2000 Census, SF-1 table P17

¹¹ U. S. Census Bureau, 2000 Census, SF-1 tables P003 and P015

¹² U. S. Census Bureau, 2000 Census, SF-3 table P53

¹³ U. S. Census Bureau, 2000 Census, SF-3 table P85

¹⁴ U. S. Census Bureau, 2000 Census, SF-3 table P88

¹⁵ U. S. Census Bureau, 1990 Census, STF-3 table P121

4. LAND USE & GROWTH PATTERNS

CURRENT CONDITIONS

The Central Naugatuck Valley Region encompasses about 200,800 acres (314 square miles). As of 2000, about 48 percent was developed or committed to a long term use, 43 percent was either vacant, not committed to a specific use, or a waterbody, and 9 percent was used for agricultural or resource extraction uses. Table 4.1 and Figure 4.3 summarize how the area was used in 2000 based on aerial photographs, USGS maps, field surveys, previous regional and local land use surveys, and information from town planners.

LOCATION OF GROWTH

The location of growth is a major issue in the Central Naugatuck Valley Region. While Waterbury is the residential, economic, institutional, and cultural center, the region is changing from a center city surrounded by residential suburbs to a metropolitan area with dispersed employment and generally low density housing developments.

Residential growth in the region during the 1990s was slower than in the 1970s or the 1980s. The pace of residential growth was faster in outlying communities (8.7 percent) than it was in Waterbury (-1.6 percent) and regionally about the same as the state as a whole (3.6 percent).

This suburban growth pattern is expected to continue during the planning period due to:

- Perceptions of quality of life, community character, and education.
- Availability of automobile transportation to most of the population.
- Social and economic influences.
- Availability of vacant land.

While outlying communities are, or have been, heralded for their rural character and availability of vacant land, the changing form of the region reduces the amount of vacant land (often perceived as open space). Continuation of current patterns of development threatens the very features that attract people to these areas.

Dispersed suburban and rural growth can result in:

- Under-use of infrastructure capacity in urban areas.
- Increased demand for costly infrastructure in previously undeveloped areas.
- Increased intergovernmental funding for the provision of new services.
- Fewer economies of scale in the provision of municipal services.
- Increased demand for development in outlying areas in order to expand the tax base or provide goods and services.
- Loss of prime and important farmland.
- Negative environmental impacts (air, water, and energy).
- Adverse effects on aquifers and watersheds.



Farming meets Residential Development in Cheshire

Table 4.1 Central Naugatuck Valley Region Land Use: 2000

Existing Land Use	Acres	Percent of Developed Land	Percent of Total Land
Residential			
High Density	990	1.0%	0.5%
Medium Density	11,720	12.1%	5.8%
Low Density	57,690	59.4%	28.7%
Business			
Commercial - Trades and Services	2,770	2.9%	1.4%
Industrial	4,040	4.2%	2.0%
Public & Institutional Uses			
Community Facilities/Institutional	3,200	3.3%	1.6%
Open Space and Recreation	14,050	14.5%	7.0%
Transportation/Utilities	2,670	2.7%	1.3%
Developed / Committed	97,130	100%	48.3%
Other Uses			
Agriculture	16,200		8.1%
Resource Extraction/Production	1,780		0.9%
Water	4,410		2.2%
Vacant / Remaining Potential	81,360		40.5%
Total Land Area	200,880		100.0%

Source: Central Naugatuck Valley Region 2000 Land Use Survey

BUILD-OUT

Over 65,000 acres of residentially zoned land remains to be developed in the region. In 2007, working with the University of Connecticut's Center for Land Use Education and Research, staff performed a build-out analysis using three approaches: a standard mathematical calculation, a GIS model using readily available data, and a parcel specific model (Community Viz) for Woodbury. The Community Viz program requires up-to-date digital parcel information that was only available for Woodbury. All the models used existing zoning regulations and an efficiency factor to reflect new roads, lot configuration, required open space, and other factors. The purpose of the

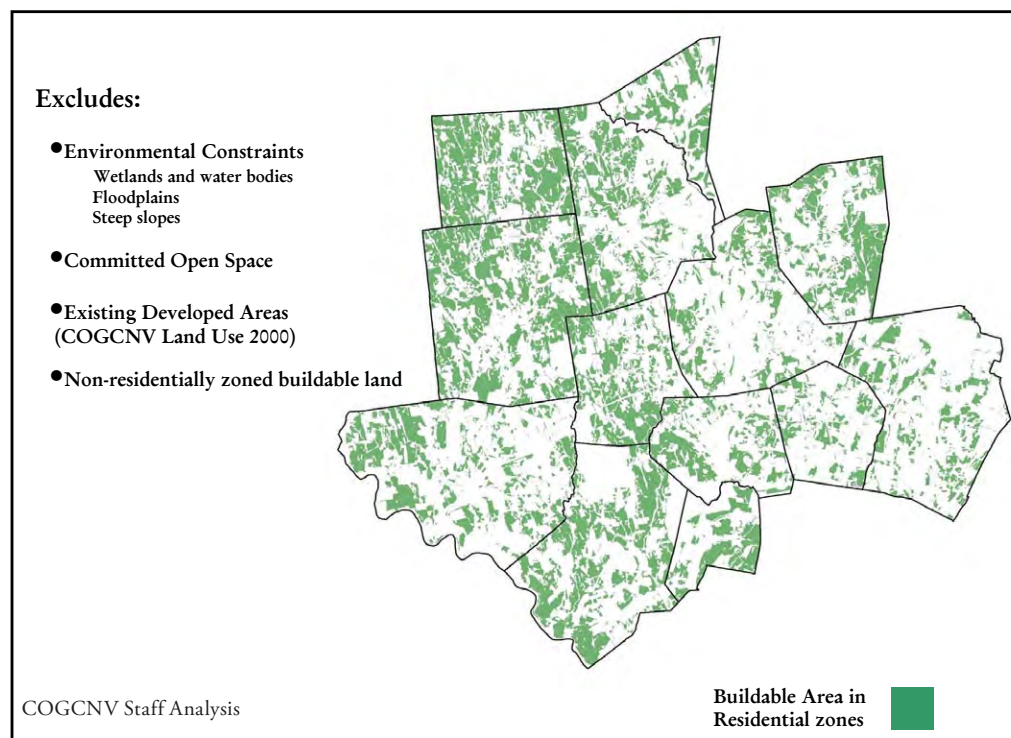
build-out is to project the potential population growth under existing zoning, not at any specific time. The GIS model projects the potential population using a formula that included all remaining land that can be residentially developed in each municipality, the number of acres required for development in each zoning district, average household size, and an efficiency factor. Note that Waterbury's potential population reflects the permitted high zoning densities under the City's present zoning regulations. The resulting population projections at full build-out are shown in Table 4.2.

Table 4.2 CNVR Build-Out Final Results

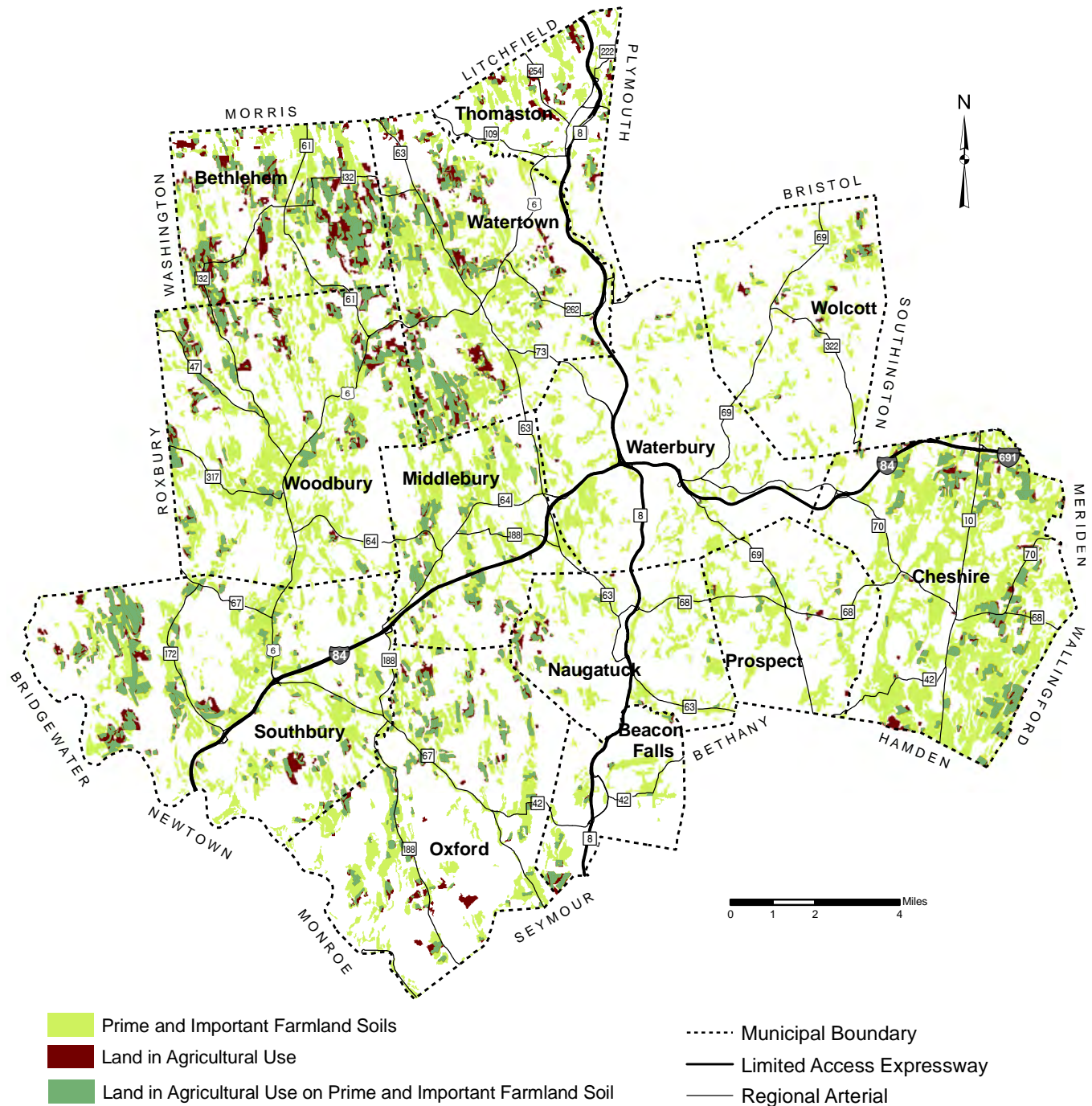
Municipality	2005 Population Estimates	Efficiency Factor	Total Build-out Population	
			Mathematical (non-GIS)	Basic GIS Using Land Use
Beacon Falls	5,596	50%	9,120	9,060
Bethlehem	3,596	50%	4,610	6,280
Cheshire	29,097	60%	35,280	35,100
Middlebury	6,974	50%	11,600	12,030
Naugatuck	31,864	60%	48,340	44,610
Oxford	11,709	50%	14,410	19,470
Prospect	9,234	50%	11,760	12,320
Southbury	19,677	50%	24,410	25,400
Thomaston	7,938	60%	13,280	12,350
Waterbury	107,902	70%	296,230	175,790
Watertown	22,330	60%	34,440	31,480
Wolcott	16,228	60%	16,440	21,730
Woodbury	9,734	50%	15,440	16,320
CNVR	281,879		535,360	421,940

COGCNV Staff Analysis

Figure 4.1 Basic GIS CNVR Build-Out



**Figure 4.2 Land in Agricultural Use and
Prime and Important Farmland Soils
Central Naugatuck Valley Region**



Source: Prime & Important Farmland Soils, DEP
Agricultural Land Use identified by COGCNV using 2000 State Aerials

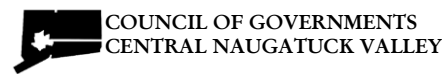
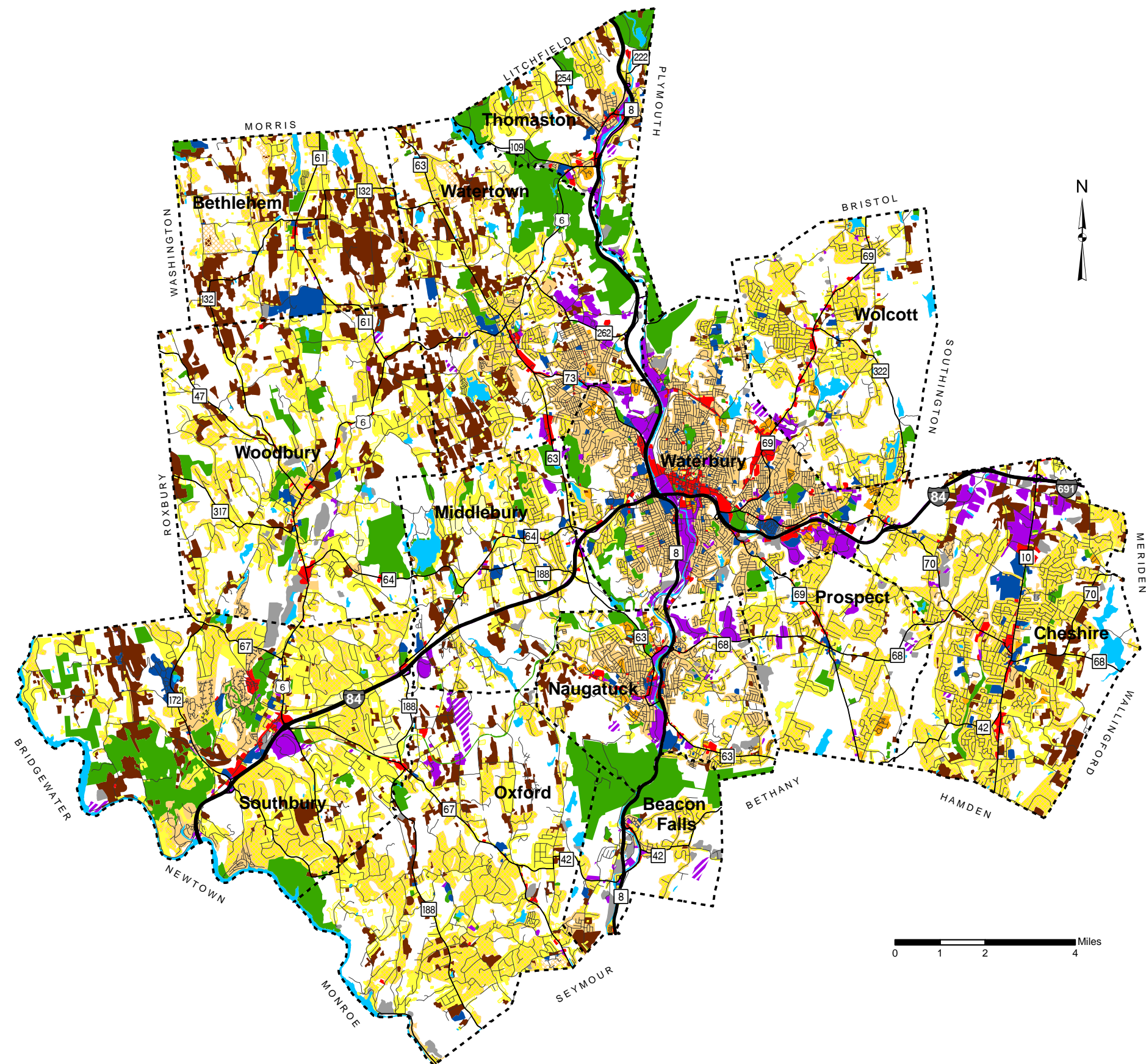
Figure 4.3 Generalized Land Use
Central Naugatuck Valley Region
2000

Landuse

- AG Agriculture
- CF Institutional
- CM Commercial
- IN Industrial
- RC Recreational
- RX Resource Extraction
- TU Transportation & Utilities
- UL Undeveloped Land
- W Water

- Urban High Density > 8 Units/Acre
- Urban Low Density 2-8 Units/Acre
- Suburban High Density 1-2 Units/Acre
- Suburban Low Density 1/2 Unit/Acre
- Estate < 1/2 Unit/Acre

- Municipal Boundary
- Limited Access Expressway
- Regional Arterial
- Local Roads



Source: Central Naugatuck Valley Region 2000 Land Use Survey
Disclaimer: This map is intended for general planning purposes only.

GENERALIZED
LAND USE

MAJOR RECOMMENDATIONS

Guide the location of growth in the region towards the regional center and areas with infrastructure.

More compact settlement patterns that take advantage of available infrastructure (water, sewer, and transportation) will prove to be a more economical and efficient growth strategy for the future of the region. Often called “smart growth,” significant efforts will be required to make such changes since land in suburban parts of the region may be more available, easier to develop, and have lower taxes at present.

Recommendations

1. Encourage growth in areas where adequate infrastructure, including the transportation network, is available.
2. Discourage large-scale residential, commercial, and industrial development in rural development areas.
3. Continue to address issues associated with suburban growth pressure.
4. Consideration of potential impacts in development of emergencies caused by natural disasters.
5. Encourage municipalities to undertake pre-disaster mitigation planning activities.
6. Preserve scenic beauty and habitat values of the region's rivers, tributaries and wetlands.

Educate municipal commissions and others about the fiscal impacts of growth within the region.

All communities in the region rely on the property tax for revenue generation. Due to local differences, some communities fare better than others, and this results in fiscal inequality, unequal tax burdens, and lack of regional cooperation in areas of common concern. This results in pressure to permit developments that appear to provide net positive tax benefits in the short term for municipalities, such as over 55 housing.



Aerial View of Downtown Waterbury

The Council of Governments commissioned the planning firm, Planimetrics of Avon, in 1999 to do a fiscal impact study of land uses. The study concluded:

- Residential uses typically received more in services than they provide in tax revenue. The key determinant of whether a residential use will produce a fiscal surplus is whether it produces public school pupils.
- Municipal services are generally configured to benefit residents (voters) while revenue comes from a variety of sources.
- To maximize fiscal benefits to existing residents, most communities want to attract new non-residential development, receive more state aid and generate more revenue from non-tax sources.

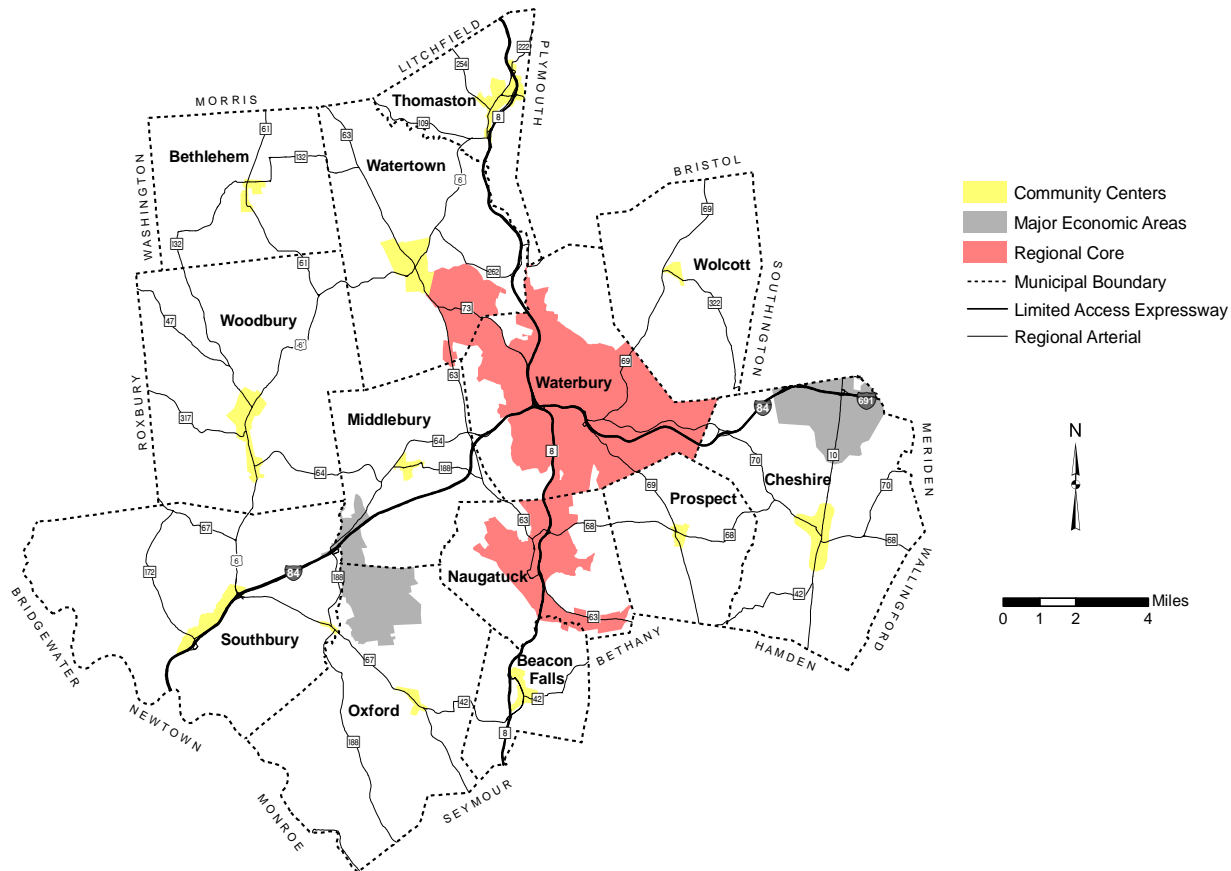
Recommendations

1. Encourage communities to cooperate in obtaining fiscal benefits that will benefit all residents of the region.

Encourage periodic review of local land use regulations.

Land use regulations are the most effective way to shape land use patterns in the region. However, this will only be effective if local regulations are periodically reviewed to ensure that they meet community and regional needs.

**Figure 4.4 Economic and Community Centers
Central Naugatuck Valley Region**



Recommendations

1. Assist communities in periodic reviews of their land use regulations to ensure that the changing needs of the region's population can be met (such as affordable housing development or accessory apartment regulations).
2. Discourage policies that reinforce patterns of racial, social, or economic segregation or concentration.
3. Encourage protection of natural and cultural resources (historic and archeological). Water resources should be a high priority.

Encourage settlement patterns that reduce the rate of land consumption in the region.

Most of the growth in the region is low density residential growth that consumes land at a faster rate than historic

settlement patterns. This pattern reduces the amount of vacant land (perceived as open space), changes the character of the region, and contributes to problems with air quality, traffic, energy consumption, and the efficient provision of services. The amount of low density use increased by almost 20,000 acres between 1990 and 2000.

Low density residential development increases the cost of housing. While high cost, low density, owner-occupied, single family homes are usually preferred by those who can afford them, many people are excluded and community diversity (social, racial, economic) can be adversely affected. Low density development also places farming in jeopardy as farming needs a critical mass to supply services and create a "farm friendly" atmosphere.

Recommendations

1. Encourage settlement patterns that efficiently use the region's infrastructure and preserve open space and natural resources.
2. Encourage mixed use developments in regional and community centers.
3. Encourage cluster development in appropriate areas where soil and environmental conditions would permit.
4. Encourage affordable housing and social, racial, and economic diversity.
5. Work to maintain the environment necessary for farms and the farming industry.
6. Explore land use tools such as the transfer of development rights as a means to reduce the rate of land consumption.

Recognize farmland as an important natural resource worthy of conserving for farming activity as well as its present aesthetic and economic benefits to the community.

Agriculture is important in the Central Naugatuck Valley Region for its aesthetic and economic value. There are over 11,000 acres of prime and important farmland soil in agricultural use. Agriculture can help bolster tourism, act as a barrier to development, and provide a local food source. Also, farms are generally a fiscal surplus for a community as a commercial land use, depending on the impact on local schools. However, land in agricultural use has decreased by 13 percent between 1990 and 2000, and there is a conflict between agricultural use and suburban development when they become neighbors.

COGCNV funded an agricultural land research study on this topic through its coordination with the Pomperaug River Watershed Coalition, where loss of farmland in the watershed has a close correlation to the increased demand for available, clean water and rapid development. The study found significant public support for farming, both statewide and in the watershed communities (Bethlehem, Woodbury, and Southbury).

Recommendations

1. Work with groups involved in preserving agricultural



Platt Farm, Southbury

soils and farming as a viable land use in the region or to meet open space targets.

2. Encourage the incorporation of agriculture in local plans of conservation and development, including inventories of farm businesses and farmland.
3. Help develop specific tax, zoning, and land use strategies to address farm retention and reduce impediments to farming activities.

Facilitate sustained and coordinated efforts to renovate contaminated sites.

The re-use of many well-located industrial sites in the region is impeded by environmental contamination from



Former Plume & Atwood Brass Mill, Thomaston

prior uses. Such sites need to be viewed as challenges rather than as obstacles to economic growth in the region.

Absent the contamination, the majority of these sites have a superior location relative to highway access, rail access, and access to public water and sewer facilities. Sustained and coordinated efforts will be necessary to bring these sites back to productive use.

Recommendations

1. COGCNV should serve as a clearinghouse for information on state and federal funds available for the clean-up of contaminated sites.
2. COGCNV, in its legislative efforts, should lobby annually for bond funds to address local clean-up of contaminated sites.



Hotchkiss House, Prospect

Encourage preservation of cultural resources.

The region contains a variety of historical, archeological, and other cultural resources that are worthy of preservation.

Recommendations

1. Encourage efforts to preserve important historical and cultural resources in the region.



Thomaston Opera House, circa 1884

5. NATURAL RESOURCE CONSERVATION

OVERVIEW

Significant natural resources in the region include the major north-south ridges and river valleys that define the landform of the region, the soils that support land uses and activities, water resources that sustain the region, the air that we breathe, and the plants and animals that inhabit this area. Conservation of these resources is an important element of the Regional Plan of Conservation & Development.

CURRENT CONDITIONS

Environmental constraints are an important criterion for future land use. They provide a method for setting parameters for the intensity of development — areas with more severe constraints should be developed at lower intensities.

The following table summarizes the natural resources that most affect conservation and development efforts and the rationale for their consideration in the Plan.

Table 5.1 Summary of Resources Affecting Conservation and Development

Resource	Category	Rationale for Conservation
Landform	Hilltop, ridgeline, valley, or water body.	Scenic views, community character.
Steep Slopes	15 percent or more	Slope stability, potential for erosion, structural concerns.
Soils	Poorly Drained (Wetlands)	Habitat, water quality, and flood storage functions. Groundwater impairs septic systems and buildings.
	Hardpan	Groundwater impairs septic functions and buildings.
	Shallow and Rocky	Shallow soils impair septic function and construction.
	Excessively Drained	Susceptible to contamination.
Floodplains	Watercourse	Periodic flooding, threat to life and property.
Water Quality	Surface	Protect supply watersheds, prevent pollution.
	Groundwater	Protect supply aquifers, prevent pollution.
Aquifers	Water Quantity	Provide adequate water supply.
	Water Quality	Provide safe water supply.
Air	Air Quality	Provides healthy environment.
Plants	Diversity	Plant habitat, endangered species, forestry.
Animals	Diversity	Animal habitat, endangered species, migration.

The following table and map show how these resources can be used to estimate constraints to development. Natural resources have been classified as to whether they pose minimal, moderate, severe, or prohibitive constraints to development. Conversely, these areas can be considered to present low, modest, important, or significant opportunities for natural resource conservation.

This type of analysis suggests areas where, in the absence of public water supply or public sewer service, land use intensity should reflect the natural capabilities of the land. In other words, it can be the starting point for zoning cat-

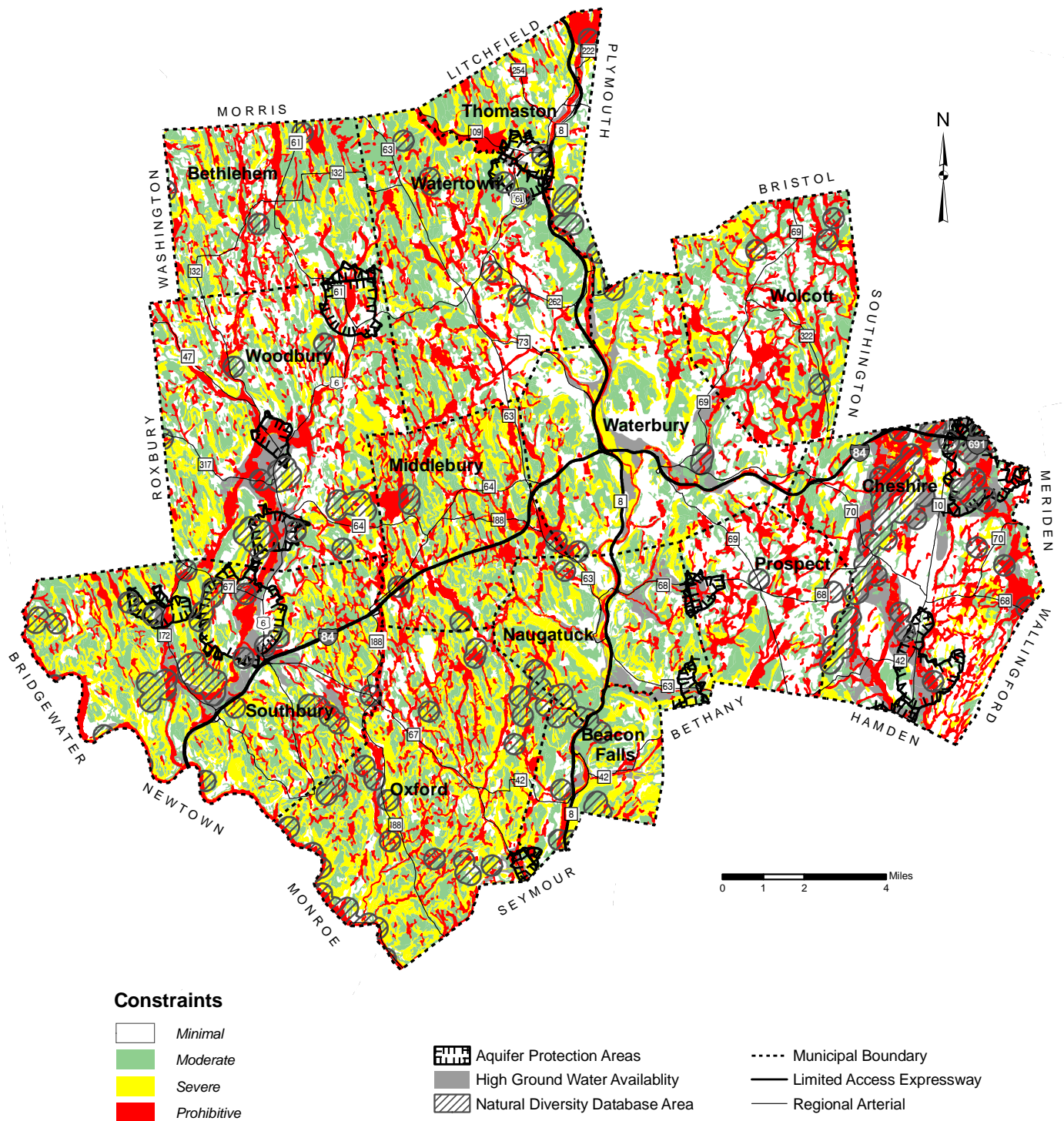
egories that consider soil type, terrain, and infrastructure capacity.

While these resources influence development patterns and densities, development can also adversely affect sensitive natural resources. The impact of land uses on public water supply watersheds, areas of high groundwater availability, and areas of excessively drained soils (all potentially subject to contamination) need to be considered. Natural diversity areas, sites with endangered plant and animal species and unique habitats, should also be protected from adverse impacts of development activities.

Table 5.2 Natural Resources Summary Table

Development Constraint	Conservation Opportunity	Definition	Resource Condition
Minimal	Low	Having only few or slight environmental constraints to development. Most difficult to conserve from development.	Excessively drained soils Well drained soils, less than 15% slopes
Moderate	Modest	Having moderate or localized severe restrictions on development which may be overcome with environmental planning and mitigation. Difficult to conserve from development.	Well drained soils, 15-25% slopes Well drained soils, high seasonal water table Hardpan soils, less than 15% slopes Shallow or rocky soils, less than 15% slopes
Severe	Important	Having some severe or very severe limitations on development which may be difficult to overcome with environmental planning and mitigation. Present many opportunities to conserve important natural resources and functions.	Any soil with slopes in excess of 25% Shallow or rocky soils, 15-25% slopes Hardpan soils, 15-25% slopes Hardpan soils, high seasonal water table Floodplain (500-year, 0.2% probability)
Prohibitive	Significant	Having only severe or very severe limitations on development. Represent areas where it is most important to conserve natural resources and functions.	Watercourses and waterbodies Poorly drained soils (wetlands) Floodplain (100-year, 1.0% probability)

Figure 5.1 Natural Resource Constraints and Areas Sensitive to Development
Central Naugatuck Valley Region



For general planning purposes only. Detailed review of specific field conditions is required

LAND USE INTENSITY GUIDELINES

The preceding natural resource information suggests the following land use intensity guidelines for development in the region.



Aerial View of Subdivision, Oxford

Table 5.3 Recommended Land Use Intensity Ranges

Private Septic Systems

Constraint Level	Maximum Density (units/acre)		Minimum Lot Size (acres)	
	Private Well	Public Water	Private Well	Public Water
Minimal	1.0	1.33	1.0	0.75
Moderate	0.67	1.0	1.5	1.0
Severe	0.5	0.67	2.0	1.5
Prohibitive	*	*	*	*

* No development is recommended in areas of prohibitive constraints.

Public Sewer Systems

Constraint Level	Minimum Density (units/acre)		Maximum Lot Size (acres)	
	Private Well	Public Water	Private Well	Public Water
Minimal	1.33	2.0	0.75	0.5
Moderate	1.33	2.0	0.75	0.5
Severe	0.67	1.0	1.5	1.0
Prohibitive	*	*	*	*

* No development is recommended in areas of prohibitive constraints.



Aerial View of Golf Community, Oxford

The tables can be interpreted as follows:-

- Recommended *minimum lot size* in an area of moderate development constraints that is served by private septic systems and wells would be 1.5 acres per lot (or a *maximum density* of 0.67 units per acre).
- Recommended *maximum lot size* in an area of moderate development constraints that is served by public sewer and public water would be one-half acre (or a *minimum density* of 2.0 units per acre).

These are general guidelines. Detailed review of field conditions and/or design of an engineered septic system may be cause to reevaluate these guidelines.

PRE-DISASTER MITIGATION

Natural hazard emergencies often arise from increased impervious surface, improper building locations, or poor site design, coupled with major storms. FEMA's Pre-Disaster Mitigation program provides planning funds to communities to identify likely natural hazards and projects to reduce the potential damage from natural hazard emergencies. All CNVR municipalities have approved pre-disaster mitigation plans or are in the process of creating them. Most of the mitigation projects in the plans focus on water impacts such as flooding, storm drainage, and icing. With approved plans, the municipalities will be eligible for state and federal assistance for some of their priority mitigation projects.

IMPERVIOUS SURFACES

An impervious surface limits the ability of water to drain into the soil, increasing the speed, temperature, and pollutant carrying capacity of the runoff. Over time, increased sediment loads cause streams to change form, destroying valuable riparian and streambed habitat. An impervious surface can be a roof, road, driveway, parking lot, hard packed soil, and other surfaces that seal the soil surface, preventing rainwater from soaking into the ground. The amount of impervious surface in a local watershed is a significant factor in the health of the watershed.

There are 576 local watersheds located, wholly or in part, in the Central Naugatuck Valley Region. According to research provided by the University of Connecticut CLEAR project, a watershed is harmed when it becomes over 10% impervious. At 25% impervious, major degradation occurs, which is extremely expensive to remediate. Currently, 22% of the region is already affected by impervious surfaces and 6% is degraded. Under current zoning regulations, if the region becomes fully built-out, these proportions rise to 43% and 16%.



5th Street damage after storm, Waterbury

MAJOR RECOMMENDATIONS

Protect water resources in the region.

Surface water and groundwater quality is an important resource issue in the region for:

- Abundant, clean water for residents and businesses.
- Recreational and other amenities in the region.
- The health of the area ecosystem.

Water quality is affected by land use and development activities. Increased development and increased percentages of impervious surfaces swell the amount and rate of runoff and escalate the amount and concentration of pollutants entering watercourses. While reducing non-point source pollution is difficult to achieve, it is instrumental in improving the region's water quality as well as that of Long Island Sound's. Other water resources such as floodplains and wetlands must also continue to be protected. These resources provide important functions such as flood control, water quality, aquifer recharge, and wildlife habitat.

Watersheds provide a good basis for environmental management strategies since the outlet is a barometer of the activities in the watershed. Land use management and water quality protection efforts will be enhanced by undertaking and implementing comprehensive watershed management plans. Scientific research such as that undertaken by the Pomperaug River Watershed Coalition helps set statewide parameters for water resource planning.

**Figure 5.2 Imperviousness of Local Basins (Watersheds)
Central Naugatuck Valley Region**

- Municipal Boundaries
- Local Basin Boundaries

Imperviousness summarized by basin

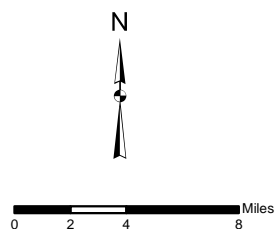
- 0 - 10 % Streams are generally protected
- 10 - 25 % Streams are impacted
- 25 - 100 % Streams are degraded

Build-out Methodology

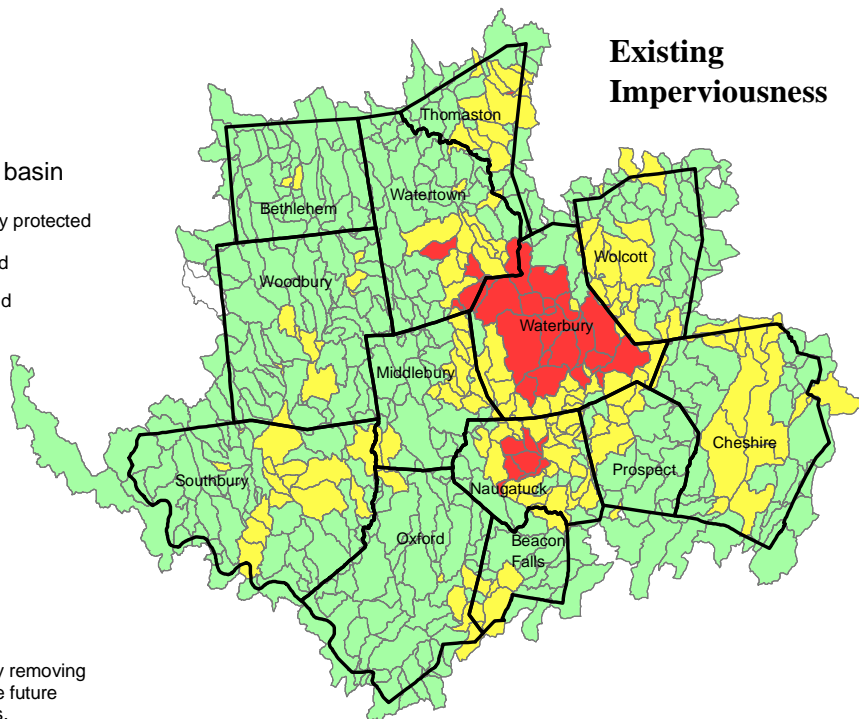
Available buildable land was determined by removing those areas that cannot be built upon in the future due to environmental or regulatory limitations.

The buildable acreage in each zoning category was multiplied by a zoning-based coefficient which represents the expected percentage imperviousness that will result when built out.

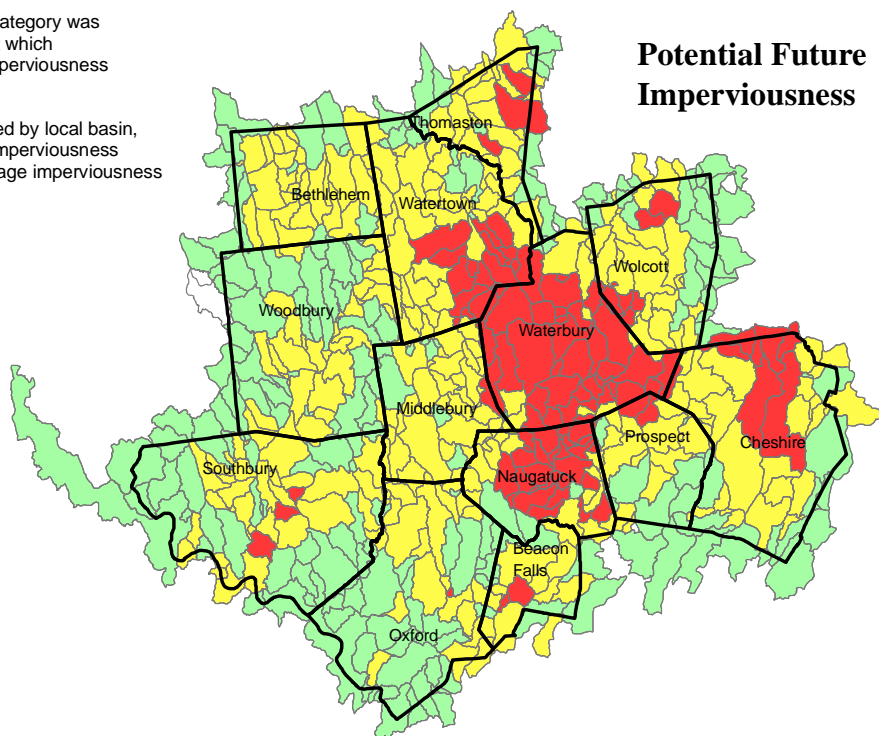
This "new " imperviousness, summarized by local basin, was added to the existing percentage imperviousness to calculate the potential future percentage imperviousness for each local basin at build-out.



Existing Imperviousness

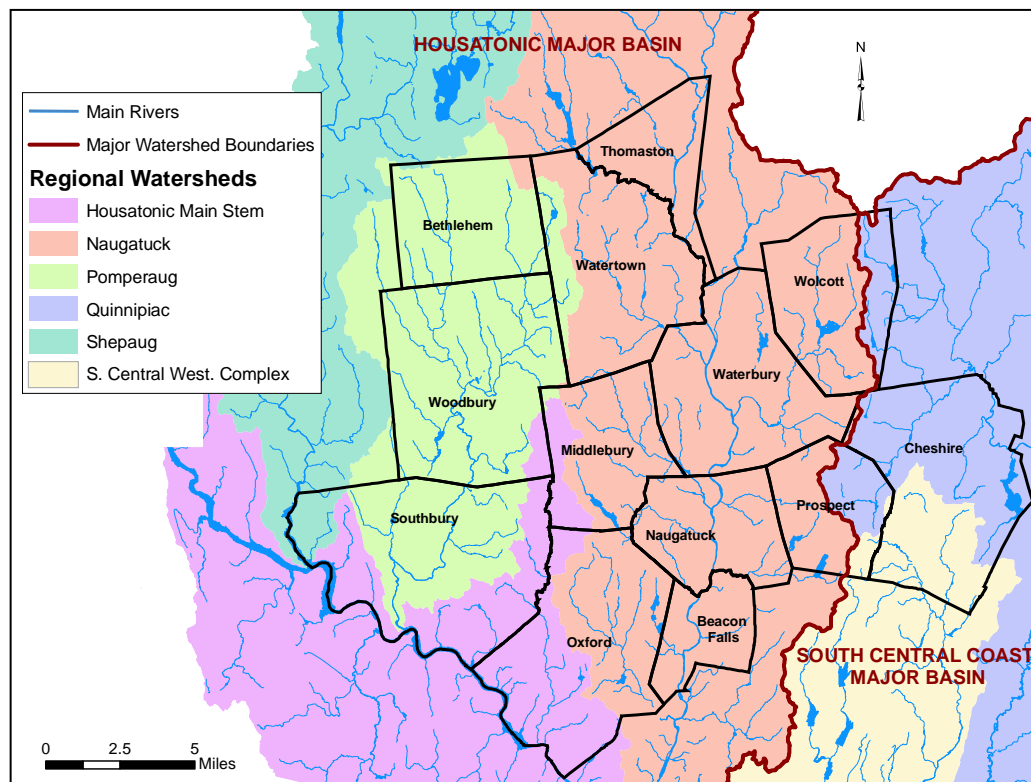


Potential Future Imperviousness



Study conducted with support from
NEMO (Nonpoint Education for Municipal Officials.)

Figure 5.3 Major and Regional Watersheds
Central Naugatuck Valley Region



Recommendations

1. Protect surface and groundwater quality throughout the region by:
 - Controlling land use to avoid contamination, minimize impervious areas, and maximize ground-water recharge.
 - Reducing disruption of natural drainage and vegetation, establishing buffers and setbacks for high priority resources, and continuing to regulate activities that affect wetlands and watercourses.
 - Continuing hazardous waste collection programs.
 - Mapping aquifer protection areas and regulating their land uses.
 - Controlling development in public water supply watersheds and protecting public supply well recharge areas.
 - Working with the State and local agencies such as the Pomperaug River Watershed Coalition to study, improve, and maintain water quality in the region.
2. Evaluate and manage natural resources on a watershed basis.
3. Continue to implement floodplain protection measures.
4. Encourage and educate communities to update land use and stormwater protection policies to address non-point source pollution by utilizing best management practices (BMPs) such as detention basins, grass swales, and sedimentation structures.
5. Consider the cumulative impact of land use decisions on water quality as well as downstream implications (such as impact to Long Island Sound).

Relate land use intensity to the capability of the land.

The ability of the land to support development varies due to the natural constraints such as soil type, slope, and water resources. While certain constraints may be mitigated by providing public sewer and/or water, environmental constraints should still have a significant influence on land use type and intensity. To avoid installing sewers for low intensity uses, municipal plans should consider soil type and terrain in determining lot sizes.

Recommendations

1. Increase allowed development intensity where it is compatible with natural resources and infrastructure (water, sewer, roads).
2. Decrease allowed development intensity where it may exceed the natural capabilities of the land and infrastructure is not, or will not be, available.



Naugatuck River, Naugatuck

SECONDARY RECOMMENDATIONS

Support efforts to protect natural resources.

If important natural resources are to be protected, efforts must continue to identify and understand them. Early identification and protection is important for the region to maintain a balance between the use of land and the need to protect and preserve significant:

- Natural resources that provide important functions.
- Natural features that enhance the aesthetic setting and quality of life.

Also, incremental land use decisions in the region have the potential to cumulatively affect air quality, water resources, and plant and animal habitats.

Recommendations

1. Support efforts to identify and protect important natural resources.
2. Continue to identify and preserve scenic areas within the region.
3. Encourage preservation efforts that mitigate areas where negative impacts have resulted.
4. Consider the cumulative implications of land use decisions in the region on:
 - Water resources.
 - Farmland.
 - Forests.
 - Air quality.
 - Other biological resources.

6. HOUSING

The Central Naugatuck Valley Region faces a range of housing challenges. The region needs adequate and affordable housing in order to retain workers and young adults. High housing costs hamper economic growth, as businesses decide to locate or expand in places with a lower cost of living. The social fabric of communities can be disrupted if young families and the elderly are forced to move elsewhere to find suitable housing. As the population ages and energy prices rise, there is a need for a variety of housing types, including housing built to enable transportation choice. The continued low density development of the region's outlying areas comes with fiscal and environmental costs. Development in rural areas of the region can weaken existing neighborhoods and the regional core.

CURRENT CONDITIONS

The growth in housing has roughly kept pace with population growth. In 2006, the region had an estimated total of 114,312 housing units. The number of housing units in the region grew by 2.9% since 2000, up 7.8% since 1990. New home construction has mainly been in the region's suburban towns. In Waterbury more housing has been torn down since 1990 than built. Nevertheless, housing construction in Waterbury, and the region as a whole, has accelerated since 2000.

Median house prices have risen significantly in the CNVR since 2000. The region's estimated 2006 median sale price was 88% higher than estimated 2000 U.S. Census median home value. In 2006, the regional estimated median sale price of single family houses was \$229,500. Southbury had the highest median sale price of \$426,250, and Waterbury had the lowest with \$159,900 (See Table 6.1).



Condominiums in Cheshire

In 2000, most of the region's housing units were owner occupied. Slightly more than half of Waterbury's housing units were renter occupied. This is a decline from 1990 when the majority of Waterbury's housing units were owner occupied. Two-thirds of the region's rental properties were located in Waterbury in 2000. In all other CNVR municipalities, the vast majority of housing was owner occupied (See Table 6.2).

HOUSING POLICIES

The U.S. Department of Housing and Urban Development and the Connecticut Department of Economic and Community Development have set goals to increase homeownership, support community development, and increase access to affordable housing. Regional housing recommendations are made in the context of the federal and state goals and are intended to provide guidance to municipal land use commissions which enact housing policies through planning and zoning regulations.

Table 6.1 CNVR Housing Data, by Municipality: 2006

Geographic Area	Number of Housing Units		2006 Median House Sale Price ^c	2000 Median House Value ^d
	2006 ^a	2000 ^b		
CNVR	114,312	109,780	\$229,477 ^c	\$122,011 ^c
Waterbury	47,325	46,827	\$159,900	\$89,900
Remainder of Region	66,987	62,953	\$244,232 ^c	\$156,080 ^c
Beacon Falls	2,285	2,104	\$275,000	\$160,000
Bethlehem	1,458	1,388	\$342,500	\$174,000
Cheshire	9,886	9,588	\$340,000	\$215,000
Middlebury	2,836	2,494	\$330,000	\$193,500
Naugatuck	12,758	12,341	\$233,580	\$132,250
Oxford	4,309	3,420	\$385,000	\$239,000
Prospect	3,257	3,094	\$270,000	\$175,000
Southbury	8,281	7,799	\$426,250	\$269,195
Thomaston	3,173	3,014	\$219,500	\$135,500
Watertown	8,646	8,298	\$242,700	\$145,000
Wolcott	5,972	5,544	\$240,000	\$130,500
Woodbury	4,126	3,869	\$400,000	\$280,000

Sources: ^aCT Department of Economic and Community Development, Housing Inventory 2006

^bU.S. Bureau of the Census, Census 2000 Summary File 1 (SF1)

^cThe Warren Group website (<http://www.thewarrengroup.com>)

^dU.S. Bureau of the Census, Census 2000 Summary File 3 (SF3)

^eEstimation



Multi-Family Homes, Beacon Falls



Single Family Home, Wolcott

**Table 6.2 Tenure in the CNVR, by Municipality:
1990, 2000**

Geographic Area	Percent Renter Occupied Units	
	2000	1990
CNVR	32.7%	33.7%
Waterbury	52.4%	51.0%
Remainder of Region	18.8%	19.9%
Beacon Falls	21.6%	22.4%
Bethlehem	14.5%	17.4%
Cheshire	13.4%	14.8%
Middlebury	11.0%	11.1%
Naugatuck	33.5%	32.9%
Oxford	9.0%	8.0%
Prospect	7.4%	6.9%
Southbury	10.5%	14.0%
Thomaston	26.2%	27.1%
Watertown	20.6%	21.8%
Wolcott	11.8%	11.0%
Woodbury	25.0%	27.8%
Connecticut	33.2%	33.4%

Source: U.S. Bureau of the Census, Census of the Population and Housing: 1990 and 2000

MAJOR RECOMMENDATIONS

Increase opportunities for affordable housing in the region.

The availability and distribution of affordable housing in the CNVR remains an important issue. As of 2006, 78% of the region's 12,417 publicly assisted housing units were located in Waterbury. The state's Affordable Housing Appeals Act (CGS 8-30g) sets a minimum goal of 10% of a municipality's housing units to be publicly assisted. As of 2006, only Waterbury (21%) exceeded the Act's goal. The rest of the region's housing units averaged 4% publicly assisted. The number of qualifying affordable housing units in each CNVR municipality is reported in the annual Profile of the CNVR (See Table 6.3).

The Affordable Housing Appeals Act is intended to encourage the construction of new affordable housing by removing roadblocks in local land use regulations. The Act shifts the burden of proof in the zoning and subdivision appeals process from the developer to the municipality in municipalities where less than 10% of housing units are deemed affordable housing units. Since going into effect in 1990, the Act has not adequately encouraged the construction of affordable housing.

The burden-of-proof advantage given by the Appeals Act to developers proposing affordable housing projects discourages cooperation between developers and municipalities. In most cases, the adversarial situation created by the Act does more to hinder projects and stigmatize them than to promote the construction of affordable housing units.

Recommendations

1. Consider participating in the state affordable housing financial incentive program.
2. Offer density bonuses that make building affordable housing units profitable to developers.
3. Combat the stigma of affordable housing by requiring quality and attractive affordable housing units.
4. Intersperse affordable units with market rate housing units.
5. Encourage the creation of accessory units.
6. Work with not-for-profit organizations dedicated to creating more affordable housing.
7. Amend the Affordable Housing Appeals Act to more accurately count and successfully encourage the construction of affordable housing.

Promote a variety of housing types in the region.

Demand for new housing units in the CNVR will continue into the future. Regional population is projected to grow over six percent between 2005 and 2025, making it one of the faster growing urban regions in the state.

Table 6.3 Governmentally Assisted Housing Units in CNVR, by Municipality: 2006

Geographic Area	Housing Units				Assisted Units as Percent of Total Housing
	Government Assisted	CHFA Mortgages	Deed Restricted	Total Assisted	
CNVR	8,890	3,039	488	12,417	11.3%
Waterbury	6,923	2,269	436	9,628	20.6%
Remainder of Region	1,967	770	52	2,789	4.4%
Beacon Falls	4	21	-	25	1.2%
Bethlehem	24	-	-	24	1.7%
Cheshire	232	67	44	343	3.6%
Middlebury	76	8	8	92	3.7%
Naugatuck	807	302	-	1,109	9.0%
Oxford	35	6	-	41	1.2%
Prospect	2	13	-	15	0.5%
Southbury	89	13	-	102	1.3%
Thomaston	97	88	-	185	6.1%
Watertown	225	114	-	339	4.1%
Wolcott	313	121	-	434	7.8%
Woodbury	63	17	-	80	2.1%
Connecticut	118,756	24,096	3,214	146,066	10.5%

Source: Connecticut Department of Economic and Community Development: 2006

Shrinking household size will mean that more housing units will be needed to house the same number of people. The relative affordability of the CNVR to neighboring regions may continue to attract new residents and add to the demand for new housing.

In addition to simply building more housing units, there is a need and potential demand for specialized housing types. Young adults and families need decent, attractive, and affordable housing options. The CNVR has a shortage of luxury urban housing and mixed use developments. Such housing types could attract young professionals and empty nesters to the region's urban core.

As life expectancies lengthen and baby boomers age, there will be increased demand for housing designed to allow residents to age in place. These units should be built with "universal design" attributes that reduce barriers within a house and typically add little to construction costs. Hous-

ing developments meant for older adults should be designed and located in close proximity to grocery stores, community centers, libraries, places of worship, and medical offices. Walkability and transit / paratransit access is also very important. Such development, although oriented to older adults, need not be age restricted, since these design attributes are universally beneficial. Many older adults may prefer to live in neighborhoods with a mixture of age groups if suitable housing is available.

Age-restricted housing has recently come to dominate new construction in some towns in the CNVR. Developers and municipalities have promoted aged 55 and older "active adult" age-restricted housing as a fiscal positive for municipalities, since it may limit the growth in school age children in the community. Nevertheless, as the residents of age-restricted housing become older, municipalities could experience demands for new senior services and

transportation. Municipalities should limit the construction of age-restricted housing to avoid future vacancies and pressure to lift age-restrictions, as the proportion of elderly in the population declines.

With delayed marriage, high divorce rates, and longer life spans, the number of single people living in the CNVR is growing. As of 2000, there were 26,708 single person households in the region. Accessory apartments, built into existing or new housing, can provide an affordable and attractive housing alternative for single people in the CNVR. In the region's suburban and rural towns, accessory apartments provide opportunities for single people to live in the community. Municipal restrictions that limit who can live in accessory apartments should be removed to encourage their use.

Recommendations

1. Promote an adequate supply of housing for population needs.
2. Encourage smaller unit sizes in response to decreasing household size.
3. Promote the construction of decent, attractive, and affordable housing options for young adults, families, the elderly, the disabled and the homeless.
4. Promote the construction and rehabilitation of a variety of housing types and sizes to fulfill the needs of the region's diverse households.
5. Encourage mixed use developments.
6. Locate active adult, age-restricted housing near community services and amenities.
7. Ensure that the number of age-restricted housing units does not exceed the local or regional market for such units.
8. Encourage the inclusion of "universal design" features in new housing units.
9. Allow accessory apartments in existing homes or their outbuildings, or built into new structures, without restricting who may rent the units.

Promote housing that allows for a variety of transportation choices.

As energy prices rise and the CNVR's population ages, housing that provides residents with a variety of trans-



Multi-family Homes, Naugatuck

portation options will become increasingly important. Most of the types and location of new housing being built in the CNVR create a dependency on automobiles for nearly all trips. Housing designed to promote alternative transportation modes (bus, rail, walking, bicycling) allows residents to access destinations without using an automobile. Transportation choice can be promoted by locating new housing near existing development such as employment, retail, and community centers. Amenities such as sidewalks, walking paths, and bicycle paths can be used to allow residents access to these nearby destinations.

Greater transportation options can be realized by building housing near existing bus routes and train stations



Avalon Farms Subdivision, Middlebury



Residential/Commercial Building on East Main Street, Waterbury

and providing access to appropriate pedestrian connections. In areas with limited or no public transit service, housing can be built at densities and configurations that could facilitate future bus service. Age-restricted and senior housing should be located in paratransit service areas.

Mixed use development that incorporates commercial and institutional uses within residential ones can foster transportation choice by bringing employment, education, and shopping within walking distance. In many municipalities, zoning and subdivision regulations may need to be changed to accommodate mixed use development. Mixed use development should be considered for urban and suburban infill projects. Allowing small scale home occupations may be a more realistic approach to mixed use in rural communities.

Development around the CNVR's three commuter rail stations (Waterbury, Naugatuck, and Beacon Falls) should include pedestrian connections to the stations. If in the future rail service increases on the Waterbury Branch Line, there may be potential for more transit-oriented types of development around these stations.

Recommendations

1. Encourage the construction of housing that provides residents with a choice of transportation options.
2. Locate new housing near existing development and employment, retail, and community centers.
3. Provide pedestrian, bicycle, and public transit amenities in new and existing development.
4. Promote the construction of mixed use development.
5. Allow small scale home occupations.
6. Promote pedestrian connections around commuter rail stations.

SECONDARY RECOMMENDATIONS

Encourage settlement patterns that utilize existing infrastructure.

New residential development in rural parts of the region continues to consume open space, alter community character, increase service and transportation demands, and impact the environment. Directing development to underutilized land and brownfields within community centers can help minimize the pressure and costs associated with rural development. Infill development can take advantage of existing services and infrastructure and reduce demand for costly utility and road extensions.

According to COGCNV's 2004 regional land use survey, 22,526 acres of land in the region were developed between 1990 and 2004 for new residential development – a 47% increase in residential acreage. The vast majority of the new residential was low density single family houses. During the 14 year period, an average of 2.7 acres of land was developed per housing unit built. The rate of land development has outpaced regional growth in population and housing units over the same time period. Overall, the trend has been for increasingly more land being developed to accommodate less growth.

Recommendations

1. Encourage housing at appropriate densities to take advantage of existing services and infrastructure.
2. Encourage infill development within the regional core and in and near community centers.

3. Promote the redevelopment of brownfield sites.
4. Discourage extensions of infrastructure and services to new developments at inappropriate densities, especially in outlying areas.
5. Review development proposals in undeveloped areas with an eye towards the impact on existing open space, natural resources, and scenic vistas.
6. Encourage environmentally sensitive and low impact development techniques.

Continue efforts to enhance the character of our communities and revitalize urban housing units and neighborhoods.

Residents of the region take great pride in the character of their communities. Efforts to protect and enhance the unique character of each community and neighborhood should continue.

Special efforts are needed in urban neighborhoods to create safe and attractive environments and to help residents address housing, health, public safety, recreation, public services, and other issues. The adequacy of the housing stock is a significant factor in maintaining and improving urban neighborhoods. State and federal programs are available to help address issues faced by the region's urban neighborhoods. Entitlement communities can benefit from defining Neighborhood Revitalization Strategy Areas (NRSA) through the U.S. Department of Housing and Urban Development. Within these designated areas, the community is afforded greater flexibility in the use of Community Development Block Grant (CDBG) funds.

Recommendations

1. Promote sound planning and design practices for all housing construction and rehabilitation which complement or improve the character of the neighborhood, each community, and the region's built and natural environment.
2. Work with municipalities and community groups developing comprehensive neighborhood revitalization strategies.

3. Assist municipalities and community groups in pursuing sources of grant money for community improvements.
4. Initiate a strategic planning process to help stabilize urban neighborhoods.
5. Advocate for neighborhood improvement and orderly housing growth which does not impair the economic or environmental health of the town, neighborhood, or residents.



Lakefront Homes, Wolcott



New Subdivision in Watertown

7. ECONOMIC DEVELOPMENT

OVERVIEW

Economic land uses provide employment and enhance the municipal tax base. The location of early industries influenced residential and business development patterns in the region. Municipalities within the region and beyond form an interdependent economy.

CURRENT CONDITIONS

Since 1990 employment growth in the region, the state, and the Northeast has not kept pace with the southern and western parts of the country. Outsourcing to other countries has also taken its toll. Fabricated metals, which has been the region's core industry, remain prominent, but employment continues to decline as the economy shifts to the service sector. In 2003, the leading employers were health services, business services, educational services, and fabricated metal products. Viewed in terms of sales, the leading sectors were banking, chemicals, automotive retail, and fabricated metal products. Precision manufacturing stays competitive in the region despite global competition.

After decades of growth, the region's labor force declined in the 1990s, but returned to its 1990 level by 2006. Residents of the thirteen municipalities fill most jobs in the region, but the region is a net exporter of workers. More residents commute to jobs beyond the CNVR, than residents from other regions commute into the CNVR to work. In 2000, 71% of the region's workers lived in the region. But only 55% of CNVR employed residents worked within the region, a marked drop from 1990 when 64% worked for CNVR employers. The greatest commuting is with the New Haven-Meriden area.



Photo courtesy of Stevens Company Inc., Thomaston

MAJOR RECOMMENDATIONS

Nurture the region's strength as a center of precision manufacturing.

Over the past thirty years, the region has shifted from a manufacturing-based economy to a more service-based economy. Since 1970, manufacturing employment has decreased from about one-half to about one-quarter of all jobs, while service employment has increased from about one-eighth to about one third of all jobs. Nevertheless, the region continues to enjoy a significant concentration of manufacturing jobs. Despite the overall decline in manufacturing employment, precision manufacturing — particularly the eyelet and screw machine industries — is an important regional industrial cluster. The skill level of its workers has made the Central Naugatuck Valley Region a focal point for precision manufacturing.

Figure 7.1 CNVR Labor Force

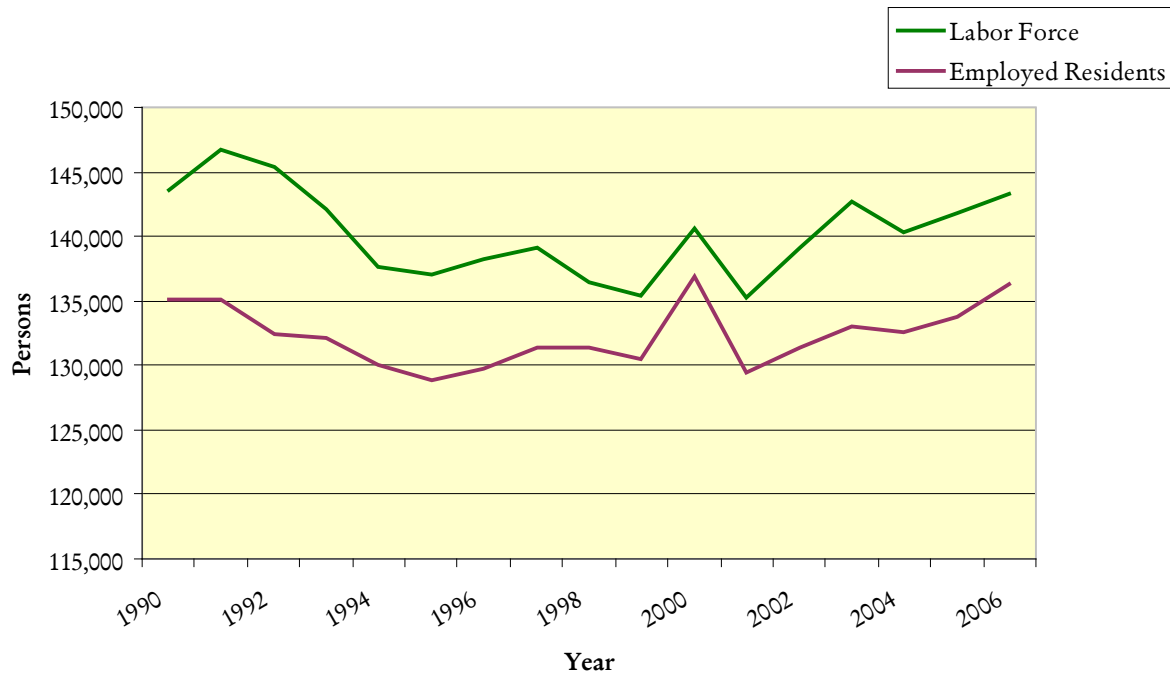


Figure 7.2 Percent Unemployment for the CNVR



Table 7.1 Estimated CNVR Labor Force Status, by Place of Residence: 2006

Geographic Area	Labor Force	Employed Residents	Unemployed Residents	Percent Unemployed
CNVR	143,307	136,287	7,020	4.9%
Waterbury	49,891	46,495	3,396	6.8%
Remainder of Region	93,416	89,792	3,624	3.9%
Beacon Falls	3,235	3,099	136	4.2%
Bethlehem	2,035	1,967	68	3.3%
Cheshire	14,602	14,109	493	3.4%
Middlebury	3,772	3,654	118	3.1%
Naugatuck	17,106	16,291	815	4.8%
Oxford	6,878	6,647	231	3.4%
Prospect	5,264	5,065	199	3.8%
Southbury	9,031	8,720	311	3.4%
Thomaston	4,620	4,404	216	4.7%
Watertown	12,392	11,878	514	4.1%
Wolcott	8,975	8,615	360	4.0%
Woodbury	5,506	5,343	163	3.0%

Source: Connecticut Department of Labor, Office of Research, Labor Force Data



Commercial Buildings, Wolcott



Pratt & Whitney, Cheshire

Table 7.2 Estimated Nonagricultural Employment by Industry, for the Waterbury Labor Market Area: 2000, 2005, 2006

Industry	Percent of Total 2006	Employment			Percent Change
		2006	2005	2000	2000-2006
Total Nonagricultural	100%	68,600	69,200	72,100	-4.9%
Goods Producing	18.7%	12,800	13,200	17,600	-27.3%
Construction, Nat. Resources, & Mining	4.1%	2,800	2,900	2,900	-3.4%
Manufacturing	14.6%	10,000	10,400	14,700	-32.0%
Service Producing	81.5%	55,900	56,000	54,500	2.6%
Trade, Transp., & Utilities	19.7%	13,500	13,700	14,000	-3.6%
Information	1.3%	900	900	1,000	-10.0%
Financial Activities	3.8%	2,600	2,600	3,100	-16.1%
Professional & Business Services	9.5%	6,500	6,500	6,000	8.3%
Education & Health Services	21.1%	14,500	14,200	13,100	10.7%
Leisure & Hospitality	7.3%	5,000	4,900	5,300	-5.7%
Other Services	4.1%	2,800	2,700	2,800	0.0%
Government	14.6%	10,000	10,400	9,200	8.7%

Note: In this table, Waterbury LMA consists of seven municipalities in the CNVR (Beacon Falls, Middlebury, Naugatuck, Prospect, Waterbury, Watertown, Wolcott). The Waterbury LMA changed from 10 municipalities to 7 municipalities in 2002. Data is rounded to the nearest hundred.

Source: Connecticut Department of Labor, Office of Research



Protocol Integrated Direct Marketing, Cheshire



Webster Bank, Waterbury

Table 7.3 Leading Industries in the CNVR: 2003 - First Quarter*Ranked by Employment*

Rank	Industry	Employment	Percent of Total	Total Sales (Millions)	Percent of Total	No. of Businesses	Percent of Total
1	Health Services	9,097	9.2%	\$439.3	4.4%	631	6.2%
2	Business Services	7,494	7.6%	\$351.9	3.5%	677	6.6%
3	Educational Services	6,236	6.3%	\$233.3	2.3%	174	1.7%
4	Fabricated Metal Prdcts, Except Machinery & Transport Eqpmnt	5,250	5.3%	\$549.1	5.5%	161	1.6%
5	Engineering, Accounting, Research, Management & Related Svcs	4,356	4.4%	\$204.4	2.0%	445	4.4%
6	Construction - Special Trade Contractors	3,620	3.7%	\$331.5	3.3%	902	8.8%
7	Executive, Legislative & General Government, Except Finance	3,615	3.7%	N/A	N/A	18	0.2%
8	Electronic, Elctrl Eqpmnt & Cmpnts, Excpt Computer Eqpmnt	3,386	3.4%	\$378.5	3.8%	58	0.6%
9	Eating and Drinking Places	3,335	3.4%	\$75.4	0.8%	467	4.6%
10	Miscellaneous Retail	3,082	3.1%	\$197.8	2.0%	634	6.2%

Ranked by Sales

Rank	Industry	Total Sales (Millions)	Percent of Total	Employment	Percent of Total	No. of Businesses	Percent of Total
1	Depository Institutions	\$1,821.4	18.2%	1,411	1.4%	113	1.1%
2	Chemicals and Allied Products	\$836.8	8.4%	638	0.6%	19	0.2%
3	Automotive Dealers and Gasoline Service Stations	\$660.2	6.6%	1,648	1.7%	219	2.1%
4	Fabricated Metal Prdcts, Except Machinery & Transport Eqpmnt	\$549.1	5.5%	5,250	5.3%	161	1.6%
5	Wholesale Trade - Durable Goods	\$476.0	4.7%	2,514	2.5%	336	3.3%
6	Health Services	\$439.3	4.4%	9,097	9.2%	631	6.2%
7	Wholesale Trade - Nondurable Goods	\$412.8	4.1%	1,467	1.5%	143	1.4%
8	Electronic, Elctrl Eqpmnt & Cmpnts, Excpt Computer Eqpmnt	\$378.5	3.8%	3,386	3.4%	58	0.6%
9	Business Services	\$351.9	3.5%	7,494	7.6%	677	6.6%
10	Construction - Special Trade Contractors	\$331.5	3.3%	3,620	3.7%	902	8.8%

Source: Dunn & Bradstreet Solutions: 2003 - Q1, as tabulated by the Connecticut Economic Resource Center and the Council of Governments of the Central Naugatuck Valley



Industrial Area, Watertown

Keeping and nurturing existing firms in the region is essential for the strength of the region's metal manufacturing cluster because of interdependence within the cluster. Manufacturing jobs are important to the wealth of the region since they typically pay higher wages than many service jobs.

Recommendations

1. Promote the region's precision manufacturing sector and develop a marketing strategy to retain existing firms and attract new ones.
2. Develop a strategic approach to industrial recruitment that focuses on precision manufacturing and related businesses.



Brass Mill Center, Waterbury

3. Encourage efforts that enhance the visibility and perception of the region's precision manufacturing focus.

Aggressively pursue economic development for the region.

A strong regional economic development presence is vital. This group could entail several regions, using the regional planning boundaries as building blocks. The lack of regional economic organization weakens the region and makes it less competitive in a global marketplace. While recognizing the importance of manufacturing, it is also essential that the region's economy diversifies, given national economic sector trends.

Recommendations

1. Seek to create a regional economic organization to assist existing businesses, market the region as a place for businesses to locate, and coordinate efforts of local economic development agencies.
2. Coordinate efforts with economic development agencies including local economic development corporations and commissions and chambers of commerce.
3. Recognize that the majority of the region's employment growth will come from the expansion of existing firms.

Guide the location of economic development to the regional center and major economic areas.

While employment was once concentrated in the regional core — Waterbury, Naugatuck, and the Oakville section of Watertown plus community centers along the Naugatuck River — automobile ownership and the shift from rail to truck for goods movement has increased locational choices, and jobs are more dispersed in the region. Since 1960, most of the region's job growth has been in communities outside of Waterbury. In addition to the city, the major employment areas are Cheshire, Southbury, Watertown, and Naugatuck.

Land zoned for economic uses and already served by adequate water, sewer, and transportation infrastructure is available in the regional core and major economic areas. Some of these sites, however, require environmental clean-up before being acceptable for new development. In the meantime, such sites must compete with land in the suburban portion of the region that may be cheaper, more abundant, easier to develop, closer to new residential development, and taxed at a lower rate.

Dispersed business locations can especially hurt residents who are dependent on transit. Public transportation cannot economically serve low density areas, preventing people without a private vehicle from accessing outlying employment opportunities.

Recommendations

1. Encourage appropriate types of economic development in locations that are compatible with the regional future land use policy map:
 - Regional business centers near major highways.
 - Compact business areas in community centers.
 - Small business areas for meeting neighborhood needs.
2. Make infrastructure and transportation improvements to encourage appropriate economic development in the regional center and major economic areas.
3. Continue to improve the region's transportation system, both highway and transit, in order to serve economic development areas within the region and help businesses benefit from the region's central location within the Northeast markets.
4. Seek to extend bus and job-access service to major employment areas.

Prepare workers for current and future needs.

While there are fewer manufacturing jobs than in the past, the jobs that are available pay higher wages and require more advanced skills. Many of these jobs go unfilled while untrained workers take service jobs. It is ironic that the very knowledge base that helped build the region into a center for precision manufacturing is at risk due to

a lack of knowledge, interest, or training. Strengthening educational achievement in the city school system is essential to ensure a workforce able to fill jobs in industries competitive in the global economy.

Recommendations

1. Encourage and support education and training programs that provide residents with the skills needed by businesses in the region, including school-to-career programs geared to metal manufacturing.
2. Work with businesses in the region to identify current and future needs for skilled employees.



UConn Waterbury Campus



Hardware Store, Southbury



Commercial Area, Watertown



St Mary's Hospital, Waterbury



Commercial Building, Woodbury



Commercial Building, Bethlehem

8. TRANSPORTATION

OVERVIEW

The region's transportation system (road, bus, rail, air, bicycle, and pedestrian facilities) supports the movement of people and goods on a local, regional and statewide level. The transportation system and regional development patterns are interconnected. Demand for development increases in areas where transportation facilities and services provide the best access and greatest mobility. As the region's federally-recognized metropolitan planning organization (MPO), COGCNV is responsible for preparing the region's long range transportation plan.

CURRENT CONDITIONS

The automobile is the primary means of travel for most of the region's population. In 2000, 80% of all households in Waterbury and 95% of all households in the rest of the region had access to an automobile.¹ Public transportation in the region primarily serves Waterbury, where one in five households is without access to a vehicle.² Widespread auto ownership, coupled with the outward movement of housing and jobs into lower density, dispersed suburban locations, has caused a trend away from public transit. Outside Waterbury, there is little or no public transportation, and most households rely on automobiles for personal mobility. Recently, public transit ridership has increased as a result of rising fuel costs.

TRAVEL TRENDS

The average commuting trip for CNVR residents was 24.3 minutes in 2000, compared to 21.0 minutes in 1990. The increase in commuting time is accompanied by an increase in distance traveled as the percentage of residents working within the region has declined since 1990.³ In 1980, 74% of CNVR workers commuted to jobs in the region; by 2000, only 55% of the region's workers commuted to jobs within the region. Figure 8.1 shows the most common workplace destinations in 2000.

STREETS AND HIGHWAYS

A road network needs to provide for the safe and efficient movement of people and goods throughout the region. A circulation plan consists of a hierarchy of road types, consistent with current and anticipated traffic conditions and surrounding land uses. The Connecticut Department of Transportation and COGCNV, working with local municipalities, update road circulation plans based on the federally-required functional classification of roads.

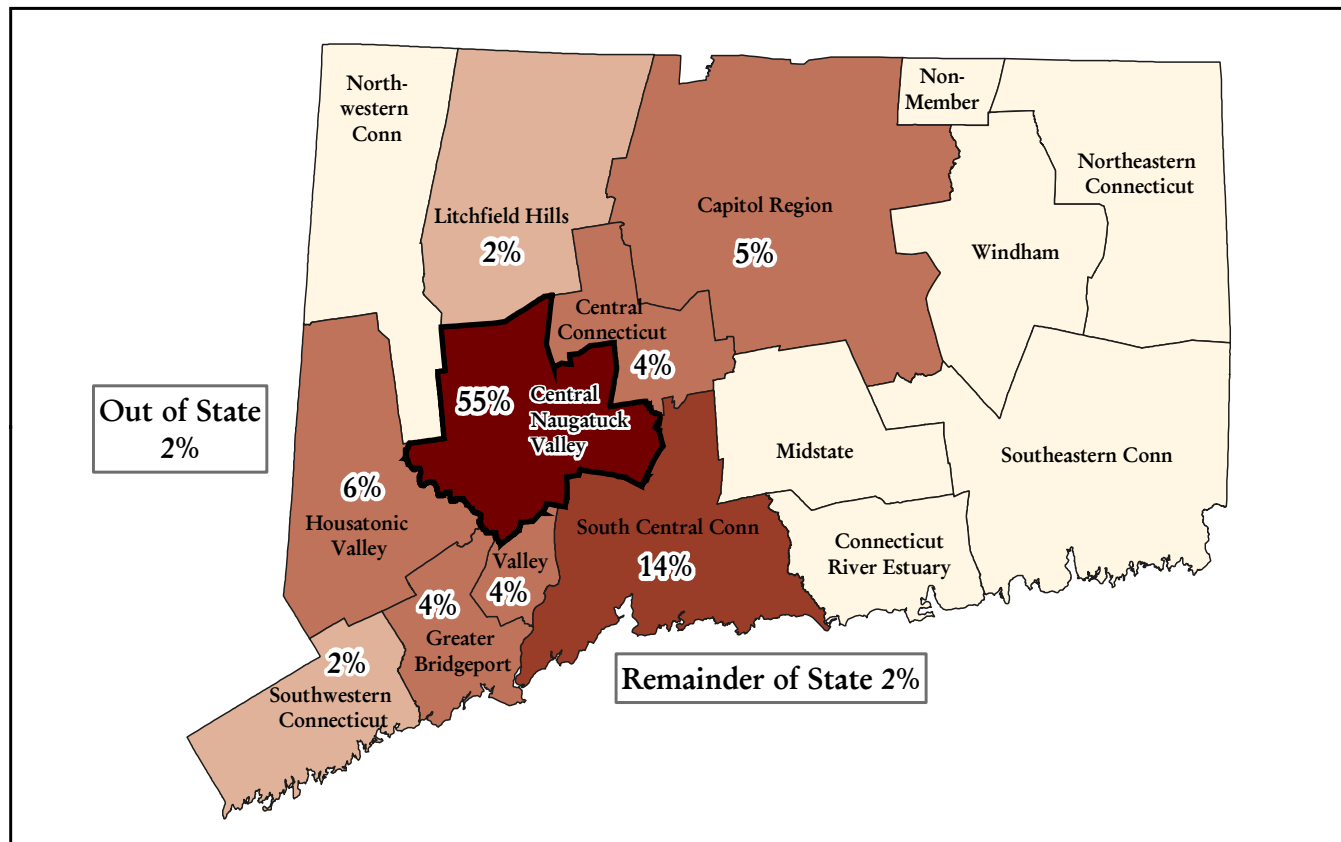


I-84 and Route 8 Interchange Area, Waterbury

Figure 8.2 shows the functional classification of roads within the region. There are five major classifications:

- Principal Arterial Expressways – Limited access highways, including interstate highways, which primarily serve longer interregional trips at higher speeds.
- Principal Arterial Highways – Major routes which primarily serve interregional trips and longer trips within the region.
- Minor Arterial – Routes which facilitate the flow of traffic across towns and between neighboring towns.

Figure 8.1 Place of Employment of CNVR Residents, by Region: 2000



Source: U. S. Census Bureau, 2000 Census

- Collector Roads – Roads that carry traffic at lower speeds, linking traffic from local roads to arterial routes.
- Local Roads – Roads that provide direct access, at low speeds, to properties, generally in residential or undeveloped areas.

Among these classifications, arterial roads function as the primary routes for handling relatively high speed service, longer trips, and higher traffic volumes. There is typically a greater emphasis on mobility along these roads, and access is often limited.

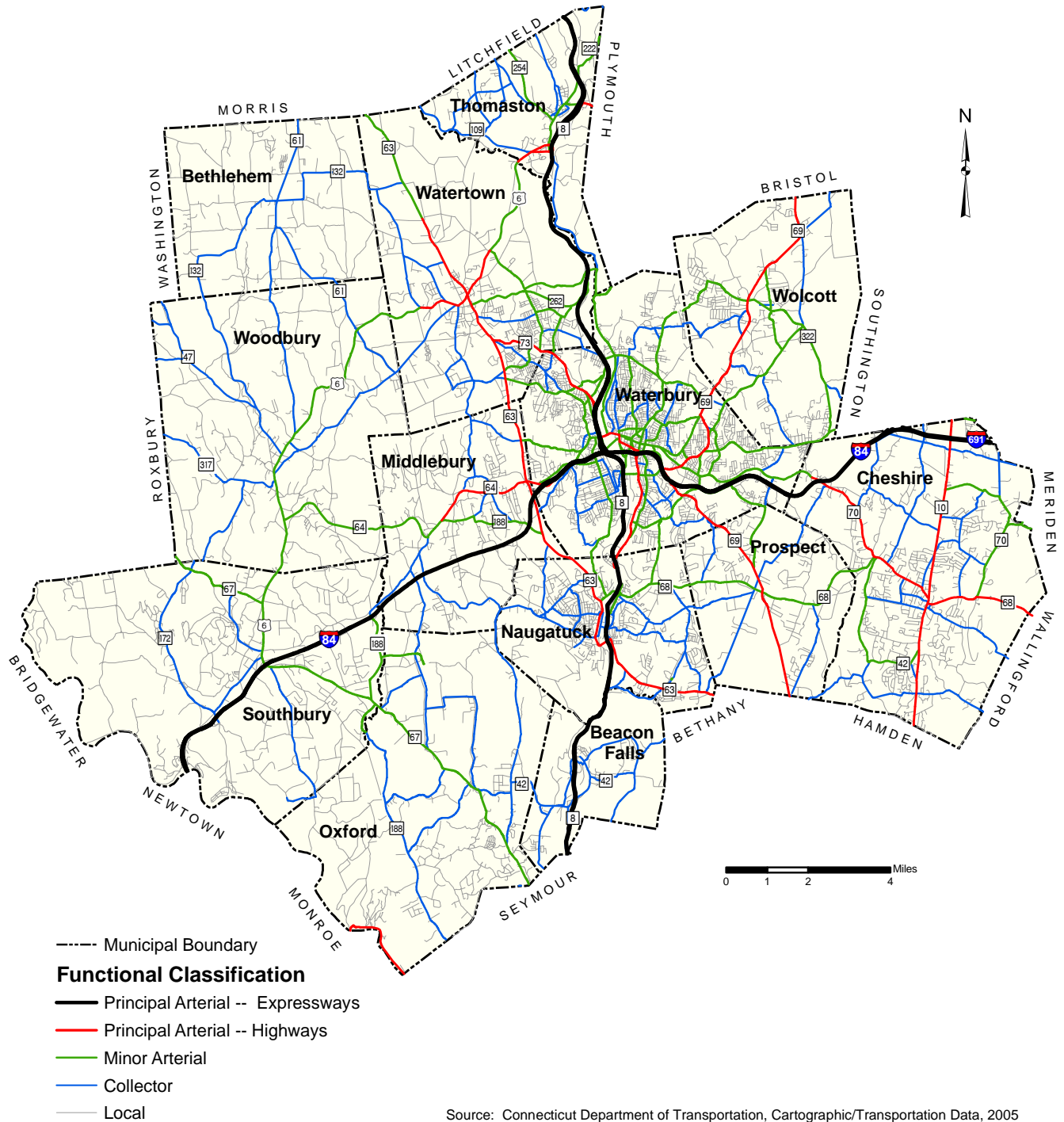
Interstate 84 serves as an important gateway into Connecticut and New England, linking the CNVR to Danbury and New York State to the west and Hartford and Massachusetts to the northeast. Within the CNVR, traffic volumes on I-84 peak through Waterbury where aver-

age daily traffic (ADT) can reach as high as 125,700 vehicles.⁴ I-84 is an alternative route to the more congested I-95 in southwestern Connecticut.

The widening of I-84 is an ongoing project in the CNVR, and it is part of a larger state effort to increase the highway's capacity from Hartford to the New York State line. With its close proximity to the downtown area and the limited number of crossings over the Naugatuck River, I-84 accommodates a substantial amount of local traffic through the City of Waterbury. Southwest of downtown Waterbury, the interchange of I-84 and Route 8 completed in the late 1960s, is expected to require major repairs or full replacement in the future.

Route 8 links the region with I-95 in Bridgeport to the south and Torrington and Winsted to the north. Traffic volumes are greatest within the Waterbury section of

Figure 8.2 Functional Classification of Roads
Central Naugatuck Valley Region



Source: Connecticut Department of Transportation, Cartographic/Transportation Data, 2005



Traffic congestion on eastbound I-84

Route 8, where ADT in 2006 reached 79,400 vehicles.⁵ Traffic volumes to the north of Waterbury are lower than those to the south.

Interstate 691 serves as an expressway connector between I-84 in Cheshire and I-91 in Meriden. In 2006, average daily traffic along I-691 in Cheshire was estimated to be 55,100 vehicles.⁶

Other principal highways in the CNVR are Routes 6, 10, 63, 67, 68, 69, and 70. To the southeast, Routes 10, 63, 68, and 69 provide connections to the New Haven metropolitan area. To the east, Route 70 connects the region with the City of Meriden. To the north, Routes 6 and 69 provide access to Bristol. Route 67 provides a link, in the southwest corner of the region, between I-84 and Route 8.



Train Station, Waterbury

Highway congestion impedes the flow of vehicles, causing motorist delays, greater risk of collisions, and increased fuel consumption and vehicle exhaust. The Federal Highway Administration defines congestion as “the level at which the transportation system performance is no longer acceptable due to traffic interference.” Insufficient capacity is the leading cause of congestion on our nation’s highways. A common measure of congestion levels is the volume to capacity (v/c) ratio, which compares peak hour traffic volumes on a road segment to its hourly vehicle capacity. V/C ratios above 0.90 indicate road segments operating close to capacity at peak hour, and those above 1.00 indicate bottlenecks. ConnDOT provides annual updates of v/c ratios on all state roads. Figure 8.3 shows the levels of congestion on state roads within the region.

COMMUTER LOTS

Park-and-Ride lots help reduce some of the congestion experienced on the region’s highway network by facilitating carpooling. There are thirteen commuter lots in the CNVR that can accommodate about 1,014 passenger vehicles. Some tend to be full or near capacity, while a few are only lightly used. Commuter express bus service to Hartford is offered from the Cheshire commuter lot.

PUBLIC TRANSPORTATION SYSTEMS

The CNVR’s transit system is concentrated in the region’s center, where there is a higher population density and a significant transit dependent population: about one in five households lacks access to a vehicle.⁷ Transportation options for those unable to drive, such as the elderly and disabled, are limited or nonexistent outside of the region’s center.

Rail Travel

Waterbury, Naugatuck, and Beacon Falls are served by commuter rail service on the Waterbury Branch of the New Haven Line. Metro-North operates the service which connects the CNVR to Bridgeport and the lower Naugatuck Valley.

Figure 8.3 Highway Congestion in the Central Naugatuck Valley Region: 2006





Bus at The Green, Waterbury

In Bridgeport, connections can be made to mainline rail service to New Haven, Stamford, and New York City. In FY 2006, an estimated 168,400 passengers used the CNVR's Waterbury Branch Line.⁸

Fixed Route Bus System

The CT Transit–Waterbury bus system, operated by the Northeast Transportation Co., has 24 fixed routes, covering a service area of 23.2 square miles. The service carries 4,600 passengers per weekday and over one million passengers per year. Most of the fixed routes operate within Waterbury, with service extending into Watertown, Middlebury, and Wolcott. There is no evening fixed route bus service, with service ending by 6:30 PM. Two separate bus routes serve a large portion of Naugatuck, including its downtown area. CT Transit–New Haven operates a

fixed route between New Haven and Waterbury. Special runs, referred to as “tripper routes” serve industrial parks and other major employment centers in the region.

Intercity Buses

CT Transit–New Haven operates bus service, leaving hourly from the Waterbury Green, between Waterbury and New Haven via Route 10 in Cheshire. This route provides a limited connection between Cheshire and the Waterbury bus system, but also links up to a peak-hour express bus to Hartford at the Cheshire commuter parking lot on Route 70 at I-84. Intercity bus service is also available to Hartford, Danbury, Torrington, Albany, and New York City. Airport shuttles run regularly to Bradley International and New York metropolitan airports.

Elderly and Disabled Transportation

Transportation for the elderly and disabled residents in the CNVR is provided by a variety of public and private organizations. The largest provider of transportation for the disabled is the Paratransit Division of CT Transit – Waterbury (formerly operated by the Greater Waterbury Transit District). The Paratransit Division offers paratransit services for the disabled and dial-a-ride services for the elderly and disabled in Cheshire, Naugatuck, Middlebury, Prospect, Thomaston, Waterbury, Watertown, and Wolcott. In FY 2007, 76,834 paratransit trips were provided. The Greater Waterbury Transit District collects the local share of paratransit service costs and fees, oversees the dial-a-ride program, and is an advisory body for the Paratransit Division of CT Transit–Waterbury.

Starting in FY 2007, the State began funding the Municipal Grant Program for Senior and Disabled Demand Responsive Transportation (CGS 13b-38bb). The eight municipalities in the GWTD were awarded funding towards a dial-a-ride service that would establish a coordinated transportation system for the elderly and disabled. During the first year of service, the GWTD Dial-A-Ride averaged 500 rides per month. Bethlehem, Oxford, and Southbury also received funding in FY 2007 to expand their dial-a-ride /senior transportation services.



Senior centers, public agencies, and private organizations within the region provide additional transportation services to the elderly and disabled using buses, minibuses, vans, or private passenger vehicles. Transportation is generally provided to medical offices, shopping destinations, and social or entertainment destinations.

Joblinks

Joblinks is a job access program, transporting transit-dependent, low income individuals who need to reach employment opportunities outside of the service area of the fixed bus route system. The program also provides transportation during times when the fixed route system is not operating. Clients can also receive other assistance in the form of bus passes or discounted gas cards through the program.

Proposed Intermodal Transportation Center

A study is underway for a city-proposed intermodal transportation center in Waterbury. The center would serve the Metro North rail line, fixed route and intercity buses, taxis, shuttles (downtown, hotel, airport, etc.), and commuter travel. A key issue is the impact on bus passengers and bus operations if the bus pulse point is moved from the center of the downtown to Meadow St. A ConnDOT study of the Waterbury Branch Rail Line, which will evaluate future operations for the branch line, will affect the scale and desirability of the transportation center.

AIRPORT FACILITIES

The Waterbury-Oxford Airport (OXC) is a state owned and operated general aviation airport, located seven miles southwest of Waterbury in Oxford near the Middlebury town-line. In 2006, 244 aircraft were based at the airport. The airport handled an average of 164 flights a day, and approximately 60,000 flights a year. The runway was recently extended to 5,800 feet, increasing corporate interest in the airport. The lack of adequate hangar space, however, limits growth in use. Additional hangars and tie-down areas are proposed in the Waterbury-Oxford Airport Master Plan. In 2004, the airport provided ap-

proximately 320 jobs throughout the local economy and had an economic impact of approximately \$54 million, according to the study.

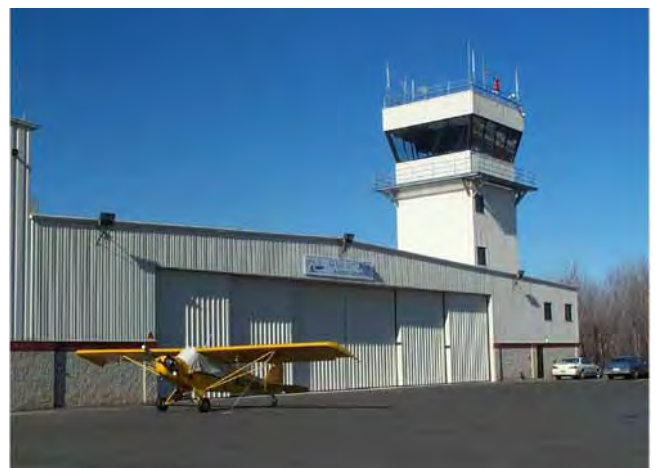
A Federal Aviation Regulation Part 150 Noise Study found that the airport generates off-airport noise that exceeds acceptable levels over residential areas in Middlebury. The study recommends changes to flight operations and redirecting flights during the evening to alleviate noise disturbances to nearby residential properties. The study also recommends changes in local zoning to reduce existing and future noise exposure.

PEDESTRIAN & BICYCLE PATHWAYS

In most areas, travel by bicycle is limited to road shoulders or to the sharing of travel lanes with vehicle traffic. Pedestrian walkways are often disjointed and are mainly within the regional core and community centers. Improved pedestrian and bicycle facilities are needed in the CNVR to provide transportation choice and increased opportunities for physical activity and recreation in the region.

Greenways

The Farmington Canal Heritage Greenway in Cheshire and the Trolley Line recreation trail in Middlebury are the region's two main recreational pedestrian and bicycle paths. The Larkin State Bridle trail passes through portions of Middlebury, Naugatuck, Oxford, and Southbury.



Waterbury Oxford Airport, Oxford
photo courtesy of Clough, Harbour & Associates LLP



Naugatuck River Greenway

COGCNV is working with municipalities and neighboring regions to plan the Naugatuck River Greenway. Other greenway trails have been proposed in the CNVR along the Housatonic River in Southbury and Oxford, the Mad River in Waterbury, the Pomperaug River in Woodbury, and Steele Brook in Watertown.

The Pedestrian Network

Well planned sidewalks, crosswalks, and pedestrian signaling provide a direct link between the transportation system and employment, recreational, and shopping destinations. Sidewalks provide access to buildings from other buildings along the sidewalk network, as well as from on-street parking spaces, parking lots, and garages. Sidewalks with curb cuts, crosswalks, and pedestrian signals allow for safer pedestrian crossings on roads in more developed areas. Pedestrian paths can also provide direct connections to destinations, avoiding circuitous street networks. Areas where sidewalks are deteriorating or the sidewalk network is disjointed can create serious safety risks.



Sidewalk East Street, Bethlehem

MAJOR RECOMMENDATIONS

Maintain and improve the region's transportation system.

Future transportation planning should emphasize maintaining and improving the existing transportation system in the region rather than engaging in new construction. While our highways will remain the focal point of the transportation system, the role of public transit and ride-sharing should be enhanced as a means of diversifying transportation options. Greenways, bikeways, and sidewalks and pedestrian paths can also serve as a transportation alternative between residential areas and high priority and scenic destinations. Figure 8.4 shows the different transportation options available in the region.

Recommendations

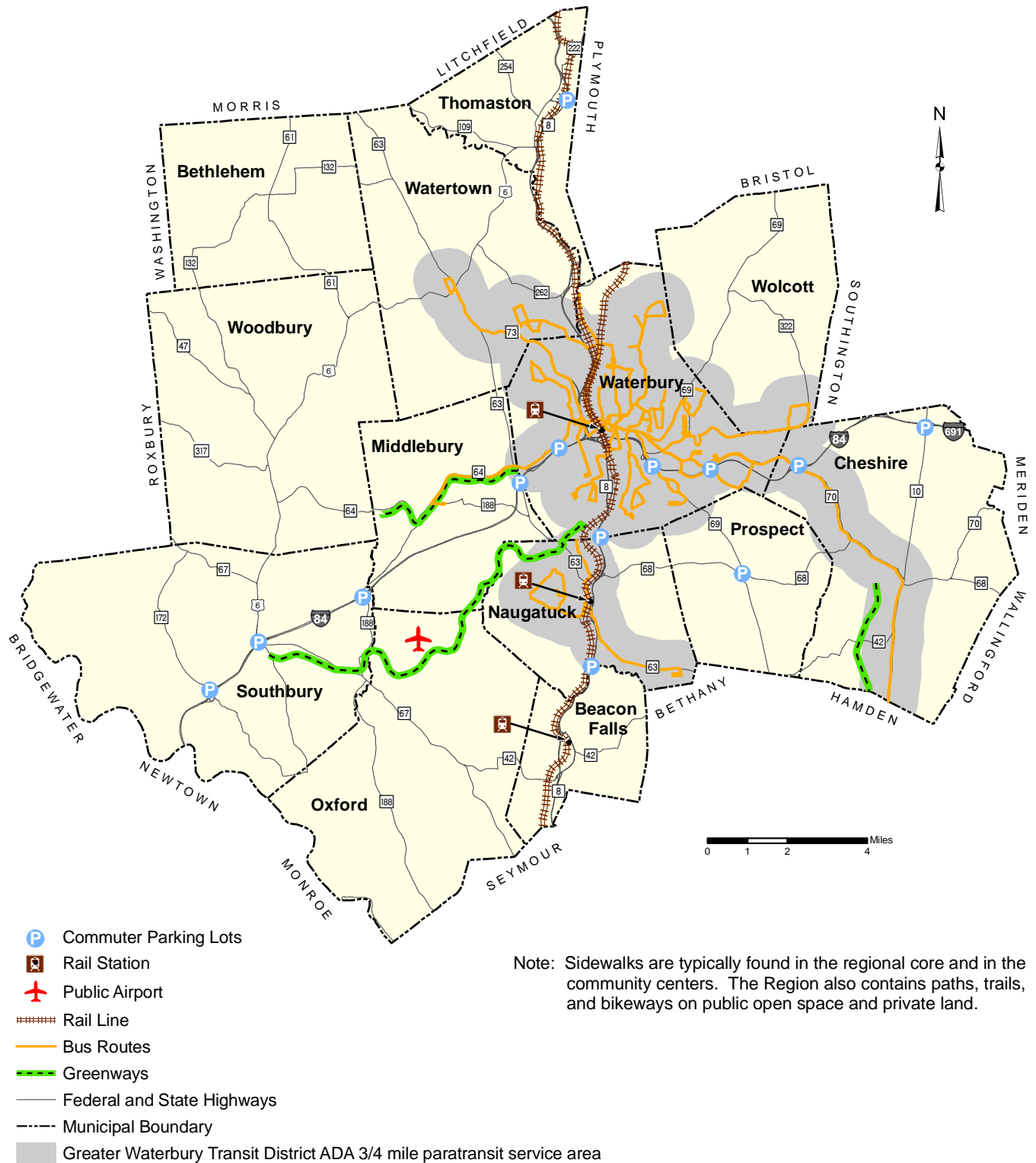
HIGHWAY SYSTEM

1. Monitor congestion within the region's highway network, and emphasize highway projects that will help address congested corridors in a timely manner.
2. Seek to improve safety and reduce traffic congestion, energy consumption, and motor vehicle emissions.
3. Encourage access management techniques along arterial roads to improve highway capacity and safety.
4. Encourage proper maintenance of the region's highways, including ongoing safety and pavement maintenance.
5. Continue the evaluation and maintenance of the region's bridges.
6. Support context-sensitive design for the region's highway system improvements.
7. Increase awareness of commuter parking locations along major commuter routes, and expand lots where needed.

TRANSIT & RAIL

1. Continue to refine bus services to better serve the region and increase ridership.
2. Pursue stable funding for fixed route bus services to cover operating expenses.
3. Promote intercity express buses as a means of alleviat-

Figure 8.4 Transportation Modes
Central Naugatuck Valley Region





I-84 Crossing the Housatonic River, Southbury

ing congestion on the region's expressways.

4. Support continued paratransit services (such as dial-a-ride) to meet the specialized needs of residents.
5. Encourage efforts to increase rail passenger ridership in the region.
6. Maintain and expand regional rail freight facilities and services.

WALKWAYS & BIKEWAYS

1. Coordinate with municipalities and neighboring RPOs on interregional greenway projects.
2. Encourage provision of walkways and bikeways, where appropriate.
3. Provide areas for bicycle use as part of road projects, as appropriate.
4. Encourage activities that provide for a regional network of contiguous pedestrian and bicycle paths.

AIRPORTS

1. Continue to identify and make improvements that encourage use of the Waterbury-Oxford Airport, while limiting land use conflicts.

Coordinate land use and transportation actions.

Coordinated transportation planning and land use planning is essential for supporting desirable growth patterns at the local and regional levels. Uncoordinated, scattered development results in longer trips and higher traffic

volumes. A land use plan should be complemented by planned transportation facilities, allowing people to enjoy urban amenities, attractive public spaces, and an adequate degree of mobility.

Recommendations

1. Encourage coordinated land use and transportation planning so that transportation investments can be prudently planned for anticipated development.
2. Encourage transit-oriented development towards existing transit corridors.
3. Continue efforts to encourage transit use and ride-sharing.
4. Assure adequate mobility to employment and services for transit-oriented populations.
5. Consider the transportation implications of proposed developments, and propose projects as needed.
6. Consider the environmental and land use implications of transportation projects, and mitigate their effects as needed.
7. Discourage residential development within close proximity to the Waterbury-Oxford Airport.

Emphasize connectivity in developing local roads.

Connecting roads within communities is an important means of enhancing future traffic circulation. While unconnected streets are often favored by developers and residents, each community should develop an overall traffic circulation plan to meet future needs. The presence of an excessive number of unconnected roads concentrates traffic on a few main roads in a municipality. Local street connections, in addition to pedestrian paths between neighborhoods, help bind communities together, increase social opportunities for children, and reduce parental "chauffeuring" of children. In addition, a lack of alternate traffic circulation routes can create problems for emergency services.

Recommendations

1. Encourage communities to plan road networks for future circulation needs.

Continue to plan for needed transportation improvements.

The Regional Transportation Plan, updated every five years by COGCNV, identifies transportation needs in the region and sets priorities for recommended improvements. The Transportation Improvement Program contains a five-year funding schedule of priority transportation projects. These planning documents are integral to obtaining state and federal funding and setting regional priorities for transportation projects.



Construction on Route 8N before I-84 interchange

Recommendations

1. Continue to set priorities for transportation projects in the region in response to local and regional needs.
2. Continue to pursue available transportation funding for the region.

Table 8.1 Priority Highway Projects from the COGCNV Regional Long-Range Transportation Plan: 2007-35

Transit	1. Ensure continued and stable funding to cover operating expenses for the local bus service and regional transportation services for the disabled and job access.
Expressways	<ol style="list-style-type: none"> 1. Interstate 84 — Upgrade I-84 in CNVR, widening it to three lanes in each direction and improve interchanges. 2. I-84/Route 8 interchange — Upgrade the interchange in Waterbury, including improved downtown traffic circulation and connections to the expressways. 3. Route 8 — Investigate the feasibility of re-designating Route 8 as an Interstate to improve the visibility of the CNVR in the national and international workplace.
State Highways	<ol style="list-style-type: none"> 1. Route 10 — Improve Route 10 in southern Cheshire at Route 42 and sections north to Route 70.68 and south to Cooks Hill Rd. In northern Cheshire, improve in the vicinity of I-691 as well as between Maple Ave. and Sandbank Rd. 2. Route 64/Route 63 intersection — Reconfigure Routes 63 and 64 between I-84 and the Route 64/63 intersection in Middlebury. 3. Route 69 — Improve Route 69 in Waterbury from Harper's Ferry Rd./Pearl Lake Rd. to I-84, and key intersections from E. Main St. to Lakewood Rd. as recommended in the COGCNV Route 69 Traffic Operations Study. 4. Route 73 — Replace the Tomkins S. intersection with Route 73 in Waterbury by reconnecting Huntingdon Ave. to Route 73 and implement recommended improvements in COGCNV Route 73 Corridor Study.
Urban Highways	<ol style="list-style-type: none"> 1. Waterbury, Homer St./Chase Ave. — Reconstruct and widen from Waterville Rd. to N. Main St. 2. Waterbury, Aurora St. — Widen from Bunker Hill Rd. to Watertown Ave. 3. Prospect, Scott Rd. — Connect Scott Rd. to Austin Rd. in Waterbury and reconstruct and widen Scott Rd. from Waterbury-Prospect town line to Route 69. 4. Naugatuck, Cross St. — Reconstruct and widen from Route 8 to Route 63.

¹U.S. Bureau of the Census, Census Transportation Planning Package: CTTP 2000

²U.S. Bureau of the Census, 2000 Census, Summary File 3.

³U.S. Bureau of the Census, Census Transportation Planning Package: CTTP 2000.

⁴Connecticut Department of Transportation, 2007 Congestion Screening & Monitoring Report.

⁵Ibid.

⁶Ibid.

⁷8,294 households. U.S. Bureau of the Census: Census 2000.

⁸Rail ridership figures from *Report and Recommendations of the Connecticut Transportation Strategy Board*, January 2007.



Farmington Canal, Cheshire

9. OPEN SPACE

This component of the Plan is intended to recommend the preservation of open space areas of regional significance that can:

- Enhance regional character and quality of life.
- Preserve lands for parks and recreational uses.
- Conserve important natural resources.
- Provide fiscal and economic benefits.
- Shape development patterns.

CURRENT CONDITIONS

Open space is defined as land that is preserved or restricted for park, recreation, cemetery, or conservation use. This definition varies from the perception of many residents that undeveloped land is “open space” even though it may be developed at a future time. About 16 percent of the entire region’s land area is some type of open space. Of this, 84 percent is committed open space owned by water companies, land trusts, government entities, cemeteries, and private organizations such as clubs. The remainder of the open space, 16%, is not committed to preservation. These percentages do not include undeveloped private land, but do include municipally owned land used as open space but not permanently protected.

Within the state, the proportion of open space varies by the type of municipality. As the 2005 Statewide Comprehensive Outdoor Recreation Plan (SCORP) states, smaller towns (Beacon Falls and Thomaston) have much larger amounts of recreational acreage than either urban centers (Waterbury) or towns near urban municipalities (Naugatuck), the two municipal categories with the least amount of recreational acreage. All remaining municipalities in the CNVR are classified by SCORP as suburban, the category which has the second largest recreational acreage.

Acquisition of open space is strongly supported by the citizens of Connecticut. The Department of Environmental Protection (DEP) alone owns 66% of the total recreational acreage in the state. While the largest unmet need of Connecticut households reported by the SCORP plan is for multi-use trails, 85% of all households use some type of water-based recreation, and the acquisition of water-based recreational properties is DEP’s highest priority.

In its draft *Green Plan*, which identifies sensitive types of ecological areas and unique features that merit protection, DEP’s vision is stated as providing:

A diverse landscape of protected open space that offers outdoor recreation to Connecticut’s citizens, protects water supplies, preserves natural communities and habitats for plants and animals, offers green spaces accessible to all residents, whether residing in urban, suburban or rural communities, and provides a working natural landscape for the harvest of farm and forest products.



Flander’s Nature Center, Woodbury

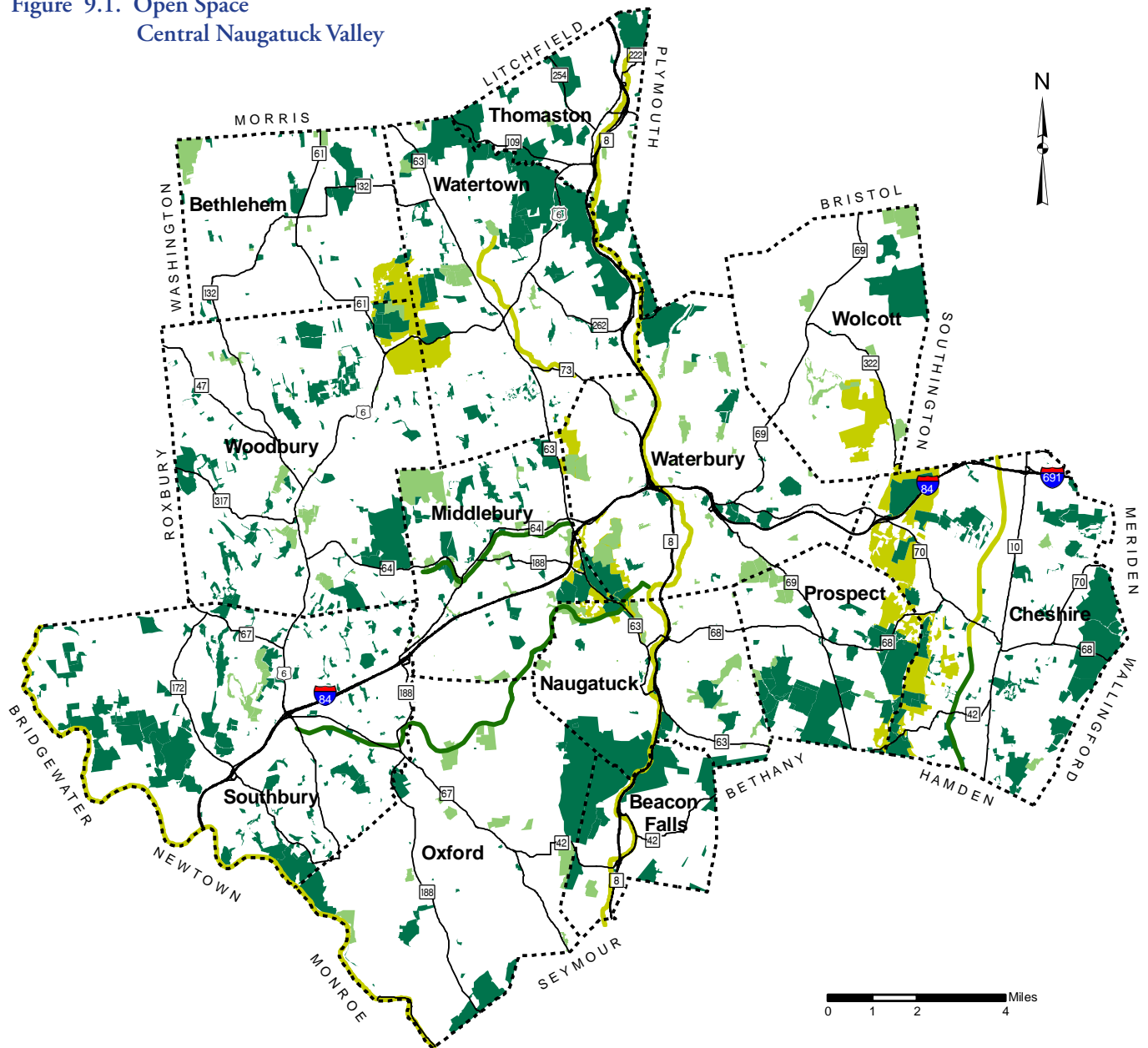
Table 9.1 Open Space in the CNVR, by Municipality: 2006

Town	Federal	State	Municipal	Private*	Cemetery	Land Trusts	Golf Courses	Water Company	Total
Beacon Falls Bethlehem Cheshire Middlebury Naugatuck Oxford Prospect Southbury Thomaston Waterbury Watertown Wolcott Woodbury CNVR	Committed Open Space (Acres)								
	0	1,181	259	0	3	42	0	21	1,506
	0	4	149	0	8	391	0	206	758
	0	316	1,441	297	20	470	0	1,426	3,970
	229	28	0	57	4	881	0	113	1,312
	2	1,009	27	0	118	27	0	235	1,418
	0	1,233	551	0	12	25	0	0	1,821
	0	1	88	0	3	78	0	2,198	2,368
	0	1,202	1,155	944	20	767	0	6	4,094
	573	723	172	0	60	0	0	289	1,817
	261	409	253	27	329	0	0	0	1,279
	62	1,877	649	28	178	145	0	648	3,587
	0	0	0	0	5	0	0	833	838
	0	0	152	785	30	1,667	0	397	3,031
	1,127	7,983	4,896	2,138	789	4,493	0	6,372	27,799
Beacon Falls Bethlehem Cheshire Middlebury Naugatuck Oxford Prospect Southbury Thomaston Waterbury Watertown Wolcott Woodbury CNVR	Uncommitted Open Space (Acres)								
	0	0	0	56	0	0	0	0	56
	0	0	21	307	0	0	0	0	328
	0	0	0	36	0	0	34	0	70
	0	9	311	25	0	0	453	0	798
	0	0	165	2	0	0	73	227	467
	0	0	273	376	0	0	0	38	687
	0	0	20	0	0	0	33	217	270
	0	0	0	0	0	0	238	0	238
	0	0	53	23	0	0	0	0	76
	0	0	377	42	0	0	492	56	967
	0	0	32	49	0	0	186	79	346
	0	0	204	299	0	0	81	0	584
	0	0	401	0	0	73	0	0	474
	0	9	1,857	1,215	0	73	1,590	617	5,361
Total	1,127	7,992	6,753	3,353	790	4,566	1,590	6,989	33,160

Note: *Included Audubon land, Roxbury land trust, easements, homeowner's associations, etc

Source: COGCNV Staff with assistance from municipalities and local land trusts

Figure 9.1. Open Space
Central Naugatuck Valley



- Proposed Open Space Action Areas and Greenways**
- This does not include detailed planning by town or land trust.
- Preserved Open Space**
- This includes protected federal, state, municipal, private, cemetery, land trust, and water company Class I and II land.
- Other Open Space**
- This includes unprotected state, municipal, private and land trust lands, golf courses, and water company Class III land.

- Major Roads
- Municipal Boundary

Source: COGCNV staff with assistance from municipalities and local land trusts

For DEP, the goal is:

To continue to acquire and protect land to satisfy a variety of needs as expressed in Connecticut General Statutes 23-8(b) and in various State plans, including the Conservation and Development Policies Plan of Connecticut 2005-2010 and to support local and regional plans, where available."

The acquisition tools available to DEP are the Recreation and Natural Heritage Trust Program and the Open Space and Watershed Land Acquisition Grant Program.

MAJOR RECOMMENDATIONS

Protect more open space in the region.

In 1998, the State set a goal of 21% of the total land area, or 673,210 acres, to be preserved as open space by 2023 with 10% by the state and 11% by municipalities, water companies, and conservation organizations. As of January 2005, 78% percent of the state goal and 65% of the non-state goal have been met. These goals compete with housing, commercial, industrial, and other land uses for diminishing available land.



Fulton Park, Waterbury

Recommendations

1. Encourage activities to identify and preserve important open space areas before they are threatened by development.
2. Retain existing private open space through public acquisition, use of open space requirements in subdivision regulations, easements, or other means.
3. Assist the state, municipalities, and land trusts in their efforts to meet the state's open space goal.

Coordinate and prioritize open space preservation throughout the region.

In addition, efforts at preserving open space should not simply be directed to acquiring a certain percentage of land as open space. Instead, efforts should be devoted to creating a meaningful open space system with priority given to the establishment of greenways, open space connections, and the preservation of visible parcels (ridgelines, scenic view areas, steep slopes, agricultural land, and historical or archeological sites). Some municipalities and organizations, such as the Southbury Land Trust, are working to prioritize land for preservation.

Recommendations

1. Maximize the benefits of open space by giving priority to:
 - Establishment of greenways (for wetland protection and wildlife habitat), open space connections (including trails and wildlife corridors), and forests.
 - Multi-purpose areas.
 - Preservation of visible parcels (ridgelines, scenic view areas, steep slopes, and historical or archeological sites).
 - Protection of water resources and lands which protect water quality.
2. Address the difficulty of providing adequate open space in urban areas by:
 - Providing small public greens and "pocket parks".
 - Enhancing and upgrading existing public greens.
 - Promoting street tree programs.
3. Where feasible, encourage creation of:
 - Multi-purpose trail systems (pedestrian, bicycle, bridle, cross-country ski, as appropriate) that link recreational and open space areas.

- Pedestrian and bike paths that link residential, retail, and employment areas.
4. Work to coordinate open space preservation with forests, agriculture, and lands with minimum land use impacts.

Focus efforts on obtaining sites for water-based recreation.

One of the region's most pressing recreational needs is water access to local rivers and lakes, especially new beaches. Lake Quassapaug, the Naugatuck River, and the Quinipiac River are examples of major water resources in the region that do not have major public access.

Recommendations

1. Encourage efforts to address the region's needs for access to local rivers and lakes, especially new beaches.

Preserve declassified water company land as open space.

Some of the land that residents may believe is protected as open space is at risk. Almost 10%, over 3,400 acres, of the region's total existing open space is in private ownership (such as water companies, golf courses, private clubs) and is not permanently committed open space. Some of this land, as well as some municipal holdings, could potentially be developed in the future. In addition, many people believe that agricultural land registered under Public Act 490 protects open space, when, in fact, it only enables the property owner to feel less pressure to sell immediately. It does not preserve land long term.

Recommendations

1. Work with local communities including land trusts, the state, and other organizations such as the Trust for Public Land and Connecticut Farmland Trust to preserve land, especially Class III and other watershed lands, as open space and/or potential future water supply sources.
2. Undertake education programs on the fiscal benefits of open space protection and use of Public Act 490.



Middlebury Greenway on Route 64, Middlebury

SECONDARY RECOMMENDATIONS

Encourage use of a broad range of tools to protect open space.

While open space preservation has been shown to be a cost-effective investment for many communities, public acquisition is not the only method available. Open space can also be preserved through the activities of private land trusts, settlement patterns (cluster development), purchase of development rights, transfer of development rights, easements, or other methods. Where public open space protection is desirable and identified, it can be facilitated through the annual budgeting of funds, bonding, or fees in lieu of open space in subdivisions.



Lake Quassapaug, Middlebury



Nonnewaug Falls, Woodbury

Recommendations

1. Promote open space preservation in the region by public and private agencies.
2. Assist local land trusts and other non-profit organizations (such as the Connecticut Land Alliance, Flander's Nature Center, Southbury Land Trust, Prospect Land Trust, etc.) that preserve open space in the region.
3. Encourage communities to budget funds each year for open space acquisition, to aggressively seek open space acquisition grants, and to require open space set-asides in subdivisions.
4. Encourage communities in the region to inventory their preserved open space.
5. Encourage communities to use land use techniques that promote open space protection, such as:
 - Open space set-asides in residential subdivisions.
 - Cluster-type residential developments.
 - Ridgeline protection provisions within zoning regulations.
 - Transfer of development rights.
 - Other flexible land use regulations.

Manage open space effectively to maximize benefits.

Open space should be accessible to all residents of the region. People dependent on public transportation will need open space near bus routes. The Americans with Disabilities Act requires public facilities to provide equal opportunities to all persons to participate in activities. At the same time, each facility must be managed to prevent unwanted damage (such as soil erosion, trampled vegetation, litter, or fires). Lower income people may need facilities without admission fees. The SCORP points out the need for additional parking, improved restrooms, shelters, and other accessibility issues at many public open space areas.

Recommendations

1. Encourage appropriate access to open space and recreational facilities for all residents of the region.
2. Encourage appropriate activities in open space areas to avoid unwanted damage, such as soil erosion, trampled vegetation, litter, fires, and ensure proper management.

Encourage efforts to preserve open space action areas, critical environmental areas, and areas threatened by development.

The following areas are recommended for consideration by the region's municipalities in determining priorities in recreation and open space lands. Many of these proposals were identified in the 1963, 1977, and 1998 Regional Plans.

1. Water-Based Recreational Sites — locate and preserve sites for water-based recreation, especially access points for boating, fishing, or swimming. This may include acquisition of existing watershed lands and reservoirs being considered for abandonment, sites along the Naugatuck, Quinnipiac, Pomperaug or Housatonic Rivers, or other water bodies such as Lake Quassapaug.
2. Greenways (region-wide) — create, extend, and enhance greenways in the region, especially along river corridors (such as the proposed greenway along the

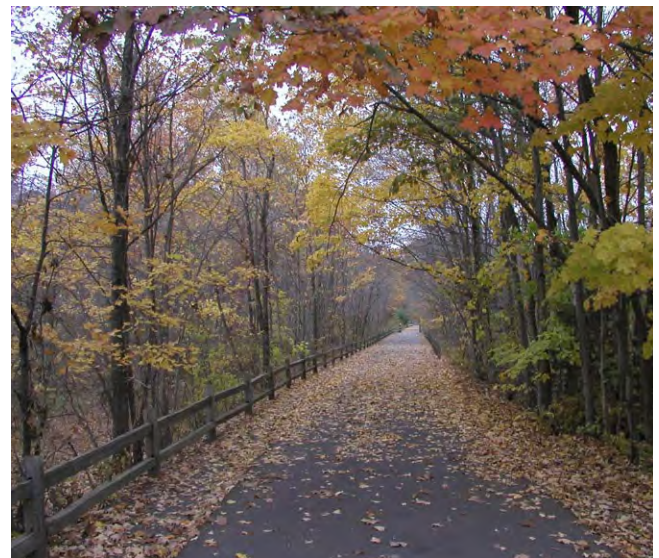
Naugatuck River in Waterbury, the Housatonic River in Southbury, the Quinnipiac River in Cheshire, Steele Brook in Watertown and Waterbury, and the Pomperaug River in Southbury and Woodbury).

3. Recreation Trails (region-wide) — protect, create, extend, and enhance recreational trails throughout the region, the Farmington Canal trail in Cheshire, the trolley line trail in Middlebury, and the Larkin Bridle Trail in Middlebury, Oxford, and Southbury. Encourage the preservation of trail corridors maintained by the Connecticut Forest and Park Association and other groups.
4. Ridgelines — Assist the region's communities in protecting ridgeline areas.
5. Other Recommended Action Areas — In 1967, the Regional Planning Agency of the Central Naugatuck Valley proposed seven open space action areas (see Figure 9.1). One of these, the Lake Quassapaug Action Area, has largely been protected through the efforts of the Flander's Nature Center in Woodbury. Regionwide, over 5,290 acres within the action areas remain available for development and almost 2,940 acres have been preserved.
 - Expand the existing open space preserve at the Nonnewaug Falls area in Bethlehem, Watertown, and Woodbury (Figure 9.2).
 - Create a major open space area near Straits Turnpike in Waterbury, Middlebury, and Watertown (Figure 9.3).
 - Improve access to existing facilities in the Hop Brook area (Middlebury, Naugatuck, Waterbury) containing 703 acres of existing open space (Figure 9.4).
 - Create a major community and regional open space area in Wolcott as recommended in Wolcott's 1973 Plan of Development (Figure 9.5).
 - Enhance existing open space (477 ac.) preserved by the Town of Cheshire with additional lands near I-84 and Route 70 (Figure 9.6).
 - Enhance existing open space on Peck Mountain in Cheshire and Prospect (1,160 ac.) with acquisition of watershed lands or other lands (Figure 9.7).



Volunteer Park, Beacon Falls

While these areas represent resources of potential regional significance due to their size or location, additional open space preservation efforts at the local level and the state level will also be important to the region.



Farmington Canal, Cheshire

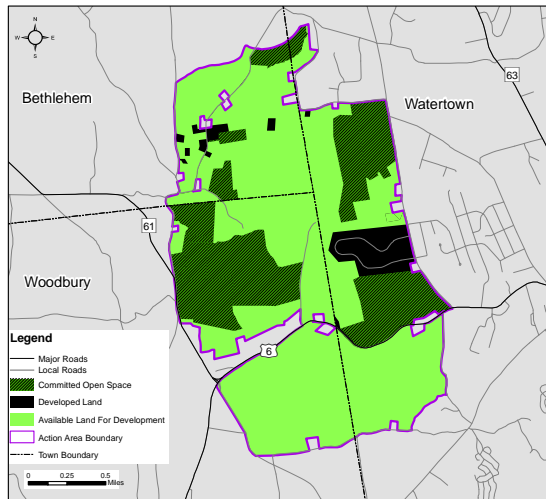


Figure 9.2 Nonnewaug Falls Open Space Action Area

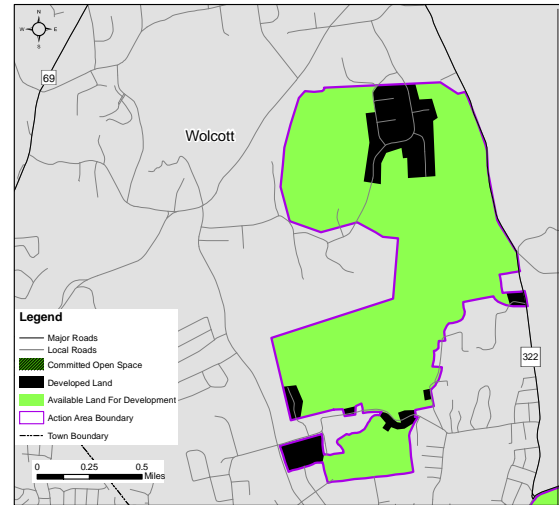


Figure 9.5 Boundline Road Open Space Action Area

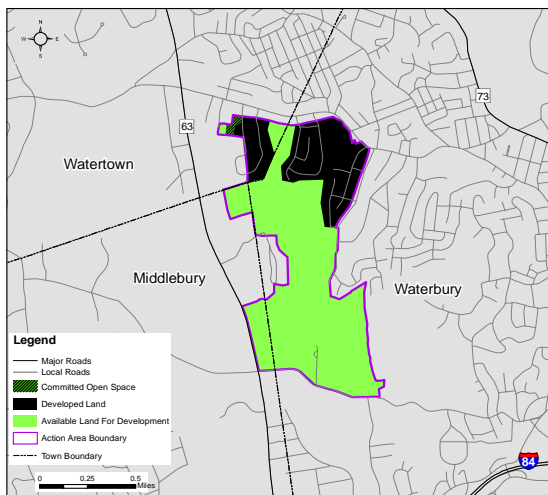


Figure 9.3 Straits Turnpike Open Space Action Area

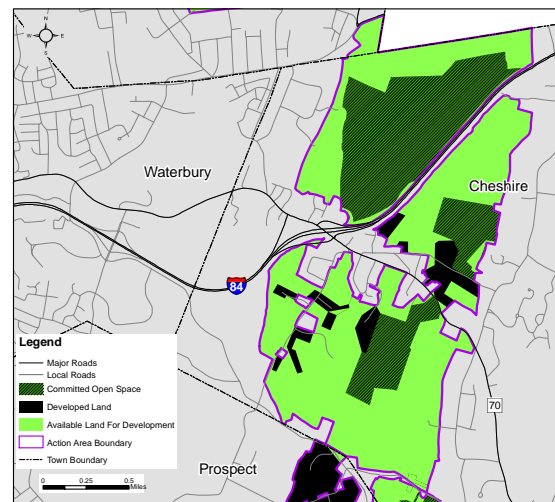


Figure 9.6 I-84 Connecticut Route 70 Open Space Action Area

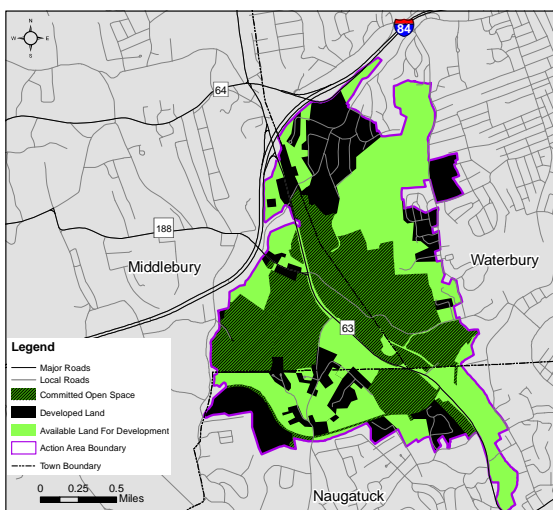


Figure 9.4 Hop Brook Open Space Action Area

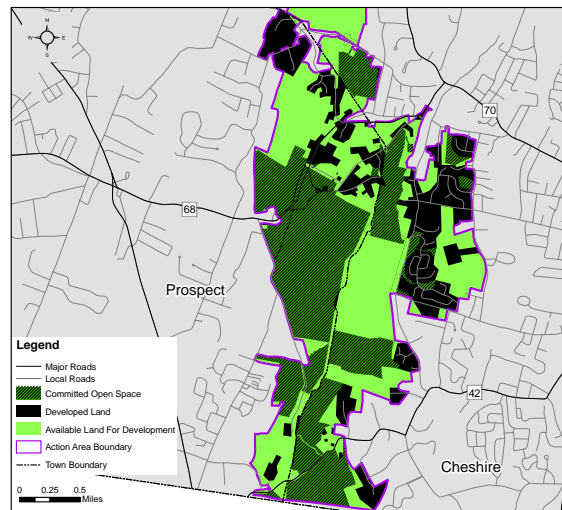


Figure 9.7 Peck Mountain Open Space Action Area

10. WATER SUPPLY & SEWER SERVICE

OVERVIEW

The region's infrastructure includes water supply and wastewater disposal systems. These utility services are important to:

- Ensure a water supply of adequate quality and quantity to maintain the health and safety of the residents of the region.
- Provide public facilities to accommodate the needs of the region's residents.
- Guide the location of development in the region.
- Protect areas vital to water supply watersheds.

CURRENT CONDITIONS

An estimated 70% of the region's households are served by both public water and sewer.

WATER SERVICE

Over 80% of CNVR households are served by public water. In addition, many business and industrial uses within the water service area use public water. Other residences and businesses use private wells. Issues related to water service in the region include:

- Maintaining drinking water sources.
- Protecting drinking water sources from conflicts among multiple uses (such as withdrawal, discharges, and recreational uses) in the Quinnipiac River basin.
- Coordinating major suppliers in the allocation of water through the water utility coordination committees.
- Implementing the state mandated aquifer protection program regulating land uses in the vicinity of public water supply wells.
- Limitations of the Pomperaug River aquifer while water demand increases.
- Protecting water quality from pollution stemming from urban runoff, fuel storage tanks, prescription drugs, personal care products, and other sources.

- Planning for catastrophic water system failures (including redundancy and potential interconnections).

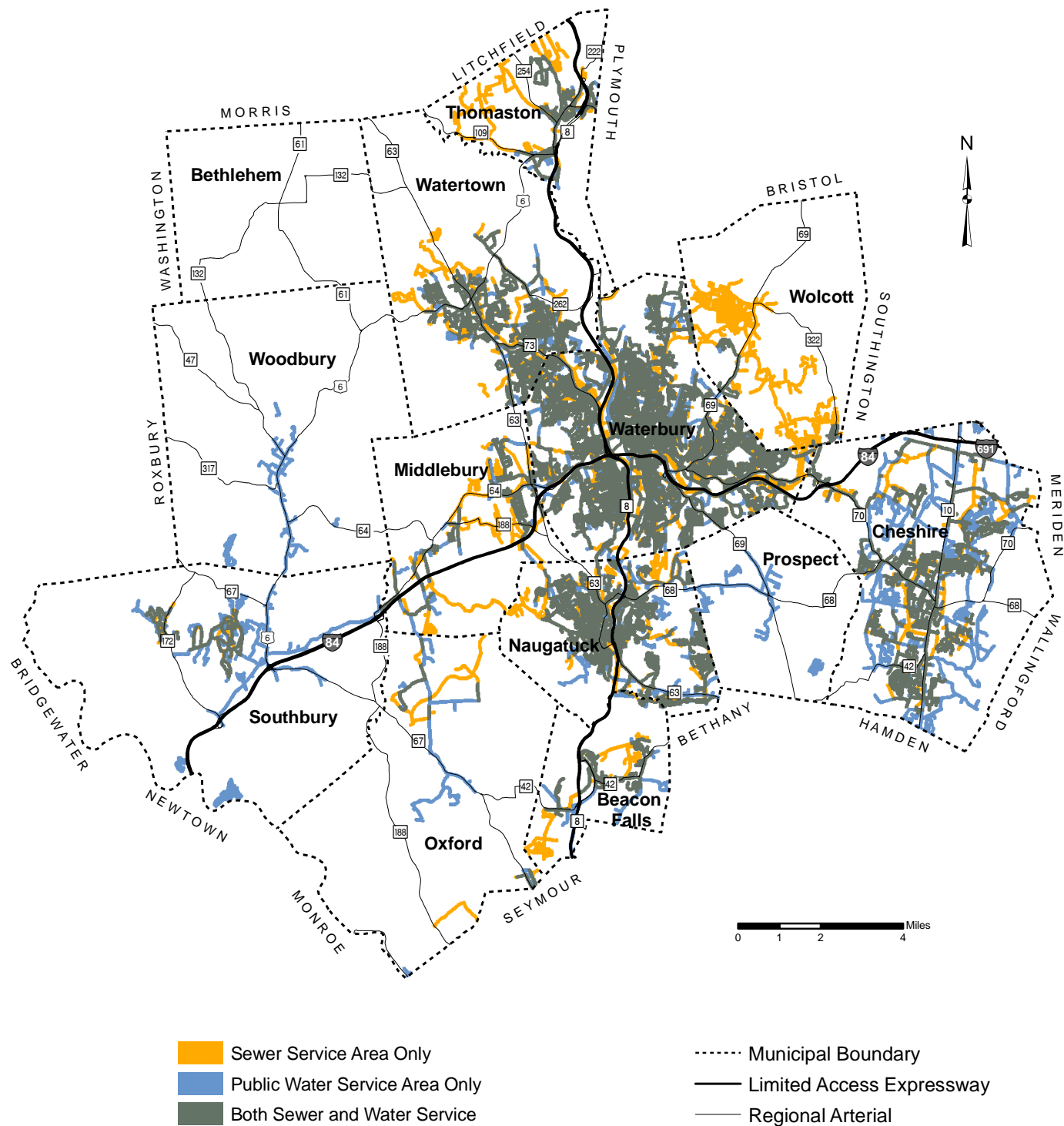
SEWAGE SERVICE

Nine wastewater treatment plants in the CNVR serve development in twelve of the region's communities. These facilities rely on mechanical, chemical, and/or biological treatment of wastewater before, typically, discharge into watercourses. Four of the facilities are publicly owned and operated, one (Southbury Training School) is state-operated, one is municipally owned and contractually operated, and three are associated with private development. In addition, there are three systems, two in Southbury and one in Woodbury, that pre-treat prior to discharge into the ground.



Wastewater Treatment Plant, Cheshire

**Figure 10.1 Existing Sewer and Public Water Service Area
Central Naugatuck Valley Region**



Source: COGCNV staff with assistance from municipalities

Table 10.1 Sewage Treatment Facilities in the CNVR: 2007

Municipality	Facility by Owner/Operator	Permitted Flow (mgd)	Estimated 2004 Average Flow (mgd)
Beacon Falls	municipal/municipal	0.71	0.277
Bethlehem	none	--	--
Cheshire	municipal/municipal	3.5	2.5
Middlebury	none	--	--
Naugatuck	municipal/contractor	10.3	4.85
Oxford	none	--	--
Prospect	none	--	--
Southbury	state/state	0.3	0.235
	private/private	0.78	0.425
	private/private	0.83	0.025
Thomaston	municipal/municipal	1.38	0.951
Waterbury	municipal/municipal	27	18.5
Watertown	none	--	--
Wolcott	none	--	--
Woodbury	private/private	na	na

Source: Department of Environmental Protection

An estimated 80% percent of the region's housing units are served by public or community sewers. Some concerns, particularly in the Naugatuck River basin, remain as to the effect of discharges on the recreational use of the river and on Long Island Sound. The Quinnipiac River Basin, part of the South Central Coastal Basin, also has conflicts of uses for supply versus disposal.

Land uses not served by wastewater treatment plants are served by septic tank systems that rely primarily on biological treatment and typically discharge into the ground by leaching fields or other subsurface disposal system.

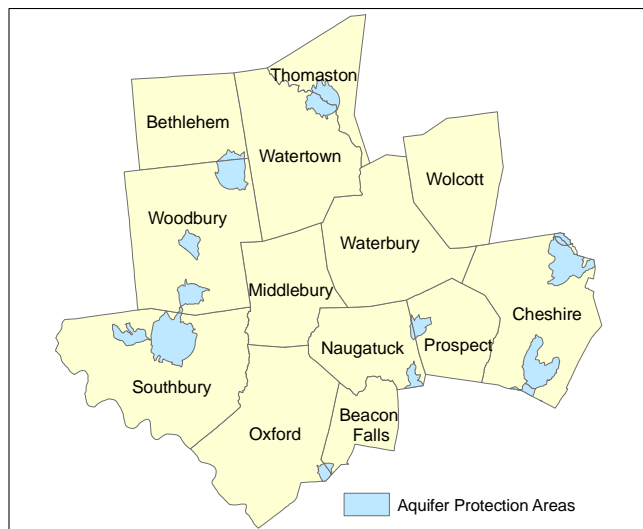
MAJOR RECOMMENDATIONS

Protect the quality of the region's water supply.

Protection of the region's drinking water supply is difficult due to the variety of land uses and activities that have the potential to harm water quality. While new fed-

eral surface water filtration standards and local aquifer protection programs will help to protect water resources in the region, new development increases the risk of pollution from non-point sources such as road runoff. (See Impervious Surface discussion in the Natural Resources Section.)

The State of Connecticut has made a major attempt to protect source water (wells) through the EPA approved Source Water Assessment Program (SWAP). Under the program, the Department of Public Health (DPH) delineated source water protection areas for each public drinking water source, inventoried significant potential contaminant sources within these areas, and assessed the relative susceptibility of each public drinking water source. This sensitive information has been distributed to the municipal chief elected officials. The key indicators of susceptibility are sensitivity to certain contaminants, vulnerability to land development, and the presence of additional source protection measures. In 2007 DPH was in the implementation phase of SWAP.



The Connecticut Department of Environmental Protection (DEP) has undertaken an Aquifer Protection Program, as mandated by the state legislature. Under this program, water companies map the 13 CNVR aquifer protection areas, which cover 45 drinking-water wells in the region. Municipalities then adopt regulations for the well areas, following a DEP-supplied model. When certain specified land uses are present within the approved area, the municipality registers them and monitors their activity. Certain new uses are prohibited within the aquifer protection areas. All CNVR municipalities except Waterbury, Wolcott, and Middlebury contain aquifer protection areas.



Water Sampling, Pomperaug River

Recommendations

1. Identify and protect the water resources in the region — the existing and potential future water supply watersheds and aquifer protection areas — from pollution or degradation.
2. Monitor the extent of impervious surface near water supplies and aquifer areas.
3. Encourage best management practices to reduce pollution from non-point and other sources.
4. Protect water quality and availability through the acquisition of property and the use of best management practices (BMP) in developments.

Ensure an adequate supply of water for the region.

Future growth in the region may strain the ability of some water sources to provide an adequate quantity of potable water. Presently, demands on the water supply in the Pomperaug River aquifer are a concern for the future development in the western section of the region. Overall, inadequate supply storage, undercapitalized water companies, absentee ownership, competing recreational uses, lack of sufficient scientific data on availability and usage, and increasing regulatory requirements have the potential to affect the region's water supply.

Recommendations

1. Encourage efforts to provide an adequate supply of water for the region.
2. Vigorously encourage the preservation of existing and potential water supply resources (such as reservoirs) for the region's future water supply needs.
3. Encourage the adequate provision of water in rapidly growing areas through interconnections, cooperation, and other means.
4. Work to resolve conflicts among suppliers, users, and regulators of water supply in the region.
5. Assist communities in the transition from reservoir sources to groundwater wells.
6. Help in the development of scientific data for water supply decision-making.
7. Encourage efforts to develop a regional water institute or water museum.

Reduce the impacts of sewage discharges.

Sewage discharges can hurt water quality for recreational, scenic, and other uses. Studies of Long Island Sound have shown that sewage discharges from throughout the state have had cumulative impacts on this resource, especially in the discharge of excessive nitrogen. The same is true for rivers in the region.

Polluted stormwater runoff can be transported to municipal separate storm sewer systems and discharged into rivers and streams without treatment. In order to reduce discharges to the maximum extent possible, protect water quality, and satisfy the requirements of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) instituted a five-year permitting system, called Phase II Stormwater, for discharges from small municipal separate storm sewer systems, serving less than 100,000 and certain construction sites. It aims to reduce the quantity of pollutants — such as soil, grease, pesticides and trash — in the waste water system from entering rivers and streams. The program emphasizes best management practices (BMPs), education and outreach, good municipal house-keeping, and construction site erosion control measures. It covers the urbanized areas within twelve municipalities, excluding Bethlehem. COGCNV has worked with the municipalities to develop maps and data of GPS¹ located outfalls, and provided educational brochures, staff training, and cable television public information spots. As the program expands to the entire area of a municipality over the permitting period, COGCNV may offer additional assistance.

Recommendations

1. Encourage efforts to improve the treatment of wastewater prior to discharge.
2. Work to reduce nitrogen discharge regionwide.
3. Assist municipalities with adherence to the EPA Phase II Stormwater requirements.

Use the infrastructure system to guide growth.

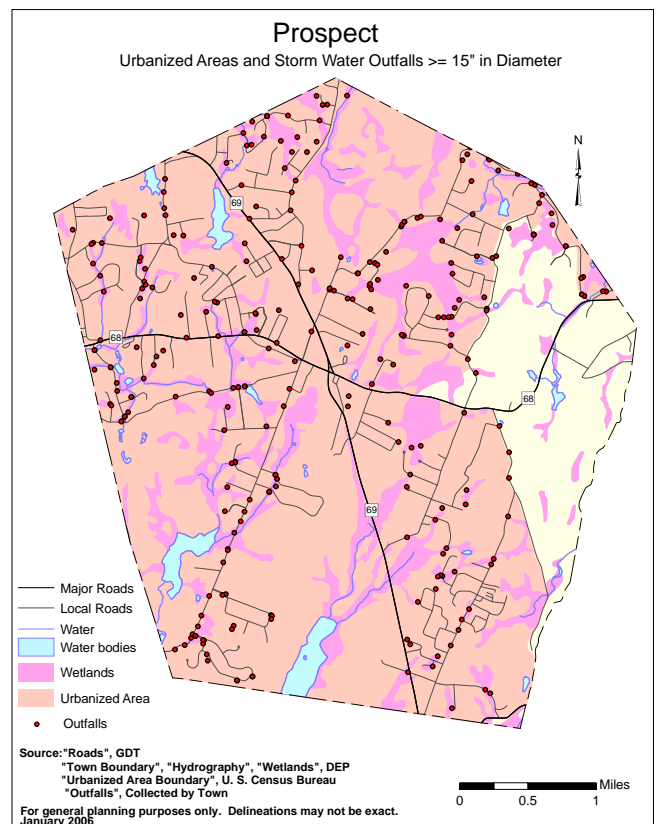
The public water distribution system can effectively support and guide regional settlement patterns. While it is



Outfall, Beacon Falls

not possible to provide public water supply for all locations or uses, certain uses and intensities may require public water supply.

Since sewers are the preferred disposal method for industrial, commercial, and intense residential land uses, such



uses should be located in sewer service areas. Sewer extensions are costly, especially in lower density areas.

Recommendations

1. Encourage the development of sewer and water infrastructure that serves the desired concept of regional land use.
2. Relate development intensity to the capabilities of the sewer and water infrastructure.
3. Encourage land development in areas served by infrastructure, including sewer and water.
4. Encourage sewer extensions only in areas of significant commercial and industrial growth and contiguous, high density residential development.
5. Provide a forum for regional cooperation and assistance in the EPA Phase II stormwater program.

Carefully manage existing infrastructure systems.

Portions of the region's infrastructure system may be in need of repair or upgrade. Also, infiltration and inflow are problems in the older systems, causing water to undergo costly water filtration which is not always necessary. Infiltration is unwanted water that enters a sewer (such as from leaks into the pipe). Inflow is an unwanted connection to the sewer (such as from floor drains). These problems consume valuable sewage treatment capacity and reduce the life of a treatment facility.



Storm Drain

Potential infrastructure issues are:

- Water supply systems — leakage, undersized pipes, inappropriate pipe materials (lead or asbestos cement), or dead end pipes.
- Sewer pipes — undersized pipe, brittle pipe, areas with combined waste water and storm sewers or infiltration and inflow.
- Sewage treatment plants — upgrading for reliability and efficiency as well as level of treatment

OTHER SEWAGE TREATMENT SYSTEMS

In addition to municipal sewage systems and subsurface sewage disposal systems², the Department of Environmental Protection has regulatory authority over community sewerage systems and alternative sewage treatment systems. Community sewerage systems are those serving two or more residences in separate structures that are not connected to a municipal sewerage system. Community systems may utilize either a subsurface sewage disposal system or an alternative sewage treatment system. Alternative sewage treatment systems are those serving one or more buildings that discharge into the groundwater and use a method of treatment other than a subsurface sewage disposal system. Alternative sewage treatment systems can be sized to meet the needs of an individual home up to a large residential or commercial development.

Alternative systems can be used for nutrient reduction and solids and organic removal. Since alternative systems generally include biological and chemical processes, they require more monitoring and maintenance than subsurface sewage disposal systems. Alternative sewage treatment systems are generally prohibited in public water supply watersheds, but could be used for residential communities, schools, malls, assisted living, and other uses. Because of this variety, alternative sewage treatment systems have the potential of decentralizing development and creating sprawl. They should be used with careful knowledge of the impacts on land use and the service area planning of a water pollution control authority.

Recommendations

1. Encourage efforts and programs to improve and maintain the region's public water distribution system.
2. Encourage efforts and programs to improve and maintain the region's sewer systems and treatment plants for greater efficiency and capacity.
3. Avoid installing costly new infrastructure in rural areas or in water supply watersheds.
4. Assist municipalities and water pollution control authorities in balancing the use of alternative sewage treatment systems with land use impacts.

SECONDARY RECOMMENDATIONS

Encourage private maintenance of septic systems.

Septic system failures are a continuing problem in the region. While most areas of widespread failures have been addressed, new problems continue to arise from the conversion of summer homes to year-round units, poor maintenance, inadequate or improper construction, inappropriate use of the systems, and age. It is more cost effective in the long term to encourage the maintenance of private septic systems than to extend public sewers.

Recommendations

1. Educate homeowners on the importance of maintenance and care of their septic systems to avoid costly repairs and replacements.
2. Educate homeowners on the importance of water conservation.
3. Educate homeowners about substances that should not be disposed of in septic systems.
4. Encourage the use of the regional household hazardous waste program.
5. Encourage purchasers of existing homes to check with the local health department to learn the history of their system.
6. Assist municipalities in drafting ordinances to properly regulate the inspection and maintenance of septic systems.



Well Field, Woodbury

Encourage water conservation in the region.

Water conservation efforts that can extend the existing supply are difficult to implement since some utility providers do not meter flows to encourage conservation. Improvements from the required use of low-flow fixtures have been offset by increases in lawn irrigation. Opportunities for cooperation among water service providers seem to hold promise for ensuring the region's water needs are met efficiently and economically.

In addition, the lack of water conservation increases flow to sewage treatment plants, reducing the plant's capacity to treat wastewater.

Recommendations

1. Undertake educational efforts to encourage water conservation, working with local environmental organizations and water providers.
2. Encourage water conservation improvements (flow meters, efficient fixtures, and management).
3. Encourage water conservation by the region's households and commercial, industrial, and municipal users in order to:
 - Reduce the amount of effluent (sewer or septic) to be treated.
 - Help extend the life of sewage treatment plants and septic systems.
 - Help protect water quality throughout the region.

¹ GPS: Global Positioning System

²A subsurface sewage disposal system is a house or collection sewer and a septic tank followed by a leaching system.



Wigwam Reservoir, Thomaston

II. FUTURE REGIONAL FORM

OVERVIEW

The recommendations of the preceding chapters are combined in this chapter to present the overall future regional form for the Central Naugatuck Valley Region.

THE CONCEPT OF THE FUTURE REGIONAL FORM

The future regional form was developed by considering:

- Existing land use patterns, environmental constraints, and existing and proposed infrastructure (water and sewer).
- Local desires (as evidenced by local plans of conservation & development and local zoning regulations and maps).
- State guidelines (as presented in the State Plan of Conservation & Development).
- Regional considerations (such as regional land use issues, regional goals and policies, and a concept of the desirable regional form).

The basic concept of the regional form is to focus development in a strong Waterbury-Naugatuck-Watertown regional core along the Naugatuck River where land use intensity reflects the availability of adequate infrastructure (water, sewer, transportation). Additional development in the region should be located in economic areas, community centers, and growth areas. The concentration of development minimizes costly expansions of public infrastructure, as areas of moderate land use intensity will be served by existing or planned infrastructure. A more intense density pattern promotes public transportation, energy conservation, and air quality goals by minimizing travel distances between places. With distance from the core area and subregional centers, the intensity of development decreases until some of these services are no longer required. Under the Plan, land use intensity



Age Restricted Housing, Middlebury

should be highest in the regional core to promote greatest economies of scale.

Growth areas are anticipated to be developed primarily as residential areas with some institutional uses and neighborhood trade and service establishments located at major intersecting roads.

Land use intensity in suburban and rural areas will also be higher in areas served with adequate infrastructure (water, sewer, transportation), as in community centers and employment centers. New major infrastructure investments (water, sewer, transportation) should be minimized outside these centers.

Major infrastructure investments are not anticipated in conservation areas. Future development in emerging suburbs and rural areas should be at the lowest densities since there is little or no infrastructure. Pockets of good soils in these areas can accommodate more development. Areas of desirable open space or significant natural resources should be preserved.



Downtown Waterbury

LAND USE CATEGORIES

This section provides the framework for the categories in the plan.

Development Areas

Regional Core

An area of mixed uses that is the primary focus of employment, commercial, institutional, and cultural activity in the region because of the significant investment in infrastructure, facilities, and services. This area has an intensity of development to warrant local bus service.



Pumpkin Patch, Bethlehem

Location: Waterbury, Naugatuck, and Watertown (Oakville).

Major Economic Areas

Areas outside the regional core that have developed, or are intended, as major economic development locations. These areas may support limited transit (such as commuter buses and/or para-transit). Water and sewer infrastructure are typically available.

Location: northern Cheshire, the Airport/Route 188 Area in Oxford, and the southwestern corner of Middlebury.

Community Centers

Community centers in outlying towns where mixed uses such as commerce, community activities, and housing with limited transit (such as commuter busses and/or para-transit). Some have water and sewer infrastructure.

Major Community Centers: Cheshire, Watertown, and Southbury. Smaller Community Centers: Beacon Falls, Bethlehem, Middlebury, Oxford, Prospect, Wolcott, and Woodbury.

Growth Areas/Infill

Growth areas accommodate the bulk of future regional growth. Water and/or sewer infrastructure is, or could be, provided. Infill is anticipated within neighborhoods or areas with infrastructure already available and where greater densities exist. Transit service may be available in both areas.

Conservation Areas

Rural Areas

Areas where rural characteristics should be preserved. Any development should respect natural resource and environmental constraints. Rural areas include: farms, residential uses, and small, interspersed community service areas. Intensity depends on the availability of infrastructure and other appropriate support services. Major public investment is discouraged.

Prohibitive Environmental Constraints

Areas of watercourses and waterbodies, poorly drained soils (wetlands), or 100-year floodplains (subject to field verification).

Existing Committed Open Space

Land permanently preserved as open space (such as local, state, or federal-dedicated open space, homeowners' association open space, land trust preserves, Class I and II water company land, cemeteries). These areas do not include some areas perceived as open space that are in private or municipal ownership and not protected (such as Class III water company land, municipal parks not designated for preservation, schools, and golf courses).

Proposed Open Space

Areas recommended for permanent, large scale, regional open space or regional greenways.

RELATION TO OTHER PLANS

The Plan was compared with local plans of conservation & development including recent draft plans, and the



East Mountain Reservoir, Prospect

2005-2010 State Conservation & Development Policies Plan. The six policies of the state plan were taken into account when developing the regional plan. While some areas of difference remain, minor inconsistencies can be attributed to:

- Scale of the mapping.
- Differences in definitions of desirable uses or development densities.
- Regional (as opposed to local or state) perspectives on future growth and development in the Central Naugatuck Valley Region.

CIVIL RIGHTS - ENVIRONMENTAL JUSTICE

The Civil Rights Act of 1964 protects individuals from discrimination based on race, color, or national origin that can limit the opportunity of minorities to gain equal access to services and programs. Recipients of federally assisted programs, such as COGCNV, cannot, on the basis of race, color, or national origin, either directly or through contractual means:

- Deny program services, aids, or benefits;
- Provide a different service, aid, or benefit, or provide them in a manner different than they are provided to others; or
- Segregate or separately treat individuals in any manner related to the receipt of any service, aid, or benefit.

Effective planning and decision making depends on un-

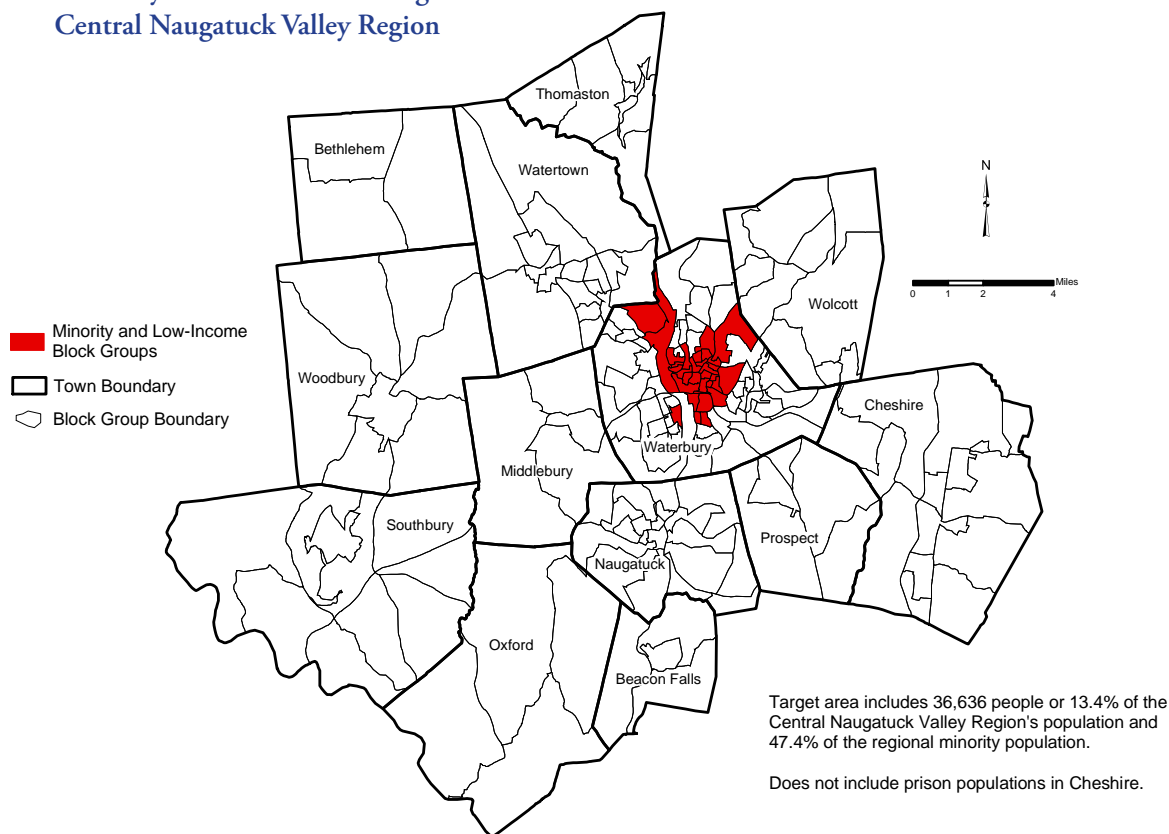
derstanding and properly addressing the unique needs of different socioeconomic groups.

Figure 11.1 identifies census block groups in the region where:

- More than 50% of the residents considered themselves Non-White or Hispanic on their 2000 Census form, and
- More than 20% of the residents were part of a household that reported having a median household income 150% or below the Census poverty threshold, by family size, on their 2000 Census form.

Block groups meeting both these criteria are all located in the city of Waterbury.

**Figure 11.1 Minority and Low-Income Target Area
Central Naugatuck Valley Region**



Source: COGCNV, Long Range Regional Transportation Plan: 2007-2035, Section VI Civil Rights - Environmental Justice

Figure 11.2 Future Land Use
Central Naugatuck Valley Region

Conservation Areas

- Rural Areas
- Prohibitive Environmental Constraints
- Committed Open Space
- Proposed Open Space
- Aquifer Protection Area

Development Areas

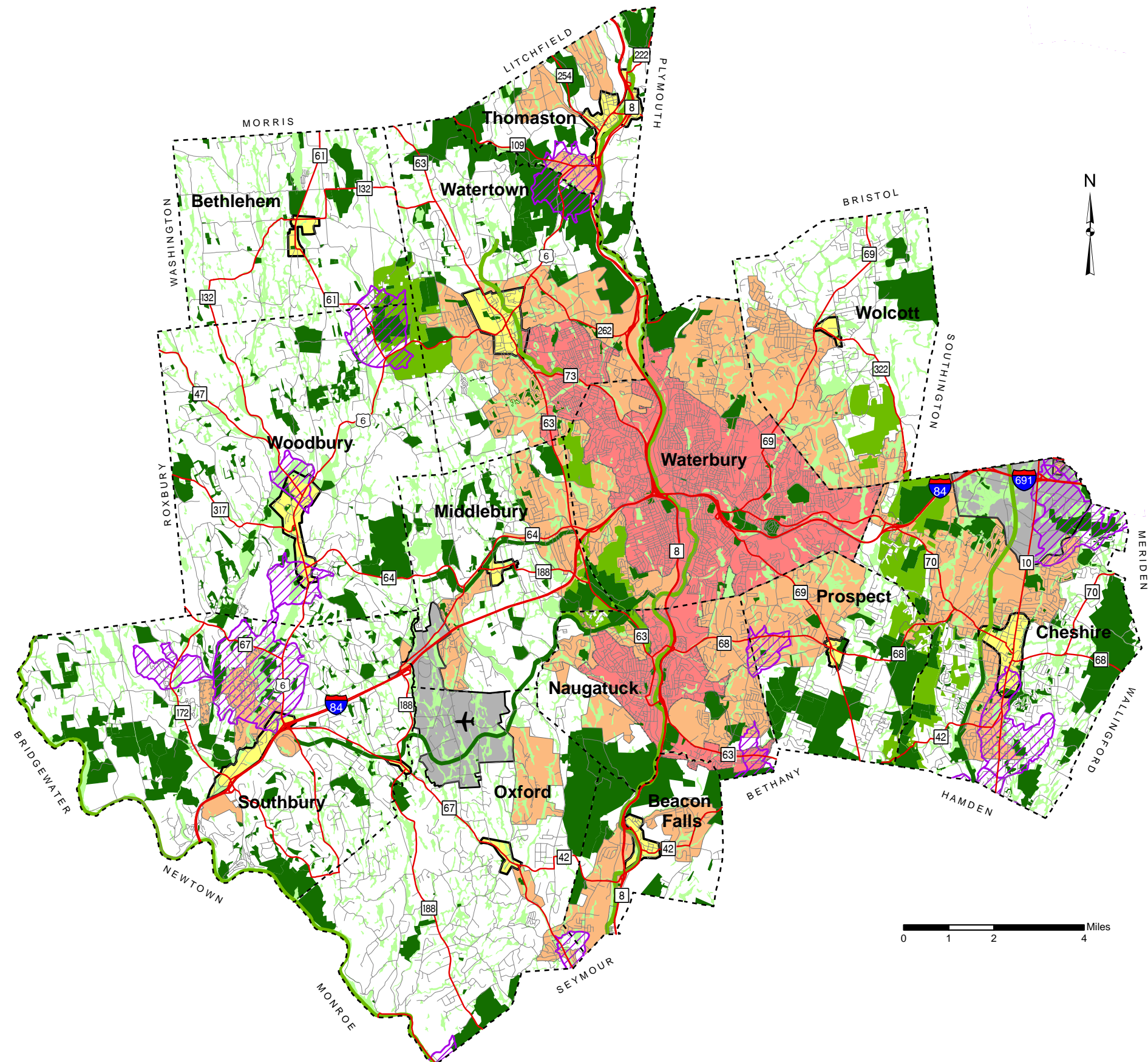
- Growth Areas
- Major Economic Areas
- Community Centers
- Regional Core

Transportation and Other

- Regional Arterial
- Local Road
- Municipal Boundary
- Airport



Plan Adoption: June 13, 2008
Disclaimer: This map is intended for general planning purposes only.





FUTURE
LAND USE

12. IMPLEMENTATION TOOLS

COGCNV has the primary responsibility for initiating implementation of the Plan's recommendations. Some of the recommendations in the Regional Plan of Conservation and Development can be accomplished by COGCNV through funding requests, regional referrals, application reviews, and other means. Other recommendations require the cooperation of, and actions by, local boards and commissions in each community. Still other recommendations will be implemented with the assistance of state or federal agencies that will consider the recommendations of the Plan in their reviews and proposals.

If the Plan is to be realized, it must serve as a guide to all residents, communities, commissions, boards, agencies, and individuals interested in the orderly growth of the Central Naugatuck Valley Region.

REGIONAL TOOLS

Due to the unique circumstances in Connecticut (small state, no county government, regional planning organizations with advisory powers), limited tools are available at the regional level to implement the Plan. Coordination among the three levels of governments and other local, regional, and state agencies is essential for its implementation.

The Plan will guide COGCNV in setting priorities, reviewing state, regional, and local proposals, implementing programs, and assisting member communities. The document will be used by COGCNV for:

- Review of projects that request federal or state funding.
- Review of proposed interlocal agreements (CGS 8-35d).
- Referrals of zoning and subdivision with intermunicipal impacts (CGS 8-3b and 8-26b).



Dwight Merriam and Robert Sitkowski giving seminar on Due Process, Middlebury Library

- Educational seminars on plan-related topics.
- Funding of municipal economic development projects (CGS 32-224).
- Review of local plans of conservation & development.
- Review of proposals as may be requested by member municipalities.
- Source of information, locally and statewide.

COMMUNITY TOOLS

Several tools are available to implement the Plan's recommendations at the community level. These tools can influence the pattern, character, and timing of future development in the Central Naugatuck Valley Region — both public and private — so that it is consistent with and promotes the goals and recommendations of the Regional Plan. Available tools include:

- Local plans of conservation and development.
- Zoning and subdivision regulations.
- Capital improvement programs.
- Referral of municipal improvements.
- Open space acquisitions.

Plan of Conservation & Development

The local Plan of Conservation & Development should be the basis for land use decisions by the local planning and/or zoning commission. Under state statutes, the local Plan must consider the recommendations of the Regional Plan, and thus help accomplish the goals and recommendations of the Regional Plan.

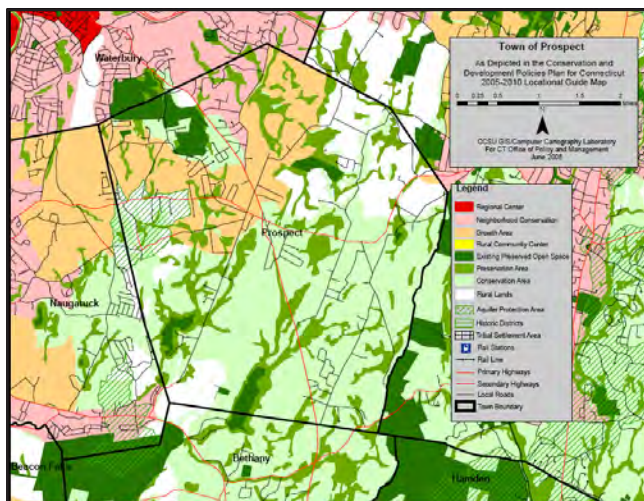
Zoning and Subdivision Regulations

The zoning and the subdivision regulations provide specific criteria for land development at the time of applications. These regulations can be important tools to implement the recommendations of the Regional Plan.

Capital Improvement Program

The Capital Improvement Program is a tool for planning major capital expenditures of a municipality so that local needs are identified, ranked, and scheduled for funding within local fiscal constraints.

The Plan contains several proposals that may require the expenditure of municipal funds. The Plan recommends that these (and other) items be included in the municipality's Capital Improvement Program and that funding for them be included as part of the annual Capital Budget.



State Conservation & Development Policies Plan, Prospect

Referral of Municipal Improvements

Section 8-24 of the Connecticut General Statutes requires that municipal improvements (defined in the statute) be referred to the Planning & Zoning Commission for a report before any local action is taken. A proposal disapproved by the Commission can only be implemented after a two-thirds vote by the municipality's legislative body. All local boards and agencies should be notified of Section 8-24 and its mandatory nature so that proposals can be considered and prepared in compliance with its requirements.

Open Space Acquisition

State funding programs, payments in lieu of open space set-asides, and other tools can assist in the implementation of the Plan by guiding development. The setting of priorities for these land acquisitions should consider the Regional Plan's goals.

STATE TOOLS

The Office of Policy & Management (OPM) is responsible for preparing the State Conservation & Development Policies Plan (C&D PP). The *2005-2010 C&D PP*, which is prepared every five years, was adopted in 2005 by the General Assembly.

The C&D Plan is considered by state agencies in undertaking projects in Connecticut. The Regional Plan of Conservation & Development will be considered by the Office of Policy & Management in preparing for future C&D Plans. Similarly, OPM and other state agencies may consider the Regional Plan when reviewing projects in the Central Naugatuck Valley Region.

State agencies are directed to consider the state C&D PP when they prepare agency plans. In addition, agency prepared plans, when required by state or federal law, are to be submitted to OPM for a review of conformity with the Plan. State agencies are required to be consistent with the C&D PP when undertaking the following actions:

- Acquisition of real property when the acquisition costs are in excess of two hundred thousand dollars.
- Development or improvement of real property when the development costs are in excess of two hundred thousand dollars.
- Acquisition of public transportation equipment or facilities when the acquisition costs are in excess of two hundred thousand dollars.
- Authorization of any state grant for an amount in excess of two hundred thousand dollars for the acquisition, development, or improvement of any real property or for the acquisition of public transportation equipment or facilities.

The Secretary of OPM also submits to the State Bond Commission, prior to the allocation of any bond funds for any of the above actions, an advisory statement commenting on the extent to which such action conforms to the State Plan.

FEDERAL TOOLS

Federal agencies may refer to the Regional Plan when considering major projects in the region.

The Regional Plan has the greatest influence on transportation projects. Since COGCNV is the metropolitan planning organization (MPO) for the region, the Regional Plan of Conservation & Development, the Regional Transportation Plan, the Transportation Improvement Program, and any special studies provide important information to the Federal Highway Administration, the Federal Transit Administration, and other transportation agencies.

RELATED PLANNING ACTIVITIES

The 2008 *COGCNV Regional Plan of Conservation and Development* relates to other local regional and state planning activities. The following list, while by no means exhaustive, illustrates the wide range of planning efforts and documents which have been consulted and which provide the background for this Plan. The interaction of these documents provides implementation of this Plan.

State

- *Connecticut Conservation and Development Policies Plan 2005-2010*
- *State of Connecticut Solid Waste Management Plan 2006*
- *2005 Statewide Comprehensive Outdoor Recreation Plan (SCORP)*

Regional

- *Profile of the CNVR 2007*
- *CNVR Fiscal Impact Study: 2000*
- *Long-Range Regional Transportation Plan 2007-2035*
- *Transportation Trends and Characteristics of the CNVR 2000*

Local

- Municipal Plans of Conservation and Development
 - Beacon Falls, 2002
 - Bethlehem, 1999
 - Cheshire, 2002
 - Middlebury, 2000
 - Naugatuck, 2001
 - Oxford, 2007
 - Prospect, 2001
 - Southbury, 2002
 - Thomaston, 2005
 - Waterbury, 2005
 - Watertown, 1992
 - Wolcott, 1997
 - Woodbury, 1999

IMPLEMENTATION SCHEDULES

LAND USE & GROWTH PATTERNS	Local	Region	State	Other
<i>Guide the location of growth in the region towards the regional center and areas with infrastructure.</i>				
1. Encourage growth in areas where adequate infrastructure, including the transportation network is available.		Lead		
2. Discourage large-scale residential, commercial, and industrial development in rural development areas.		Lead		
3. Continue to address issues associated with suburban growth pressure.		Lead		
4. Consideration of potential impacts in development of emergencies caused by natural disasters.		Lead		
5. Encourage municipalities to undertake pre-disaster mitigation planning activities.		Lead		
6. Preserve scenic beauty and habitat values of the region's rivers, tributaries, and wetlands.	Lead			
<i>Educate municipal commissions and others about the fiscal impacts of growth within the region.</i>				
1. Encourage communities to cooperate in obtaining fiscal benefits that will benefit all residents of the region.		Lead		
<i>Encourage periodic review of local land use regulations.</i>				
1. Assist communities in periodic reviews of their land use regulations to ensure that the changing needs of the region's population can be met (such as affordable housing development or accessory apartment regulations).		Lead		
2. Discourage policies that reinforce patterns of racial, social, or economic segregation or concentration.		Lead		
3. Encourage protection of natural and cultural resources (historic and archeological). Water resources should be a high priority.		Lead		

Legend

Lead	Lead agency for implementation	GWTD	Greater Waterbury Transit District
	Provides assistance to Lead	OS	Open Space Preservation Groups
CO	Conservation Organizations	WP	Water Providers
NPHG	Non-profit housing groups	WUCC	Water Utility Coordinating Committee
WDC	Waterbury Development Corporation	LHD	Local Health Department
CofC	Chamber of Commerce	WPCA	Water Pollution Control Authority

LAND USE & GROWTH PATTERNS	Local	Region	State	Other
<i>Encourage settlement patterns that reduce the rate of land consumption in the region.</i>				
1. Encourage settlement patterns that efficiently use the region's infrastructure and preserve open space and natural resources.		Lead		
2. Encourage mixed use developments in regional and community centers.		Lead		
3. Encourage cluster development in appropriate areas where soil and environmental conditions would permit.		Lead		
4. Encourage affordable housing and social, racial, and economic diversity.		Lead		
5. Work to maintain the environment necessary for farms and the farming industry.		Lead		
6. Explore land use tools such as the transfer of development rights as a means to reduce the rate of land consumption.		Lead		
<i>Recognize farmland as an important natural resource worthy of conserving for farming activity as well as its present aesthetic and economic benefits to the community.</i>				
1. Work with groups involved in preserving agricultural soils and farming as a viable land use in the region or to meet open space targets.		Lead		
2. Encourage the incorporation of agriculture in local plans of conservation and development, including inventories of farm business and farmland.		Lead		
3. Help develop specific tax, zoning, and land use strategies to address farm retention and reduced impediments to farming activities.		Lead		
<i>Facilitate sustained and coordinated efforts to renovate contaminated sites.</i>				
1. COGCNV should serve as a clearinghouse for information on state and federal funds available for the clean-up of contaminated sites.		Lead		
2. COGCNV, in its legislative efforts, should lobby annually for bond funds to address local clean-up of contaminated sites.		Lead		
<i>Encourage preservation of cultural resources.</i>				
1. Encourage efforts to preserve important historical and cultural resources in the region.		Lead		

NATURAL RESOURCE CONSERVATION		Local	Region	State	Other
<i>Protect water resources in the region.</i>					
1. Protect surface and groundwater quality throughout the region.	Lead				
2. Evaluate and manage natural resources on a watershed.				Lead	
3. Continue to implement flood plain protection measures.	Lead				
4. Encourage and educate communities to update land use and stormwater protection policies to address non-point source pollution by utilizing best management practices (BMPs) such as detention basins, grass swales, and sedimentation structures.				Lead	
5. Consider the cumulative impacts of land use decisions on water quality as well as downstream implications (such as impacts to Long Island Sound).				Lead	
<i>Relate land use intensity to the capability of the land.</i>					
1. Increase allowed development intensity where it is compatible with natural resources and infrastructure (water, sewer, roads).	Lead				
2. Decrease allowed development intensity where it may exceed the natural capabilities of the land and infrastructure is not, or will not be, available.	Lead				
<i>Support efforts to protect natural resources.</i>					
1. Support efforts to identify and protect scenic areas within the region.			Lead		CO
2. Continue to identify and preserve scenic areas within the region.	Lead				CO
3. Encourage preservation efforts that mitigate areas where negative impacts have resulted.			Lead		CO
4. Consider the cumulative implications of land use decisions in the region on water resources, farmland, forests, air quality, and other biological resources.	Lead				

Legend

Lead	Lead agency for implementation	GWTD	Greater Waterbury Transit District
	Provides assistance to Lead	OS	Open Space Preservation Groups
CO	Conservation Organizations	WP	Water Providers
NPHG	Non-profit housing groups	WUCC	Water Utility Coordinating Committee
WDC	Waterbury Development Corporation	LHD	Local Health Department
CofC	Chamber of Commerce	WPCA	Water Pollution Control Authority

HOUSING	Local	Region	State	Other
<i>Increase opportunities for affordable housing in the region.</i>				
1. Consider participating in the state affordable housing financial incentive program.	Lead			
2. Offer density bonuses that make building affordable housing units profitable to developers.	Lead			
3. Combat the stigma of affordable housing by requiring quality and attractive affordable housing units.	Lead			
4. Intersperse affordable units with market rate housing units.	Lead			NPHG
5. Encourage the creation of accessory units.	Lead			
6. Work with not-for-profit organizations dedicated to creating more affordable housing.	Lead			NPHG
7. Amend the Affordable Housing Appeals Act to more accurately count and successfully encourage the construction of affordable housing.		Lead		
<i>Promote a variety of housing types in the region.</i>				
1. Promote an adequate supply of housing for population needs.		Lead		NPHG
2. Encourage smaller unit sizes in response to decreasing household size.		Lead		NPHG
3. Promote the construction of decent, attractive, and affordable housing options for young adults, families, the elderly, the disabled, and the homeless.		Lead		NPHG
4. Promote the construction and rehabilitation of a variety of housing types and sizes to fulfill the needs of the region's diverse households.		Lead		NPHG
5. Encourage mixed use developments.		Lead		
6. Locate active adult, age-restricted housing near community services and amenities.	Lead			
7. Ensure that the number of age-restricted housing units does not exceed the local or regional market for such units.	Lead			
8. Encourage the inclusion of "universal design" features in new housing units.		Lead		NPHG
9. Allow accessory apartments in existing homes or their outbuildings, or built into new structures, without restricting who may rent the units.	Lead			

HOUSING	Local	Region	State	Other
<i>Promote housing that allows for a variety of transportation choices.</i>				
1. Encourage the construction of housing that provides residents with a choice of transportation options.		Lead		
2. Locate new housing near existing development and employment, retail and community centers.	Lead			
3. Provide pedestrian, bicycle, and public transit amenities in new and existing developments.	Lead			
4. Promote the construction of mixed use developments.		Lead		NPHG
5. Allow small scale home occupations.	Lead			
6. Promote pedestrian connections around commuter rail stations.		Lead		
<i>Encourage settlement patterns that utilize existing infrastructure.</i>				
1. Encourage housing at appropriate densities to take advantage of existing services and infrastructure.		Lead		
2. Encourage infill development within the regional core and in and near community centers.		Lead		
3. Promote the redevelopment of brownfield sites.		Lead		
4. Discourage extensions of infrastructure and services to new developments at inappropriate densities, especially in outlying areas.		Lead		
5. Review development proposals in undeveloped areas with an eye towards the impacts on existing open space, natural resources, and scenic vistas.	Lead			
6. Encourage environmentally sensitive and low impact development techniques.		Lead		
<i>Continue efforts to enhance the character of our communities and revitalize urban housing units and neighborhoods.</i>				
1. Promote sound planning and design practices for all housing construction and rehabilitation which complement or improve the character of the neighborhood, each community, and the region's built and natural environment.		Lead		
2. Work with municipalities and community groups developing comprehensive neighborhood revitalization strategies.		Lead		
3. Assist municipalities and community groups in pursuing sources of grant money for community improvements.		Lead		
4. Initiate a strategic planning process to help stabilize urban neighborhoods.	Lead			
5. Advocate neighborhood improvements and orderly housing growth which does not impair the economic or environmental health or safety of the town, neighborhood, or residents.	Lead			

ECONOMIC DEVELOPMENT	Local	Region	State	Other
<i>Nurture the region's strength as a center of precision manufacturing.</i>				
1. Promote the region's precision manufacturing sector and develop a marketing strategy to retain existing firms and attract new ones.				WDC/ CofC
2. Develop a strategic approach to industrial recruitment that focuses on precision manufacturing and related business.				WDC/ CofC
3. Encourage efforts that enhance the visibility and perception of the region's precision manufacturing focus.				WDC/ CofC
<i>Aggressively pursue economic development for the region.</i>				
1. Seek to create a regional economic organization to assist existing business, market the region as a place for business to locate, and coordinate efforts of local economic development agencies.		Lead		WDC/ CofC
2. Coordinate efforts with economic development agencies including local economic development corporations and commissions and chambers of commerce.		Lead		WDC/ CofC
3. Recognize that the majority of the region's employment growth will come from the expansion of existing firms.				WDC/ CofC
<i>Guide the location of economic development to the regional center and major economic areas.</i>				
1. Encourage appropriate types of economic development in locations that are compatible with the regional future land use policy map.		Lead		WDC
2. Make infrastructure and transportation improvements to encourage appropriate economic development in the regional center and major economic areas.		Lead		WDC
3. Continue to improve the region's transportation system, both highway and transit, in order to serve economic development areas within the region and help businesses benefit from the region's central location within the Northeast markets.		Lead		WDC
4. Seek to extend bus and job-access service to major employment areas.		Lead		WDC
<i>Prepare workers for current and future needs.</i>				
1. Encourage and support education and training programs that provide residents with the skills needed by businesses in the region including school-to-career programs geared to metal manufacturing.		Lead		CofC
2. Work with businesses in the region to identify current and future needs for skilled employees.		Lead		CofC

TRANSPORTATION	Local	Region	State	Other
<i>Maintain and improve the region's transportation system.</i>				
Highway System				
1. Monitor congestion within the region's highway network, and emphasize highway projects that will help address congested corridors in a timely manner.		Lead		
2. Seek to improve safety and reduce traffic congestion, energy consumption, and motor vehicle emissions.		Lead		
3. Encourage access management techniques along arterial roadways in order to improve roadway capacity.		Lead		
4. Encourage proper maintenance of the region's highways, including ongoing safety and pavement maintenance.		Lead		
5. Continue the evaluation and maintenance of the region's bridges.			Lead	
6. Support context-sensitive design for the region's highway system improvements.		Lead		
7. Increase awareness of commuter parking locations along major commuter routes.		Lead		
Transit & Rail				
1. Continue to refine bus services to serve the region and increase ridership.		Lead		GWTD
2. Pursue stable funding for fixed route bus services to cover operating expenses.		Lead		GWTD
3. Promote intercity express buses as a means of alleviating congestion on the region's expressways.		Lead		GWTD
4. Support continued paratransit services (such as dial-a-ride) to meet the specialized needs of residents.			Lead	
5. Encourage efforts to increase rail passenger ridership in the region.		Lead		
6. Maintain and expand regional rail freight facilities and services.			Lead	
Walkways & Bikeways				
1. Coordinate with municipalities and neighboring RPOs on interregional greenway projects.		Lead		
2. Encourage provision of walkways and bikeways, where appropriate.	Lead			
3. Provide areas for bicycle use as part of road projects, as appropriate.			Lead	
4. Encourage activities that provide for a regional network of contiguous pedestrian and bicycle paths.		Lead		
Airports				
1. Continue to identify and make improvements that encourage use of the Waterbury-Oxford Airport, while limiting land use conflicts.			Lead	

TRANSPORTATION	Local	Region	State	Other
<i>Coordinate land use and transportation actions.</i>				
1. Encourage coordinated land use and transportation planning so that transportation investments can be prudently planned for anticipated development.		Lead		
2. Encourage transit-oriented development towards existing transit corridors.		Lead		
3. Continue efforts to encourage transit use and ride-sharing.		Lead		
4. Assure adequate mobility to employment and services for transit-oriented populations		Lead		
5. Consider the transportation implications of proposed developments, and propose projects as needed.	Lead			
6. Consider the environmental and land use implications of transportation projects, and mitigate their effects as needed.	Lead			
7. Discourage residential development within close proximity to the Waterbury-Oxford Airport.	Lead			
<i>Emphasize connectivity in developing local roads.</i>				
1. Encourage communities to plan road networks for future circulation needs.		Lead		
<i>Continue to plan for needed transportation improvements.</i>				
1. Continue to set priorities for transportation projects in the region in response to local and regional needs.		Lead		
2. Continue to pursue available transportation funding for the region.		Lead		

Legend

Lead	Lead agency for implementation	GWTD	Greater Waterbury Transit District
	Provides assistance to Lead	OS	Open Space Preservation Groups
CO	Conservation Organizations	WP	Water Providers
NPHG	Non-profit housing groups	WUCC	Water Utility Coordinating Committee
WDC	Waterbury Development Corporation	LHD	Local Health Department
CofC	Chamber of Commerce	WPCA	Water Pollution Control Authority

OPEN SPACE	Local	Region	State	Other
<i>Protect more open space in the region.</i>				
1. Encourage activities to identify and preserve important open space areas before they are threatened by development.		Lead		OS
2. Retain existing private open space through public acquisition, use of open space requirements in subdivision regulations, easements, or other means.	Lead			OS
3. Assist the state, municipalities, and land trusts in their efforts to meet the state's open space goal.		Lead		
<i>Coordinate and prioritize open space preservation throughout the region.</i>				
1. Maximize the benefits of open space by giving priority to the establishment of greenways, open space connections, and forests, multi-purpose areas, the preservation of visible parcels, and the protection of water resources and lands which protect water quality.		Lead		OS
2. Address the difficulty of providing adequate open space in urban areas by providing for small public greens and "pocket parks," enhancing and upgrading existing public greens, and promoting street tree programs.	Lead			
3. Where feasible, encourage creation of multi-purpose trail systems that link recreational and open space areas, and pedestrian and bike paths that link residential, retail, and employment areas.		Lead		OS
4. Work to coordinate open space preservation with forests, agriculture, and lands with minimum land use impacts.		Lead		
<i>Focus efforts on obtaining sites for water-based recreation.</i>				
1. Encourage efforts to address the region's needs for access to local rivers and lakes, especially new beaches.		Lead		OS
<i>Preserve declassified water company land as open space.</i>				
1. Work with local communities including land trusts, the state, and other organizations such as the Trust for Public Land and Connecticut Farmland Trust to preserve land, especially Class III and other watershed lands, as open space and/or potential future water supply sources.		Lead		OS
2. Undertake education programs on the fiscal benefits of open space protection and use of Public Act 490.		Lead		OS
<i>Encourage use of a broad range of tools to protect open space.</i>				
1. Promote open space preservation in the region by public and private agencies.		Lead		OS
2. Assist local land trusts and other non-profit organizations that preserve open space in the region.	Lead			OS
3. Encourage communities to budget funds each year for open space acquisition, aggressively seek open space acquisition grants, require open space requirements in subdivisions.	Lead			

OPEN SPACE	Local	Region	State	Other
4. Encourage communities in the region to inventory their preserved open space and to use land use techniques that promote open space protection.		Lead		OS
<i>Manage open space effectively to maximize benefits.</i>				
1. Encourage appropriate access to open space and recreational facilities for all residents of the region.		Lead		OS
2. Encourage appropriate activities in open space areas to avoid unwanted damages, such as soil erosion, trampled vegetation, litter, fires, and ensure proper management.		Lead		OS
<i>Encourage efforts to preserve open space action areas, critical environmental areas, and areas threatened by development.</i>				
1. Water-Based Recreational Sites — locate and preserve sites for water-based recreation, especially access points for boating fishing, or swimming.		Lead		OS
2. Greenways (region wide) — create, extend, and enhance greenways in the region, especially along river corridors.		Lead		OS
3. Recreation Trails (region-wide) — protect, create, extend, and enhance recreational trails throughout the region, the Farmington Canal trail in Cheshire, the trolley line in Middlebury, and the Larkin Bridle Trail in Middlebury, Oxford, and Southbury. Encourage the preservation of trail corridors maintained by such groups as the Connecticut Forest and Park Association.		Lead		OS
4. Ridgelines — Assist the region's communities in protecting ridgeline areas.	Lead			
5. Other Recommended Action Areas — Work toward the preservation of the six open space action areas.		Lead		OS

Legend

Lead	Lead agency for implementation	GWTD	Greater Waterbury Transit District
	Provides assistance to Lead	OS	Open Space Preservation Groups
CO	Conservation Organizations	WP	Water Providers
NPHG	Non-profit housing groups	WUCC	Water Utility Coordinating Committee
WDC	Waterbury Development Corporation	LHD	Local Health Department
CofC	Chamber of Commerce	WPCA	Water Pollution Control Authority

WATER SUPPLY & SEWER SERVICE	Local	Region	State	Other
<i>Protect the quality of the region's water supply.</i>				
1. Identify and protect the water resources in the region — the existing and potential future water supply watersheds and aquifer protection areas — from pollution or degradation.			Lead	
2. Monitor the extent of impervious surface near water supplies and aquifer areas.		Lead		
3. Encourage best management practices to reduce pollution from non-point and other sources.			Lead	
4. Protect water quality and availability through the acquisition of property and the use of best management practices (BMP) in developments.				WP
<i>Ensure an adequate supply of water for the region.</i>				
1. Encourage efforts to provide an adequate supply of water for the region.		Lead		
2. Vigorously encourage the preservation of existing and potential water supply resources (such as reservoirs) for the region's future water supply needs.		Lead		
3. Encourage the adequate provision of water in rapidly growing areas through interconnections, cooperation, and other means.			Lead	
4. Work to resolve conflicts among suppliers, users, and regulators of water supply in the region.				WUCC
5. Assist communities in the transition from reservoir sources to ground-water wells.				Lead
6. Help in the development of scientific data for water supply decision-making.				CO
7. Encourage efforts to develop a regional water institute or water museum.		Lead		
<i>Reduce the impacts of sewage discharges.</i>				
1. Encourage efforts to improve the treatment of wastewater prior to discharge.		Lead		
2. Work to reduce nitrogen discharge regionwide.	Lead			
3. Assist municipalities with adherence to the EPA Phase II Stormwater requirements.		Lead		
<i>Use the infrastructure system to guide growth.</i>				
1. Encourage the development of sewer and water infrastructure that serves the desired concept of regional land use.		Lead		
2. Relate development intensity to the capabilities of the sewer and water infrastructure.			Lead	
3. Encourage land development in areas served by infrastructure, including sewer and water.		Lead		

WATER SUPPLY & SEWER SERVICE	Local	Region	State	Other
4. Encourage sewer extensions only in areas of significant commercial and industrial growth and contiguous, high density residential development.	Lead			
5. Provide a forum for regional cooperation and assistance in the EPA Phase II stormwater program.		Lead		
<i>Carefully manage existing infrastructure systems.</i>				
1. Encourage efforts and programs to improve and maintain the region's public water distribution system.		Lead		WP
2. Encourage efforts and programs to improve and maintain the region's sewer systems and treatment plants for greater efficiency and capacity.		Lead		WPCA
3. Avoid installing costly new infrastructure in rural areas or in water supply watersheds.	Lead			
4. Assist municipalities and water pollution control authorities in balancing the use of alternative sewage treatment systems with land use impacts.		Lead		
<i>Encourage private maintenance of septic systems.</i>				
1. Educate homeowners on the importance of maintenance and care of their septic systems to avoid costly repairs and replacements.				WPCA
2. Educate homeowners on the importance of water conservation.				CO/WP
3. Educate homeowners about substances that should not be disposed of in septic systems.				WP
4. Encourage the use of the regional household hazardous waste program.		Lead		
5. Encourage purchasers of existing homes to check with the local health department to learn the history of their system.				Lead
6. Assist municipalities in drafting ordinances to properly regulate the inspection and maintenance of septic systems.				LHD
<i>Encourage water conservation in the region.</i>				
1. Undertake educational efforts to encourage water conservation, working with local environmental organizations and water providers.				WP
2. Encourage water conservation improvements (flow meters, efficient fixtures, and processes).				WP
3. Encourage water conservation by the region's households and commercial, industrial, and municipal users in order to reduce the amount of effluent to be treated, help extend the life of sewage treatment plants and septic systems, and help protect water quality throughout the region.				WP

MAJOR RECOMMENDATIONS

The planning process will be most successful when it serves as the foundation for implementation of the Plan's recommendations.

IMPLEMENT THE PLAN	Local	Region	State	Other
1. Keep local officials familiar with the Regional Plan by providing a copy to newly elected or appointed officials in the region.		Lead		
2. Keep the Plan current, relevant, and "user-friendly" in order to promote its effectiveness at the local and regional level.		Lead		
3. Work to educate local officials and agencies about how the Plan can be of value to their community.		Lead		
4. Demonstrate the value of the Regional Plan by showing how its recommendations have helped the region.		Lead		

Legend

Lead	Lead agency for implementation	GWTD	Greater Waterbury Transit District
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COUNCIL MEMBERS, ALTERNATES, & REGIONAL PLANNING COMMISSION

Municipality	Chief Elected Official	Alternate	Regional Planning Commission
Beacon Falls	Susan Cable, First Selectman	Karen Wilson	Richard Minnick Jeff Burkitt
Bethlehem	Jeff Hamel, First Selectman	Ellen Samoska	Ellen Samoska Maria Hill
Cheshire	Matthew Hall, Chairman, Town Council	Michael Milone	Martin Cobern Vacant
Middlebury	Thomas Gormley, First Selectman	Joseph Salvini	Thomas Gormley Alice Hallaran
Naugatuck	Michael Bronko, Mayor	Tamath Rossi	Anthony Malone Joseph McEvoy
Oxford	Mary Ann Drayton-Rogers, First Selectman	Margaret Potts	Harold Cosgrove Herman Schuler
Prospect	Robert Chatfield, Mayor	Gina Ash	Gil Graveline Gene McCarthey
Southbury	Mark Cooper, First Selectman	Jennifer Naylor	Harmon Andrews Nancy van Norden
Thomaston	Maura Martin, First Selectman	Robert Flanagan	Bill Guerrera Robert Flanagan
Waterbury	Michael Jarjura, Mayor	Theresa Caldarone	James Sequin Vacant
Watertown	Elaine Adams, Chairman, Town Council	Charles Frigon	Ruth Mulcahy Vacant
Wolcott	Thomas Dunn, Mayor	Elizabeth Gaudiosi	Linda Fercodini Pamela Casagrande
Woodbury	Paul Hinckley, First Selectman	Vacant	Kay Campbell Janet Bunch

COGCNV Staff

Peter Dorpalen, Executive Director
 Virginia Mason, Assistant Director
 Samuel Gold, Senior Planner
 Joseph Perrelli, Regional Planner
 Glenda Prentiss, GIS Coordinator

Jeff Cormier, GIS Specialist/Regional Planner
 Patricia Bauer, Financial Manager
 Selma Alves, Administrative Assistant (Left 05/08)
 Lauren Rizzo, Administrative Assistant (Hired 05/08)



COUNCIL OF GOVERNMENTS OF
THE CENTRAL NAUGATUCK VALLEY