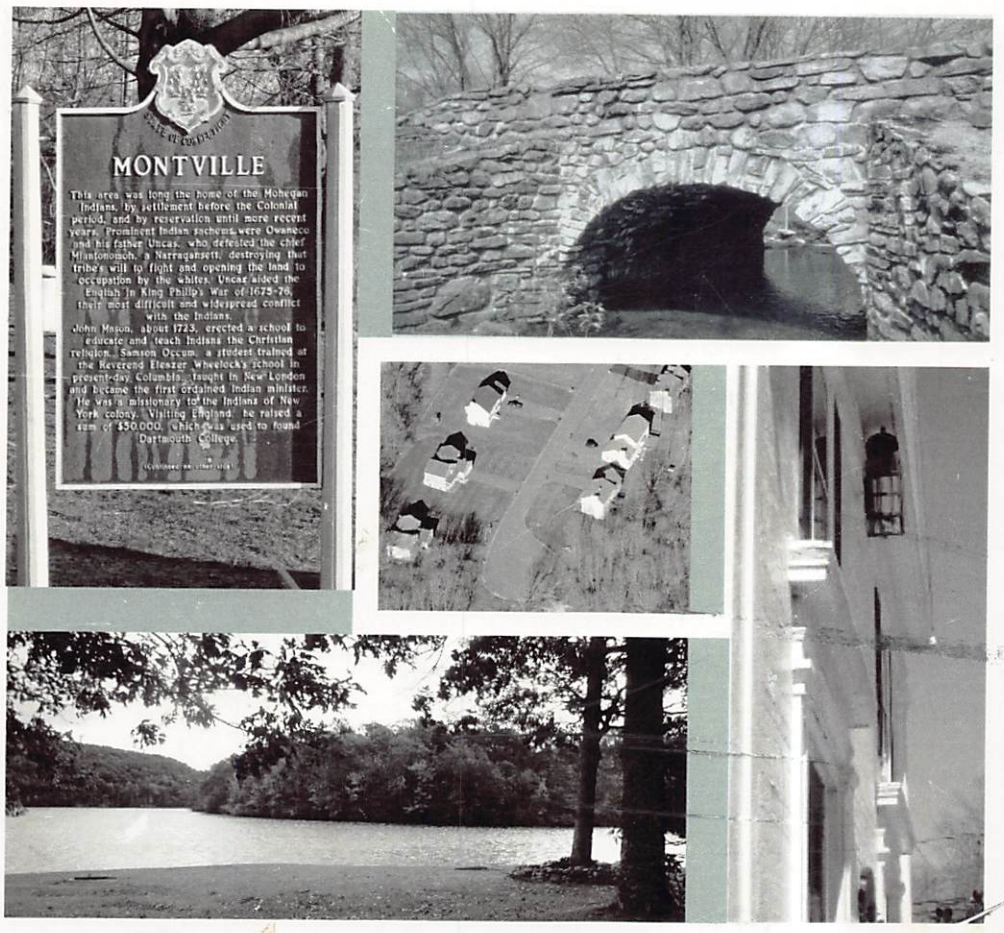
MONTVILLE

Plan of Conservation and Development 2010



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Effective Date
May 15, 2010

"If you don't know where you're going, you might not get there"

Yogi Berra

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Introduction

The Planning Commission is required to prepare and adopt or amend a Plan of Conservation and Development for the community, showing its recommendation for the most desirable use of land for residential, recreational, commercial, industrial, and other purposes, and for the most desirable density of population for the various parts of the municipality (CGS §8-23).

The Commission may consider the following in the Plan:

- Show the Commission's recommendation for a system of principal thoroughfares, parkways, bridges, streets and other public ways; for airports, parks, playgrounds and other public grounds; for the general location, relocation and improvement of public buildings; for the general location and extent of public utilities and terminals, whether publicly or privately owned, for water, sewage, light, power, transit and other purposes; and for the extent and location of public housing projects.

- Recommend the conservation and preservation of traprock and other ridgelines.

- Include recommended programs for the implementation of the plan, including a schedule and budget for public capital projects, and a program for the enactment and enforcement of zoning and subdivision controls, building and housing codes and safety regulations, plans for implementation of affordable housing, and plans for open space acquisition and greenways protection and development.

- Include all necessary and related maps, explanatory material, photographs, charts, or other pertinent data and information relative to the past, present and future trends of the municipality.

- Include such other recommendations, as the Commission deems beneficial to the municipality.

The Plan of Conservation and Development shall:
Be a statement of policies, goals and standards for the physical and economic development of the municipality, and recommend the most desirable types of uses and population densities in the various parts of the municipality.
Take into account the State Plan of Conservation and Development and note any inconsistencies it may have with that plan.
Be designed to promote with the greatest efficiency and economy the coordinated development of the municipality and the general welfare and prosperity of the people using the municipality.
Make provisions for the development of housing opportunities, including opportunities for multifamily dwellings, consistent with soil types, terrain, and infrastructure capacity, for all residents of the municipality and the planning region in which it is located.
Promote housing choice and economic diversity in housing, including housing for both low and moderate income households, and encourage the development of housing that will meet the housing needs identified in the State Housing Plan prepared under CGS §8-37T and the State Plan of Conservation and Development.
Be reviewed and, if necessary, amended at least once every 10 years.

Introduction

Standards for the Plan:

In preparing the plan, the Commission must consider the community development action plan of the municipality, if any, the need for affordable housing; the need for protection of existing and potential public surface and underground drinking water supplies; the use of cluster development and other development patterns to the extent consistent with soil types, terrain and infrastructure capacity; the State Plan of Conservation and Development; the Regional Plan of Conservation and Development; physical, social, economic and governmental conditions and trends; the needs of the municipality, including, but not limited to; human resources, education, health, housing, recreation, social services, public utilities, public protection, transportation and circulation, and cultural and interpersonal communications; and the objectives of energy efficient patterns of development, the use of solar and other renewable forms of energy and energy conservation.

The Plan of Conservation and Development is divided into the following sections:

- History
- Population
- Housing
- Natural Resources
- Open Space and Cultural Resources
- Community Facilities and Infrastructure
- Stormwater
- Transportation
- Economy
- Future Land Use

Community Profile - History

"In Montville the natural landscape influenced not only the patterns of original settlement but ultimately the quality of life and the level of economic growth. Although Montville occupies some of the less rugged terrain of the southern part of this region, some hills rise as much as 600 feet above sea level. The steepest slopes border the valley of the Oxoboxo River. Six miles long, the river drops 350 feet between its source at Oxoboxo Lake and its mouth at the Thames River, the eastern border of the Town. Like all of the Eastern Uplands, Montville is underlaid with ancient metamorphic bedrock. Created by volcanic action, it was compressed and uplifted by the movement of continental plates many millions of years ago. During the last Ice Age, which began more than 70,000 years ago, a massive glacier poured down from warmer Labrador through New England as far south as Long Island. As climate grew warmer, about 18,000 years ago, the glacier began to retreat and advance, grinding down the hills and leaving behind glacial till, a relatively light and stony soil. With this type of soil and hilly terrain not suited for grazing and forage crops, agricultural prospects were limited. Fortunately there were other resources to sustain a viable economy particularly the Oxoboxo River, a major source of waterpower for colonial mills and nineteenth-century industry."[1]

"When the English first arrived in Connecticut, the Pequots were the dominate Native-American Tribe. When English traders supplanted the Dutch and began to trade directly with the Mohegans and other tributary tribes in the region, the balance of Native-American power was destabilized. The Mohegans welcomed the English as allies and protectors, and under the skillful leadership of Uncas, became the most powerful tribe in Connecticut.

SPECIAL POINTS OF INTEREST:

- *Montville was incorporated in 1786.*
- *The English first arrived in Ct. in the 1630's.*
- *Montville and Salem were originally part of the North Parish of New London.*
- *New London was settled in 1646 under the name Pequot. New London changed its name in 1658.*



Congregational Church and the Raymond Library

[1] Historic and Architectural Resources Survey Town of Montville, Connecticut, 2001

Community Profile - History

With a history of repeated attacks by the Pequots, Uncas gathered his people into a fortified village, now known as Fort Shantok. Ideally situated for defense, the village was located on a promontory above the Thames River. With bluffs on either side, a palisade was required only across the inland side. Archaeologists have determined that palisades were built in three distinct time frames, beginning about 1636, when the settlement was fortified just prior to the Pequot War. The palisade was rebuilt during the Narragansett Wars (1653-1657), when the village was under attack, and again at the time of King Phillip's War (1675-1676).

In 1665 colonial authorities designated Caption John Mason as the agent for Mohegan land, setting aside a tract for Uncas, where he lived until his death. Uncas was succeeded by his son Owaneco, who sold or gave away much of the remaining Tribal land throughout eastern Connecticut. Samson Occum (1723-1792) became the first formally trained Indian Christian Minister. By the late 1760's having led an ultimately futile attempt to get compensation from the colony for illegally owned Mohegan land, a litigation that went all the way up to the Lord Justices of England, Reverend Occum was further disillusioned by the colony's continued interference in the orderly election of hereditary sachems. When the Oneidas of New York had offered land in upper New York State, he made plans to leave Connecticut, taking with him a few Mohegans along with members of five other dispossessed tribes. Together they founded a community called Brothertown shortly after the Revolution. The Mohegan land issue in Montville, which continued to surface and engage governments of the colony and state for at least another 100 years, ultimately would not be resolved until 1994, when the tribe was officially recognized by the federal government."[1]

"There were many problems with the settlement of Montville. As Francis Caulkins aptly noted in her history of New London, the frontier remained in an "unsettled and disorderly state" for many years. The original northern boundary of New London of 1646 only extended to the Oxoboxo River. The land north to Trading Cove Brook, the Norwich bounds, was considered to be the domain of the Mohegan people. In 1703, however, New London annexed the area between the Oxoboxo and Norwich, an action designed to try to bring a dozen or so English settlers there under the political and religious control of the town.

SPECIAL POINTS OF INTEREST:

- *1639 - The Fundamental Orders*
- *1662 - The Charter of Connecticut*
- *1765 - Connecticut Resolutions on the Stamp Act*
- *1776 - The Declaration of Independence*
- *1782 - Contract with the King and the thirteen United States signed at Versailles*
- *1787 - United States Constitution*
- *1788 - Ratification of the Constitution by the State of Connecticut*
- *1789 - Washington's First Inaugural Address*
- *1797 - Adams Inaugural Address*
- *1801 - Jefferson's Inaugural Address*



Fidelia Fielding (1827-1908) is considered the last speaker and preserver of the Mohegan Pequot language. She and her grandmother, Martha Uncas, conversed in their native dialect. Four diaries she left are now preserved and used in the reconstruction of the Mohegan and other related Indian languages. Fidelia called herself Dji'ts Bud dnaca, meaning "Flying Bird." Following Fidelia's marriage to William Fielding, she continued to live the traditional Mohegan lifestyle. Fidelia was the last to live in the traditional style log dwelling.

Copyright ©2004 The Mohegan Tribe

Community Profile - History

Samuel Rogers is generally considered to be the first English settler in Montville. One of the major beneficiaries of Uncas' largesse, Rogers was the progenitor of a family line that persisted in Montville for centuries. At one time the Rogers family owned thousands of acres on both sides of the Thames River. They were members of the Rogerenes, a notorious dissident religious sect started by James and John Rogers. As they did in Montville, Rogerenes tended to settle in once remote areas, such as Quaker Hill in Waterford and Quakertown in Ledyard, beyond the reach of the long arm of colonial law. A powerful force, they effectively prevented the formation of a Congregational parish in West Farms, present day Waterford, the only town in Connecticut without a church of this denomination even today, and undoubtedly delayed parish formation in Montville. Joshua Raymond, another early settler, was one of a New London committee that laid out the first road from New London to Norwich along the Mohegan path.

It was not until 1720 that the colonial government took serious steps to settle conflicting land claims. Not surprisingly, all the grants made by the General Court were declared legal. All transactions with the Mohegans prior to 1710 and the Livingston purchase (the western part of Oxoboxo lands) were validated. Property in Montville continued to change hands, often ending up in the possession of land speculators. As land prices began to rise, as they did all over the colony in the early eighteenth century, fortunes could be made in real estate by canny speculators. Forming a parish was a big step forward in 1772. While political allegiances remained with New London for another 60 years, church taxes could now be used to support a local minister. Highways were laid out to accommodate church members in the north and western parts of the parish. At this time education also came under control of the Congregational church societies, and a parish schoolhouse was constructed in 1724.

Many of the social and economic trends that prevailed in nineteenth-century Connecticut are reflected in Montville. It was a period characterized by ethnic diversity, religious pluralism, and ultimately a shift from an agrarian to an industrial economy. The development of industry, which had the greatest impact on the Montville economy, placed a disproportionate amount of wealth in the hands of manufacturers and created a large industrial laboring class.

Montville voted with the rest of the towns in New London County to approve the new state constitution in 1818. A decisive defeat to the "Standing Order", the political coalition based on family and wealth that had governed Connecticut since its founding, the new constitution officially disestablished the Congregational Church and opened the door to new religious groups.

Montville occupies a special place in the industrial history of Connecticut and the nation. According to the Historic American Engineering Record, the American woolen industry was launched when the Schofield brothers, John and

SPECIAL POINTS OF INTEREST:

- *The first Town Meeting was held in November 1786.*
- *Joshua Raymond was the first Moderator of the Town Meeting.*
- *John G. Hillhouse, the top ratepayer in Town, was appointed as the first Treasurer.*
- *The overwhelming majority of State legislators representing Montville up through the nineteenth century carried the names of Raymond, Bradford, Chester, Turner, Dolbeare, Comstock, Hillhouse, or Rogers - a testament to the endurance of the landed gentry .*
- *The tax list of 1788 shows: 20,000 acres taxed; 12,000 acres were closed by fence or walls; 3000 sheep and 302 horses.*
- *The wealthiest farmers were John and George Dolbeare, Joseph Chester, Mathew Turner, and John Hillhouse.*

Community Profile - History

Arthur, came to Montville and developed and perfected the first machinery to process woolen in the United States. The carding and spinning mill that the Schofields ran at the outlet of the Oxoboxo in what is now known as Uncasville, was the first modern water powered industry in Montville. It was at this very same site that the first colonial sawmill was built in 1653.

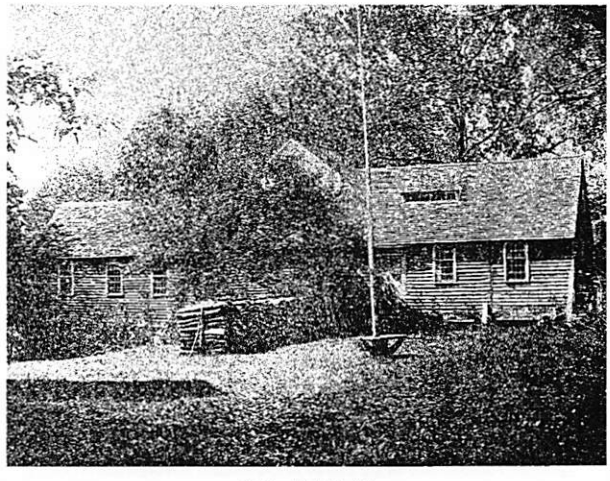
Many Yankee entrepreneurs entered the woolen business in the early 1800's. Market conditions were particularly favorable at that time. All foreign trade was embargoed by President Thomas Jefferson and no British woolens were imported during the War of 1812." [1]

"While the industrial history of Montville had its share of failures, in the long term, success was assured. Most rural industry faltered due to a lack of access to markets, but blessed with the railroad and a reliable source of waterpower, industry sustained the Montville economy well into the twentieth century.

By the 1880's the Oxoboxo River provided waterpower for 15 cotton, woolen, and paper mills, many located on earlier colonial water privileges. Over time the river was dammed in numerous locations, creating new millponds. Oxoboxo Lake, a natural reservoir, was originally dammed in the seventeenth century. The dam there was raised and rebuilt several times; the present impoundment dates from the 1880's. Advances in waterpower technology, such as water turbines, were introduced to further improve the natural capacity of the stream. By 1896 the assessed value of all mill property in Montville was $450,000, which, according to a local historian Henry A. Baker, represented a fifteen-fold increase over the entire Grand List in 1820.

The leader in Montville's paper industry was Carmichael Robertson. He started business in 1847 with his brother Robert in Quaker Hill. His Montville operation was established in 1865 at the site of the cotton mill once owned by Gideon Palmer. By 1882 paper production there had risen to two tons per day. Cardboard was manufactured under the Robertson name until 1995."[1] Access to water and rail continued to support business and industry through the twentieth century. Such firms as Olin Mathieson, Stone Container and AES Thames located parallel to the railroad and the Thames River.

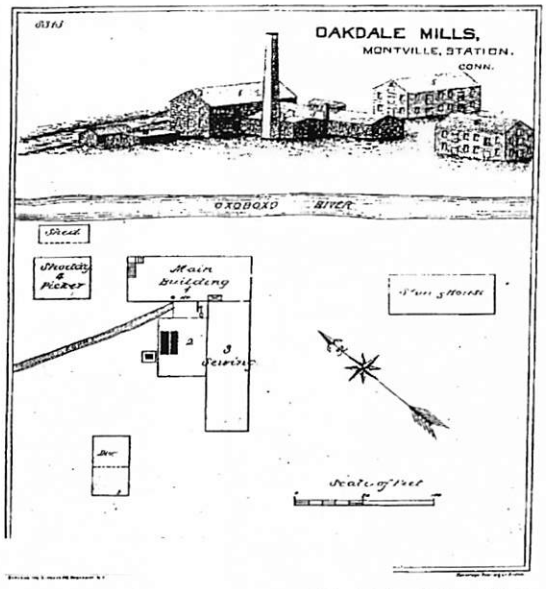
The site of Olin Mathieson, located in a section of Uncasville known as the Sandy Desert, would be sold to the United Nuclear Corporation. The United Nuclear Corporation would cease operating with the end of the Cold War.



Schofield Mill

In 1994 the United States Congress, the State of Connecticut, the Town of Montville and the Mohegan Tribe of Indians of Connecticut settled all land claims which were dated back to 1684. The State negotiated, in accordance with the Indian Gaming Regulatory Act, a compact governing the conduct of gaming

activities on land held in Trust by the United States of America for the Mohegan Tribe. The settlement stipulated that the Tribe's initial Reservation lands would be seven hundred acres more or less to include the former United Nuclear Site (244 acres), Trading Cove in Norwich (27 acres) and the Mohegan Church (.4 acres). The Mohegan Tribe has constructed one of the largest casino destination resorts on the Sandy Desert.



Insurance survey of Oakdale Mills - 1885



1912 1st Grade Class Palmer Memorial School - Maple Avenue

Community Profile - Population

During the 19th Century, population in Montville was consistently in the 1,800 to 2,400 person range. "In the first half of the 20th Century Montville almost doubled in size, reaching 4,766 by 1950. Most of the growth prior to World War I can be attributed to a new wave of Eastern European immigrants, which included Russians, Poles and Ukrainians, accounting for most of the 39 percent increase in population up through 1920. Montville also became a popular summer destination for urban dwellers, who came here by train from New York and other cities, and a few farmhouses became seasonal residences or boardinghouses. By the 1930's some newcomers to town were the first harbingers of widespread suburbanization of the state after World War II, which peaked in Montville in 1970."[1] Montville's population growth remained steady at approximately 3 to 5 percent over the ensuing decades. The Town's raw population numbers can be deceptive. Any analysis of the population must consider the number of people in group quarters (the Correctional Facility) which varies from 1400 to 1800 and skews the male population numbers and the total population. Although the number of housing units has continued to grow, the number of persons per household has declined in each decade.

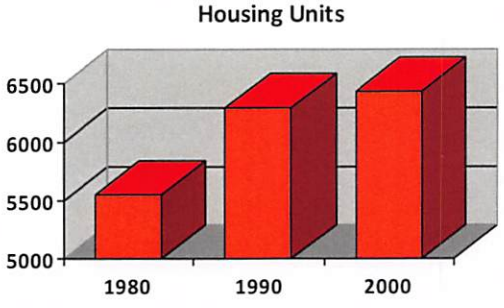


Figure 1

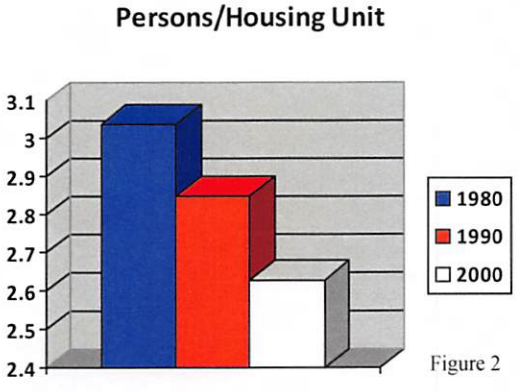


Figure 2

Historical Census	
Year	Population
1800	2,233
1810	2,187
1820	1,951
1830	1,972
1840	1,990
1850	1,848
1860	2,141
1870	2,495
1880	2,664
1890	2,344
1900	2,395
1910	2,804
1920	3,411
1930	3,970
1940	4,135
1950	4,766
1960	7,759
1970	15,662
1980	16,455
1990	16,673
2000	18,546
2007	19,432

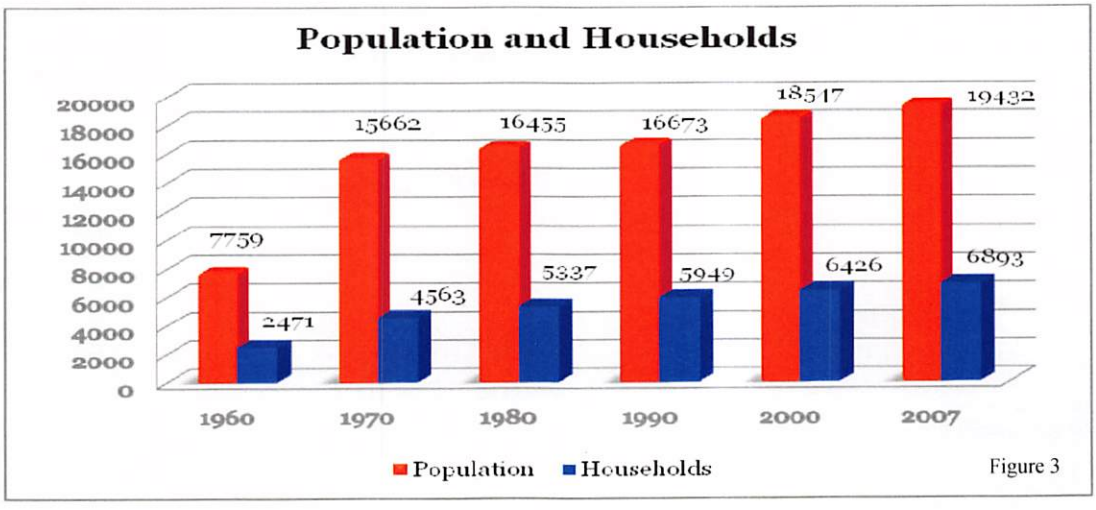
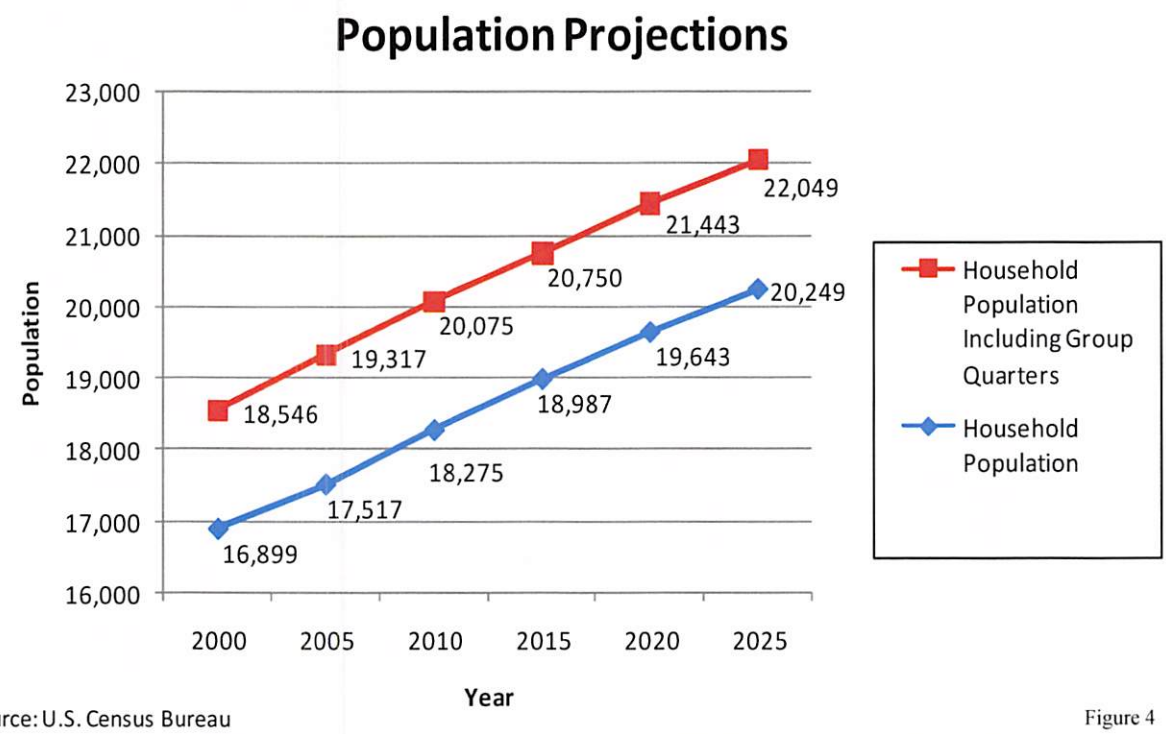


Figure 3

Community Profile - Population



Source: U.S. Census Bureau

Figure 4

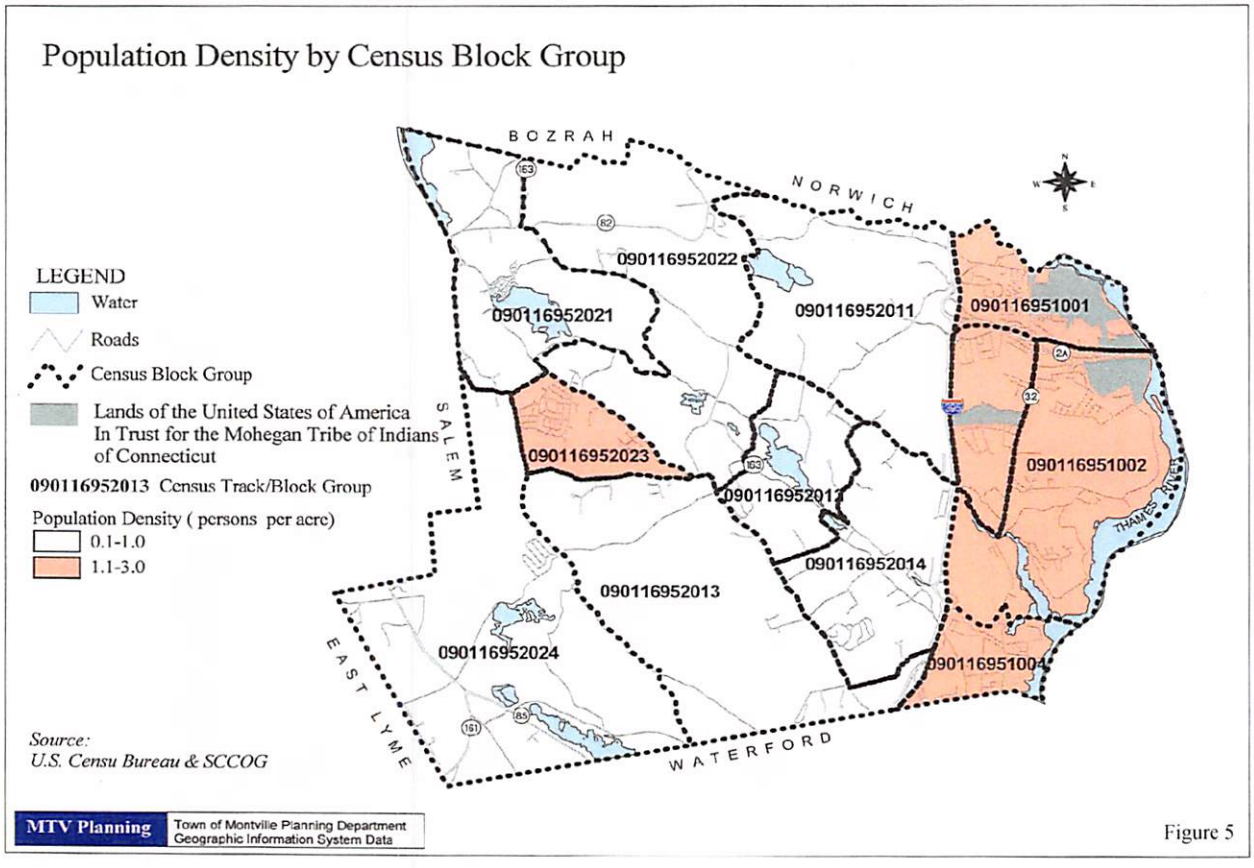


Figure 5

Community Profile - Population

Montville has three Census Tracts: 6951, 6952.01 and 6952.02. Prior to the 1990 Census the Town was divided into only two Census Tracts, 6951 and 6952. The new divisions allow for only a decade of comparison between 1990 and the 2000 Census. The 2010 Census data will yield data which can be analyzed over a twenty year period. For more information on the Census visit http:\\www.census.gov.

Table 1

Age Group	Number Of People In Age Group
0 to 4	1,119
5 to 9	1,198
10 to 14	1,363
15 to 17	806
18 to 20	694
21 to 24	893
25 to 34	2,328
35 to 44	3,705
45 to 49	1,571
50 to 54	1,099
55 to 59	984
60 to 64	864
65 to 74	1,261
75 to 84	699

Table 2

Year	Projected Median Age
2000	37.7
2005	39.0
2010	43.6
2015	43.6
2020	41.9
2025	40.7
2030	41.6

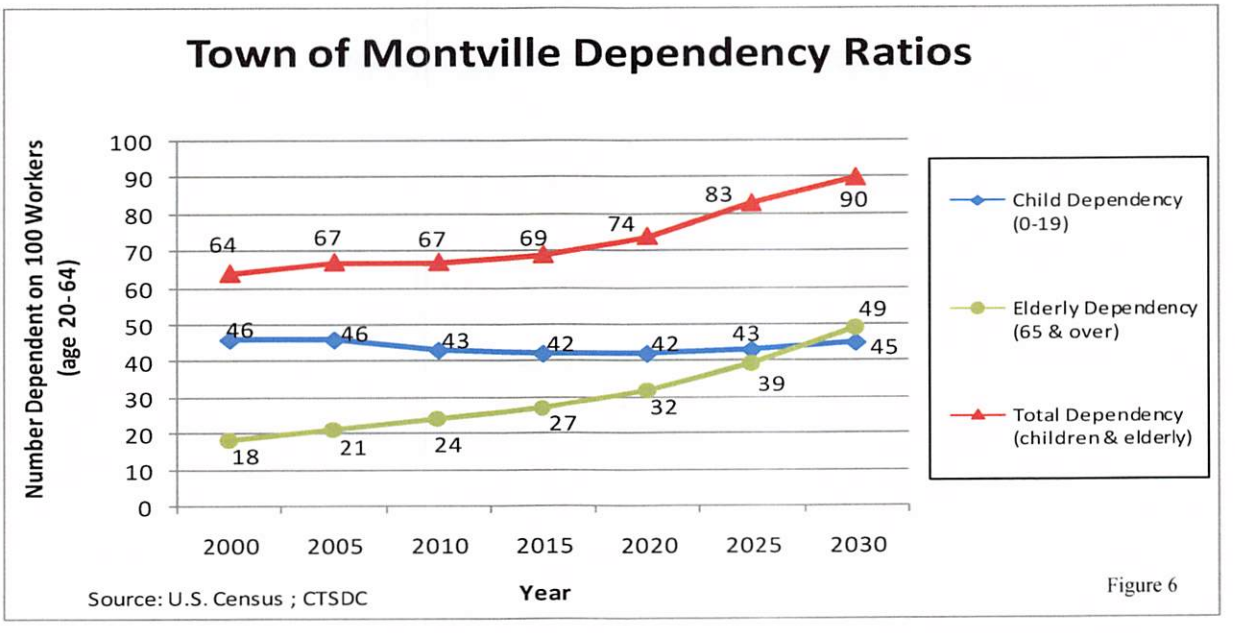


Figure 6

The projected Median Age table and the Dependency Ratio graph depict the same trend. The median represents the middle. An increasing median age indicates the overall population is aging. The dependency ratio chart also shows that more workers will be needed to support the dependent population, child and senior. If more workers are not attracted to and retained in the area, the workforce will be taxed at a higher rate and face deferred retirement.



Montville Manor Subdivision

Community Profile - Housing

Future readers of this section will have the advantage of historical perspective. At this point, it is impossible to predict the future of housing with any degree of certainty.

"The financial crisis that began in August 2007 has entered its second year. Its proximate cause was the end of the U.S. housing boom, which revealed serious deficiencies in the underwriting and credit rating of some mortgages, particularly subprime mortgages with adjustable interest rates. As subsequent events demonstrated, however, the boom in subprime mortgage lending was only a part of a much broader credit boom characterized by an under pricing of

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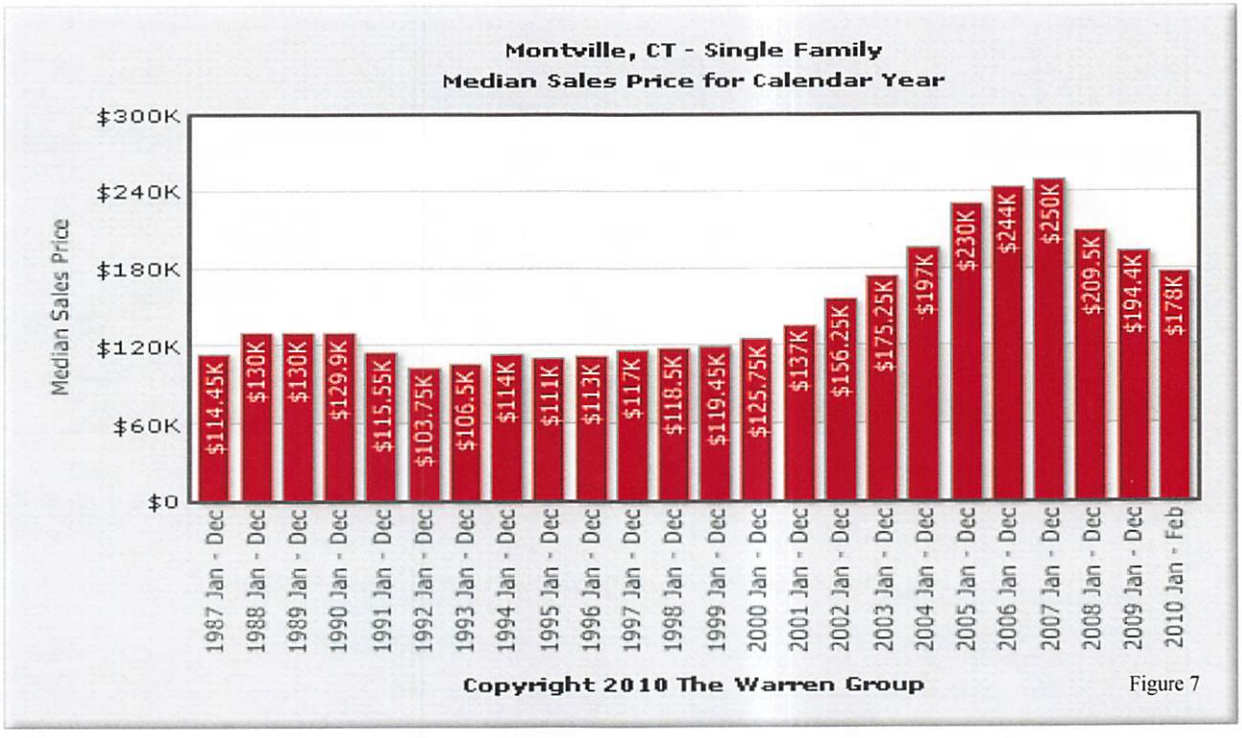


Figure 7

"The downturn in the housing market has been a key factor underlying both the strained condition of financial markets and the slowdown of the broader economy. In the financial sphere, falling home prices and rising mortgage delinquencies have led to major losses at many financial institutions only partially replaced by the rising of capital. Investor concerns about financial institutions increased over the summer (2008), as mortgage-related assets deteriorated further and economic activity weakened. Among the firms under the greatest pressure were Fannie Mae and Freddie Mac. To avoid unacceptably large dislocations in the financial sector, the housing market, and the economy as a whole, the Federal Housing Finance Agency (FHFA) placed Fannie and Freddie into conservatorship, and the Treasury used its authority, to make available financial support to the two firms."[2]

[2] Chairman Ben S. Bernanke, Federal Reserve, 10/24/08

Community Profile - Housing

Subprime mortgage lending, the unwinding of leverage, lack of available credit, and the burst of the housing bubble has led to unprecedented home foreclosures. Figure 7 depicts the rise in median sales price of Montville homes and shows that the price doubled between 2000 and the first quarter of 2006. This overvaluation in price has wiped out a significant portion of affordable homes within the community. One hundred ninety six residential properties in Montville have been in the foreclosure process since January 2007. Geographically, these properties are scattered throughout the Town. The majority of the houses were built prior to 1970 which is counterintuitive to what we would have predicted.

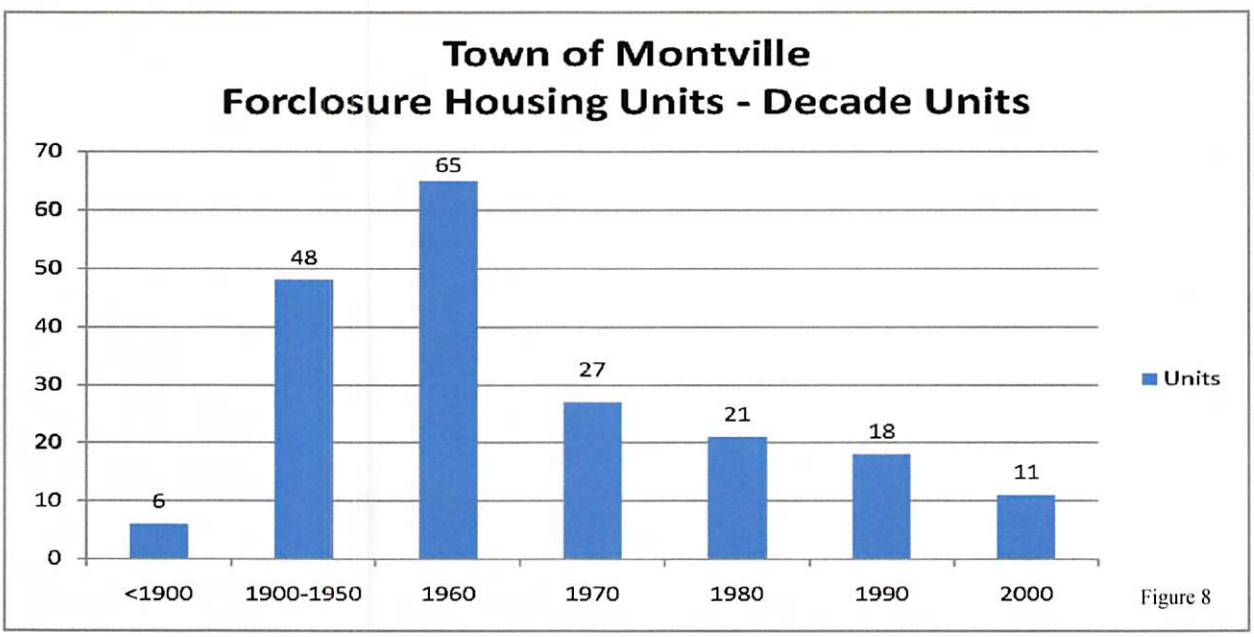


Figure 8

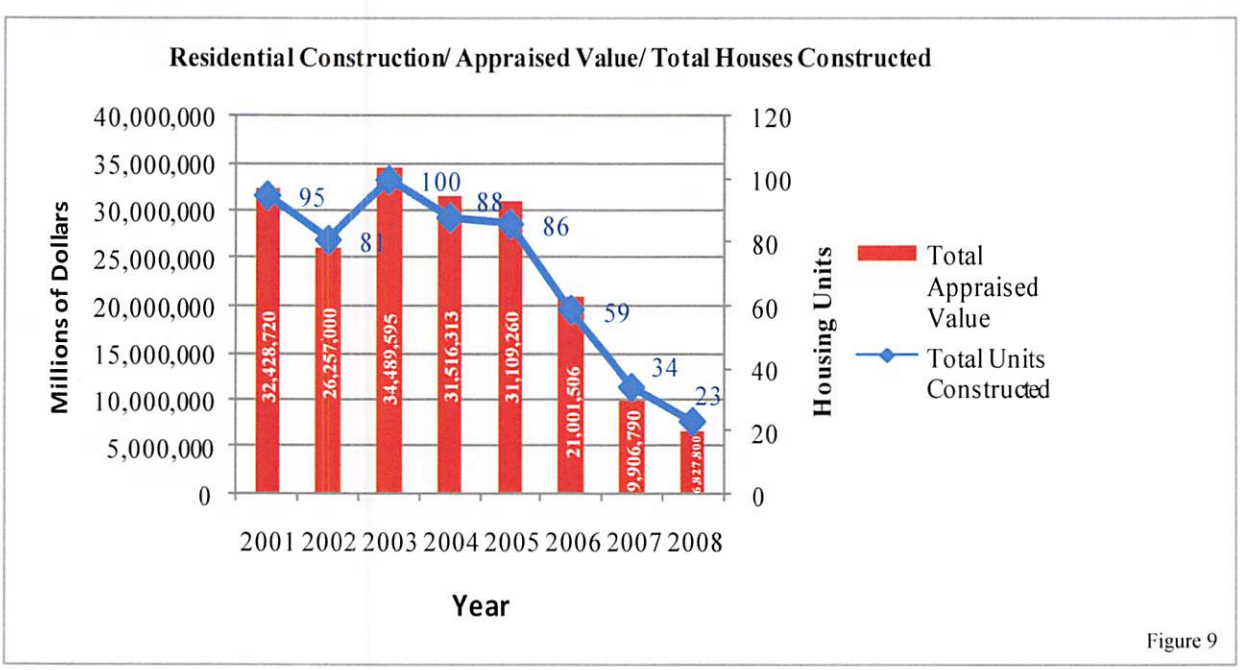


Figure 9

Table 3

Connecticut Delinquency and Foreclosure Data					
Total Prime & Subprime	**3rd Quarter 2008**	**2nd Quarter 2008**	**1st Quarter 2008**	**4th Quarter 2007**	**3rd Quarter 2007**
60 Days + Delinquent Loans	3.25% (14,866)	2.69% (12,175)	2.49% (11,038)	2.33% (10,323)	2.02% (8,740)
Foreclosure Starts	3,373	3,842	3,528	3,205	3,077
Foreclosure Sales	1,401	1,105	960	687	599

Source: HUD Hope Now

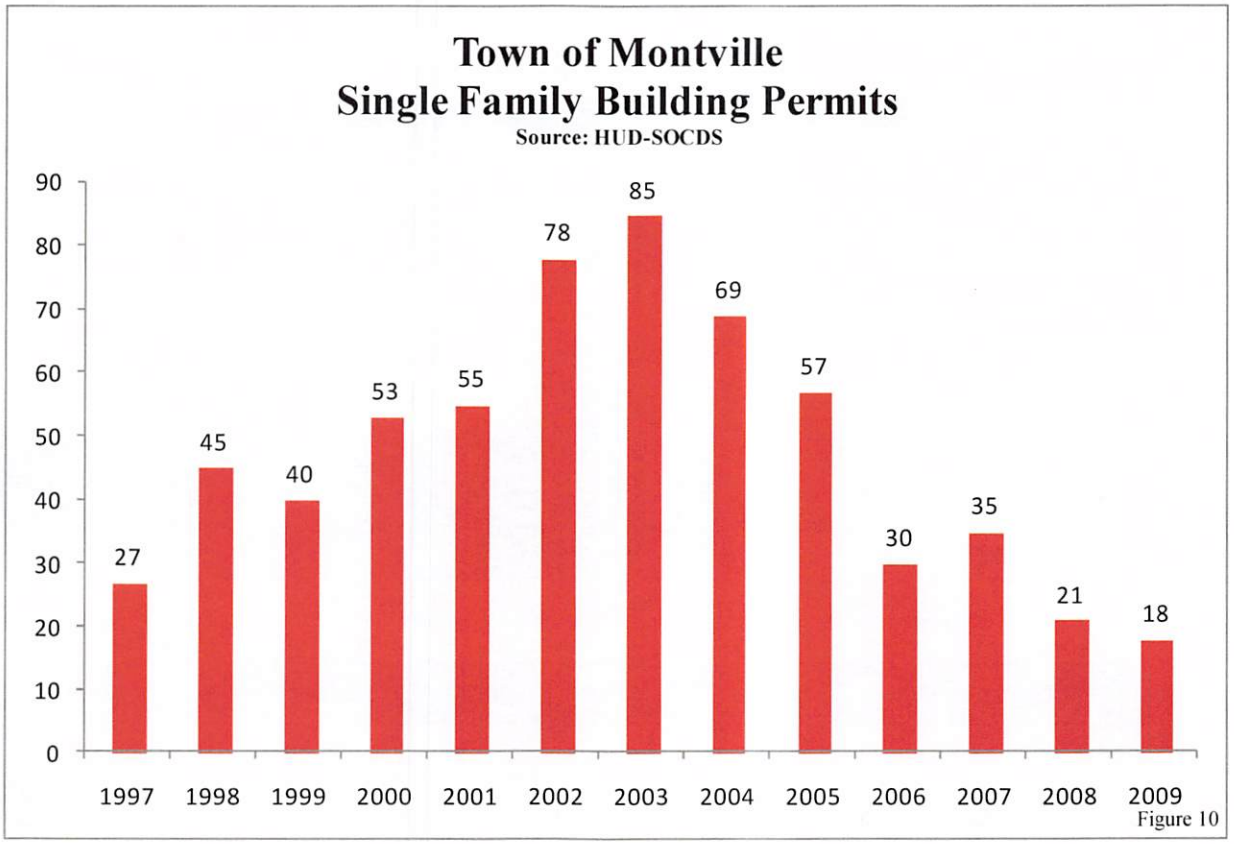


Figure 10

Community Profile - Housing

We compared a significant random sample of homes constructed in the 1960's with the homes constructed in the 2000's. The average square footage for the 1960 era home was 1,117 square feet; the average square footage for the home built in the year 2000 and beyond was 2,298 square feet. While our homes have become larger, the number of people living in them has decreased. The population per household was 3.14 in 1960 and 2.54 in 2000.

Total Housing Units	**7,276**
Owner Occupied	**5,669**
Renter Occupied	**1,516**
Median Structure Built	**1969**

At the present time, the Town, through its housing authority, manages 80 units of elderly and assisted housing. The first 40 units called Freedom Village were constructed in 1984. The later project was named Independence Village. These two projects were funded by the State Department of Housing in the form of capital grants. Funding for subsidized housing has been severely cut since that time. Montville has less than 1% of the total assisted housing units in the region.

Table 4

Total Housing Units History			
Year	**Housing Units**	**Increase**	**Percent**
1970	4,524		
1980	5,551	1,027	22.7 %
1990	6,283	732	13.2 %
2000	6,805	522	8.3 %
2008	7,276	471	6.9 %

Source: US Census

Table 5

Housing Types		
Units in Structure	**Number**	**Percent**
1 Unit Detached	5,110	75.1 %
1 Unit Attached	97	1.4 %
2 Units	286	4.2 %
3 - 9 Units	656	9.7 %
10 - 19 Units	79	1.2 %
20 or more Units	85	1.2 %
Mobile Homes	492	7.2 %

Source: 2000 US Census

Community Profile - Housing

The "Affordable Housing Appeals Act" (CGS §8-30g) became effective on July 1, 1990. The Affordable Housing Program is Developer generated. The Developer is required to deed restrict 30% of the units as "affordable". Of the affordable units, half must be affordable to buyers making 65% of the median area income, and half must be affordable to buyers making 80% of the area median income. These deed restrictions are in place for 40 years. The balance of the units are available for "fair market" sales.

Affordable housing can be located in any Zoning District except Industrial. The Developer is required to submit a three part application consisting of a Zone Change Application, Site Plan, and an Affordable Housing Application containing an Affordability Plan. The Developer may propose a greater density than permitted by the underlying Zoning District.

The Planning and Zoning Commission may not deny an Affordable Housing Application unless the decision is necessary to protect substantial public interests in health, safety, or other matters which the Commission may legally consider; public interests must clearly outweigh the need for affordable housing and such public interests cannot be protected by reasonable changes to the Affordable Housing Development Plan.

"Incentive Housing" was established by CGS §8-13m-§8-13x and became effective on July 1, 2007. The Planning and Zoning Commission may create the Zoning Districts based on the standards in CGS §8-13n. The Incentive Housing Program established minimum densities which are six units per acre for single family homes; ten units per acre for duplex or townhouse units; twenty units per acre for multifamily units. The Program provides for financial incentives to the community from the State if funding is available. In order to qualify for incentives, the densities must be 25% greater than the original zone.

In response to the need for affordable housing, the Planning and Zoning Commission drafted and approved the "Housing Opportunity Development Zone" which became effective November 1, 2007. The purpose of the regulation is:

A. To allow, on a long-term basis, for the development of diverse housing types, including affordable housing to help address identified housing needs;
B. To encourage the construction of housing that is both affordable as defined by state statutes and is consistent with design and construction standards present in the community;
C. To promote housing choice and economic diversity, including housing for low and moderate income households;
D. To efficiently utilize infrastructure and promote neighborhood planning by providing, where infrastructure support is available, a mix of housing types, densities, sizes and prices, while also providing substantial public and private open space and recreational areas;
E. To guide a proposed development so that it helps accomplish the above purposes while being consistent with soil types, terrain and infrastructure capacity and is consistent with the statutory purpose of protecting the public health, safety, convenience and property values; and
F. To encourage energy-efficient patterns of development, the use of solar and other renewable forms of energy, and energy conservation.

Community Profile - Housing

The objective of this buildout analysis is to provide an understanding of the magnitude of Montville's residential growth potential. A buildout analysis utilizes the town's Geographic Information System (GIS) data to determine the current amount of vacant, developable land. The yield of new housing units possible on this land is then calculated, taking into consideration current zoning restrictions and natural resource constraints, including slopes greater than 25 percent, wetlands, and floodplains.[3]

In making the Land Use Map, parcel data from the GIS was linked to assessment data. For any properties which did not link up to the assessment data or were for any other reason questionable, Vision Appraisal's online database or oblique air photos were used to determine use. In determining residential uses with additional development potential, the minimum lot size for the zone was compared to the parcel size. Vision Appraisal is the company that provides the revaluation information for the Town.

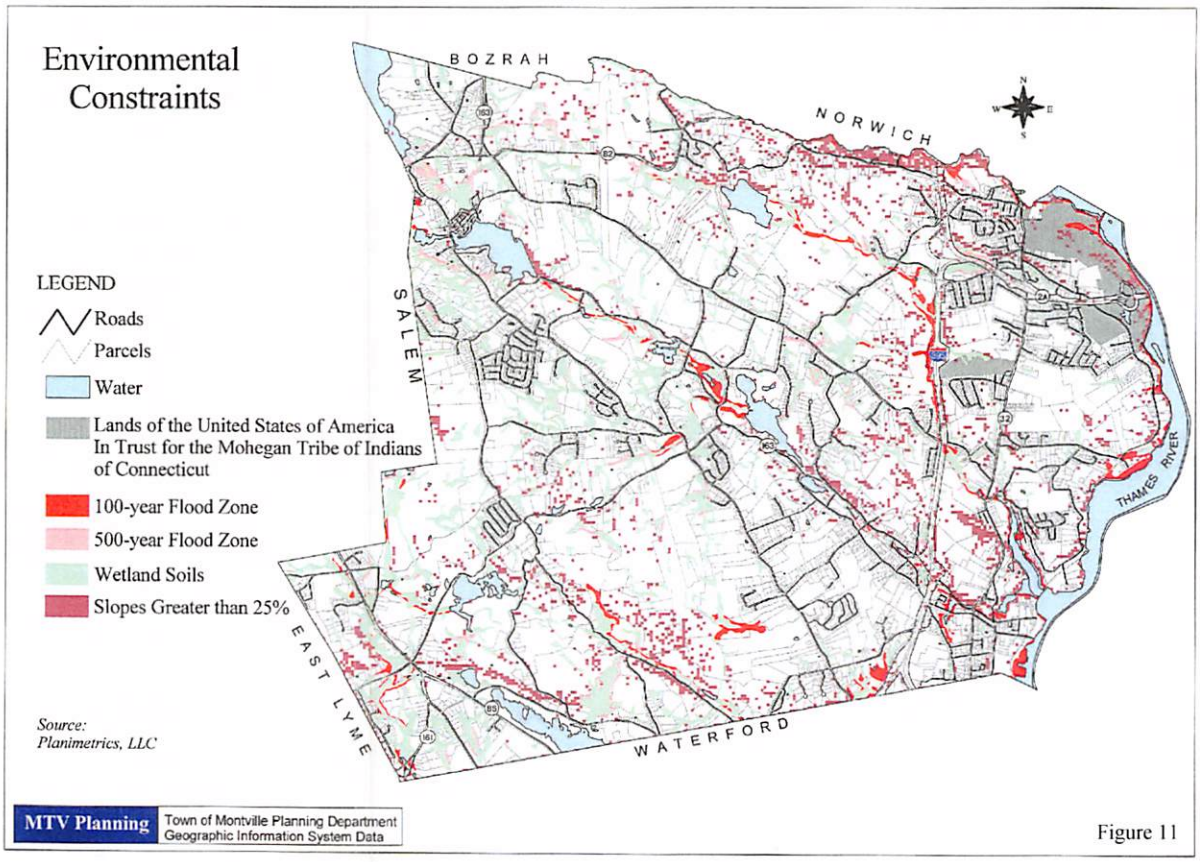


Figure 11

An analysis of the land use map shows that 15,534 acres, over 50 percent of Montville's 28,384 acres are potentially available for development at some time in the future. This could include 3,017 acres of managed open space, which is owned by water companies, the electric company, and non–profit organizations. Although there is a potential for future development of these properties, the probability of development is less than other privately owned vacant land.

[3] Residential Buildout Analysis prepared by Planimetrics, LLC

When placing potential new housing units on lots, new units were not placed in natural resource constraint areas. In this manner, the buildout stimulates the constraint that the natural resource configuration has on development. Montville does not have a buildable area regulation for residential development, therefore, natural resource constraints do not affect overall yield on a given property.

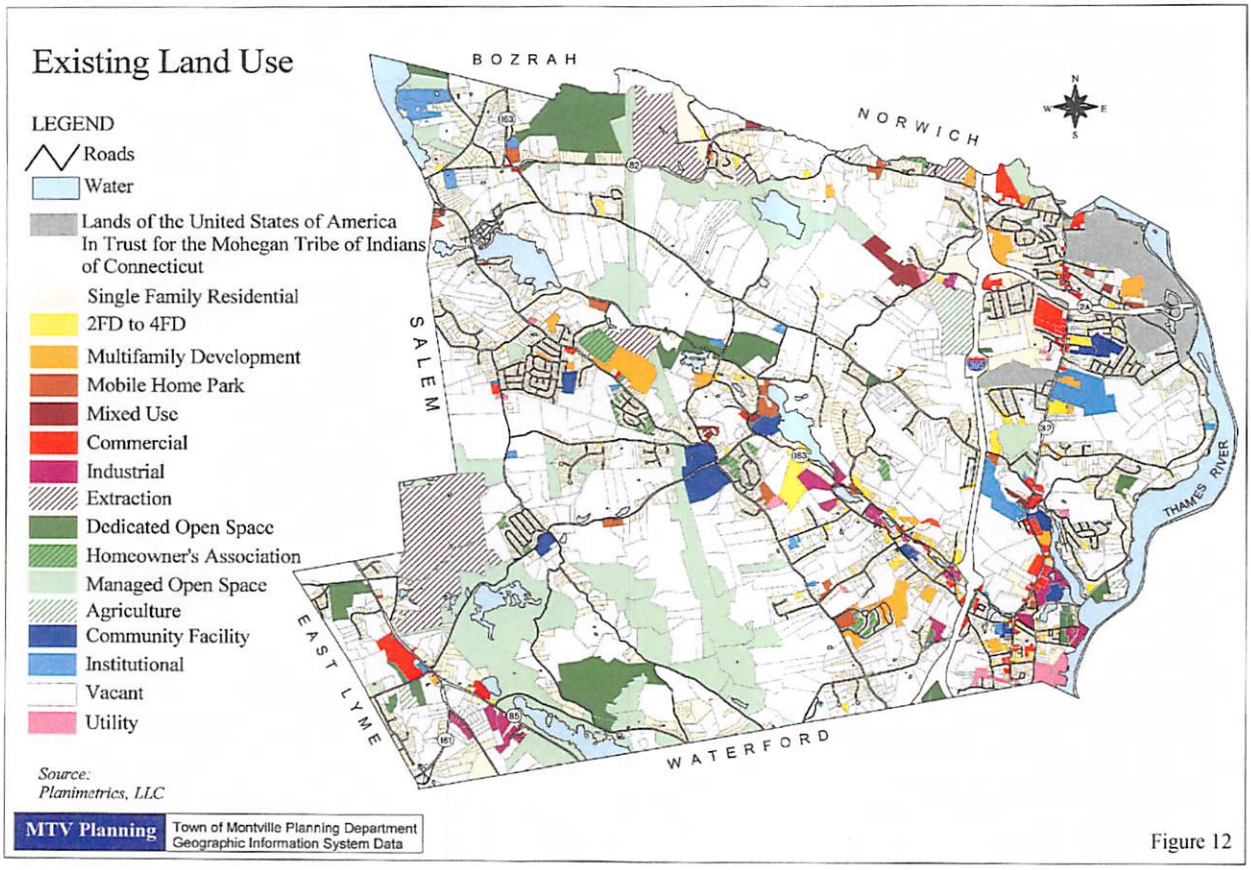


Figure 12

One factor the buildout cannot account for is the impact that slopes greater than 10 percent have on potential new road construction. To account for the impact of such constraint, a three tiered coding system of minimal, moderate, and maximum constraints was used.

Table 6

Slope Constraint Type		
Minimal Slope	Moderate Slope	Maximum Slope
No Slopes	Parcels not categorized as minimum or maximum	((Slopes 20-25%) + (Slopes >25)) >25% of land area
Only Slopes 10-15% present		((Slopes 15-20%) + (Slopes 20-25%) + (Slopes > 25%))>35% of land area
All slopes on property <10% of land area		All slopes > 75% of property
((Slopes 10-15%) + (Slopes 15-20%)) < 20% of land area and all Slopes <20% of land area		

For *Minimal Constraints*, it was considered reasonable to conclude that the development yield can be fully realized. For *Moderate Constraints*, it was determined the development yield would be about 80 percent of the potential new units. For *Maximum Constraints*, it was determined that any development would face significant challenges and that only about 40 percent of the development yield would be realized.

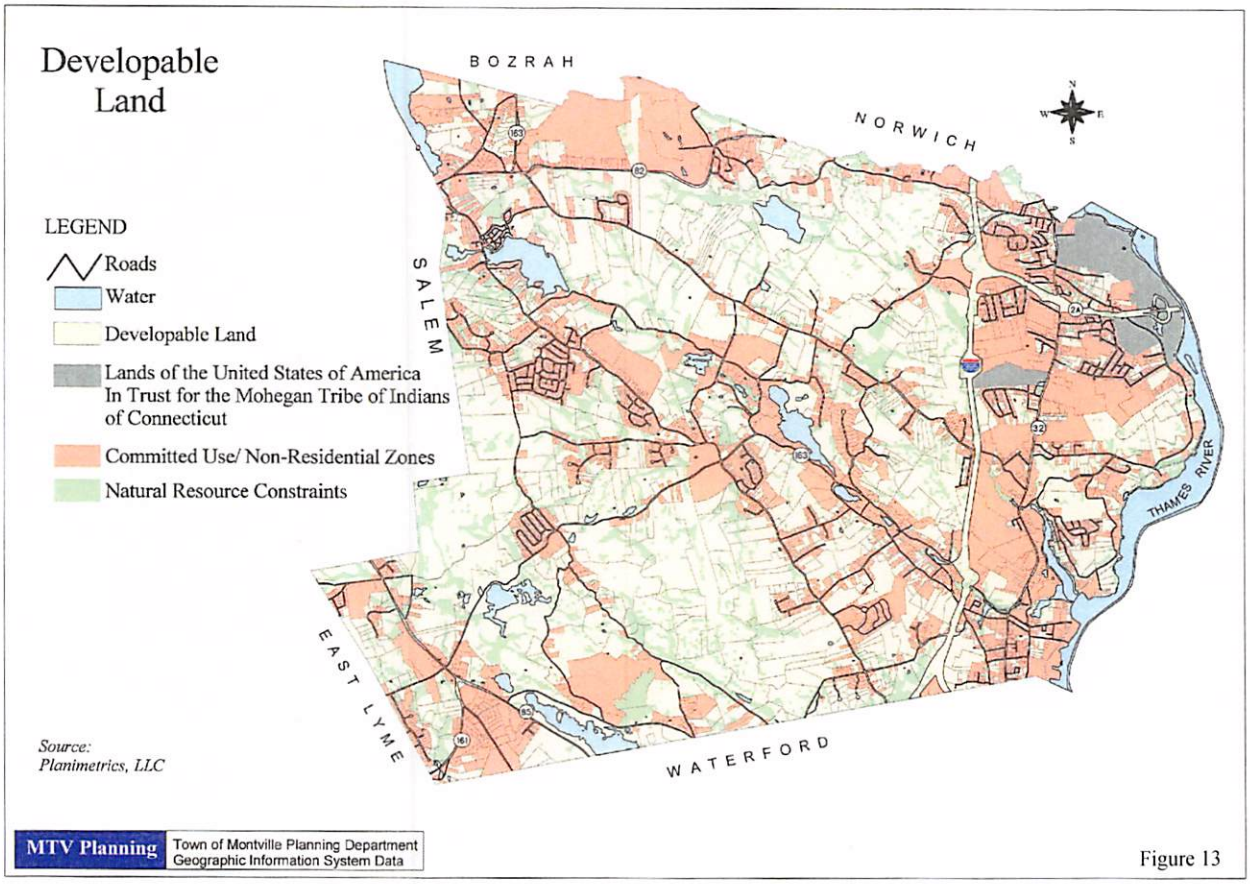


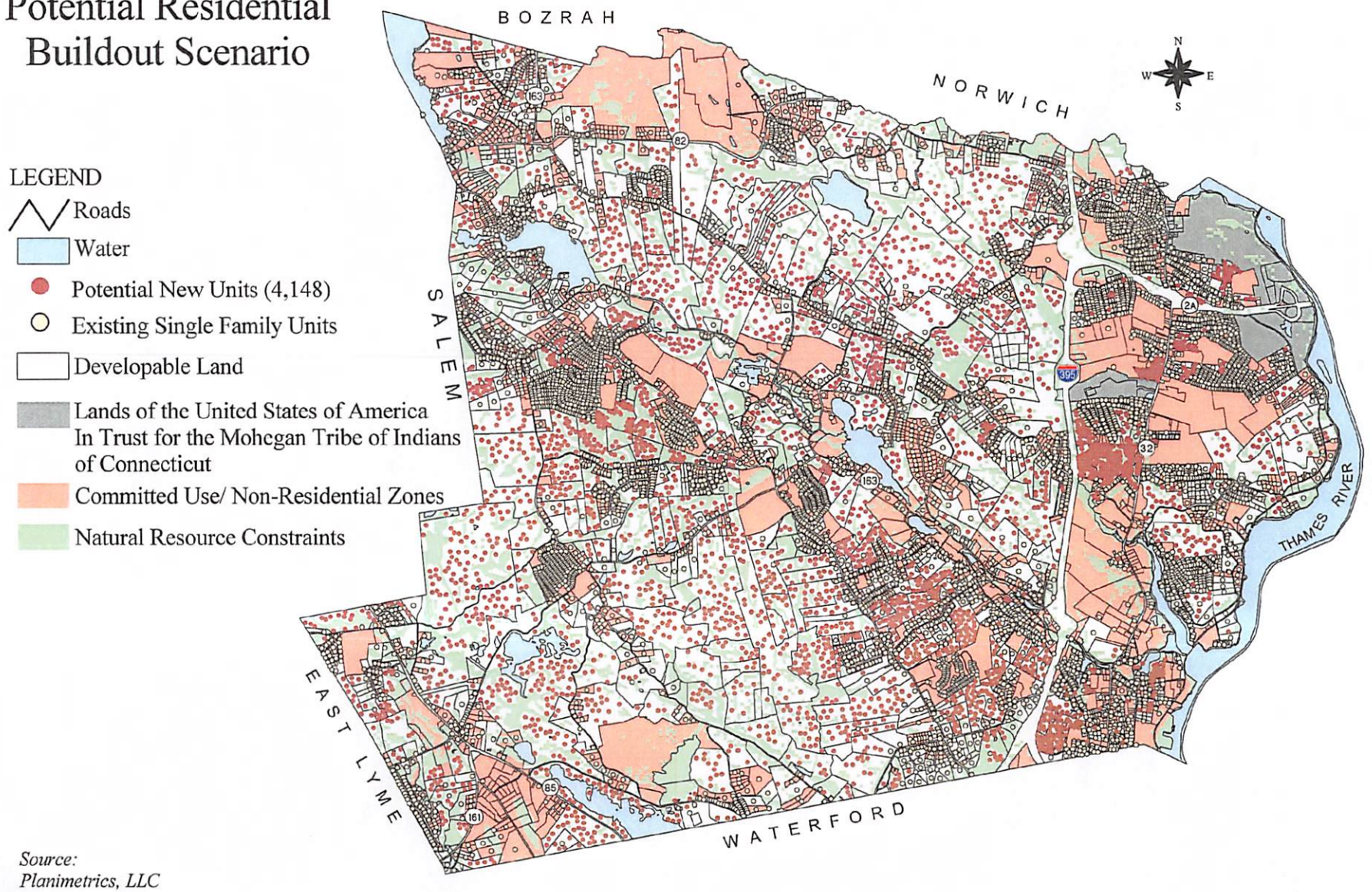
Figure 13

Rear lots are required to be one and a half times the minimum lot size for the zone. In addition to this, an access strip is required, but not figured in the area calculations. For residential parcels that had the potential to add rear lots, a simulation was used requiring the rear lots to have two times minimum lot size for the zone.

In cases where a vacant lot exists, but the lot size is less than the minimum lot size for the zone, the buildout would not add a new unit to the property. These lots can add a housing unit as a pre-existing lot. For properties that met these criteria and were greater than 5,000 square feet, a unit was added.

In addition to the standard buildout, special permit development was considered to estimate potential multi-family development.

Potential Residential Buildout Scenario



Source:
Planimetrics, LLC

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 14

Community Profile - Housing

Table 7

Buildout Summary				
Zone	**Existing Dwelling Units**	**Acres Available for Development**	**Estimated Additional Dwelling Units**	**Estimated Total Dwelling Units**
R-20	3,270	519	500	3,770
R-40	1,894	1,149	857	2,751
R-120	763	3,386	936	1,699
R-80	415	1,713	620	1,035
WRP-160	237	3,083	667	904
HOD	6	73	440	446
OS	2	702	126	128
Other Zones	432			432
Total	**7,019**	**10,625**	**4,146**	**11,165**

Table 8

Potential New Units By Existing Land Use and Zone								
Use	**Zone**							
	WRP-160	**OS**	**R-120**	**R-80**	**R-40**	**R-20**	**HOD**	**Total**
Vacant	303	39	425	285	341	258	74	1,725
Residential with Addtl Potential	158	0	357	304	490	229	150	1,688
Managed Open Space	206	87	154	31	26	13	216	733
Total	**667**	**126**	**936**	**620**	**857**	**500**	**440**	**4,146**

Community Profile - Housing

This analysis was done using a two-step process. The first step pinpointed parcels that are zoned R-40 or R-20 and are near water and sewer lines. Parcels that meet those criteria and have development potential have the possibility of an elderly housing development at a density of one dwelling per 4,000 square feet. The buildout was performed for this density as it represents the highest yield.

The second step was to determine the potential for age restricted housing developments. These can be built by special permit in the R-40 zone on parcels of ten acres or more. A density of up to four units per acre was calculated for parcels that met this criteria.

The special permit buildout does not take into account the possibility of two family units, which are allowed by special permit in the R-40 and R-20 zones.

Table 9

Special Permit Buildout Summary			
Zone	**Existing Dwelling Units**	**Estimated Additional Dwelling Units**	**Estimated Total Dwelling Units**
R-20	3,270	2,239 *	5,509
R-40	1,894	5,218 *	7,112
R-120	763	936	1,699
R-80	415	620	1,035
WRP-160	237	667	904
HOD	6	440	446
OS	2	126	128
Other Zones	432		432
Total	**7,019**	**10,246**	**17,265**

* The units in this table for the R-20 and R-40 zones represent units in place of those reported in the original buildout table. Of the estimated 2,239 additional dwelling units in the R-20 zone, 1,851 would be multi-family. Of the estimated 5,218 additional dwelling units in the R-40 zone, 5,030 would be multi-family.



Oxoboxo Brook - Meetinghouse Lane

Community Profile– Natural Resources

Drainage Basins

Table 10

Regional Drainage Basins			
Basin Name	**Basin #**	**Acres in Town**	**% of Town**
Yantic	3906	1,060	3.7 %
Southeastern Western Complex	2202	3,659	12.9 %
Thames Main Stem	3001 3004 3005	1,940.45 6,768.08 18,232	83.4 %

Thames Main Stem Basin

Like most other towns in Southeastern Connecticut, Montville's natural landscape is complex. The terrain is defined by streams, slopes and the Thames River (Figures 15, 16, 18 , 19, 20, 21, and 22). The Thames Main Stem Subregional Basin is the largest in Montville. The basin drains approximately 83 % of the Town and outlets to the Thames River. It contains Stony Brook, Trading Cove Brook, Hunts Brook, and Oxoboxo Brook local basins. The Stony Brook basin, which is 100 % within the town, contains Stony Brook Reservoir, a public drinking water supply area owned by the City of Norwich DPUC. (Figure15)

Southeast Western Complex Basin

The Southeast Western (SEW) Complex Basin contains portions of the Latimer Brook and Oil Mill Brook local basins. It constitutes 12.9 % of Montville and has a land area of 3,659 acres within the Town. The SEW contains two valuable and fragile resources, Latimer Brook and public water supply watershed lands which drain to the City of New London regional public water supply. (Figure 15 and Figure 17)

Yantic Basin

The portion of the Yantic River Basin within Montville represents 3.7 % of the total basin. The Yantic River Basin contains 529 acres of Gardner Lake, which is situated between Bozrah, Montville, and Salem. An earthen dam raises the water level 4 feet, bringing the average depth to 14 feet and the deepest point near Minnie Island State Park to 39 feet. There is a state owned boat launch on the southern shore. Hopemeade State Park abuts the lake and is located in Montville and Bozrah. The developed portions of the shoreline area is comprised of single family homes, campgrounds, and marinas. Gardner Lake is very diverse in vegetation. A July 2006 survey of the lake reported 30 aquatic species, including two invasive species confined to small coves. (Figure 15)

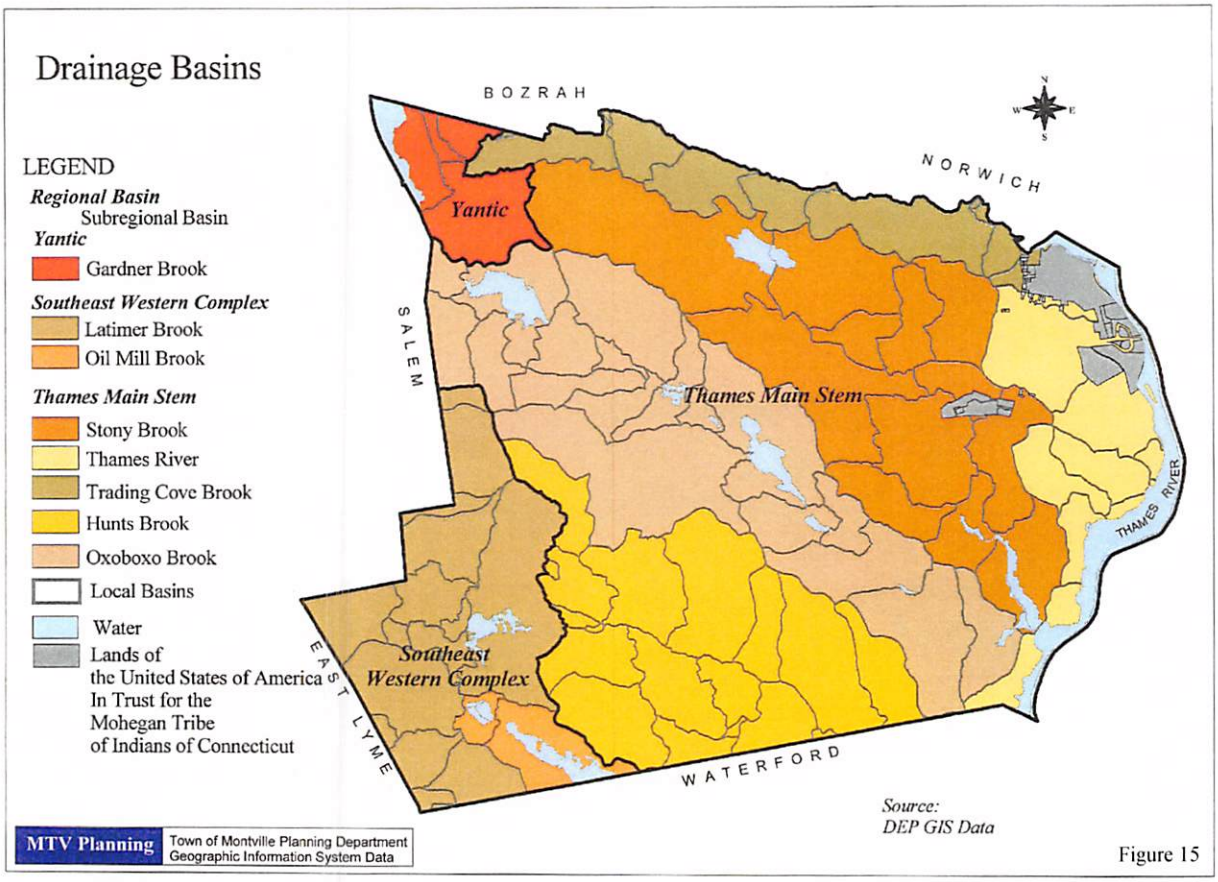


Figure 15

Table 11

Subregional Drainage Basins				
Basin Name	**Basin #**	**Acres in Town**	**% of Basin**	**% of Town**
Gardner Brook	3906	1060.92	12 %	3.7 %
Latimer Brook	2202	3659.63	32.2 %	12.9 %
Oil Mill Brook	2203	597.69	17.9 %	2.1 %
Stony Brook	3005	6366.37	100 %	22.5 %
Thames River	3000	3158.71	16.2 %	11.1 %
Trading Cove	3001	1940.45	22.0 %	6.8 %
Hunts Brook	3006	4780.99	57.1 %	16.9 %
Oxoboxo Brook	3004	6768.08	87.3 %	23.9 %

Oxoboxo Basin

Carved in ice, the Oxoboxo Valley is the dominant topographic feature in Montville. (Figure 16) The Oxoboxo River falls 350 feet in the six miles between its source at Oxoboxo Lake and its mouth at the Thames River. There are 6,768 acres of the Oxoboxo River watershed in Montville which represents 87 % of the watershed and 24 % of the total land area in the Town. Industrial use of the Oxoboxo began in 1653 with the building of a saw mill. Throughout the 17th and 18th centuries additional small mills were established in the valley, but it was the manufacturing of cloth, and later paper, that led to the complete utilization of the river. By the 1880's, the Oxoboxo powered machinery at fifteen water privileges. Oxoboxo Lake served as the reservoir, originally a natural lake and later impounded by an earth and stone dam. The entire Oxoboxo system, regulated by dams and gates had an average flow of 25 cubic feet per second and provided approximately 1,000 horsepower in support of manufacturing equipment.

Access to Oxoboxo Lake and to other downstream ponds is limited by private ownership and steep slopes. The most accessible location for public access is from Camp Oakdale, the Town owned recreational area, adjacent to Schofield Pond.

Direct industrial wastewater discharges to the river have been eliminated, however organic sludge remains in the pond systems. Various studies have concluded that the removal of sludge would be cost prohibitive. The lake and the ponds have regained overall health and now support fish life. There is concern that old septic systems on small lots which ring Oxoboxo Lake will continue to pollute the lake. This area will require public sewers in the future.

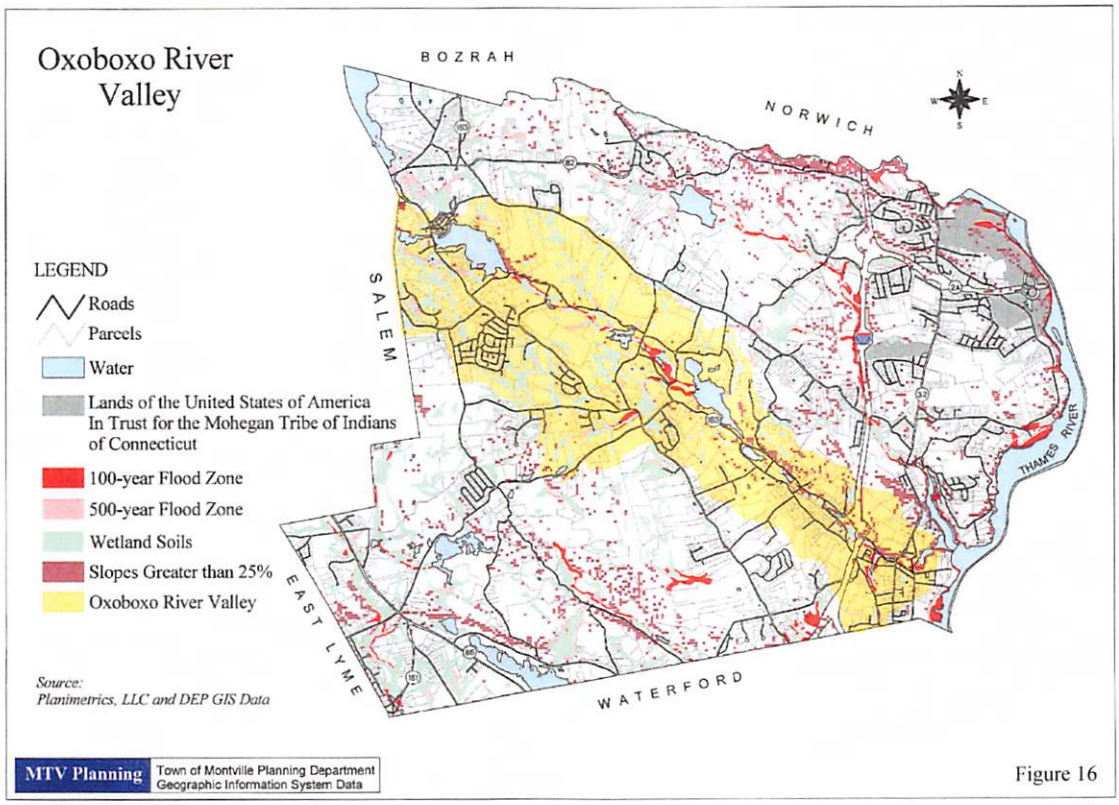


Figure 16

Niantic River Watershed

A watershed consists of all the land that drains to a waterbody, in this case, the Niantic River. The Southeast Western Complex Basin contains Latimer Brook and Oil Mill Brook. The watershed covers 31.3 square miles and includes areas from the four towns of East Lyme, Waterford, Salem, and Montville (Figure 17). The Niantic River does not currently meet State water quality standards because of observed degradation of aquatic life. Stormwater runoff transports pollutants from the land into many drainage systems and tributaries feeding the Niantic River. This widespread, nonpoint source pollution is the greatest threat to the water quality and the ecological health of the Niantic River.

Information regarding The Niantic River Watershed Protection Plan can be found at the following web address: **http://www.nianticriverwatershed.org**

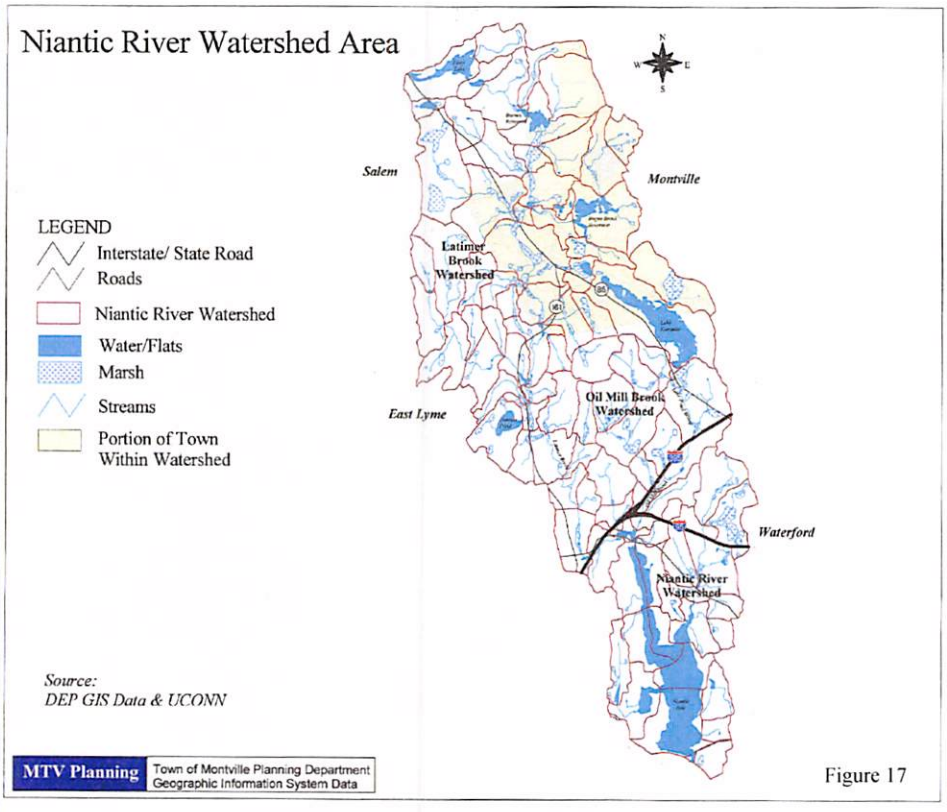
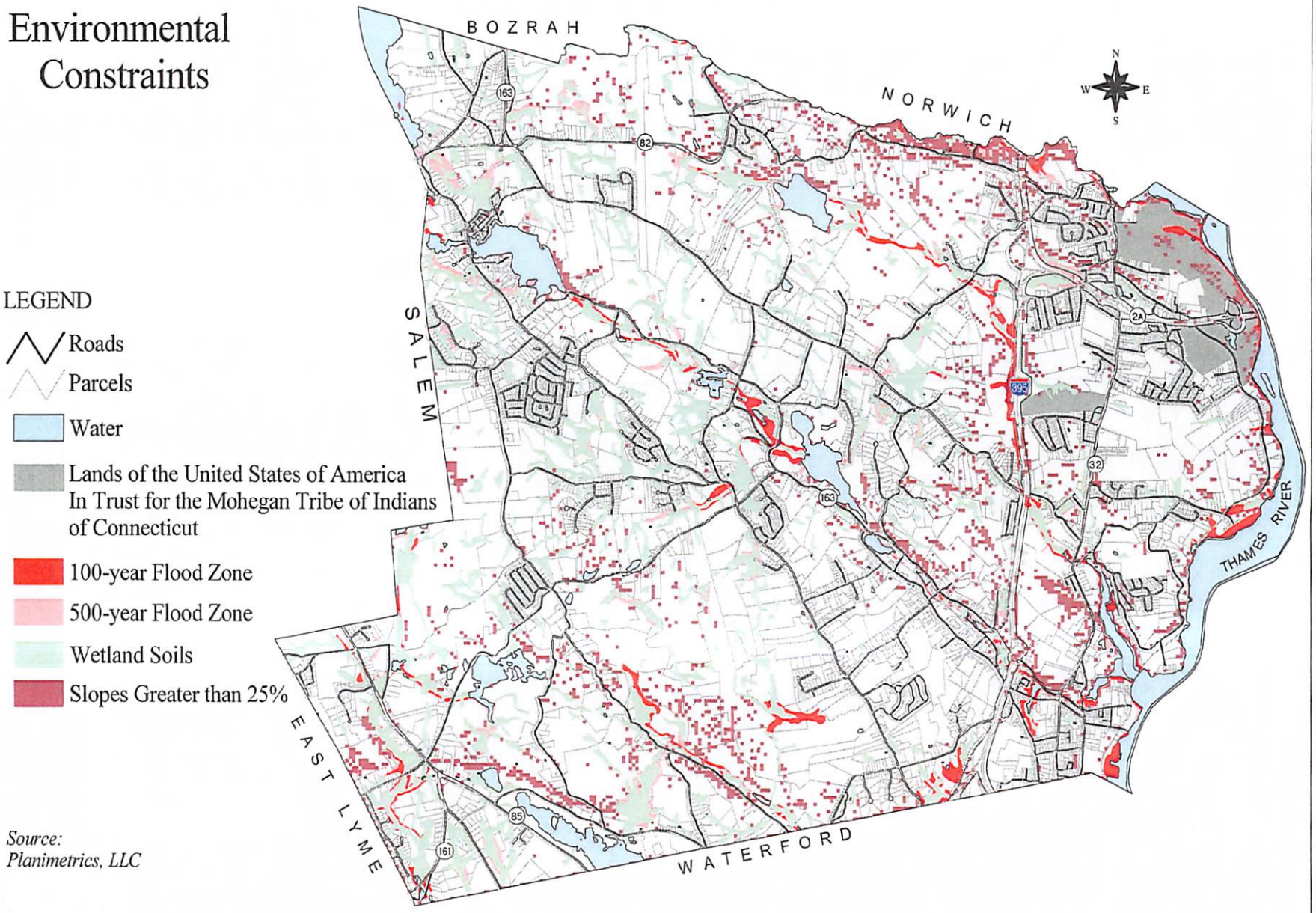


Figure 17

Recommendations for Protecting Water Quality and Natural Resources
The basis for design of all projects over one acre should use the 2004 Connecticut Stormwater Quality Manual as amended and the 2002 Connecticut Erosion and Sediment Control guidelines as amended.
Encourage new land uses within public water supply watersheds that are compatible with and operate in accordance with appropriate preservation and protection management strategies. Guide intensive development away from water supply watersheds and consider the cumulative effects of incremental growth.
Avoid sewage collection systems except when essential to solve existing area wide problems or within designated public sewer boundary. Discourage the extension of sewers into public water supply watersheds.
Consistent with the carrying capacity of the land, encourage cluster-style development to lessen impervious surfaces and avoid development in the fragile areas shown on the Constraints Map. (Figure 18) The calculated buildable area should exclude regulated wetlands.
Maintain a fifty foot buffer around regulated wetlands and watercourses .
Prohibit the introduction of non-native and invasive plant species in subdivision or project development.

Environmental Constraints

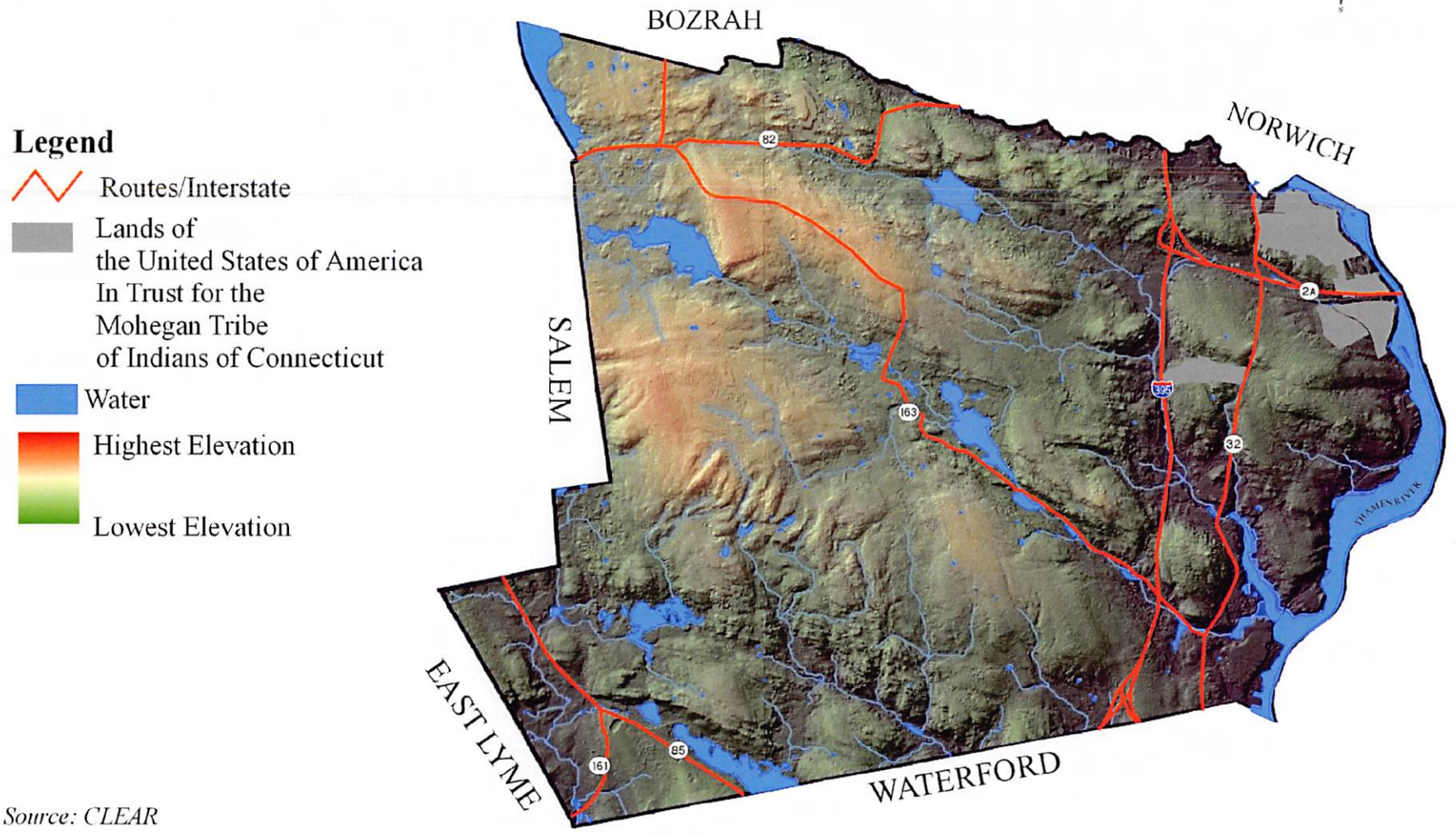


Source:
Planimetrics, LLC

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 18

Topography



Legend

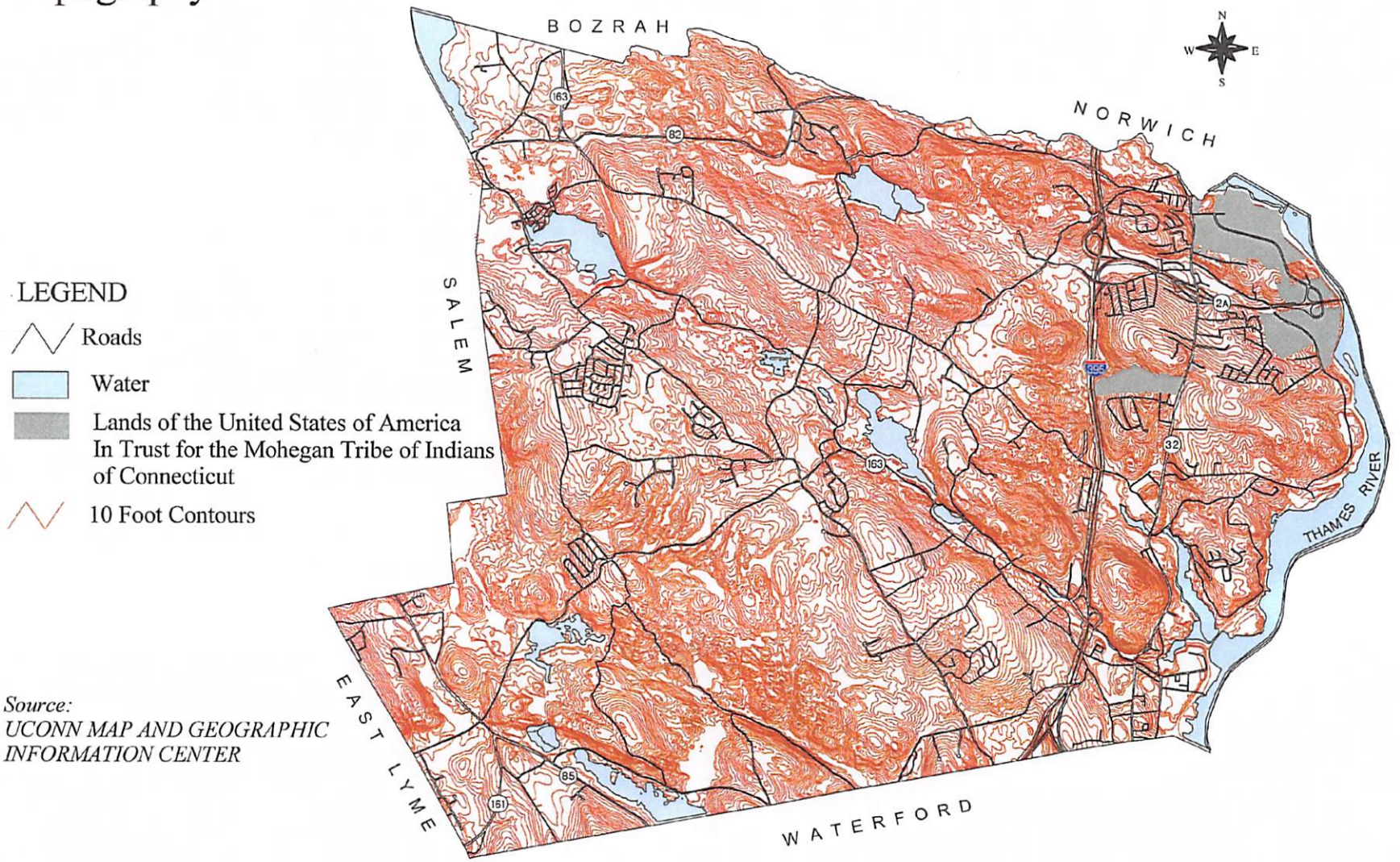
- Routes/Interstate
- Lands of the United States of America In Trust for the Mohegan Tribe of Indians of Connecticut
- Water
- Highest Elevation
- Lowest Elevation

Source: CLEAR

MTV Planning Town of Montville Planning Department Geographic Information System

Figure 19

Topography

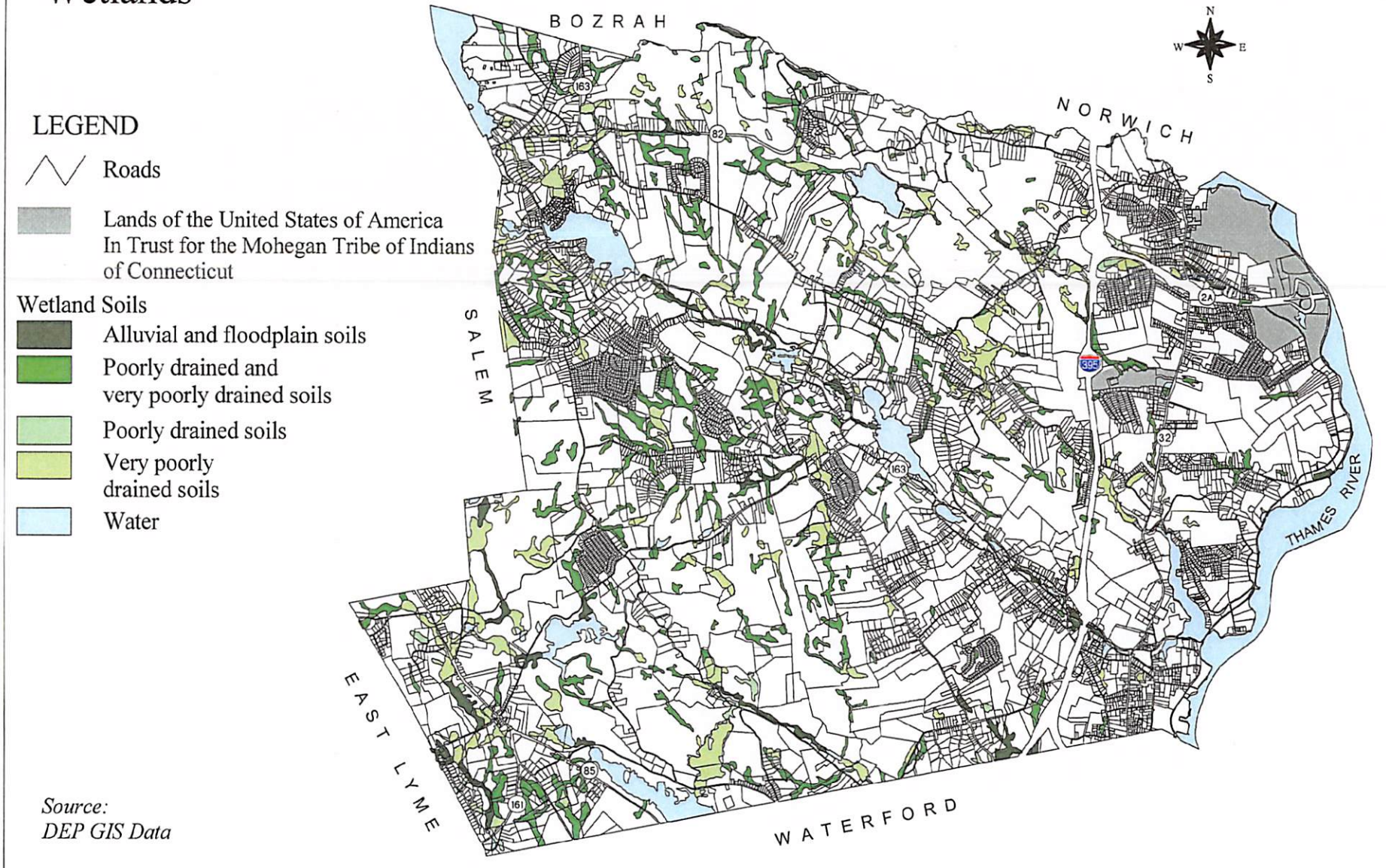


Source:
UCONN MAP AND GEOGRAPHIC INFORMATION CENTER

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 20

Wetlands

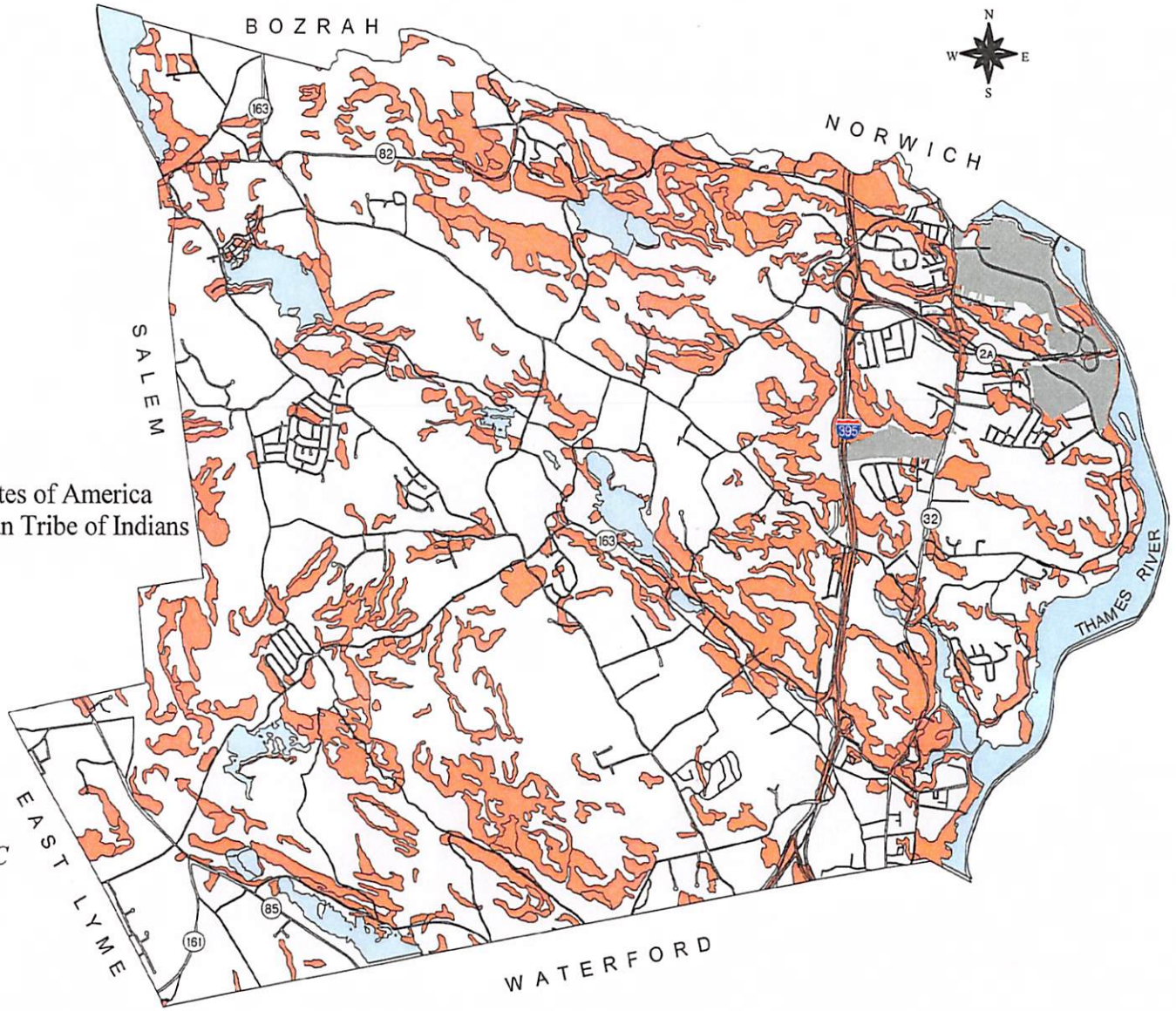


Source:
DEP GIS Data

MTV Planning Town of Montville Planning Department
Geographic Information System Data

Figure 21

Steep Slopes



LEGEND

- Roads
- Water
- Lands of the United States of America In Trust for the Mohegan Tribe of Indians of Connecticut
- Slopes > 20%

Source:
UCONN MAP AND GEOGRAPHIC INFORMATION CENTER

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 22

Soils



LEGEND

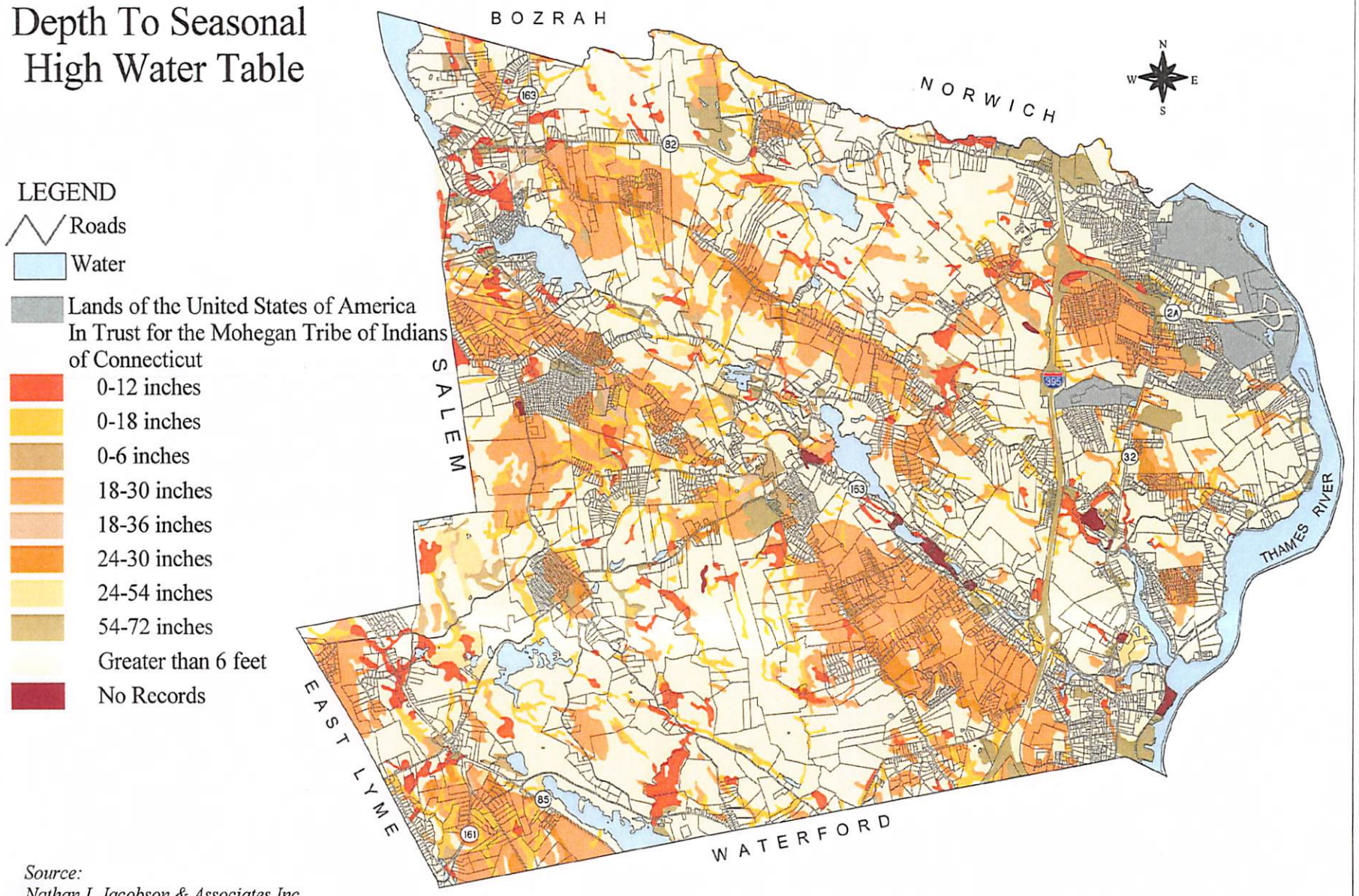
- Agawam Fine Sandy Loam
- Broadbrook Silt Loam
- Canton and Charlton Soils
- Catden and Freetown Soils
- Charlton-Chatfield Complex
- Dumps
- Haven and Enfield Soils
- Hinckley Gravelly Sandy Loam
- Hollis-Chatfield Rock Outcrop
- Limerick and Lim Soils
- Merrimac Sandy Loam
- Narragansett Silt Loam
- Narragansett-Hollis Complex
- Ninigret and Tisbury Soils
- Paxton and Montauk Fine Sandy
- Pootatuck Fine Sandy Loam
- Rainbow Silt Loam
- Raypol Silt Loam
- Ridgebury Fine Sandy Loam
- Ridgebury, Leicester, and Whit
- Rippowam Fine Sandy Loam
- Rock Outcrop-Hollis Complex
- Scarboro Muck
- Sudbury Sandy Loam
- Sutton Fine Sandy Loam
- Timakwa and Natchaug Soils
- Udorthents-Pits Complex
- Udorthents-Urban Land Complex
- Urban Land
- Walpole Sandy Loam
- Water
- Westbrook Mucky Peat
- Windsor Loamy Sand
- Woodbridge Fine Sandy Loam
- Lands of the United States of America In Trust for the Mohegan Tribe of Indians of Connecticut

Source:
UCONN MAP AND GEOGRAPHIC INFORMATION CENTER

MTV Planning Town of Montville Planning Department
Geographic Information System Data

Figure 23

Depth To Seasonal High Water Table

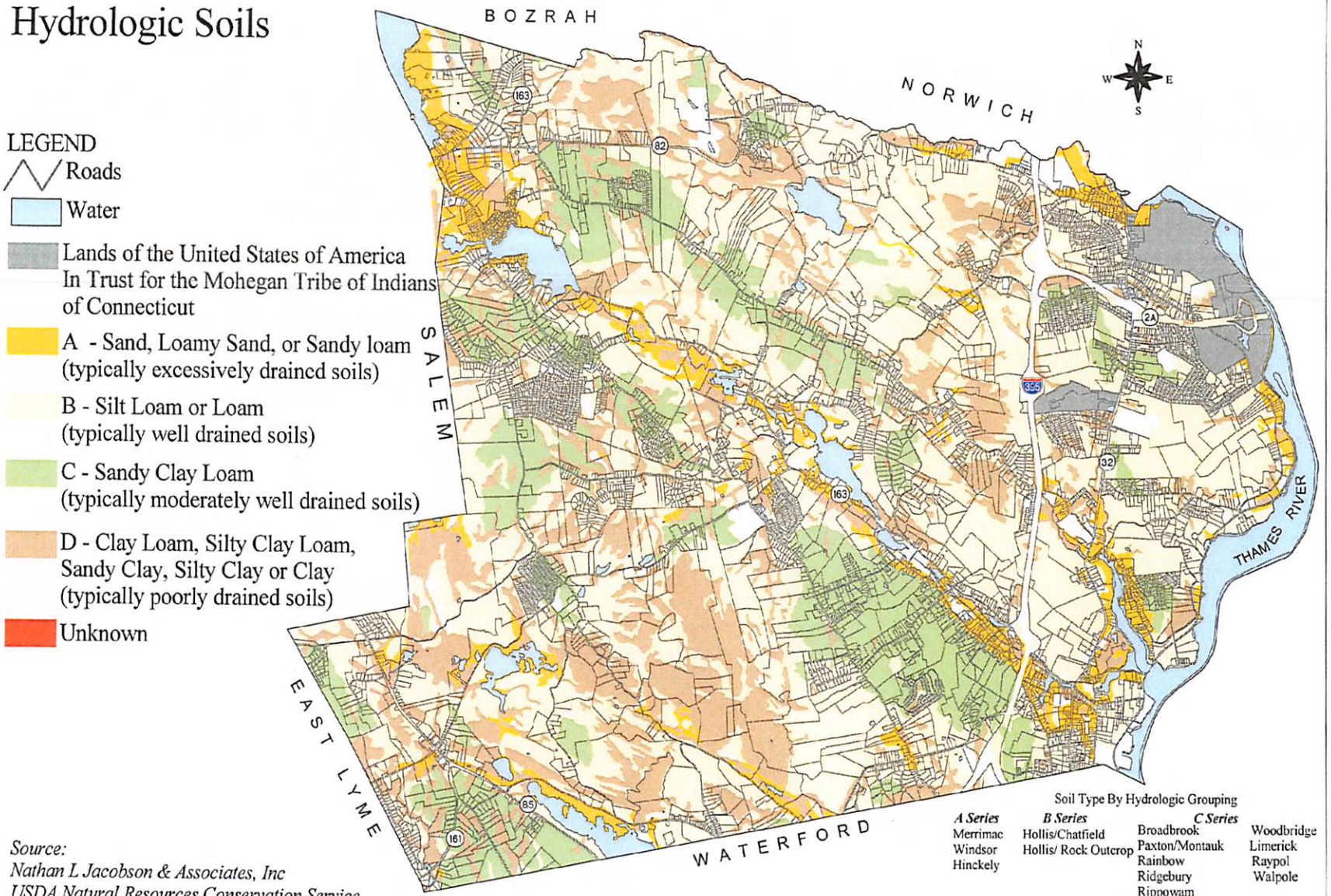


Source:
Nathan L Jacobson & Associates Inc.

MTV Planning Town of Montville Planning Department
Geographic Information System Data

Figure 24

Hydrologic Soils

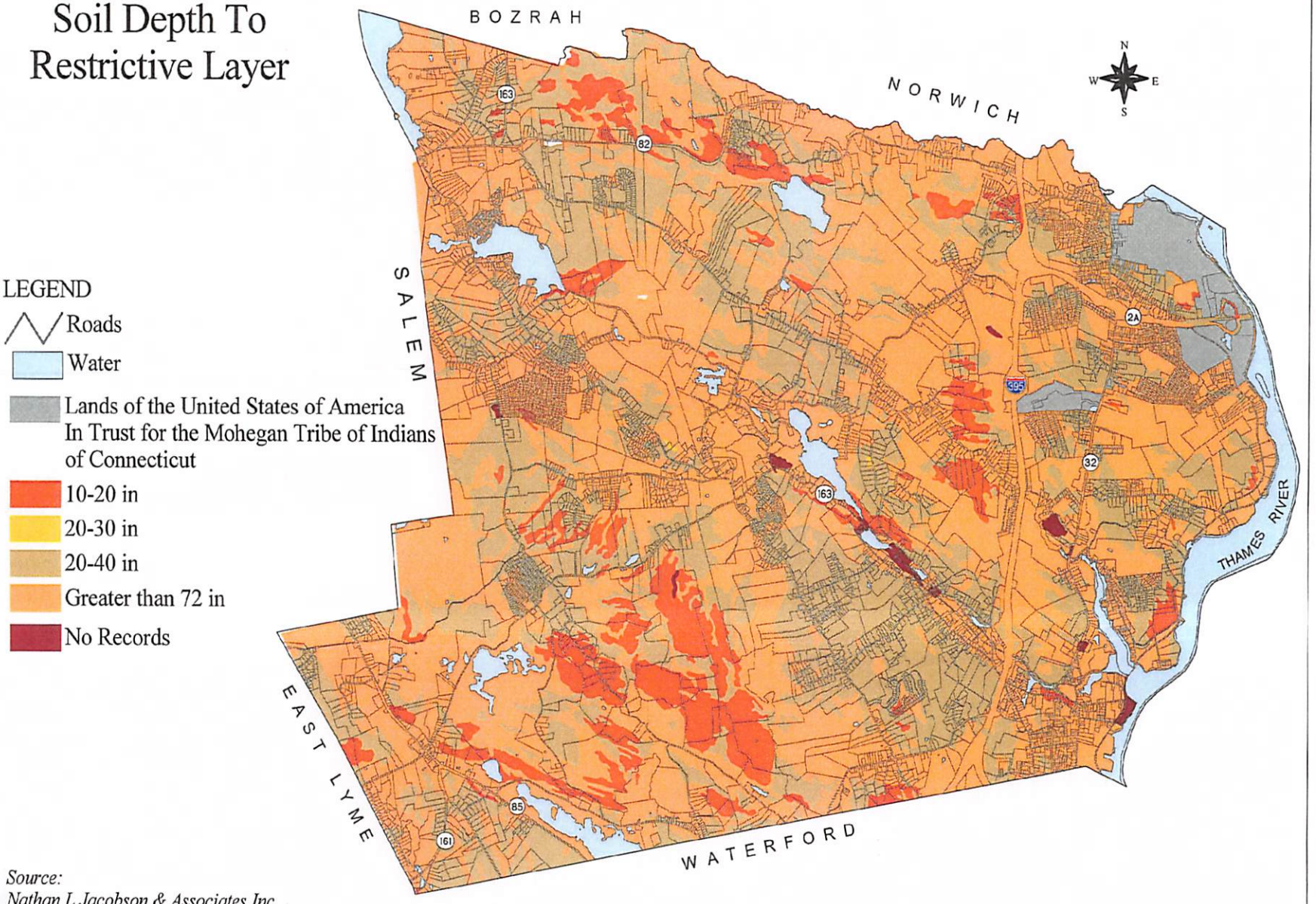


Source:
Nathan L Jacobson & Associates, Inc
USDA Natural Resources Conservation Service

MTV Planning Town of Montville Planning Department Geographic Information System Data

Figure 25

Soil Depth To Restrictive Layer

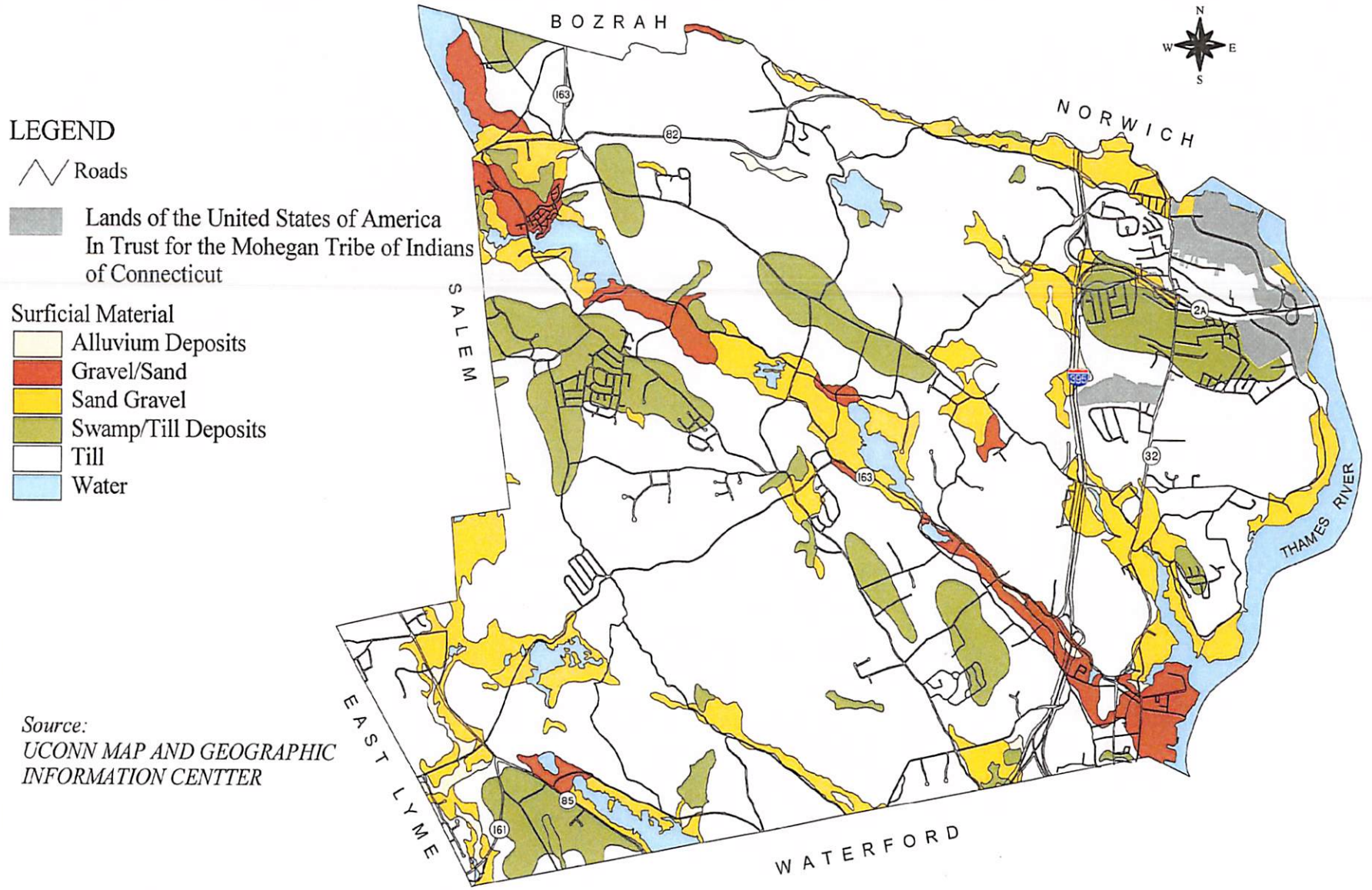


Source:
Nathan L Jacobson & Associates Inc.

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 26

Surficial Materials

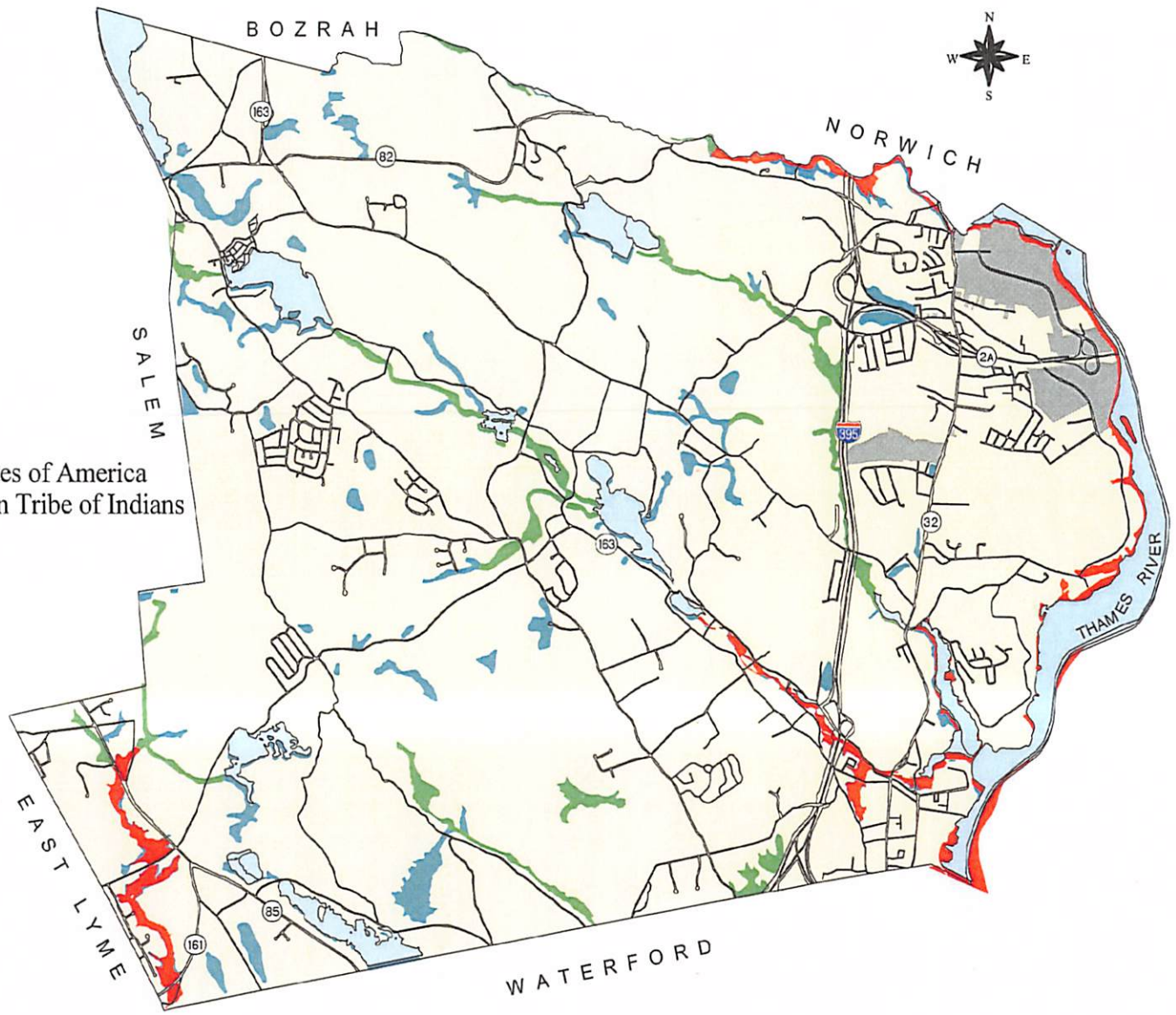


Source:
UCONN MAP AND GEOGRAPHIC INFORMATION CENTTER

MTV Planning Town of Montville Planning Department
Geographic Information System Data

Figure 27

Flood Zones



LEGEND

- Roads
- Water
- Lands of the United States of America In Trust for the Mohegan Tribe of Indians of Connecticut

Flood Zones

- A
- AE
- X
- X500

Source:
FEMA

MTV Planning Town of Montville Planning Department
Geographic Information System Data

Figure 28

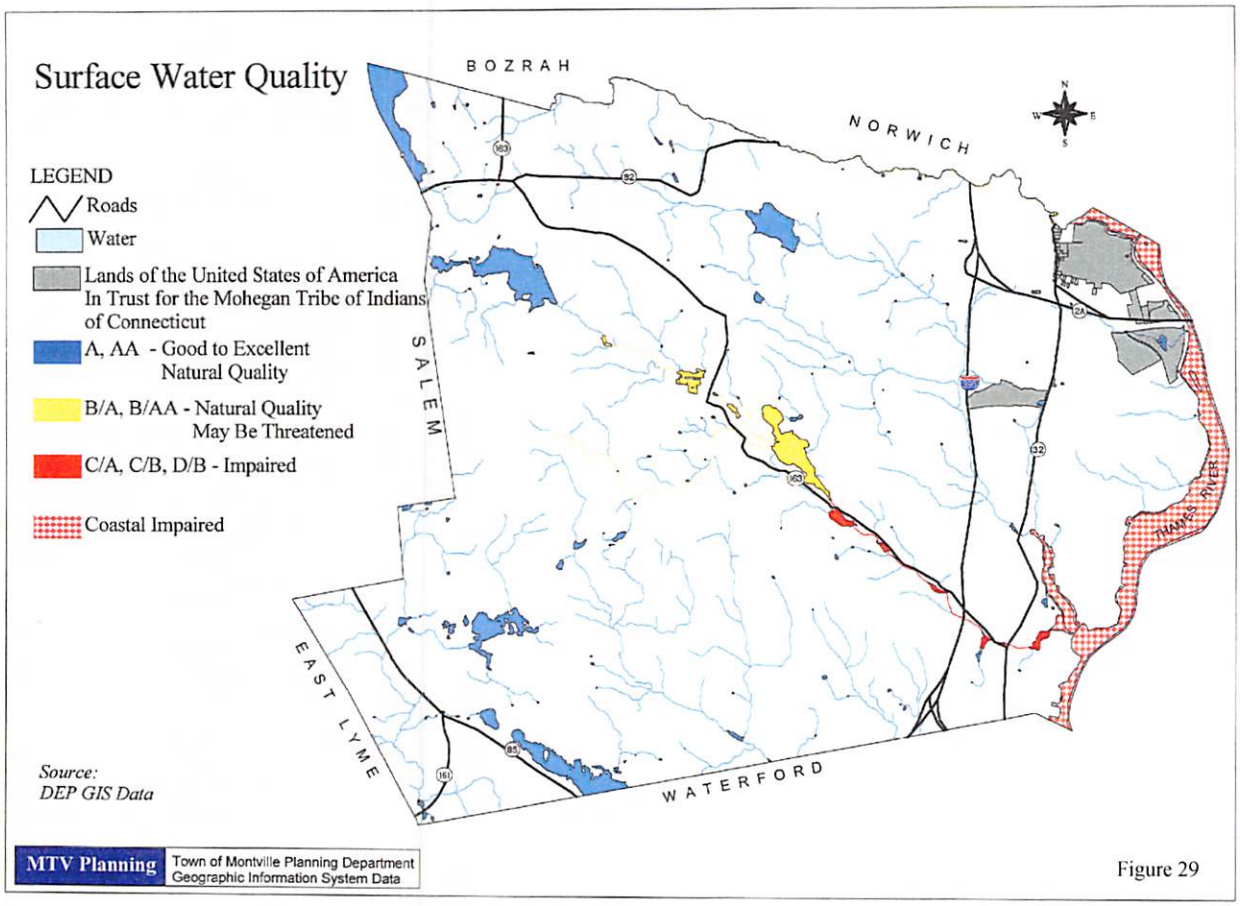


Figure 29

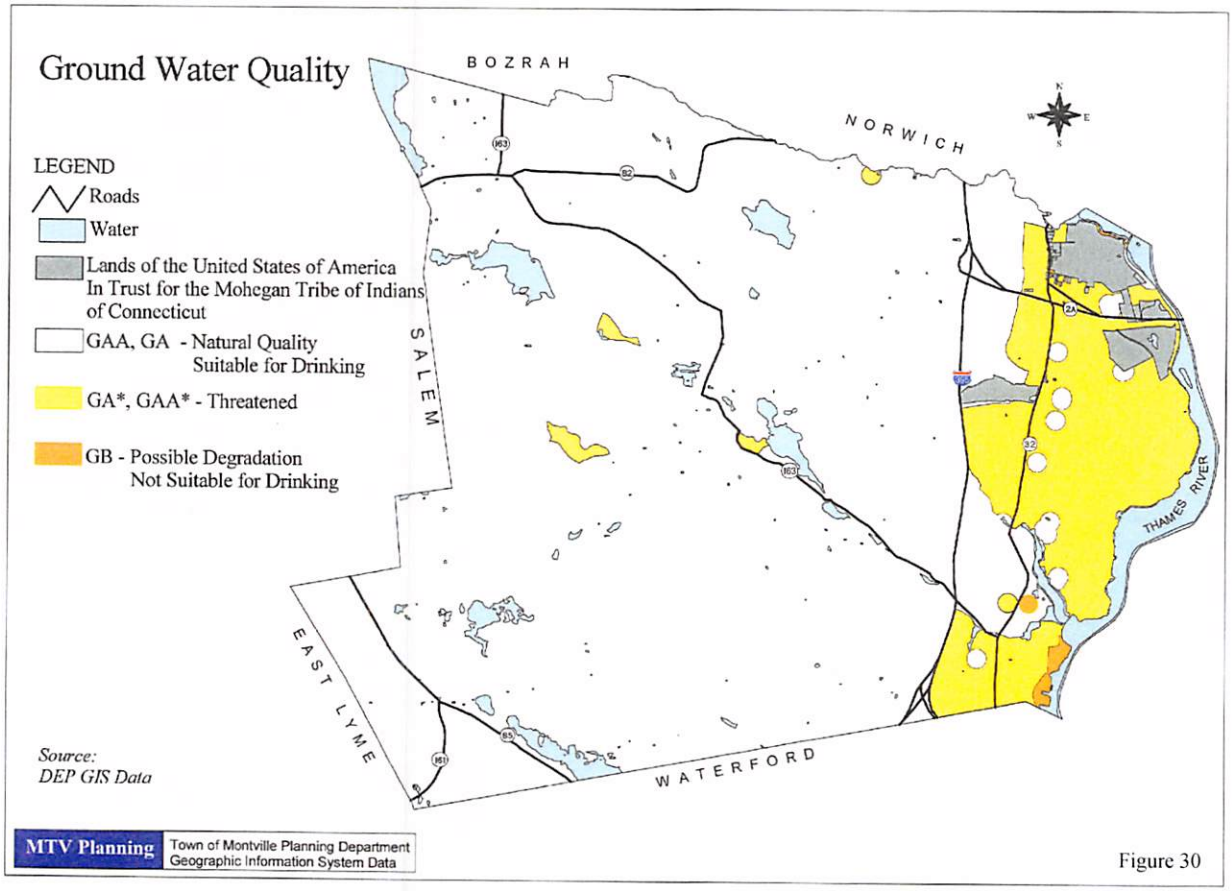
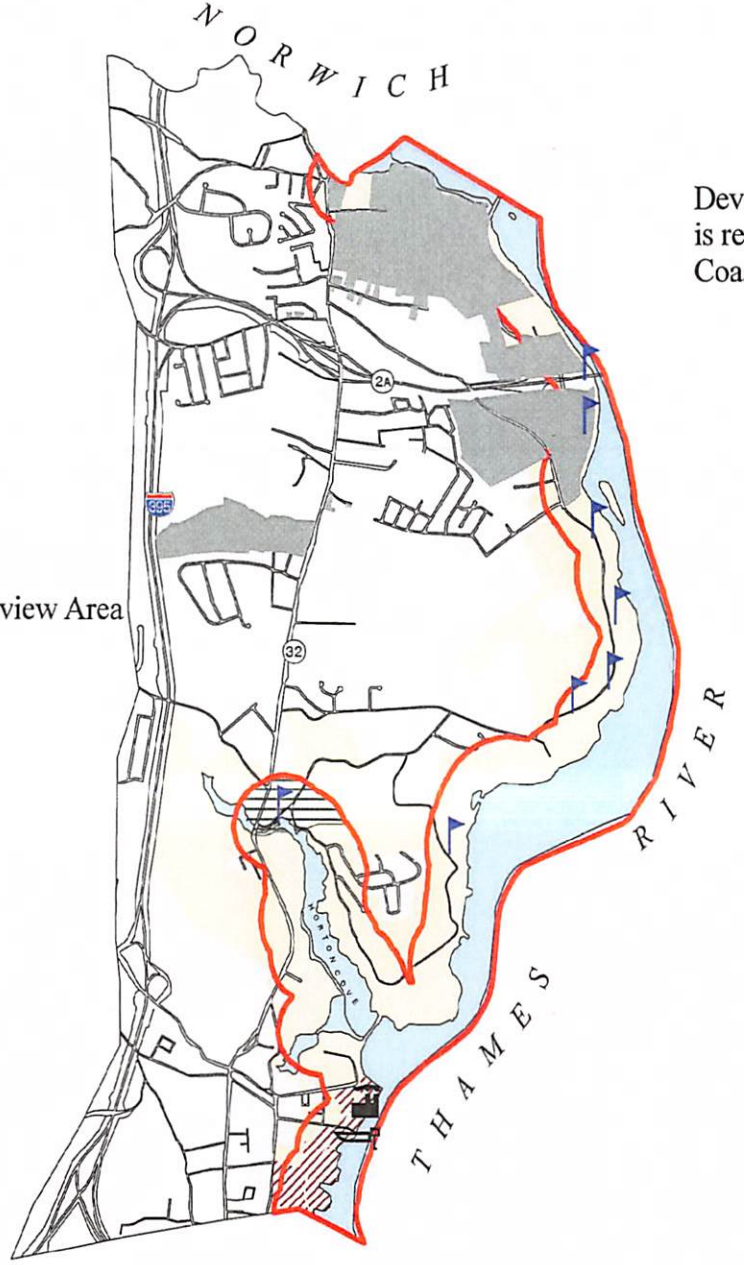


Figure 30

Coastal Area Manangement Review Area



LEGEND

- Roads
- Water
- Lands of the United States of America In Trust for the Mohegan Tribe of Indians of Connecticut
- Coastal Area Management Review Area
- Parcels Within Coastal Area Management Review Area
- Zoned for Industrial
- Wetland Encroachment Area
- Scenic ViewPoints
- Boat Launch
- Energy Facilities

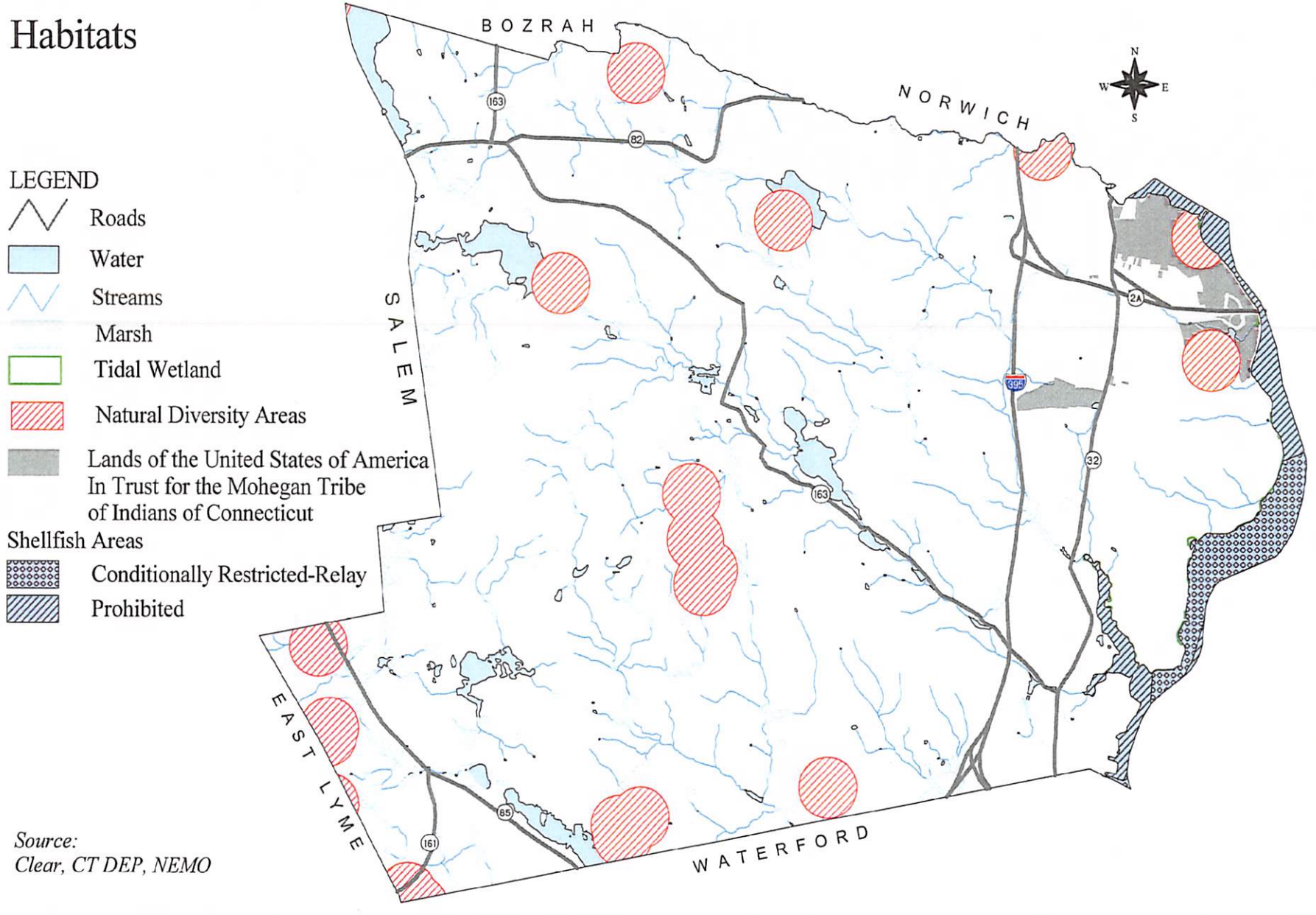
Source:
DEP GIS Data

Development within CAM area is reviewed for impacts to Coasal Resources

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 31

Habitats



Source:
Clear, CT DEP, NEMO

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 32

Community Profile
Open Space and Cultural Resources

Open space can be dictated by terrain, wetlands and watercourses (see Figure 18), or it can be selected for preservation or recreation because of unique natural features, ecological units, vistas or suitability for sports fields or trails. A holistic approach to open space planning should also consider the preservation of a Town's character and heritage and simultaneously plan for preservation of unique natural resources, public water supply watersheds, historic buildings, and vistas. An open space plan should analyze elements of both the built environment and landscapes which compromise the Town's cultural and natural resource legacy. The plan should emphasize the protection of corridors rather than scattered individual properties.

Table 12

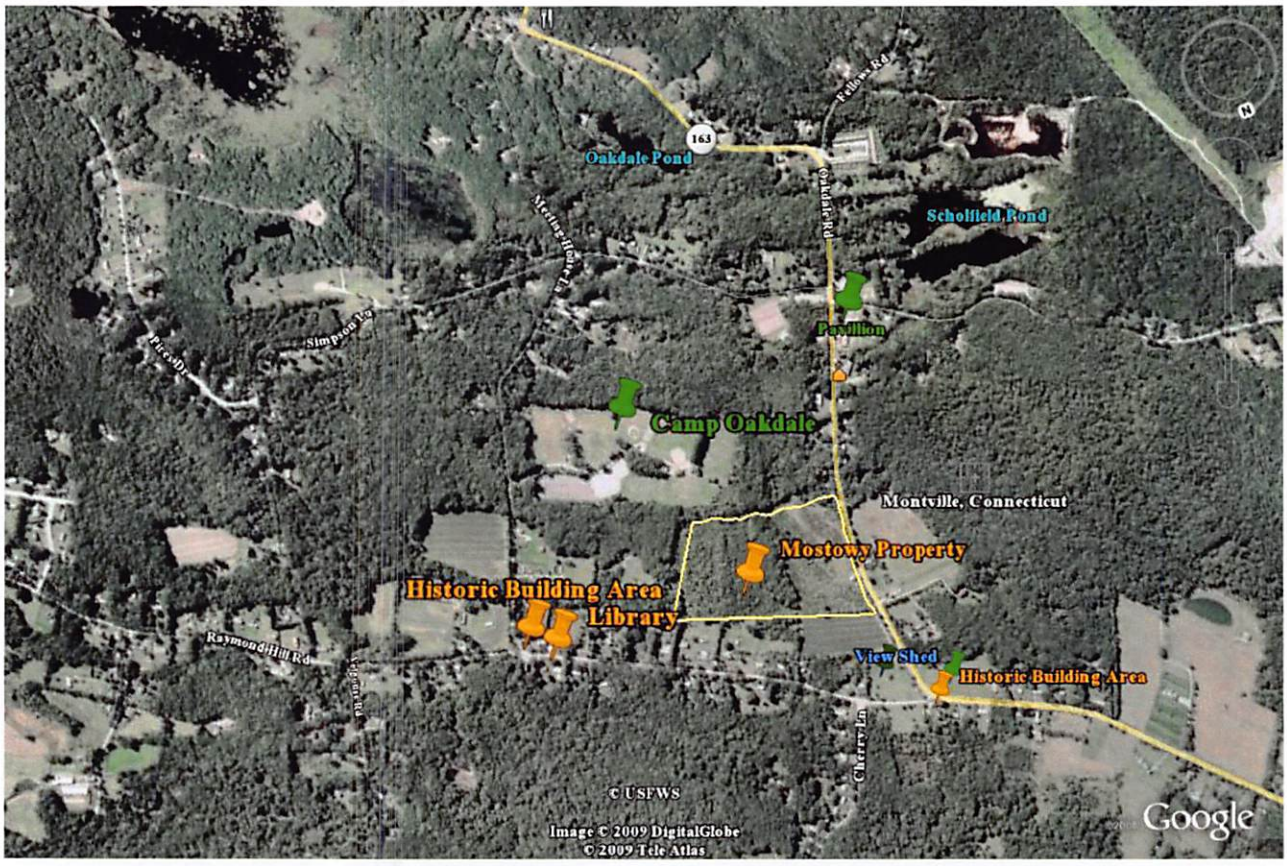
Existing Open Space and Recreation Areas		
Owner	**Acres**	**Subtotal**
Utilities		
SCWA	40.28	
City of New London	67.91	
City of Norwich	325.59	
Oakdale Heights Water	1.57	
CL& P	771.80	
		1207.15
Conservancies		
Audubon	213.92	
Nature Conservancy	295.88	
West Farms Land Trust	18.95	
		528.75
Schools		
Montville High School	65.4	
Palmer School	1.7	
Oakdale School	15.6	
Mohegan School	27.01	
Murphy School	14.55	
Tyl Middle School	Combined with High School	
		124.26
Camp Oakdale	141.35	**141.35**
Other Areas		
Fair Oaks Conservation Center	42.84	**42.84**
Total *		**2, 077.15**

* Cemeteries not included in totals

Community Profile - Open Space and Cultural Resources

The Town should use established criteria when evaluating future open space acquisitions or acceptance of open space lands. The criteria should be as follows:

- The land is in close proximity to Camp Oakdale.
- The land is in a public water supply watershed.
- The land or structure is cited in the Historic and Architectural Resource Survey of the Town of Montville, Connecticut 2001.
- The land contains a critical habitat area (as shown in Figure 32) or contains a significant ecological unit such as old growth forest or farmland.
- The land links existing open space areas which are significant natural resource areas or active recreation areas such as trails.
- The land provides public access to a lake or the Thames River.
- The undeveloped land area will significantly contribute to or sustain water quality in a basin.
- The Town should not accept isolated pockets of wetlands.



Google Maps image of Park and Heritage Corridor

Recommendations
Establish a Park and Heritage corridor (Figure 33) which will contain Camp Oakdale, trail systems, scenic vistas and historic structures. This should be undertaken as a cooperative project between the Parks and Recreation Commission and the Planning and Zoning Commission. The Planning and Zoning Commission should consider a new overlay zone for the corridor.
Establish a Historic District as shown in Figure 33. The Congregational Church building and the Raymond Library should be the central focus of the district.
Where practical, in other words, in areas not constrained by steep slopes, all trails should be handicapped accessible.
Construct a small fishing dock adjacent to Schofield Pond at the site of the former beach area. Make dock handicapped accessible. Obtain easement from the owner of Schofield Pond.
Extend WRP-160 zoning district designation to the Hunts Brook Watershed if Millers Pond becomes an approved public water supply.
Revise the Zoning Regulations to allow true open space cluster development in OS, WRP-160, and R-120 zones. Stormwater quality and the preservation of land which meets the open space criteria discussed above should be the design criteria.
Allow contribution in lieu of open space in subdivisions if contribution is directed to the Park and Heritage Corridor.
Pursue a land swap with Smurfit Stone Corporation to allow improved access to the Town Dock for parking, boat launch, and handicapped fishing access.



Raymond Library

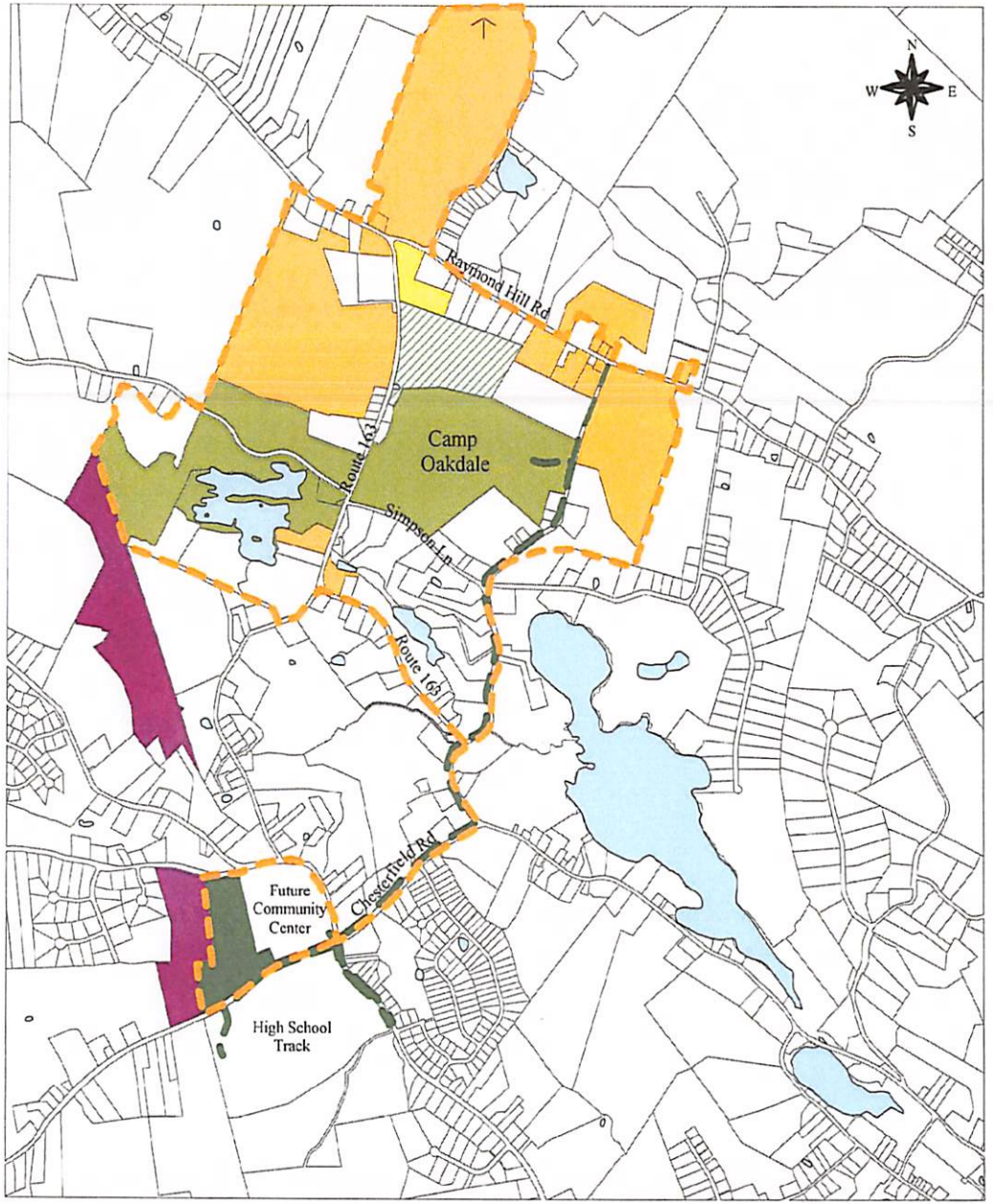


Congregational Church

Park and Heritage Corridor

LEGEND

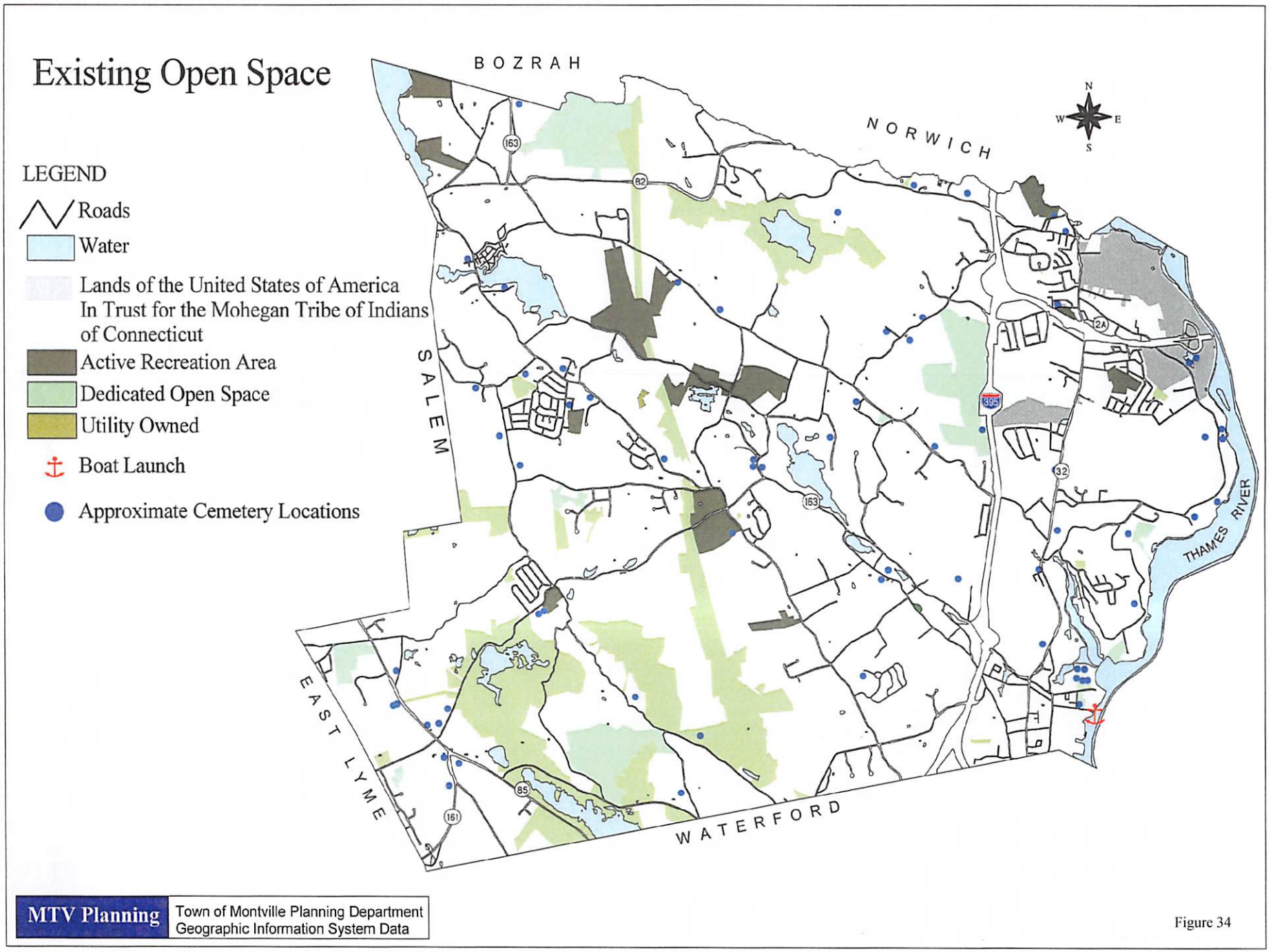
- Roads
- Water
- Park and Heritage Corridor
- Conservation Center
- Proposed Pedestrian Path
- Camp Oakdale
- Future Acquisition
- Historic Property
- Powerline R.O.W
- Preserve Vista



MTV Planning | Town of Montville Planning Department Geographic Information System Data

Figure 33

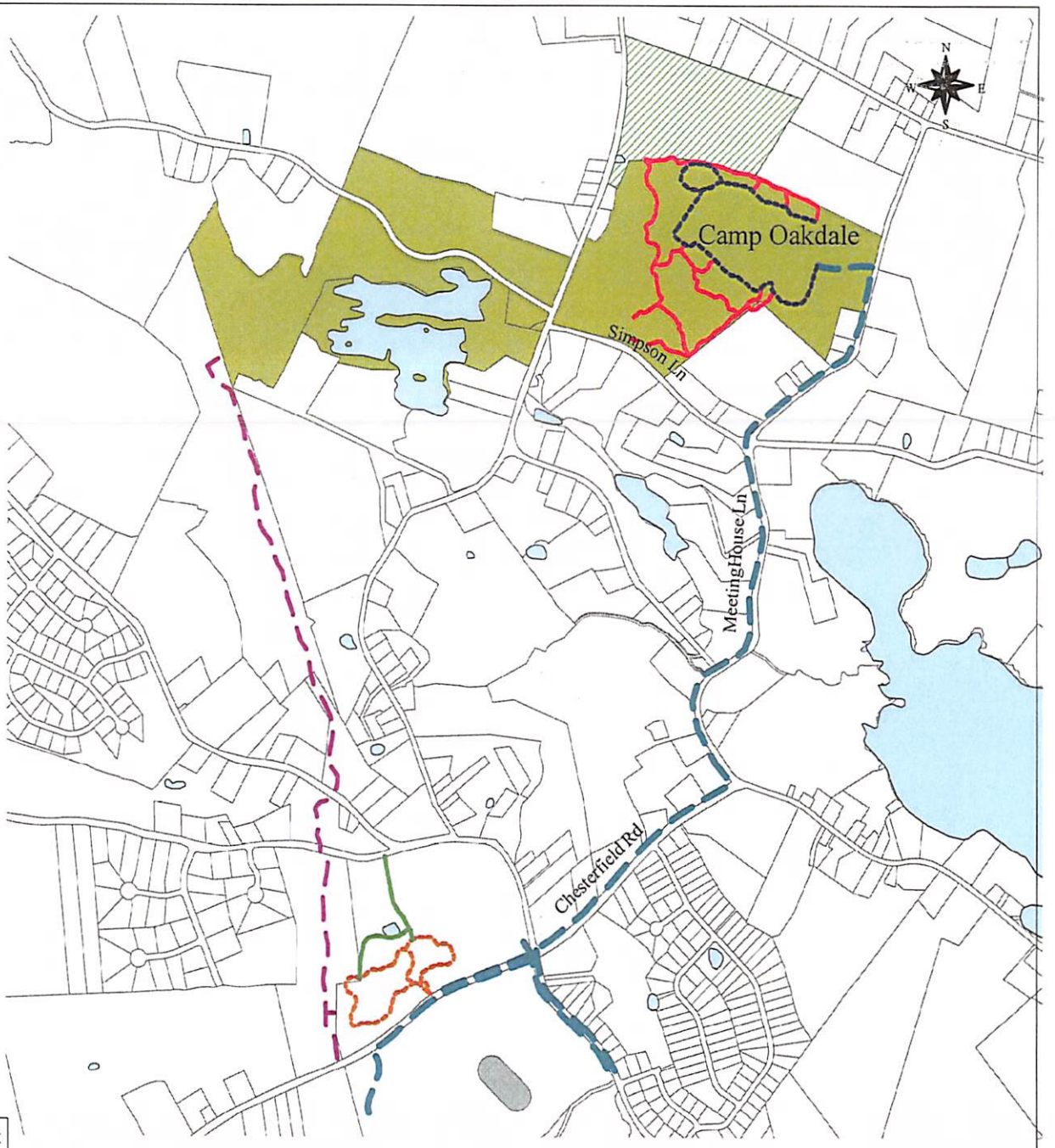
Existing Open Space



MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 34

Trail Systems



Source:
Nathan L Jacobson & Associates Inc.

MTV Planning Town of Montville Planning Department
Geographic Information System Data

Figure 35

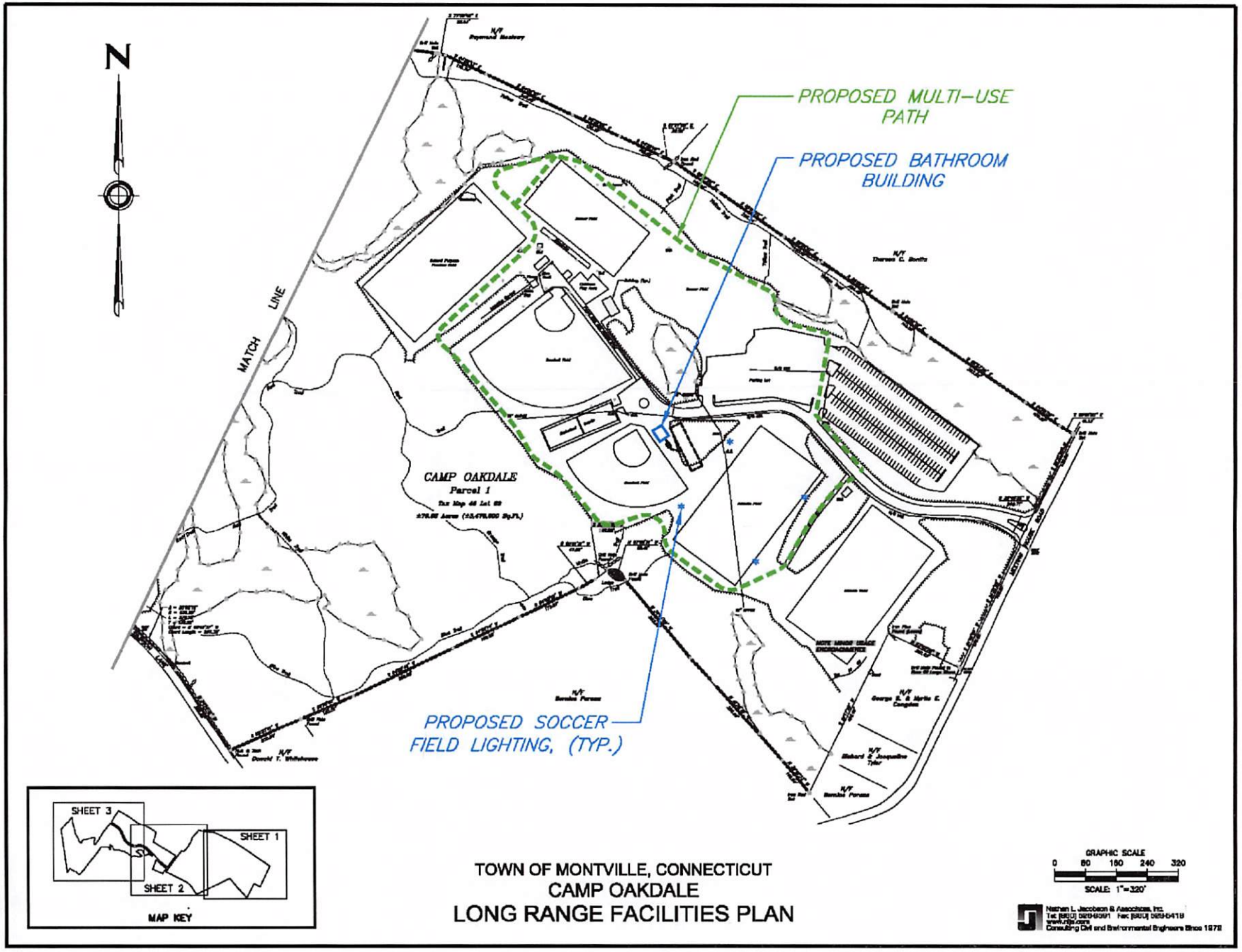

N
PROPOSED MULTI-USE PATH
PROPOSED BATHROOM BUILDING
MATCH LINE
CAMP OAKDALE
Parcel 1
PROPOSED SOCCER FIELD LIGHTING, (TYP.)
SHEET 3
SHEET 1
SHEET 2
MAP KEY
TOWN OF MONTVILLE, CONNECTICUT
CAMP OAKDALE
LONG RANGE FACILITIES PLAN
GRAPHIC SCALE
0 80 160 240 320
SCALE: 1"=320'

Figure 36



War Memorial in front of Old Town Hall

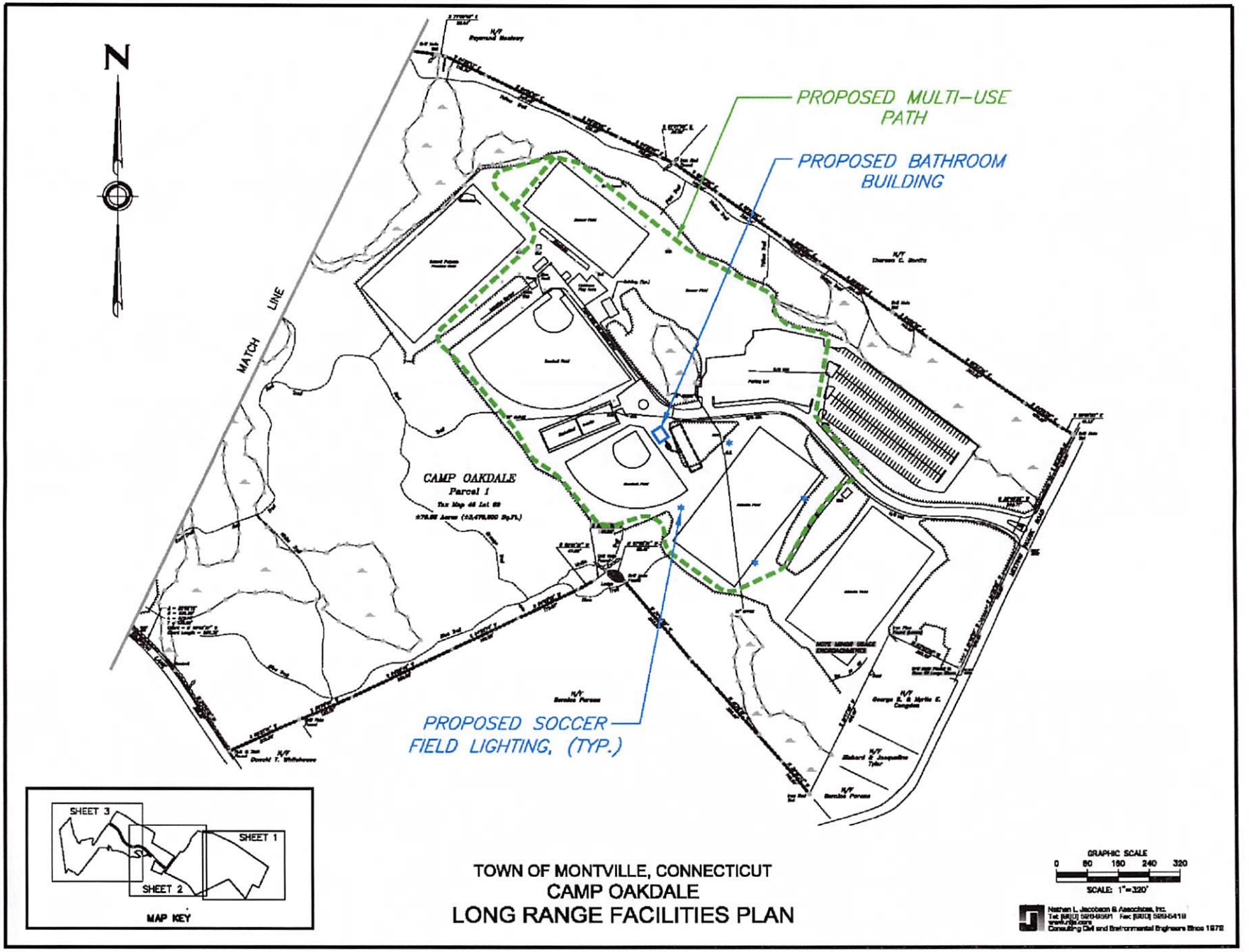

N
PROPOSED MULTI-USE PATH
PROPOSED BATHROOM BUILDING
MATCH LINE
CAMP OAKDALE
Parcel 1
PROPOSED SOCCER FIELD LIGHTING, (TYP.)
SHEET 3
SHEET 1
SHEET 2
MAP KEY
TOWN OF MONTVILLE, CONNECTICUT
CAMP OAKDALE
LONG RANGE FACILITIES PLAN
GRAPHIC SCALE
0 80 160 240 320
SCALE: 1"=320'

Figure 36

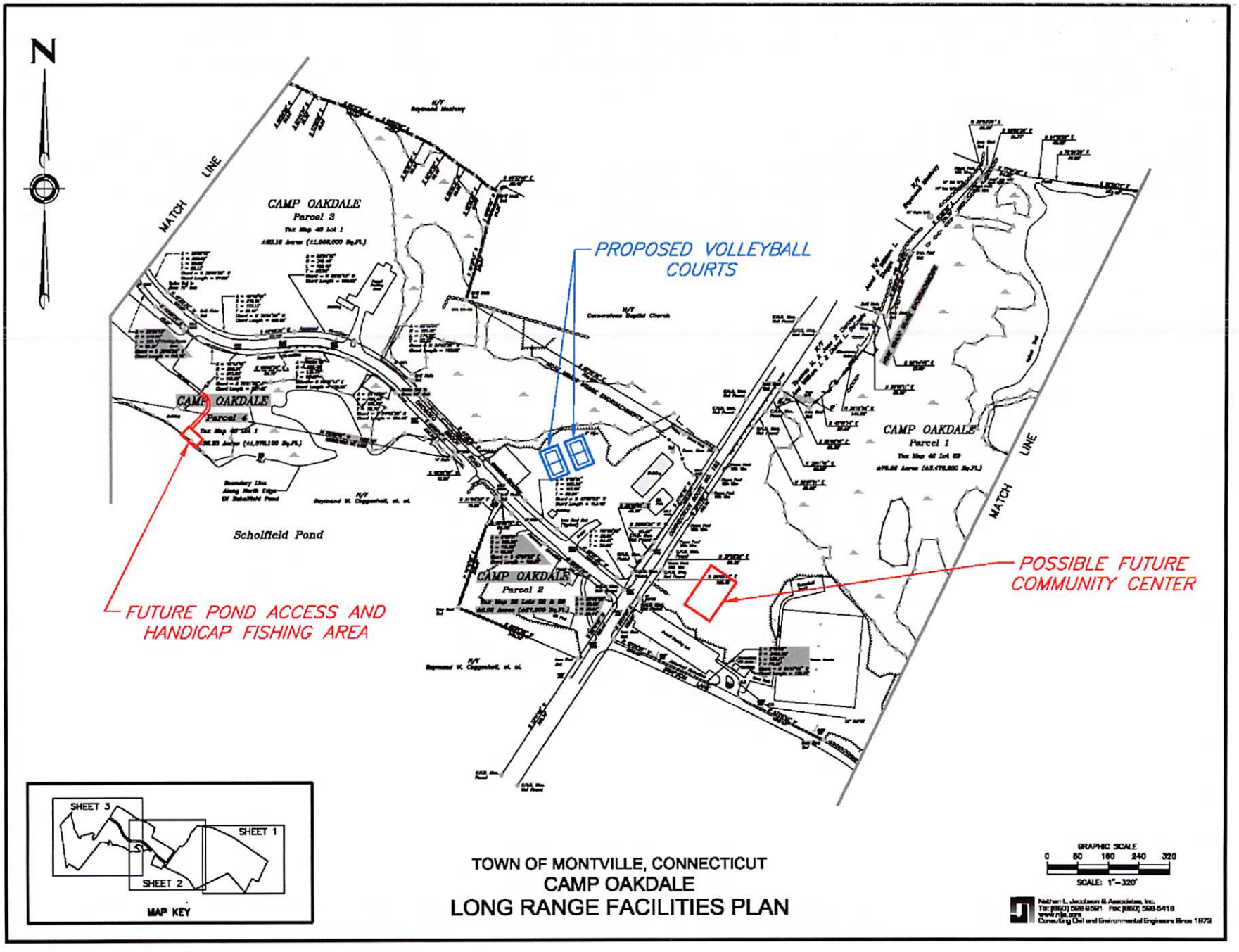

N
MATCH LINE
CAMP OAKDALE
Parcel 3
PROPOSED VOLLEYBALL COURTS
CAMP OAKDALE
Parcel 4
Scholfield Pond
FUTURE POND ACCESS AND HANDICAP FISHING AREA
CAMP OAKDALE
Parcel 2
CAMP OAKDALE
Parcel 1
POSSIBLE FUTURE COMMUNITY CENTER
MATCH LINE
SHEET 3
SHEET 1
SHEET 2
MAP KEY
TOWN OF MONTVILLE, CONNECTICUT
CAMP OAKDALE
LONG RANGE FACILITIES PLAN
GRAPHIC SCALE
0 80 160 240 320
SCALE: 1"=320'

Figure 37

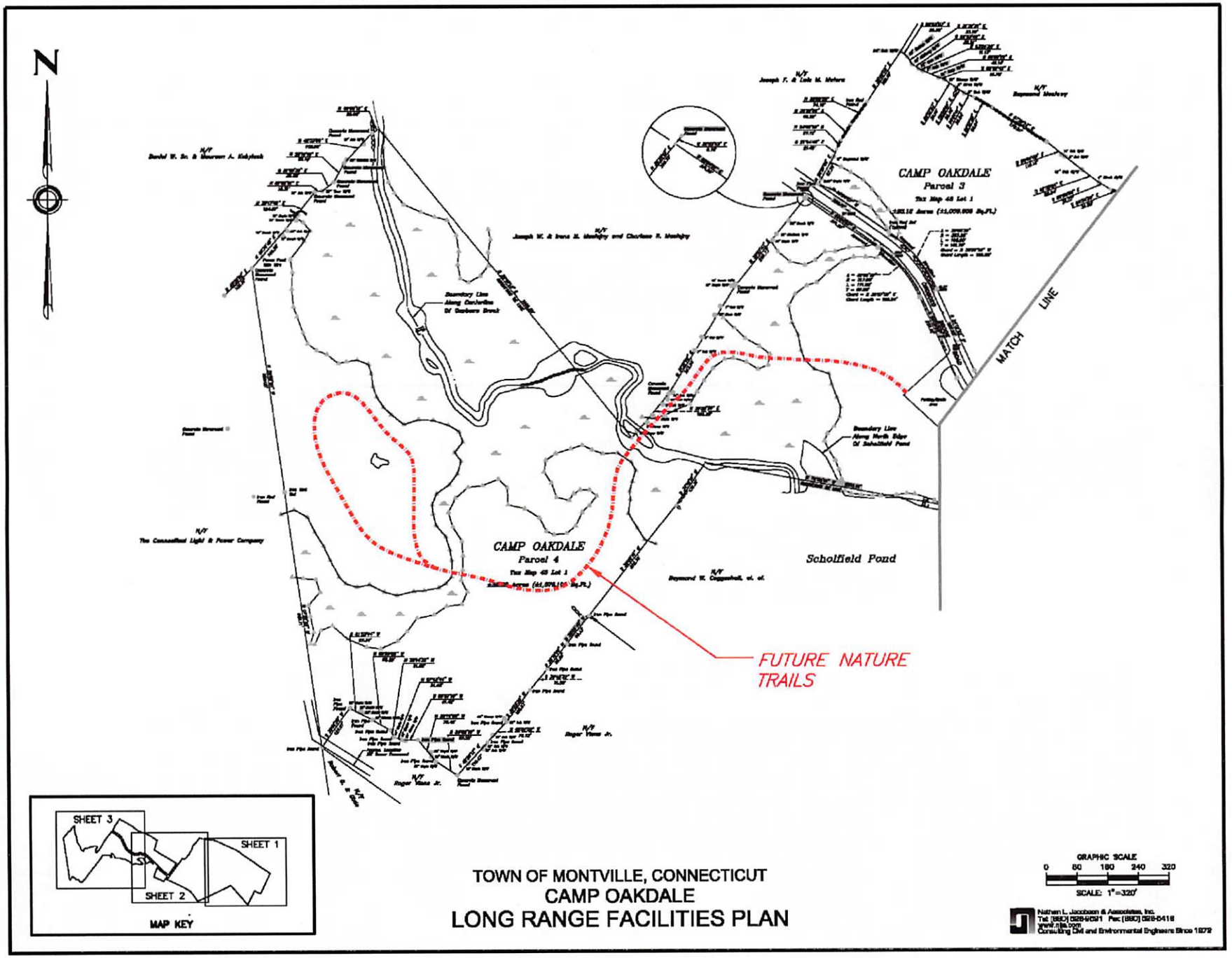

N
CAMP OAKDALE
Parcel 3
CAMP OAKDALE
Parcel 4
Scholfield Pond
MATCH LINE
FUTURE NATURE TRAILS
SHEET 3
SHEET 1
SHEET 2
MAP KEY
TOWN OF MONTVILLE, CONNECTICUT
CAMP OAKDALE
LONG RANGE FACILITIES PLAN
GRAPHIC SCALE
0 80 160 240 320
SCALE: 1"=320'
Nathan L. Jacobson & Associates, Inc.
Consulting Civil and Environmental Engineers Since 1972

Figure 38



War Memorial in front of Old Town Hall

Community Profile
Community Facilities & Infrastructure

The role of local government should be the efficient delivery of services, not provided by the public sector, within fiscal constraints. This section will address the following questions and issues:

- Building and Space Requirements
- Public Safety Infrastructure
- Road and Drainage Projects
- Deferred Maintenance Costs
- How will Demographic Trends Effect the Requirements of Future School Construction
- Are there Opportunities for Consolidation of Services

Building Space Requirements

Town Facilities

Town Hall—Route 32

The Uncasville School was renovated in 2001 and now houses most Town Administration Offices. There are off-site facilities such as the Public Works Department, Public Safety Building, and Youth Services. The Old Town Hall, which is located on the same parcel, is currently vacant. The building should be retained and used as a Town Hall Annex. There is space available in the building for a community meeting room and future office space.



Old Town Hall



New Town Hall

Community Profile - Community Facilities & Infrastructure



Playground at Camp Oakdale



Senior Center- Maple Ave



Mohegan Fire House- Route 32

Table 13

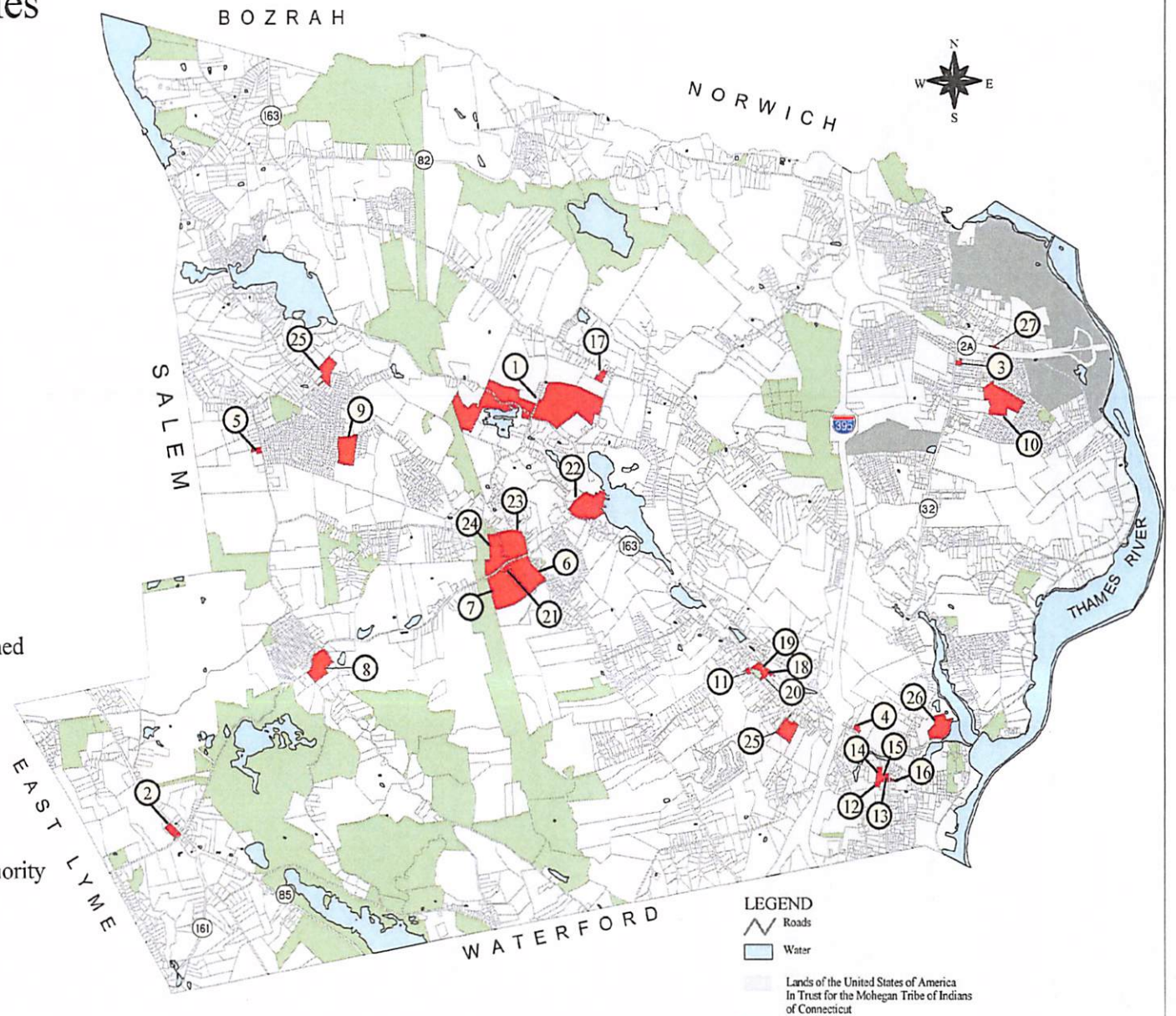
Major Town Facilities		
Facility	**Square Feet**	**Address**
Town Hall	40,752	310 Norwich N.L Tpke
Town Hall Annex	9,904	310 Norwich N.L Tpke
Social Services Annex	960	310 Norwich N.L Tpke
Senior Center	8,493	12 Maple Avenue
Public Works Complex (includes Kennel)	24,750	225 Maple Avenue
Youth Services	3,128	289 Norwich N.L Tpke
Fair Oaks	21,956	836 Old Colchester Rd
Transfer Station	25.06 acres	669 Route 163
Wastewater Treatment Plant & Garage	20,152	83 Pink Row
Chesterfield Fire Co.	9,350	1606 Route 85
Mohegan Fire Co.	9,313	2029 Route 32
Montville Fire Co.	8,408	77 Route 163
Oakdale Fire Co.	7,952	444 Chapel Hill Rd
Raymond Library	3,840	832 Raymond Hill Rd
Public Safety Building	3,515	89 Fort Shantok Rd
Water Tower	0.25 acres	50 Cook Rd
Housing Authority	40 Units	2 Liberty Road
	40 Units	41 Milefski Dr
Camp Oakdale Recreation Area	30.33 acres	78 Oxoboxo Dam Rd
	20.30 acres	75 Oxoboxo Dam Rd
	76.14 acres	176 Meetinghouse Rd
	1.83 acres	Route 163
	0.16 acres	Route 163
Montville High School	172,133	800 Old Colchester Rd
Mohegan Elem. School	53,642	49 Golden Rd
Murphy Elem. School	56,912	500 Chesterfield Rd
Oakdale Elem. School	67,467	30 Indiana Circle
Palmer Alternative	14,920	238 Maple Ave
Tyl Middle School	88,446	166 Chesterfield Rd
Bus Garage	129,373	94 Chesterfield Rd

Facilities not owned by the Town of Montville

We do not project any need for additional Town Hall Facilities over the next ten years.

Community Facilities Map

1. Camp Oakdale
2. Chesterfield Fire Co.
3. Mohegan Fire Co.
4. Montville Fire Co.
5. Oakdale Fire Co.
6. Montville High School
7. Leonard J.Tyl Middle School
8. Murphy Elementary School
9. Oakdale Elementary School
10. Mohegan Elementary School
11. Palmer Academy
12. Town Hall
13. Old Town Hall
14. Senior Center
15. Social Services
16. Youth Center
17. Raymond Library
18. Public Works Garage/ Salt Shed
19. Public Works Offices
20. Dog Pound
21. Town Bus Garage
22. Transfer Station
23. Former Fair Oaks School
24. Conservation Center
25. Housing Authority (2)
26. Water Pollution Control Authority
27. Police Station



MTV Planning | Town of Montville Planning Department Geographic Information System Data

Figure 39

Other Town Facilities



Public Works Department

The Public Works Department needs the following:

- Additional fenced space for sweepings and material storage. There are two possible locations. The State wants the Town to accept Fort Shantok Road (State Road #433). The Town should request the State Maintenance building located on Route 32 in return. The second option would be land located near the Waster Water Treatment Plant.
- An additional sand/salt shed.
- New Transfer Station Gate Building. The current entrance to the Transfer Station and the gate keeper's building are a safety hazard. Traffic bound into the Station backs up onto Route 163. The entrance should be relocated away from the Route 163 curve and the building moved to allow traffic to queue on site.

Bridges

The bridges are listed in order of replacement priority:

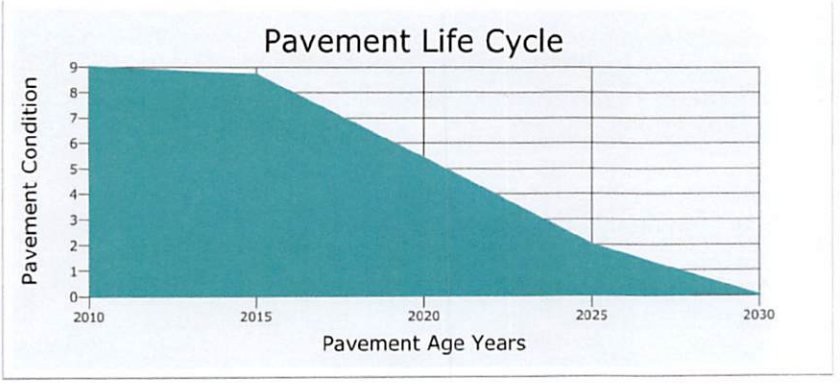
1. Meetinghouse Lane over Cove River, CTDOT Bridge No. 04741
2. Chesterfield Road over Bogue Brook, CTDOT Bridge No. 095012
3. Pink Row over Oxoboxo Brook, CTDOT Bridge No. 03966
4. Pequot Road over Brook, CTDOT Bridge No. 085013
5. Grassy Hill Road over Latimer Brook, CT Bridge No. 04742
6. New London Turnpike over Trading Cove Brook, CTDOT Bridge No. 03967
7. Fitch Hill Road over Stony Brook, CTDOT Bridge No. 085006
8. Raymond Hill Road over Stony Brook, CTDOT Bridge No. 085009
9. Moxley Road over Brook, CTDOT Bridge No. 085014
10. Bridge Street over Oxoboxo Brook, CTDOT Bridge No. 04740

(Note: The Old Colchester Road Bridge over the Oxoboxo is funded for replacement. The Montville Road Bridge over Trading Cove Brook should be given priority, however it would have to be a joint project between Norwich and Montville.)

Roads

There are 118.24 miles of improved roads and 0.88 miles of unimproved roads in Montville. The improved roads have a net book value of $9,557,599.00.

Figure 40



An effective road preservation program must contain a planned strategy of cost effective treatment to be applied while roads are still in good condition. As road quality deteriorates over time, it becomes more costly to make needed repairs. The taxpayer will have to pay five times as much for fixing a road in the future as opposed to paying for it now.

GASB 34

Government Accounting Standards Board Statement 34 (GASB 34) created new standards for state and local financial reporting, making financial reports more useful and easier to understand from the perspective of both residents and financial institutions.

GASB 34 now requires municipalities to account for all capital assets, including buildings, equipment, vehicles, roads, sewers, etc. As municipal assets depreciate, they can impact the community's financial health and ability to bond future capital improvement projects.

Rather than allow all of these assets to depreciate, municipalities can maintain and even improve the value of major assets such as roads, bridges and sewers through an Asset Management Plan that tracks their condition and schedules regular maintenance to prevent their physical deterioration and premature failure. [4]

Drainage Projects

Drainage is an issue in every community. Roads that have evolved from country roads were not built with today's stormwater requirements in mind. Two projects identified by the Public Works Director have a high priority due to flooding:

- Laurel Point Road
- Fitch Hill Road near Blais Road

Stormwater Phase II

"Polluted water runoff is often transported to municipal separate storm sewer systems (MS4s) and ultimately discharged into local rivers and streams without treatment. EPA's Stormwater Phase II Rule establishes an MS4 stormwater management program that is intended to improve the Nation's waterways by reducing the quantity of pollutants that stormwater picks up and carries into storm sewer systems during storm events. Common pollutants include oil and grease from roadways, pesticides from lawns, sediment from construction sites, and carelessly discarded trash.

[4] Town of Stonington POCD

In 1990, EPA promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a stormwater management program as a means to control polluted discharges from these MS4s. The Stormwater Phase II Rule extends coverage of the NPDES stormwater program to certain "small" MS4s but takes a slightly different approach to how the stormwater management program is developed and implemented.

A small MS4 is any MS4 not already covered by Phase I program as a medium or large MS4. The Phase II Rule automatically covers, on a nationwide basis, all small MS4s located in "urbanized areas" (UAs) as defined by the Bureau of the Census."[5] Montville Qualifies as a small MS4.

"Operators of regulated small MS4s are required to design their programs to:

- Reduce the discharge of pollutants to the "maximum extent possible"(MEP);
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the Clean Water Act.

Implementation of the MEP standard will typically require the development and implementation of BMPs and the achievement of measurable goals to satisfy each of the six minimum control measures.

The Phase II Rule defines a small MS4 stormwater management program as a program comprising six elements that, when implemented in concert, are expected to result in significant reductions of pollutants discharged into receiving waterbodies. The six MS4 elements, termed "minimum control measures" are shown in the sidebar."[5]

Montville is complying with the six elements. The system mapping is in process.

Six Minimum Control Measures
1. Public Education and Outreach
2. Public Participation /Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Runoff Control
6. Pollution Prevention / Good Housekeeping

WPCA

A sewer avoidance plan limits sprawl, reserves treatment plant capacity for economic development infill development in densely settled areas. The sewer avoidance map is shown in Figure 42. Future sewer extensions should be limited to areas outside the sewer avoidance boundary.

[5] EPA 833-F-00-002

School System

All schools in the Montville System have been recently renovated. The school population is constant to decreasing. There should be no major school facility construction projects in the next five to seven years. The average number of persons per household has decreased each decade since 1980.



Montville High School

Emergency Services

Montville has four Fire Districts. The Districts are supported by a combination of paid personnel and volunteers. The time commitment requirement for volunteer certification has become lengthy and places a tremendous burden on the individual's time. The Town may have to consider consolidation of two of the four Fire Houses/Districts in the future. A consolidation of Montville and Mohegan, with a new Fire House in the vicinity of Raymond Hill Road may be an option.

Ambulance service is provided by the four Fire Departments with mutual aid from abutting towns and Mohegan Tribal Emergency Services.

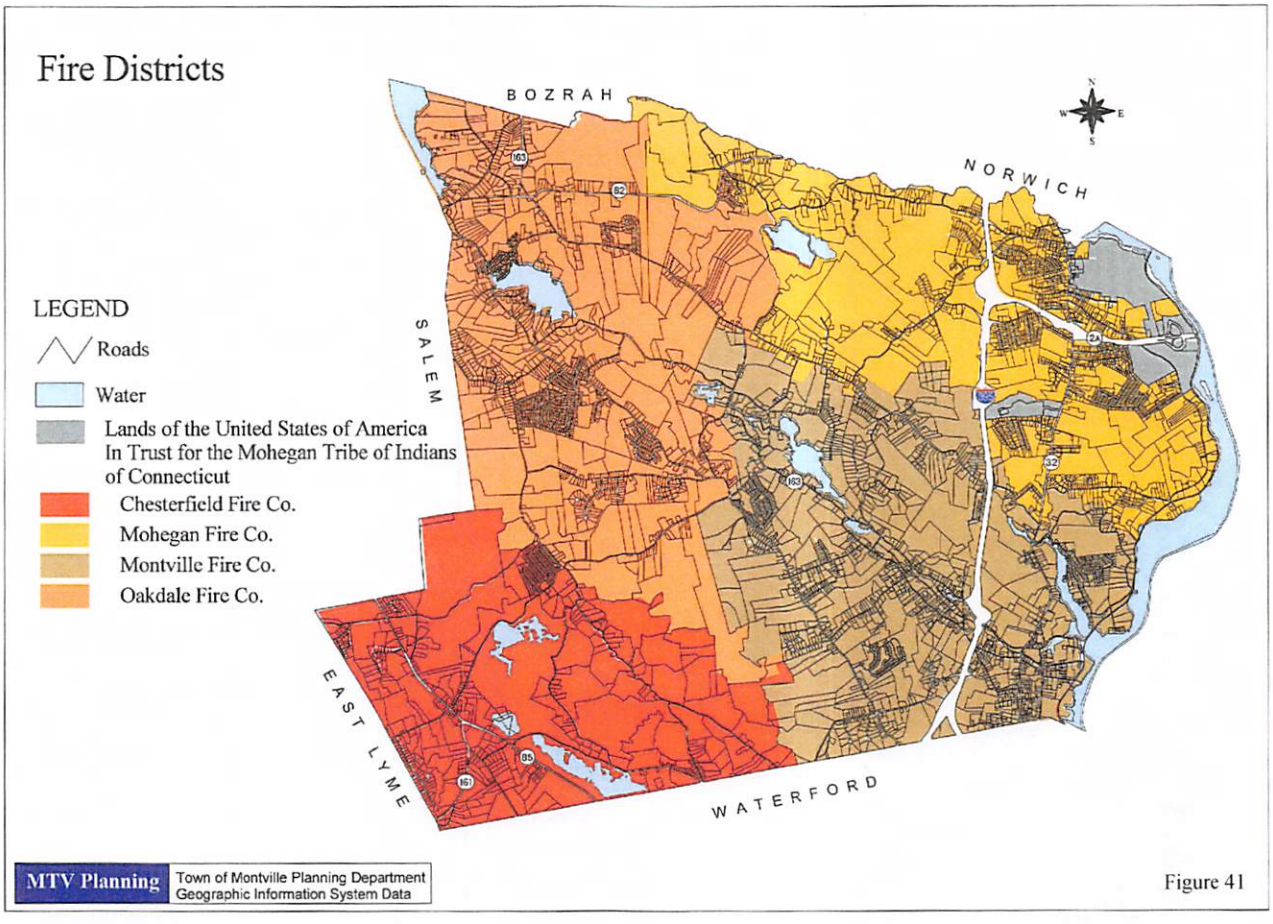
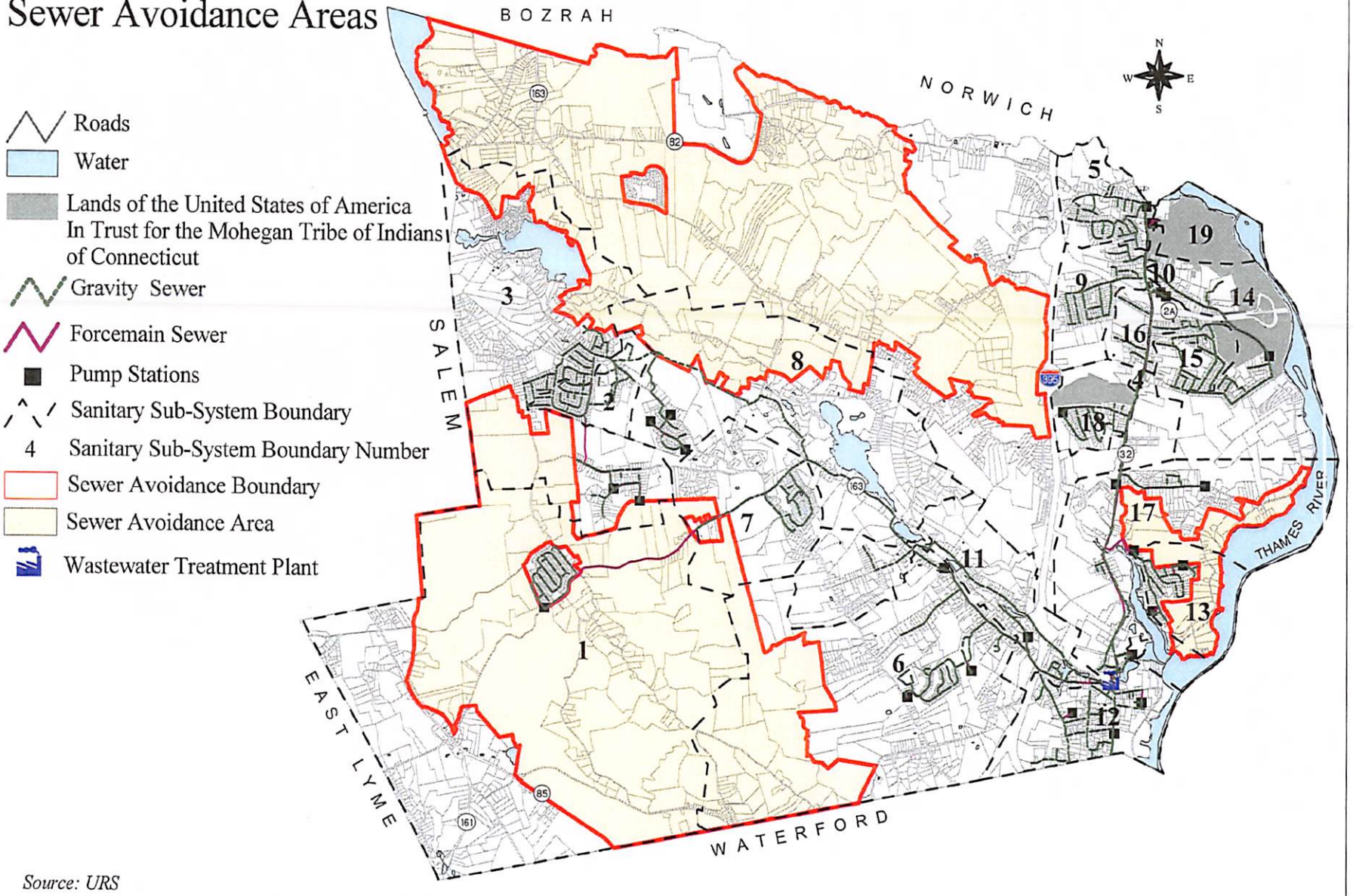


Figure 41

Sewer Avoidance Areas



Source: URS

MTV Planning Town of Montville Planning Department
Geographic Information System Data

Figure 42

Community Profile - Stormwater

Infrastructure

In addition to specific drainage projects that have a high priority due to localized flooding concerns, the inspection, maintenance, repair and improvement of the Town's Existing drainage infrastructure will be an integral part of the long term capital improvement needs of the Town.

Recently, the Town commissioned an inspection of major bridges and culverts within its road network. This study identified those structures that are in most need of repair and prioritized needed maintenance and repair on the remaining structures. The bridges inspected, in order of improving condition (poor to good) are as follows:

1. Meetinghouse Lane over Cove River, CTDOT Bridge No. 04741
2. Chesterfield Road over Bogue Brook, CTDOT Bridge No. 095012
3. Pink Row over Oxoboxo Brook, CTDOT Bridge No. 03966
4. Pequot Road over Brook, CTDOT Bridge No. 085013
5. Grassy Hill Road over Latimer Brook, CTDOT Bridge No. 04742
6. New London Turnpike over Trading Cove Brook, CTDOT Bridge No. 03967
7. Fitch Hill Road over Stony Brook, CTDOT Bridge No. 085006
8. Raymond Hill Road over Stony Brook, CTDOT Bridge No. 085009
9. Moxley Road over Brook, CTDOT Bridge No. 085014
10. Bridge Street over Oxoboxo Brook, CTDOT Bridge No. 04740

This list does not include Old Colchester Road over Oxoboxo Lake, as this project has already been funded, designed and advertised for construction and the Bridge Street Bridge over the former railroad (subject of recent deck repairs). Two bridges, namely Derry Hill Road over unnamed brook not listed above due to previously meeting the threshold for funding under the State Local Bridge program) and Meetinghouse Lane over Cove Brook (also previously having met this threshold) are currently in the early stages of design for permanent replacement.

In addition to these major structures, much of the Town of Montville's more minor drainage systems will be in need of repair and replacement in the upcoming years. Specifically, drainage systems constructed of corrugated metal piping and concrete or masonry block catch basins around the time period of thirty to forty years ago are reaching the end of their useful life. These systems are being replaced on a priority basis with more current materials including precast concrete structures and high density polyethylene piping.

Finally, when discussing maintenance and repair of roadway and drainage infrastructure it must be understood that there is a direct correlation between quality and longevity of the roads and the level to which adequate drainage is provided. Roads constructed or reconstructed with adequate sub-drainage and surface drainage will function better and last longer, especially in the northeastern climate which has relatively harsh winters and severe freeze thaw cycles. For this reason, generally when a Town repaves or reconstructs a road, the drainage systems are evaluated and necessary upgrades made prior to resurfacing.

Additional Proposed Actions

In conjunction with the EPA Stormwater Phase II requirement and in keeping with the goals of promoting development practices which will include effective yet aesthetically unobtrusive measures for control and management of stormwater runoff, the Town of Montville is currently reviewing their land use regulations with the intent of incorporating more specific requirements for the inclusion of a comprehensive stormwater management plan with development proposals. Ideally, the stormwater management aspect of a development proposal should be an integral part of that plan, not just an afterthought.

In addition, the Town is reviewing existing surface drainage patterns, current infrastructure conditions and potential development areas to identify specific points of concern with respect to future development. One such area would be on the east side of Route 32 south of the Route 2A connector. Many of the drainage systems and structures in this area are at or near capacity. Since there is potential for further development within this contributing watershed, such runoff development will need to be attentive to on-site controls and management of stormwater runoff so as to not overtax existing infrastructure.

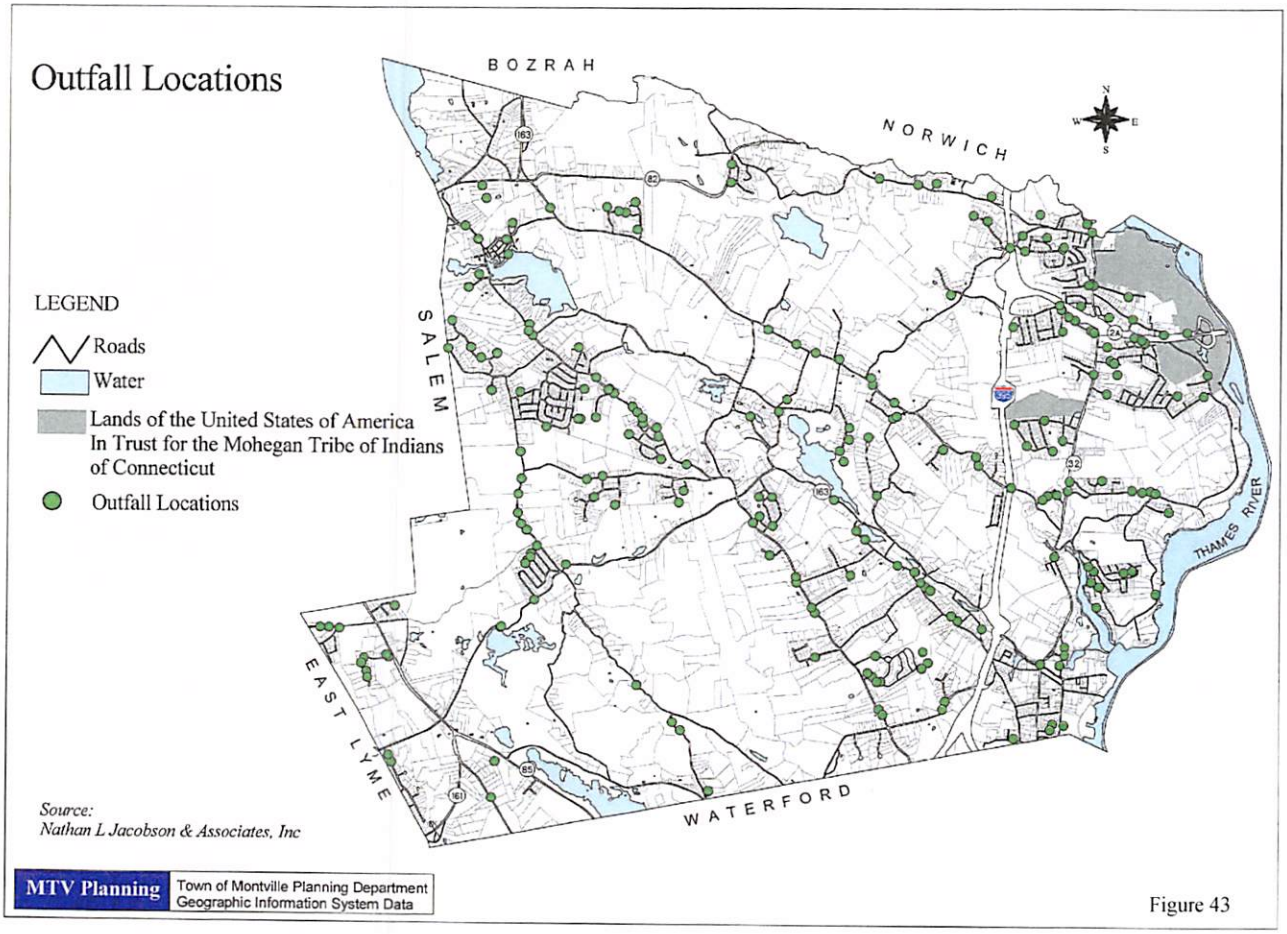


Figure 43

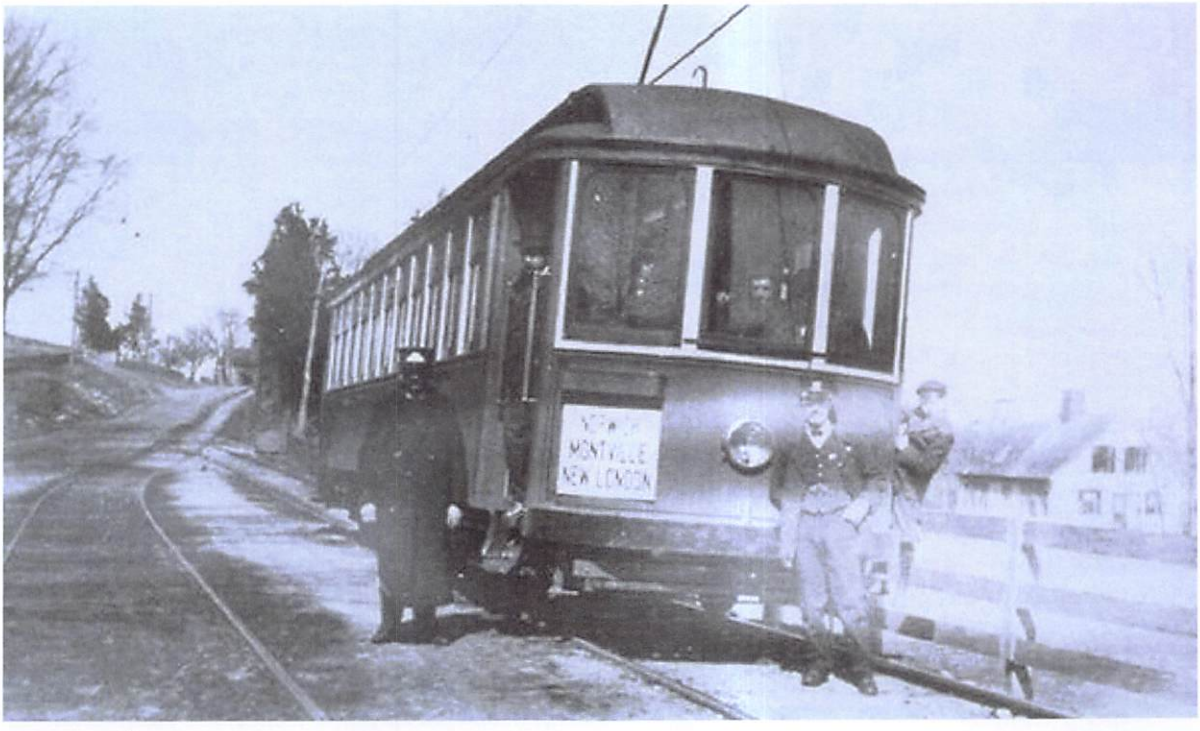
Community Profile - Transportation*

The movement of people and goods in Montville cannot really be viewed in isolation, but must be viewed in the larger context of the transportation system networks of the region, the state and perhaps even as far as Boston and New York. In a 1999 report prepared by Michael Gallis for the Connecticut Institute for the 21st Century, the author demonstrated how the inter-connections of the major rail and highway systems that originate elsewhere affect what we do in this region. There is no better example of this than Montville which is linked to the interstate highway system through I-395 and Amtrak and CSX through the New England Central line that runs through town. We might add that the Thames River is also a major transportation corridor which connects to Long Island Sound and ultimately the Atlantic Ocean. Consequently, it should be clear that Montville doesn't exist in isolation. Furthermore, many elements that determine Montville's transportation future do not exist entirely, or even largely, under Montville's control.

The following section presents both an overview and detail information about various aspects of Montville's transportation network and the modes that serve it.

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Trolley Car [10]

* Transportation section was compiled by SCCOG

[10] Archives & Special Collections at the Thomas J Dodd Research Center, University of Connecticut Libraries

Community Profile -Transportation

Traffic volume data is provided annually by the Connecticut Department of Transportation for all roadways in the state on the Federal Aid System. Roadway classifications on the Federal Aid System in urban areas include the following five classes of roadways: *1. Interstates; 2. Other expressways; 3. Principal arterials; 4. Minor arterials; 5. Major collectors.* For areas considered to be rural, the road classifications are identical to the above for urban areas with minor collector roadways added to the mix.

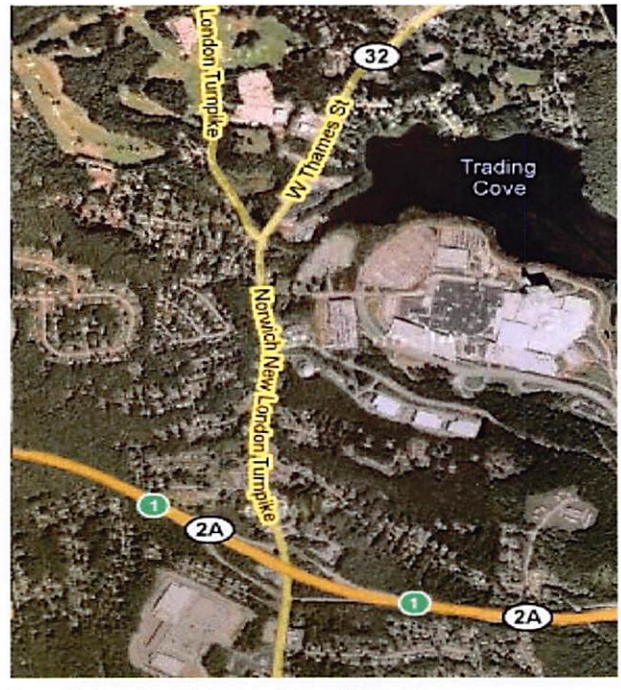
Typically, under this scenario, traffic volume data is not provided for local roads. Local roads tend to carry a lower volume of daily, or annual traffic, but collectively they represent the roadways with the greatest number of linear miles of pavement.

Montville has seven (7) roadways that fall into one of the urban and rural function classifications in the Federal Aid System. Traffic volume data for each of these roadways was assembled for the years 1992, 1996, 2007, and 2008, the most recent year for which data is available. The early years were chosen because 1992 was the year that Foxwoods Resort Casino opened, whereas 1996 was the year that the Mohegan Sun Casino opened. Each facility has had a measurable impact on traffic volumes in Montville although in different ways.

Table 14 and Figure 44 depict changes in traffic volumes over this time period on selected roadway segments. Clearly, Montville has experienced some significant increases in traffic volume on some roadway segments. Some of this traffic growth was anticipated as part of the casino development. However, while growth in expressway traffic has been significant, there are other roadways in Montville also experiencing pressure.

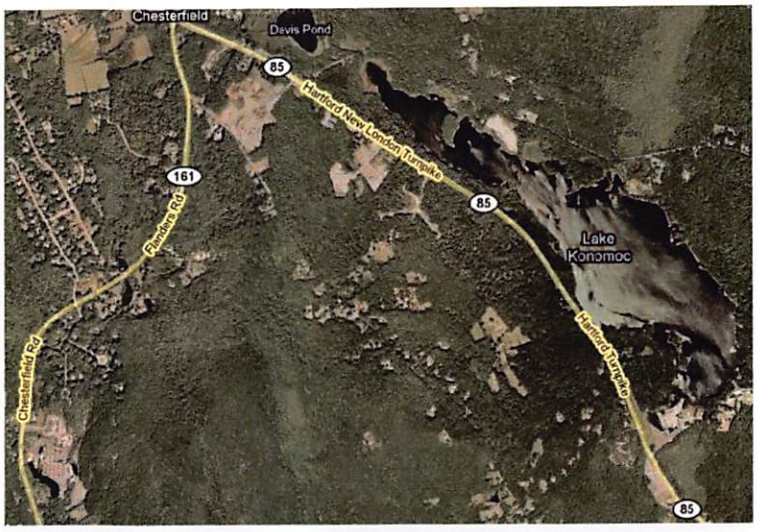
Route 32

The northern end of the Route 32 segment, from 2A to the Norwich town line, has experienced significantly greater traffic growth than the southern end during the sixteen year study time period. This is undoubtedly related to both the location of the casino and to a lesser extent, to the commercial development that has occurred in the past decade to capture some of the casino patronage. However, the largest traffic volume growth has occurred north of 2A where the percent change in the two segments examined is 83% and 91% respectively. The one year increase in traffic volumes on all segments on Route 32 in Montville is unusual given what is happening in other parts of the region. Likewise, since the largest concentration of commercial development is south of 2A, Montville should anticipate additional traffic growth on Route 32 in the next several years as a result of the commercial development south of 2A.



Route 32 from Route 2A to the Norwich Town Line
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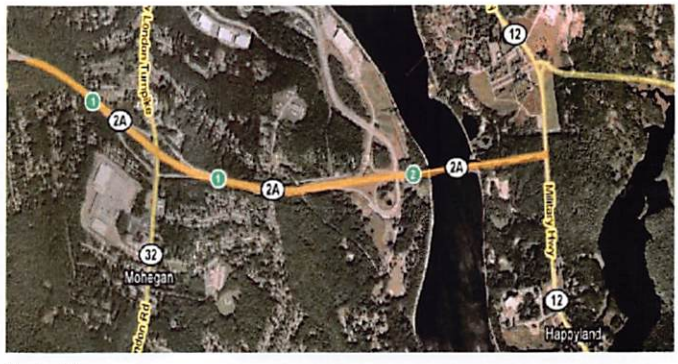
Route 85



Route 85 from Route 161 to the Waterford Town Line
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The southern section of this roadway, from Route 161 to the Waterford town line, has seen average traffic growth in the past 16 years of 1% per year whereas the upper section from Salem Turnpike to the Salem town line has seen even less growth. With the prospects slowly dimming that Route 11 will be completed in the next decade, there is no reason to expect any sort of reduction of traffic in this section of Montville. To the contrary, it is entirely reasonable to expect similar slow but steady pattern of growth in traffic on Route 85 with summertime peaks that will create gridlock conditions for short periods. Concerns along Route 85 are concentrated in the Chesterfield section of Montville where abutting land uses and turning movements create potentially unsafe conditions. Spot safety improvements should be a high priority along Route 85.

Route 2A



Route 2A
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Not surprisingly, there is a direct correlation between increases in traffic volumes on Route 2A and the opening of the Mohegan Sun Casino in 1996. Likewise, annual growth in these traffic volumes seem to correlate to expansions in the facility whereas reductions in traffic volumes can be linked to contractions in the economy. As an example, traffic volume reductions from 2007 to 2008 seem to correlate well to the unusual spike in gasoline prices. Shifts in traffic volumes, where they can be confidently and proximally be linked to casino activity, appear to debunk the notion that casinos are recession-proof. In fact, viewed from the perspective of changes in traffic volumes, one would conclude that traffic volumes related to casino activity is highly elastic and fairly predictable.

Volumes on Route 2A all seem to revolve around Mohegan Sun Boulevard with significantly higher volumes to the west in relation to the interstate. The percentage of traffic volume growth east of Mohegan Sun Boulevard, toward Preston, is less than half the growth to the west. From a long range planning perspective, future traffic volume growth to the east is largely a matter of the future disposition of the Norwich Hospital property and totally outside of the control of the Town of Montville. That said, there are no questions that Route 2A between I-395 and Route 12, is perhaps the weak link in the hierarchy of truly important highways in southeastern Connecticut. Reconstruction of the Mohegan-Pequot Bridge emerged a top regional priority subsequent to the opening of Foxwoods Casino.

Route 82



Route 82
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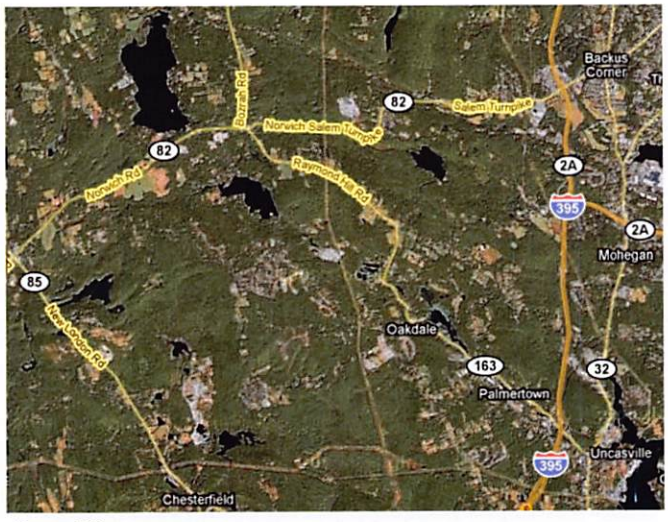
The Route 82 corridor provides secondary access to Norwich and I-395 at Exit 80. Traffic volumes on Route 82 remain moderately low suggesting the diminished importance of this arterial corridor relative to other arterial roads in Montville. While opportunities exist for commercial development along the Route 82 corridor, development remains suburban and rural in character and this is reflected in the slow traffic volume growth in the study period. One could also speculate that this slow growth is undoubtedly also a function of the lack of public water and sewer service.

The area in the vicinity of the Route 163 intersection with Route 82 has seen some moderate growth in traffic which can be attributed to some commercial development in that vicinity. However, the volumes show a one-year decline of 12% between 2007 and 2008 which is moderating what otherwise would be a more robust growth in traffic between 1992 and 2008. In the easterly roadway segment between Cherry Lane and the Bozrah town line, the stable residential nature of the abutting land use is reflected in the traffic volumes.

Route 163

Route 163 functions as one of Montville's more important historic corridors despite moderate traffic volumes and relatively low traffic growth. Traffic volumes in the northern portion of Route 163 are basically rural in character especially above Oxoboxo Dam Road. In fact, this sector has witnessed a proportionally sizeable reduction in traffic volumes in the past sixteen years.

At the same time, traffic volumes in the southern section of Route 163, from Rand Whitney south to its intersection with Route 32, is moderate with moderate growth.



Route 163
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The functional classification of Route 163 is as a collector and this classification is reflected in the moderate traffic volumes, especially given the abutting land use which is predominantly residential. The exception to this is the industrial area surrounding Rand Whitney.

I-395



I-395
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Overall, traffic volumes on I-395 have increased by 62% in the past 16 years. Regional and statewide data suggest that this increase is not merely limited to the Montville section of I-395. Traffic volume increases have been realized all along the corridor. This stepped pattern of utilization of the I-395 corridor can be clearly linked to the opening of the Mohegan Sun Casino in 1996.

Of the 4 roadway segments for which data was collected for this exercise, the southern-most section, in the vicinity of Route 693, has seen the greatest percentage increase of traffic (123%) between 1992 and 2008. Route 693 is the freeway spur that connects Route 32 to I-395 in Quaker Hill. However, the absolute volume of traffic was relatively small in 1992 which explains the large percentage increase. With this exception, it is the more northerly sections that warrant the greatest cause for attention, especially the section from 2A to the Norwich town line. This section of I-395 is beginning to carry traffic volumes equal to or greater than a number of observed segments of I-95. It should be noted that the recent addition of the third (acceleration) northbound lane from 2A to the Norwich town line addresses many of these concerns.

Route 161



Route 161
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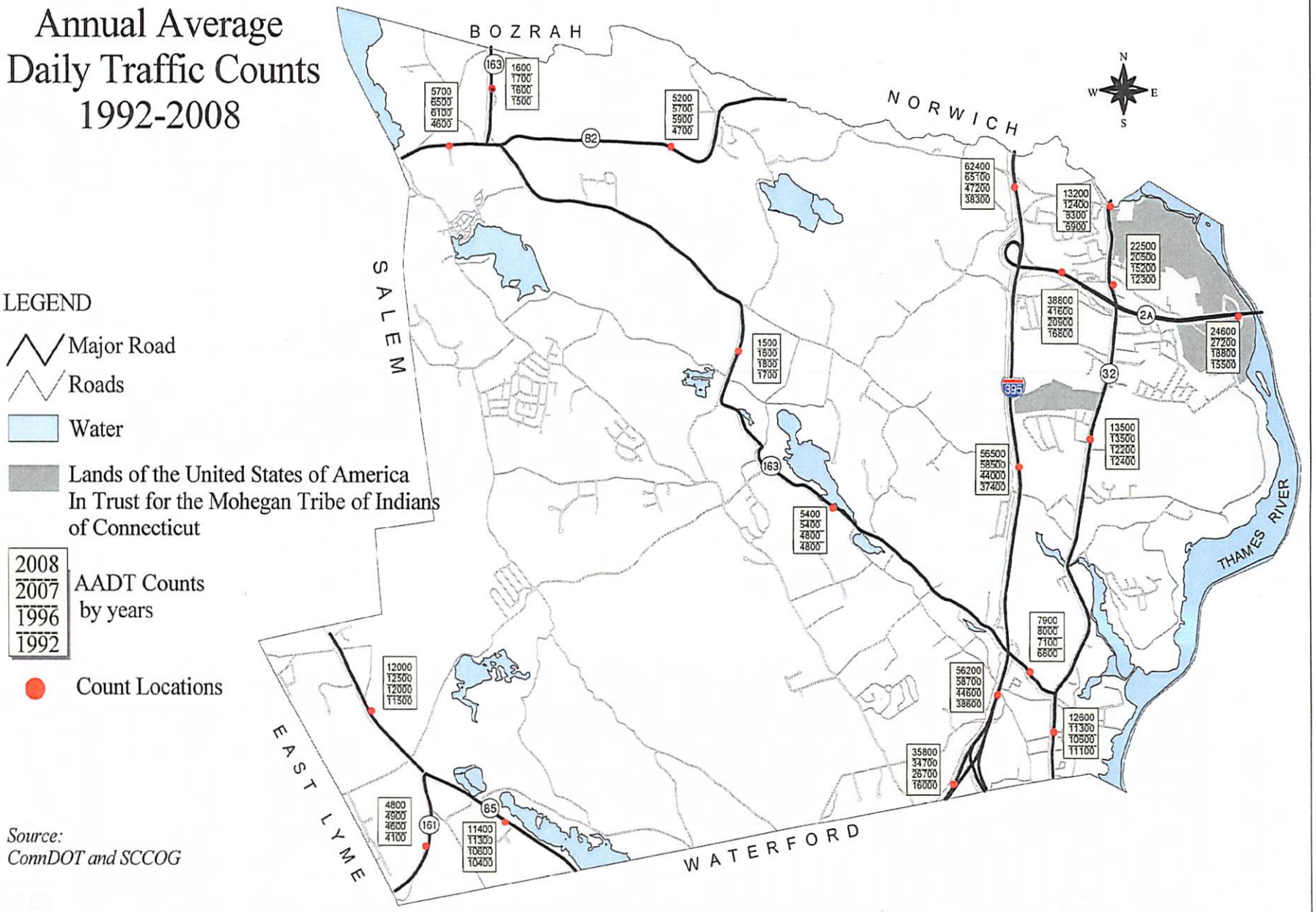
Route 161 functions as a collector road although it could be argued that it also functions as an arterial due to the linkage with East Lyme and Niantic. In any event, traffic volumes are relatively small along this one-mile roadway and have demonstrated only moderate growth (about 1% per year) over the past 16 years. If there is any cause for concern for this roadway segment, it is the intersection of Route 161 with Route 85 in the Village of Chesterfield, especially during the peak summer weekends when traffic volumes are at their highest.

Community Profile -Transportation

Table 14

Town of Montville Change in AADT on Selected Roadway Segments, 1992-2008					
	1992	1996	2007	2008	Percent Change 1992-2008
Route 32					
220 Route 32 to Route 163	11,100	10,600	11,300	12,600	14%
Route 163 to 757 Route 32	12,400	12,200	13,500	13,500	9%
Route 2A to Fort Shantok	12,300	15,200	20,500	22,500	83%
Fitch Hill Rd. to Norwich Town Line	6,900	8,300	12,400	13,200	91%
Route 85					
Waterford Town Line to Route 161	10,400	10,600	11,300	11,400	10%
Salem Tpke. to Salem Town Line	11,500	12,000	12,500	12,000	4%
Route 2A					
I-395 to Route 32	16,800	20,900	41,600	38,800	131 %
Mohegan Sun Blvd to Preston Town Line	15,500	18,800	27,200	24,600	59 %
Route 82					
Old Colchester Rd Ext. to Route 163	4,600	6,100	6,500	5,700	24%
Cherry Lane to Bozrah Town Line	4,700	5,900	5,700	5,200	11%
Route 163					
Route 32 to I-395	6,800	7,100	8,000	7,900	16 %
Rand Whitney to Chesterfield Rd	4,800	4,800	5,400	5,400	13%
Oxoboxo Dam Rd to Raymond Hill Rd	1,700	1,800	1,600	1,500	-12%
Route 82 to Bozrah Town Line	1,500	1,600	1,700	1,600	6%
I-395					
Waterford Town Line to Route 693	16,000	26,700	37,400	35,800	123 %
Route 693 to Route 163	38,600	44,600	58,700	56,200	46 %
Route 163 to Route 2A	37,400	44,000	58,500	56,500	51%
Route 2A to Norwich Town Line	38,300	47,500	65,100	62,400	63%
Route 161					
East Lyme Town Line to Route 85	4,100	4,600	4,900	4,800	17%

Annual Average Daily Traffic Counts 1992-2008



MTV Planning | Town of Montville Planning Department Geographic Information System Data

Figure 44

Community Profile -Transportation

Functional Class

Functional classification provides a convenient way to identify and categorize different types of roadways according to the purpose that they serve in the highway network. The functional classification and the physical profile of some roadways have evolved over time, as a matter of how the roadway is used and how it has developed relative to abutting development and population growth. At the other extreme, the interstate highways were designed and built to meet an exacting standard. These roads were engineered from the beginning to meet a high standard and there is relatively little variation in roadway segments in the interstate network. With the advent of umbrella federal legislation for highways, functional classification has taken on new significance. This is due to targeted funding categories for roadways in certain classes. One result of this has been a local effort to have roads upgraded so that they become eligible for federal funding assistance under these new programs. Anticipating this effort, Congress set rigid national thresholds that virtually freeze functional classification designations. However, subsequent to each census, where it can be demonstrated that urban level development has expanded, opportunities exist for upgrading highway functional classifications of affected roads.

Functional Classes

Arterial

Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control.

Collector

Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.

Local

Consists of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement.

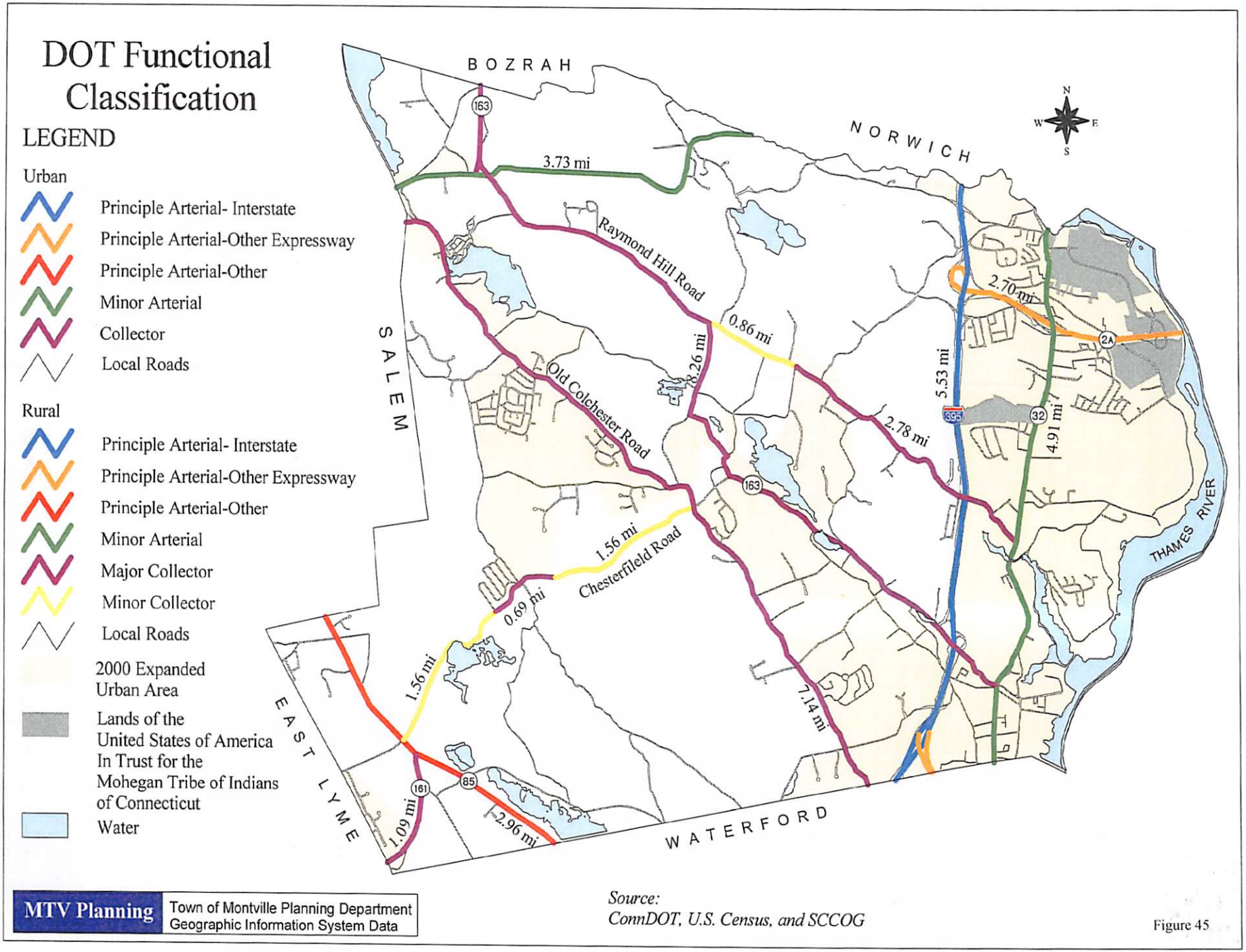
Source: Federal Highway Administration

Montville has approximately 39.05 miles of roadway with a functional classification of rural minor collector or greater. It is these 39.05 miles of roadway that are eligible for Federal Aid. Montville also has 113.47 miles of roadways classified as local which are not eligible for Federal Aid. The ratio of local/non Federal Aid roads to Federal Aid roads is approximately 3:1. Local communities must also participate financially in improvements to some Federal Aid roads. The only exception to this is for improvements to the interstate highways. For all other collector and arterial roads, local financial participation is 10% of the cost of the project. However, with no Federal financial assistance for local roads, the picture that emerges for Montville is that with a 3:1 ratio of local roads, with the exception of the I-395 corridor, Montville has a relatively heavy financial burden simply to maintain the 113.47 miles of local roads. In general, because the funding requirements for maintaining and improving local roads falls entirely on municipalities, this class of road tends to be less well maintained, whereas roads of a higher functional class that fall under the Federal Aid System tend to be better maintained.

Montville has the following length of roads categorized by functional class. This is depicted in Figure 45.

- Principle Arterial — Interstate: 5.53 mi. (I-395)
- Principle Arterial — Other Expressway: 2.7 mi. (2A)
- Principle Arterial — Other: 2.96 mi. (Route 85)
- Minor Arterial: 8.14 mi. Total (3.73 mi. Route 82; 4.91 mi. Route 32)
- Major Collector: 19.22 mi. Total (8.26 mi. Route 163; 2.04 mi. Raymond Hill Rd; 7.14 mi. Old Colchester Rd; .69 mi. segment of Chesterfield Rd; 1.09 mi. Route 161)

DOT Functional Classification



MTV Planning | Town of Montville Planning Department Geographic Information System Data

Source:
ConnDOT, U.S. Census, and SCCOG

Figure 45

Safety

Safety is perhaps the single most important concern relative to highway network. The first level of analysis is identifying where accidents occur and what, if any, patterns are discernible.

To a large degree, the process of analysis of accident locations has been constrained in recent years by an Attorney General ruling which determined that the State did not have to reveal detailed information about accident locations. This ruling stands as a legal defense to protect the State against spurious lawsuits predicated on the notion that if the State was aware of an unsafe highway condition and did not act in a timely fashion to correct it, that there was implied, if not actual, liability.

Separate and apart from unsafe highway conditions is the matter of driver error. If 1,000 cars per day safely and without incident pass through a particular roadway segment and the next 3 cars have an accident, where does the fault lie? Was the driver operating the vehicle inappropriately for the conditions as is most often the case, or is there an unsafe physical condition in the highway? This discussion helps reveal the complexity of the subject of traffic accidents.

There are three easily identifiable conditions that commonly contribute to accidents.

- High Traffic volumes
- High speeds
- Turning movements

As an example, interstate highways are modern facilities that were designed to be safe even at higher speeds. All of the above accident factors were taken into consideration in design. Yet there continue to be accidents on interstate facilities as traffic volumes increase and drivers attempt to hold speeds constant. As a safety matter, is the correct approach to expand the roadway capacity or reduce speed limits in those sections where traffic volumes and accidents are increasing? These are difficult challenging questions.

Accident Categories

Areas of Concern:

Large portions of highway segments where accidents are relatively frequent but are widely distributed and do not occur in specific locations or in large enough numbers to warrant them being designed as high frequency.

High Frequency Accident Locations:

Defined by Conn DOT as locations with 15 or more accidents in a 3-year period and where the ratio of the predicted number of accidents and the actual number of accidents exceeds 1.0.

With respect to the above discussion, Montville's roadway network exhibits some fairly predictable accident patterns. Much of Montville's road network has combinations of the three pre-conditions cited above for a higher rate of accidents. Figure 46 depicts the pattern of traffic accidents on Montville's road network for the three years between 2004 and 2006. Figure 46 aggregates accidents into two categories:

- Areas of Concern
- High Frequency Accident Locations (HFAL's)

This analysis identified 3 roadway segments in Montville that were Areas of Concern and 6 High Frequency Accident Locations.

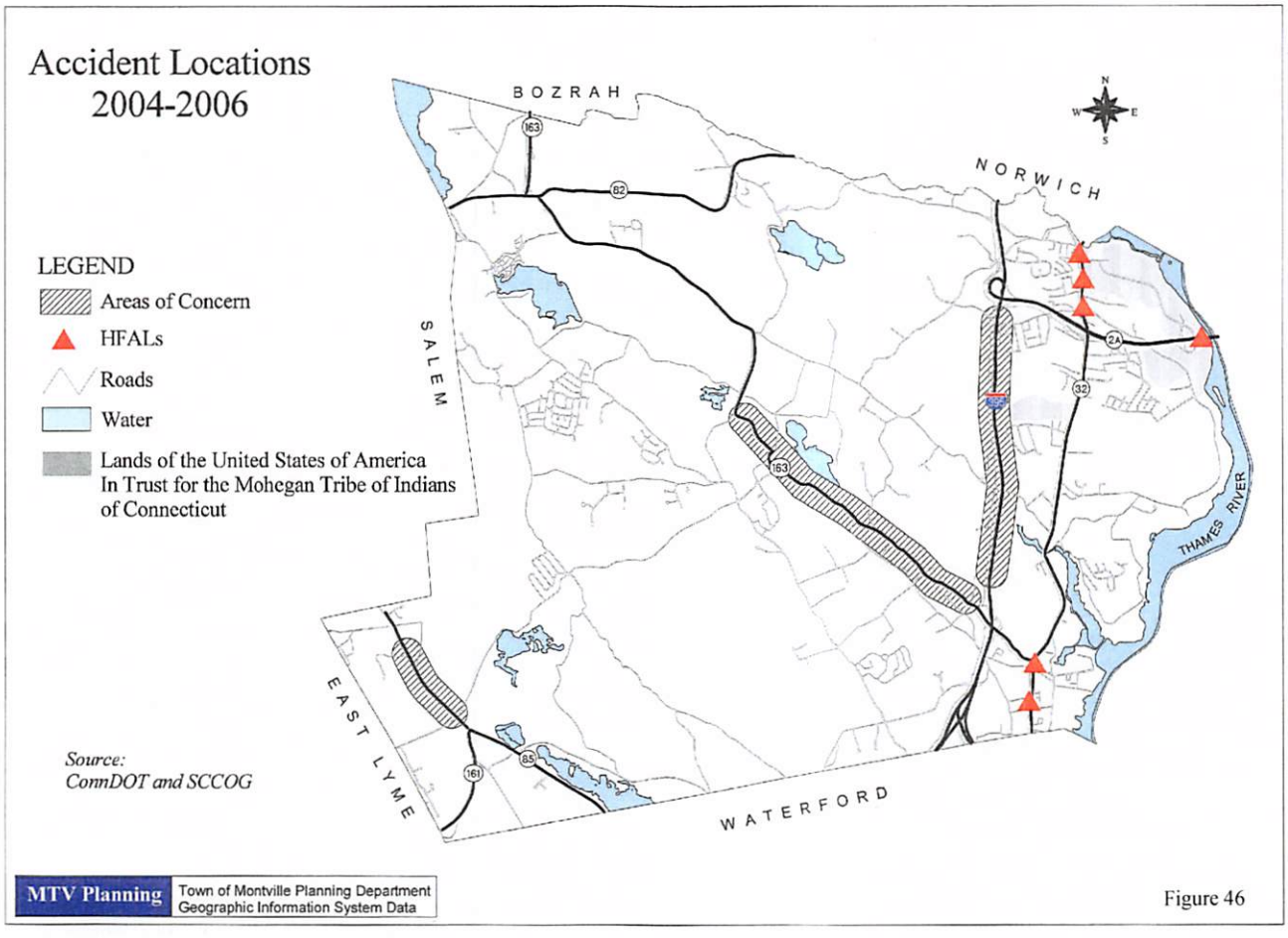


Figure 46

Areas of Concern

Route 85: The 1-mile section of Chesterfield, north of the intersection of Route 161.
This section of road has two of the three accident ingredients; high seasonal traffic volumes and turning movements. The posted speed limit is 45mph but it is clear that there are numerous "fender benders" on this highway section due to the constrained roadway width and intersecting driveways.

Route 163: The 3-mile section north of Exit 79 of I-395.
This section has horizontal and vertical alignment issues as a matter of topography. Access management issues, prevalent in other sections of town, are not prevalent in this section of Route 163. For the most part, the accidents in this section appear to be related to inadequate sight lines and operating the vehicle at excessive speeds for the conditions.

I-395: The I-395 section between Exits 79 and 79A.

This section has seen a significant increase in traffic in the past decade. At some point, consideration may have to be given to expanding the capacity of I-395 in the Montville section from 2 lanes to 3 lanes although, at the present time, there is still excess capacity on I-395. Expectations would suggest a prevalence of accidents where there are turning movements, such as at Exit 79A, yet at the exit there are fewer accidents than on the Interstate. This pattern should be studied further in successive years to determine causes such as, for instance, unclear signage which could cause driver confusion.

High Frequency Accident Locations

As noted at the beginning of this section, HFAL's are a way of identifying specific locations which may need attention in the form of reconstruction, signage, or some other treatment to correct a highway condition that may be contributing to a higher than expected number of accidents. Five HFAL's were identified on Route 32 and one on Route 2A. One of the HFAL's is located at Maple Avenue and one immediately to the south, generally in the vicinity of Town Hall. This area of Route 32 was the subject of a major access management project about a decade ago and very little change has occurred since then. The accidents in this section of Route 32, as well as those above Route 2A to the Norwich town line, are clearly related to turning movements.

Two things should be noted about the data and the patterns that they are depicting for this time period.

1. Improvements to Route 32 have been made since this data was published, especially in the vicinity of Trading Cove, so that in successive years the frequency of accidents may have been reduced and the area depicted as HFAL's in Figure 45 no longer exist.
2. The addition of Montville Commons, south of Route 2A, has resulted in both additional turning movements but also the addition of turning and through-lanes on Route 32. This area has been recently constructed to modern standards with signing, lighting and traffic controls. How these changes in the roadway section have affected the accident pattern will need to await new data.

Route 2A - Mohegan Sun Boulevard: Simply as a matter of traffic volume, it is not surprising that Mohegan Sun Boulevard emerges as a HFAL except to note that this intersection has been recently constructed to modern standards with all of the best signing, lighting, traffic control, landscaping, sight lines and alignment. To this point, it is difficult to offer what additional improvements could, or should, be made.



Route 32 Traffic Lane Improvements

Transit

Montville is one of the founding members of Southeast Area Transit (SEAT), the regional transit district that was formed in 1975-1976. Since that time, Montville has benefited from a variety of different services provided by SEAT.

Funding for public transit has not changed considerably since Montville first joined SEAT and remains the most difficult issue that towns such as Montville face in their quest to provide higher levels of transit service for their constituents. SEAT is a regional organization so that funding for multi-town types of services are shared by the constituent towns that benefit from those services. However, since fare box revenue has not covered the cost of providing transit service since WWII, sharing the cost of the deficits of the service becomes the responsibility of the State and those municipalities which choose to offer transit.

At the present time, Montville has regular route transit service on Route 32 which connects Norwich to New London. This one-bus service operates only on a 2-hour schedule as shown below.

Table 15

Run #1: Norwich/ New London– Route 32								
Route 12, Viaduct, Water St., W. Main, Route 32, Uncas-on-Thames, Route 32, Sandy Desert Rd., Mohegan Sun (Employee & Winter Entrances), Sandy Desert Rd., Route 32, Montville Commons, Route 32, Old Norwich Rd., Williams St. State Pier, Crystal Ave, E. O'Neil, Atlantic St., Water St., Gov. Winthrop Blvd, Huntington, Williams, Old Norwich Rd., Route 32, Montville Commons, Route 32, Sandy Desert Rd., Mohegan Sun (Employee & Winter Entrances), Sandy Desert Rd., Route 32, Uncas-on-Thames, Route 32, W. Main, Chelsea Harbor, Water St., Route 12, Viaduct.								
New London/ Water St.	-	7:00 am	9:00 am	11:00 am	1:00 pm	3:00 pm	5:00 pm	7:00 pm
Route32/ Route 163	-	7:20 am	9:20 am	11:20 am	1:20 pm	3:20 pm	5:20 pm	-
Montville Commons	-	7:28 am	9:28 am	11:28 am	1:28 pm	3:28 pm	5:28 pm	-
Mohegan Sun Casino	-	7:35 am	9:35 am	11:35 am	1:35 pm	3:35 pm	5:35 pm	-
Uncas-on-Thames	-	7:45 am	9:45 am	11:45 am	1:45 pm	3:45 pm	5:45 pm	-
Norwich/Trans Cntr.	6:00 am	8:00 am	10:00 am	12:00 pm	2:00 pm	4:00 pm	6:00 pm	-
Uncas-on-Thames	6:10 am	8:10 am	10:10 am	12:10 pm	2:10 pm	4:10 pm	6:10 pm	-
Mohegan Sun Casino	6:20 am	8:20 am	10:20 am	12:20 pm	2:20 pm	4:20 pm	6:20 pm	-
Montville Commons	6:27 am	8:27 am	10:27 am	12:27 pm	2:27 pm	4:27 pm	6:27 pm	-
Route32/ Route 163	6:35 am	8:35 am	10:35 am	12:35 pm	2:35 pm	4:35 pm	6:35 pm	-
Hodges Square	6:45 am	8:45 am	10:45 am	12:45 pm	2:45 pm	4:45 pm	6:45 pm	-

Community Profile -Transportation

Because Montville is located roughly in the middle of the corridor, it could be argued that transit users in Montville have more schedule options since the bus passes through Montville each hour, albeit moving in opposite directions.

Montville also benefits from a second SEAT bus route, Run #7. This is a relatively new route added to the SEAT schedule in the past several years. It represents an extension of a Norwich "local" route that originates in downtown Norwich. The first half of the route extends bus service to the east side of Norwich on Route 165 to the Preston town line. The second half of the route is a loop that operates easterly on Route 82 to New London Turnpike, southerly to Trading Cove where it enters the Mohegan Sun parking lot and employees along with patrons may disembark. It returns to Norwich via Route 32 north. The schedule for Run # 7 is shown below and the night-time schedule continues on the following page.

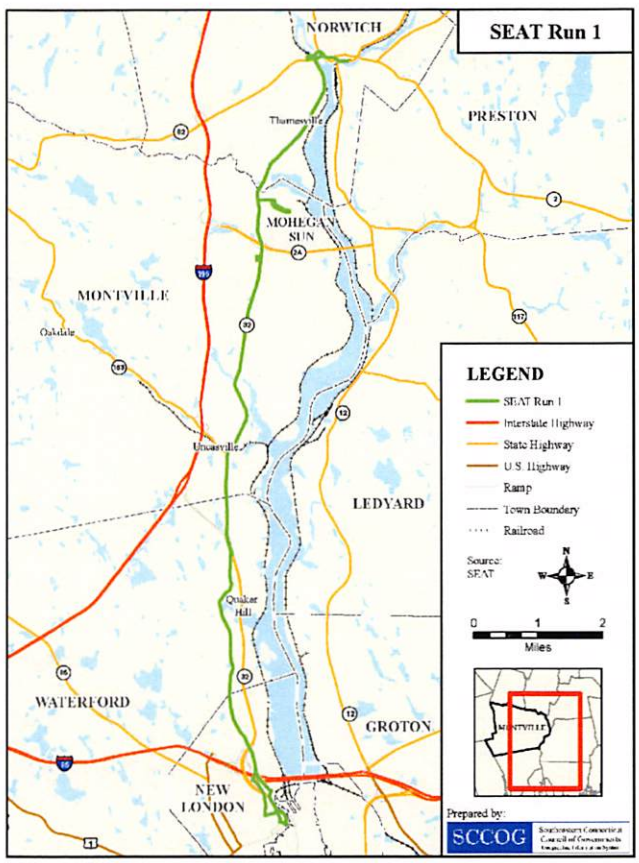


Figure 47

Table 16

Run #7 Daytime: Hamilton Ave. / Mohegan Sun / West Main / N.L. Tpke											
Viaduct, East Main St., Hamilton Ave, Quatro Rd., Smith St., Pukallus, Hamilton Ave., East Main, Viaduct, Market St., Route 32 (West Thames), Sandy Desert Rd., Route 32, Norwich-New London Tpke., West Main, Viaduct											
Norwich Trans Cntr.	6:00am	7:00am	8:00am	9:00 am	10:00am	11:00am	12:00pm	1:00pm	2:00pm	3:00pm	4:00pm
Quatro Rd	6:05am	7:05am	8:05am	9:05am	10:05am	11:05am	12:05pm	1:05pm	2:05pm	3:05pm	4:05pm
Ahepa Housing	6:07am	7:07am	8:07am	9:07am	10:07am	11:07am	12:07pm	1:07pm	2:07pm	3:07pm	4:07pm
W.	6:25am	7:25am	8:25am	9:25am	10:25am	11:25am	12:25pm	1:25pm	2:25pm	3:25pm	4:25pm
Mohegan Sun	6:30am	7:30am	8:30am	9:30am	10:30am	11:30am	12:30pm	1:30pm	2:30pm	3:30pm	4:30pm
N.L. Tpke/ W. Main	6:40am	7:40am	8:40am	9:40am	10:40am	11:40am	12:40pm	1:40pm	2:40pm	3:40pm	4:40pm

Table 17

Run #7 Nighttime: Hamilton Ave. / Mohegan Sun / West Main / West Thames						
Viaduct, East Main St., Hamilton Ave, Quatro Rd., Smith St., Eight St., Central Ave., N. Main, Market St., Westside Blvd, Route 32, Sandy Desert Rd., Mohegan Sun (Employee & Winter entrances), Sandy Desert Rd, Route 32, Norwich-New London Tpke., West Main, Chelsea Harbor						
Norwich Trans Cntr.	7:00pm	8:00pm	9:00pm	10:00pm	11:00pm	11:55pm
Quatro Rd	7:05pm	8:05 m	9:05pm	10:05 m	11:05pm	
Central Ave	7:10pm	8:10pm	9:10pm	10:10pm	11:10pm	
W. Thames/Dunham	7:25pm	8:25pm	9:25pm	10:25pm	11:25pm	
Mohegan Sun	7:30pm	8:30pm	9:30pm	10:30pm	11:30pm	
N.L. Tpke	7:35pm	8:35pm	9:35pm	10:35pm	11:35pm	
W. Main St. /Westgate	7:40pm	8:40pm	9:40pm	10:40pm	11:40pm	
Franklin Square	7:50pm	8:50pm	9:50pm	10:50pm	11:50pm	



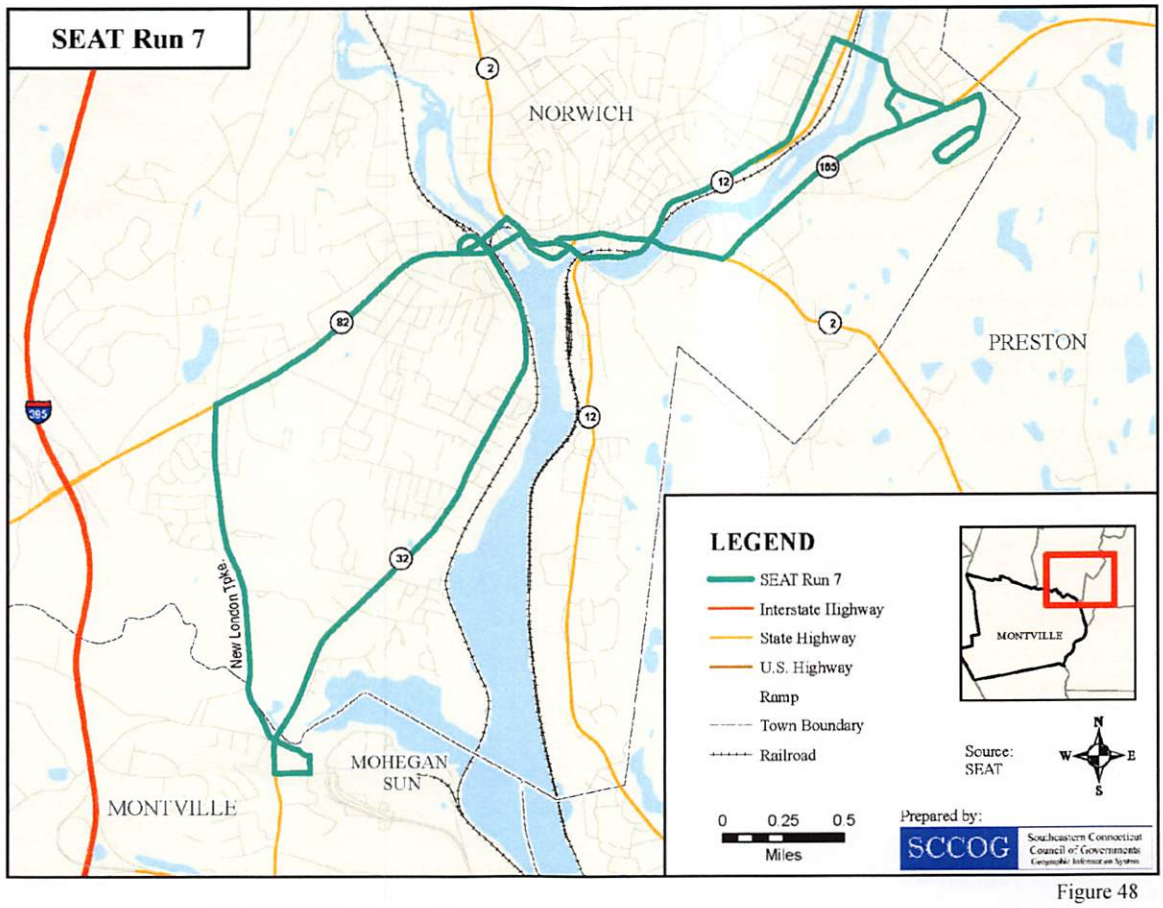


Figure 48

American Disabilities Act (ADA) service provided by the Eastern Connecticut Transportation Consortium approximates cab service and represents a much higher level of service to a special group of individuals than is offered to the general transit-using population. Likewise, fares for this service are highly subsidized relative to the cost of providing the service. Any attempt to expand ADA service, either to include more geographical area in Montville or an expanded customer base would be extremely expensive and borne entirely by Montville.

The issue for Montville, as it is for most transit district member municipalities, is that Montville's transit fate does not rest entirely in its own hands. The deficit cost of the Route 32 corridor route is shared proportionately by each of the four communities on the Route 32 corridor (Norwich, Montville, Waterford, and New London) and any change in service would need to have the approval of all the municipal participants as well as ConnDOT and the general public. Toward this question, adding a second bus on the Route 32 corridor is a top priority for SEAT as it has been for many years and securing a source of funding remains a stumbling block.

Other Efficiencies



Bus shelter in front of the Old Town Hall on Route 32

When SEAT first began operating regional service in April, 1980, it did so as a flag-down system in lieu of having designated bus stops. It did so as a matter of convenience and to optimize the opportunity for anyone along a route to use the bus. However, as the system matured, on-time performance began to suffer because a bus driver might have to stop for passengers standing 50 feet apart if they were flagged down. SEAT still operates as a flag-down system but efforts are underway to convert it to a system with designated stops. During 2009, as part of the economic stimulus effort, SCCOG conducted a study to analyze the number of signs the SEAT bus system would need to acquire to achieve such a conversion. For the Route 32 corridor, it was determined that over the distance of 4.91 miles, approximately 17-18 designated stops would be necessary if the distance between stops was 1500'. Clearly destinations such as the Mohegan Sun and Montville Commons would have their own stops and shelters. As other destinations in Montville emerged, they too would be given special consideration.

Montville's annual contribution to SEAT for 2009-2010 is $13,743.00. While it is not possible to know the exact number of people who board and disembark in Montville, the Route 32 bus route carried approximately 98,192 passengers in FY 2009. Of the four inter-town routes operated by SEAT, the Route 32 corridor route is by far the most utilized.

Other Transit

Montville operates its own special form of municipal transit for senior citizens which is completely separate and independent from regional transit. This service has been operating since the early 1970's and provides senior citizens with an exclusive form of demand-response transit (as opposed to fixed-route, fixed - schedule transit) that the municipality financially supports. Montville has one 12-passenger mini bus and a 28-passenger full sized bus. In addition, it operates two smaller med-ride vans, one for local appointments and one for out-of-town appointments which it coordinates with the City of Norwich. All of the above vehicles are lift equipped. These services operate 5 days per week.

Montville residents who are unemployed and seek job training are also eligible for transit assistance under the Jobs Access Reverse Commute Program (JARC). This program provides a whole array of types of transportation assistance to those actively seeking employment.



One of the Town of Montville Senior Buses

The future of public transit does not rest entirely in the hands of Montville, but Montville can certainly influence its transit destiny if it is willing to pay for the deficit for any new service. In so far as the Route 32 bus route is concerned, we have already shown that the addition of a second bus will reduce the headway (the time between buses) by half. However, additional service will require the concurrence of Norwich, Waterford, and New London who will have to agree to share in the additional cost. Feeder service, in and around Montville, is the logical next step in the development of a more sophisticated form of public transit for a suburban community such as Montville with lower population densities outside of Uncasville. With the expansion of commercial development along the Route 32 corridor and the addition of many new employment opportunities for Montville residents, Montville is quickly emerging as southeastern Connecticut's new transit destination. A feeder service in and around Montville would be a wise investment at many different levels. It would act to relieve some amount of congestion from single occupant trips. By making such a service available to all residents, it would relieve pressure on the senior transportation program and provide more travel opportunities for seniors. Likewise, it would increase employment opportunities for those without a second car.

Sidewalks

Until recently, Montville saw its greatest residential population and development explosion in the 1960's during a period when gasoline prices were well under $.50 per gallon and virtually all local personal travel was done by automobile. Subdivision regulations rarely, if ever, required sidewalks. In fact, during this period, the prevailing ethic through the southeast region combined sewer avoidance with sidewalk avoidance. Homeowners did not want to pay the taxes required for either. In the case of sidewalks, they simply did not want to be responsible for maintenance or the liability. Today, much of Montville continues to operate under the dual restrictions of sewer and sidewalk avoidance. The exception to this is the Uncasville/Route 32 corridor which is increasingly growing more urban in character. The development of Montville Commons enabled the installation of sidewalks in this vicinity. Following this, as part of the State Traffic Commission application for the 2007 expansion of the Mohegan Sun, Montville set as a condition that sidewalks be installed from the Norwich Town Line to Fort Shantok Road.

The advent of the Mohegan Sun Casino has contributed significantly to changing the character of the community. Montville has capitalized on this opportunity by promoting the awareness of the need for sidewalks so that an increasing amount of the resident population that chooses to walk to work can do so safely.

At present, Montville has no regulations that require sidewalks in a residential setting. As gasoline prices continue to climb, Montville residents will undoubtedly recognize and embrace the value of sidewalks as a lifestyle enhancement and act accordingly to establish the regulatory framework for their development. It is recommended that sidewalks be included, where population density warrants, in the next update of the subdivision regulations.

At a minimum, the regulations need to address the following:

Residential Development:

- Proximity to schools and parks
- Proximity to retail development
- Proximity to transit
- Density of Development

When densities reach 3-4 units per acre, sidewalks should be considered. Short of this, Montville might consider a site plan requirement that reserves 4 feet of space abutting the paved roadway as a "path" that people can use if they choose but the property owner bears no cost for construction or maintenance. Such a reserve is a view toward the future.

Figure 49 depicts areas to be considered for future sidewalk construction. This figure focuses on school location as one of the key generators for sidewalk construction. Montville has 8 schools including St. Bernards and St. Thomas More. The second key generator is a commercial activity center. There are 3 commercial activity centers in Montville, all located on Route 32.

What is clear from this illustration is that the majority of schools and the majority of commercial centers lack sidewalks. In the western section of town, this conclusion should be viewed as an opportunity to reduce municipal costs for busing through the provision of sidewalks, especially where the schools are in relatively close proximity to residential developments. The addition of sidewalks in these areas should become part of a municipal capital improvement program.

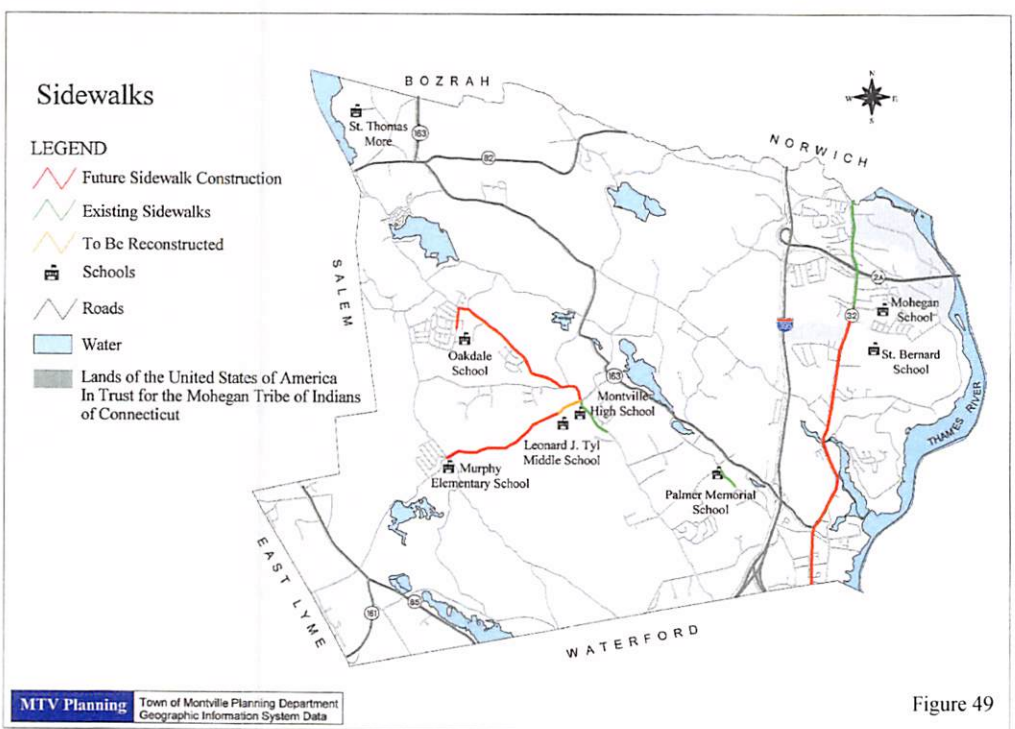


Figure 49

Bike /Pedestrian Trails

"Historians believe the name Montville quietly commemorates, by Latin reference, members of the Hillhouse family who were among its leading early citizens and obtained its incorporation as a separate town in 1786. But the more obvious aspect of this term is that the town's name reflects the geological diversity of the area, and accurately denotes some rather dramatic changes in elevation."[11]

With respect to changes in elevation, if the elevation of the Thames River is approximately sea level, then Montville has numerous areas where there is more than a 500' elevation change within its borders. Thus, from the perspective of developing bike routes in Montville, the basic rule is that Montville is hilly. While Montville has an array of beautiful country roads that are conducive for bike riding, virtually all roads have sections with steep and long hills that are not appropriate venues except for expert riders. Planning the direction of these rides suggests that the hills be ridden downward rather than upward.

Within the above context, the Town has ample opportunity to develop a low cost system of on-and-off road bike and pedestrian trails. Montville has a unique combination of geographical interest with its entire eastern border abutting the Thames River, a scenic roadway network that supports relatively low levels of traffic and publicly-owned open space that can be developed for off-road trails.

Figure 50 depicts Montville roads that are recommended for striping as on-road bike routes for both recreational and commuting purposes. Again, it must be noted that some sections of these routes are not appropriate for younger or inexperienced bike riders due to steep grades. In the preparation of this figure, every effort was made to depict those critical grade sections.

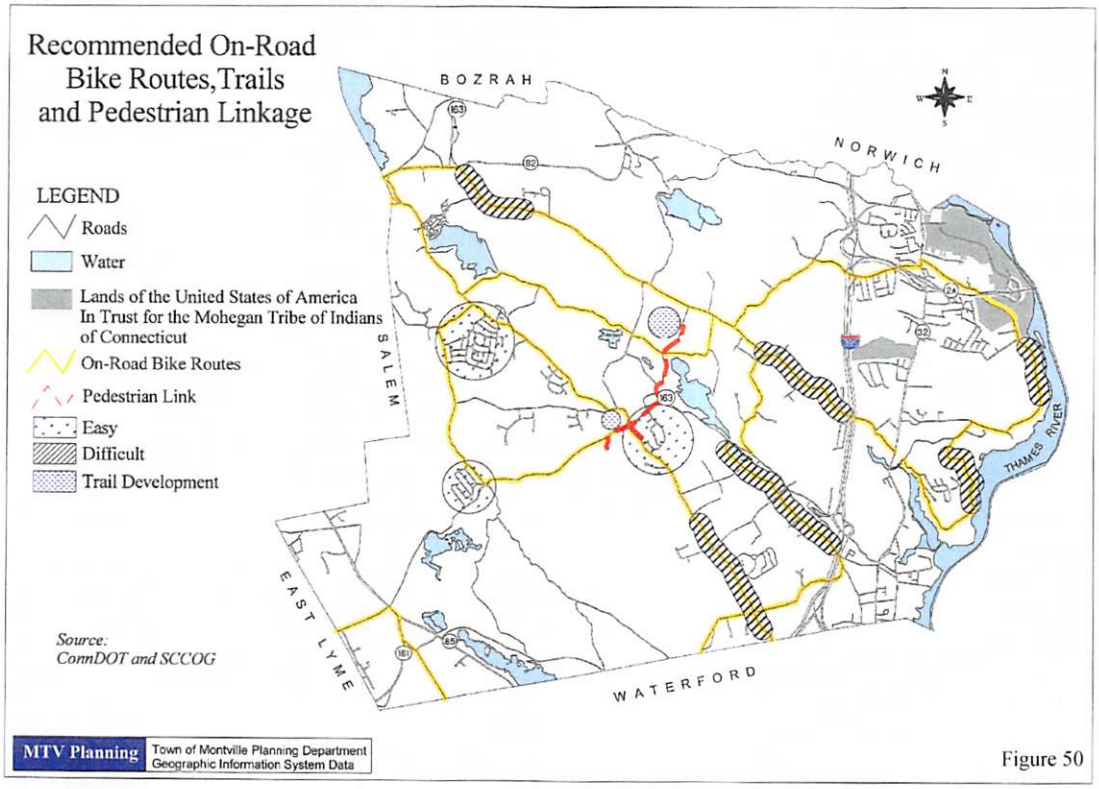


Figure 50

[11] Jon B. Chase, Esq. - Town Historian

Figure 50 also depicts areas recommended for recreational trails and future pedestrian connections not intended as sidewalks. The theme of this proposal is the connection of the vast facilities at Camp Oakdale with the High School/Fair Oaks facilities and the Cottonwood subdivision. Meetinghouse Lane is the corridor that links these facilities from Camp Oakdale to the high school. The total distance is less than 1.8 miles with relatively modest traffic volumes on Meetinghouse Lane. This connection appears safe for pedestrian and cyclists.

The Planning Department and the Public Works Department have been working on a proposed trail expansion project, with the expansion areas shown in Figure 51. This proposed project will create a multi-use paved path that would allow easy access for all the residents of the Town.

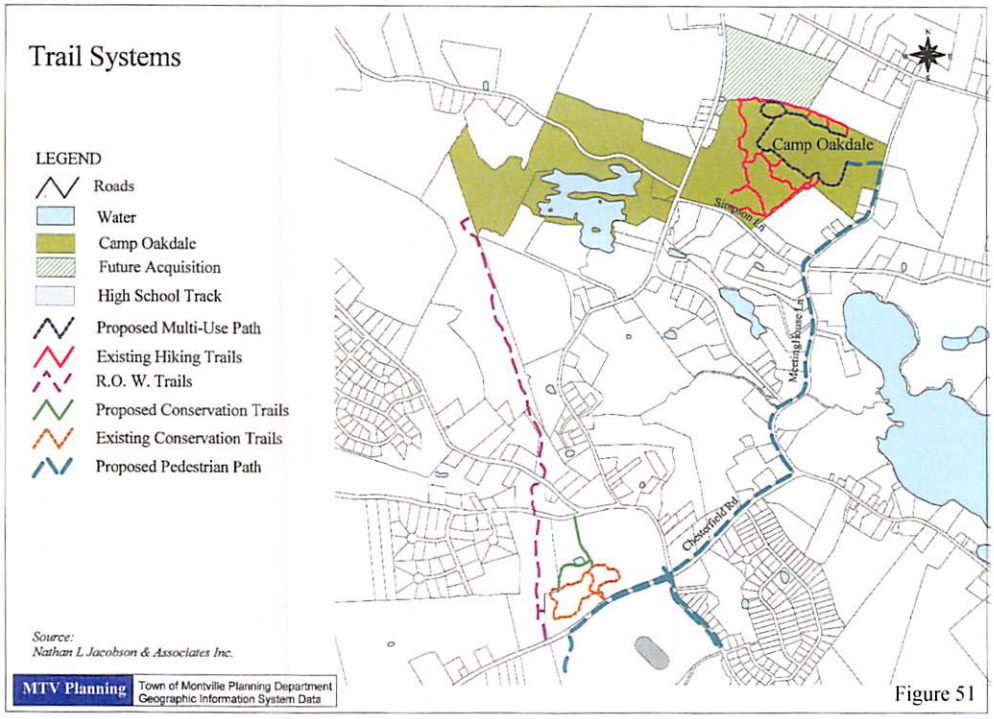


Figure 51

Rail

The New England Central Railroad operates on the west side of the Thames River, running through Montville from New London to St. Albans, Vermont through Palmer, Massachusetts. At present, New England Central operates freight service exclusively along this line. In the past, it was envisioned that this rail line, because of its choice location, could operate as a passenger service line as well and address the growing tourism and commuter demand. As this proposal was explored in greater depth, it became clear that the rail infrastructure was inadequate to operate at the speeds necessary to attract regular passenger users. Thus, while passenger service remains a long term vision, no entity has stepped forward to underwrite the cost of replacing the rail infrastructure. However, it should be noted in this respect that Norwich relocated its Transportation Center to Hollyhock Island under the vision that should passenger service be restored on the New England Central, the building could be extended over the west channel of the river and connect with a future rail stop at that location.

In the immediate future, the prospect of regular passenger rail service from New London's Union Station via Shoreline East is imminent. This service is expected to begin operating in 2010 and provide up to 7 trips per day between New London and New Haven. Trips will include two one-way trips in the morning, one round trip at midday and four return trips in the evening. This will provide basic minimal rail service to allow people from the southeast region to commute by rail to New York. Perhaps improved passenger rail service on the Northeast Corridor will open the door for passenger rail service on the New England Central line through Montville.



Montville Train Station

Marine

The Thames River, dredged to a minimum depth of 30' from the mouth all the way to Norwich, provides deep water access to Long Island Sound and the Atlantic Ocean. Utilization of this transportation resource for freight has fallen off dramatically in the past several decades and is now limited to activities at the Admiral Shear State Pier in New London. Likewise, passenger ferry service is now concentrated in New London. While Norwich constructed a ferry dock in the harbor, it continues to remain underutilized.

Future consideration will be given to marine access to Trading Cove. However, two obvious problems are evident with this proposal:

1. The channel is the center of the river at this point and significant dredging would be required to provide safe access to the cove.
2. The New England Central Railroad bridge crosses the mouth of the cove on a fixed span bridge that would need to be replaced by a new movable structure.

Therefore, access to the cove would require a considerable environmental impact study prior to the investment of capital funds to make these improvements. That said, the cove, as a protected harbor, would be an inviting and unique location for both pleasure boats and ferries as a destination for the Mohegan Sun.

Road Regulations

The Town is currently in the process of reviewing and updating the Town of Montville Road Standards and the Town Road Improvement Details. These Regulations, which set forth the design criteria and construction requirements by which new roads are to be constructed, have not been comprehensively revised since 1991. Accordingly, some aspects of the regulations are outdated.

The process by which these Regulations are being reviewed and changes recommended is through a collaborative effort with Montville Planning Department, Department of Public Works and the Town

Engineer. Recommended changes will be based on the current accepted design standards and construction practices, maintenance requirements of the Public Works Department and the experience base of the involved agencies. The goal being to promote well constructed, safe, and functional new roads; while minimizing environmental impacts and impacts to the existing road network.

The updated Regulations will incorporate by reference the most current and generally accepted design and construction guidelines including:

- The Connecticut Department of Transportation Highway Design Manual (2003)
- The Connecticut Department of Transportation Standard Specifications for Road, Bridges, and Incidental Construction (2004)
- The Connecticut Department of Transportation Drainage Manual (2000)
- The Connecticut Department of Environmental Protection Stormwater Quality Manual
- The Connecticut Department of Environmental Protection Guidelines for Soil Erosion and Sediment Control (2002)

A Preliminary review of the current regulations has identified the following specific areas that would be addressed in a comprehensive review and revision:

- Evaluate functional classifications and design criteria for new roads to make sure design standards are appropriate for the level of use. For example, it is proposed to add a specific design standard for an industrial road. In general, the goal would be to make sure that required road widths and geometric design standards area suitable for anticipated traffic volumes and design speeds, yet also allow some flexibility in design to best fit the surrounding environment.

- Review and update requirements and procedures for bonding, construction inspection, maintenance of roads during construction, and acceptance of completed roads.

- Review requirements and specifications for driveways and establish standards for common driveways to insure that driveways are designed and constructed to safely accommodate the proposed uses and to minimize impacts to the road system. This would likely include more specific requirements for sight distance, maximum grades, maximum grades for unpaved driveways, and required control of stormwater runoff.

- Update requirements for storm drainage and handling of stormwater to insure that the design of new roads considers the control of surface runoff, mitigation of any increase in runoff rates and provides measures to address water quality of stormwater runoff.

- Consider incorporating low impact development techniques by allowing alternatives to conventional curb and gutter configuration such as non-curbed roadways with off-road swales on a site specific basis; where such alternatives are compatible with the soil conditions, surrounding topography and drainage patterns.

- Review requirements for roadway cul-de-sacs and consider alternative designs which would reduce the expanse of pavement while still providing functionality for maintenance and emergency vehicles.

Community Profile– Economy

Montville Business



Community Profile -Economy

In normal times this section would lay out lofty economic goals for the Town. However, we will first examine current economic conditions because we are now living in the "new normal". What is the "new normal"? A brief history of where we have been will explain where we are. What follows is an outline of the actions, mistakes and greed which led us to the brink of the second Great Depression.

- **June 1999** - the Federal Reserve begins a series of rate increases pushing the Federal Funds Rate (commonly known as the overnight rate or interest rates banks charge each other for loans) to a nine year high of 6.5 %.

- **November 1999** - the remains of the Glass-Steagall Act of 1933 which prohibited a bank holding company from owning other financial companies was repealed by the Gramm-Leach-Biley Act.

- **May 2000** - Federal Reserve Chairman Alan Greenspan stated "I think the underlying momentum of the economy is strong".

- **January 2001** - the Federal Funds Rate was cut to 6%. This marked the beginning of a series of further cuts in reaction to:
    - The bursting of the dot.com stock bubble.
    - A recession which had begun in March 2001.
    - The terrorist attacks upon the United States on September 11, 2001.

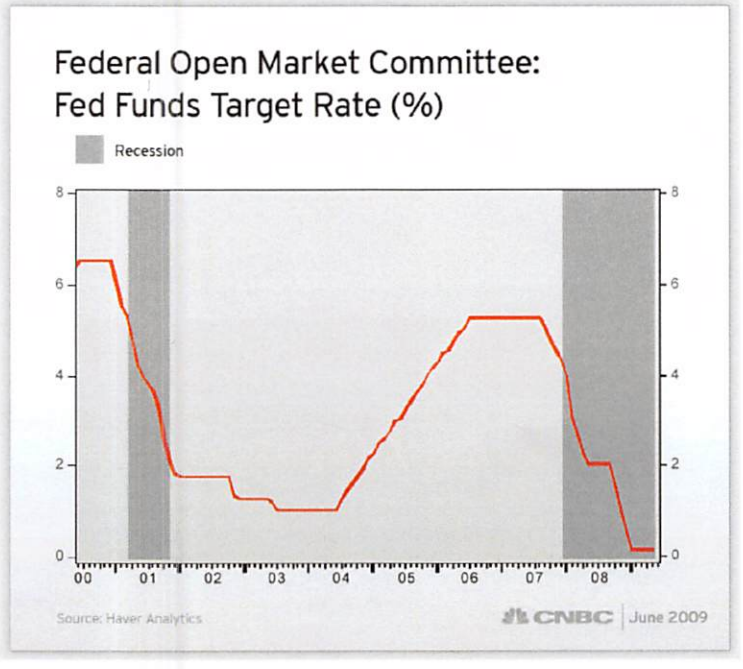


Figure 52

- **December 2002** - Mortgage rates drop, but adjustable rate loans remain popular based on the assumption that housing values will continue to rise. Home equity loans are in vogue with an introductory rate prime minus one half or even prime minus one. [12]

- **December 2002** - Home sales set a record in November. "Single-family home sales jumped a record 1.069 million annual rate in November, the Commerce Department said." [13]

- **March 2004** - The Department of Housing and Urban Development proposes forcing the companies; Fannie Mae and Freddie Mac -government supported enterprises (GSE's) to purchase more mortgages from lower-income households. The Companies would be required to buy half of their loans from people making less than the median income in a region. [14]



Figure 53

- **March 2005** - The National Association of Realtors releases a study that shows the percentage of homes bought for investment might be as high as one-quarter of the 7.7 million sold last year. "Americans are treating real estate as a viable alternative to stocks and bonds, said David Lereah, Chief Economist at the Realtors Association". "Like the day traders of the 1990's dot-com boom, people are investing in a market that seems to just go up". [15]

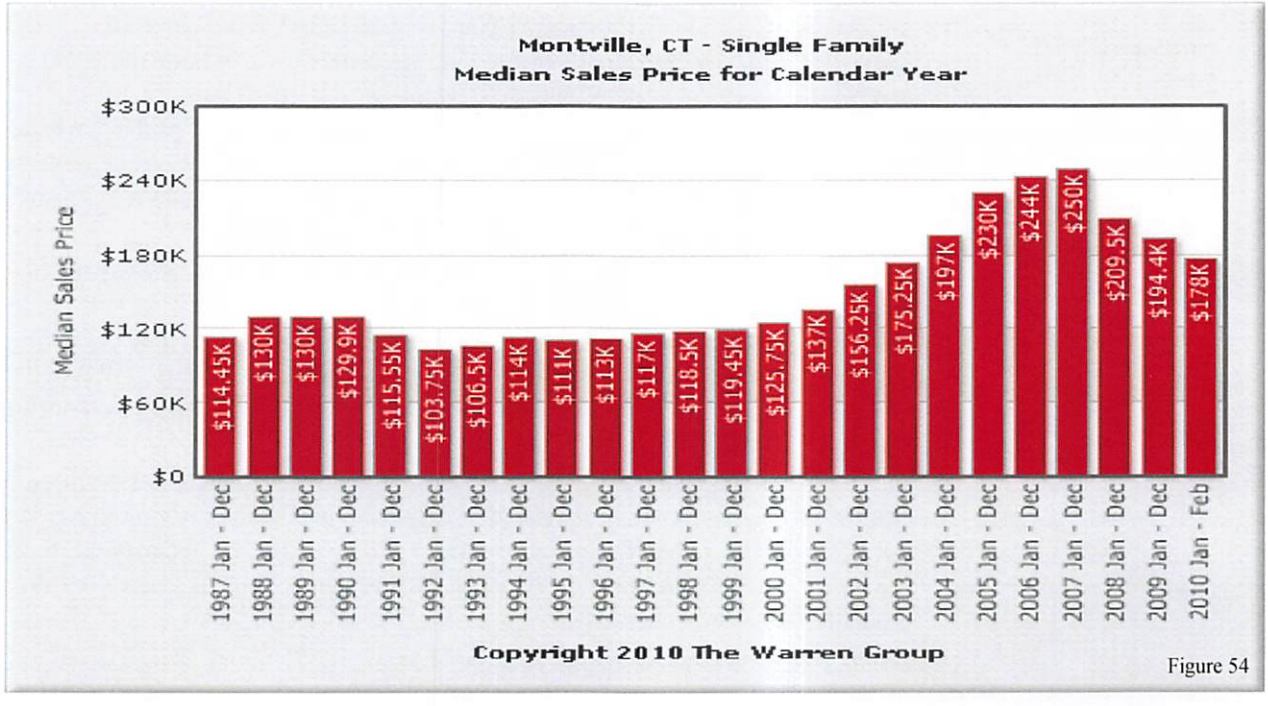


Figure 54

[12] New York Times December 2002 ; February 2002
[13] New York Times December 2002
[14] CNBC;New York Times March 2004
[15] New York Times March 2005

- **2002 thru 2006** - Subprime mortgage originations increase from seven percent of total mortgages to twenty percent. Mortgage products become more exotic, including option ARMs (adjustable rate mortgages), hybrid ARMs, piggyback mortgages and various other products which required no payment to principal, interest only payments with higher rates which might kick in during the first few months or years of the loan. The asset backing the mortgage, the house, was valued at super inflated prices.

- **2002 thru 2007** - Enter the MBS - Mortgage Backed Security. Mortgages are sliced and diced and bundled as securities and sold to investors like mutual funds, pension funds, hedge funds, insurance companies and the central bank of China. Investors held $4.6 trillion in MBS (that was more than the outstanding value of the United States Treasuries). Many of the players in this market are not subject to regulation. The lack of transparency in the market is ignored. Lenders and investors have a hazy thought that they are interconnected, but the money keeps rolling in and few see the bust at the end of the boom.

- **2006** - "The National Association of Home Builders reported that sales of previously owned homes fell to the lowest level in July in more than two years. Most economists, including the Federal Reserve Chairman, Ben S. Bernanke, still expect the slowdown to be orderly." [16]

- **2002 thru 2007** - Two investment vehicles, and the ratings given them by Standard & Poor's, Fitch and Moody's, become critical components to the housing boom and the bust. They are:

    - **CDO's** - Collaterized Debt Obligations: "CDO's are diversified, multi-class securities backed by pools of bonds, bank loans, or other assets. These securities funded $380 billion in mortgage loans in 2008. CDO's typically allow securities to be issued with a higher credit rating than securities used to back the CDO's, such as corporate bonds, commercial loans, asset-backed securities, residential mortgage backed securities, commercial mortgage backed securities, and emerging market debt. These securities are typically divided into several classes, or bond tranches, that have differing levels of credit tolerance and typically contain at least one class of investment grade bonds".[17]
    - **MBS**- Mortgage Backed Securities: "groups of mortgages packaged together by banks in order to be sold to financial institutions like Fannie Mae and Freddie Mac. Financial institutions then repackaged the mortgages so they can be sold to individual investors in a secondary market. Banks that issue mortgages sell them off in order to clear their balance sheets and make further mortgage commitments to earn more fees".[17]
    - Ratings agencies such as Moody's, Fitch, and Standard and Poor's are paid to rate the securities by the same banks that issue the securities. This generates revenues for the ratings agencies and provides a false sense of security to institutional investors, such as pension funds, that they are investing in traditional AAA rated investment grade securities.

[16] New York Times

[17] CNBC

- **June 2007** - Two Bear Sterns hedge funds, heavily invested in subprime mortgages collapse.

- **July 2007** - "Moody's Investors Service cuts its rating for 399 residential mortgage-backed securities (RMBS), citing higher than expected delinquencies in the underlying loans, the same day that Standard and Poor's said it may start cutting ratings on $12.1 billion in mortgage related debt".[18]

- **July 10, 2007** - Standard and Poor's places 612 U.S. Subprime Residential Mortgage Backed Securities (RMBS) Classes on watch negative.[19]



Figure 55

- **October 26, 2007** - "Countrywide Financial Corp. lost $1.2 billion in the third quarter, but its shares soared Friday after the nation's largest mortgage lender said it expects to be profitable this quarter and next year."[20]

- **January 11, 2008** - Bank of America announced Friday that it had agreed to pay about $4 billion in stock to acquire Countrywide Financial from the jaws of possible bankruptcy.[21]

- **March 2008** - There is a literal "run of the bank" at Bear Stearns, the fifth largest investment bank. The Treasury Department and the Federal Reserve scramble to provide emergency funding. These actions do not stop the downward spiral. Bear Sterns stocks sold for $171 in January 2007. In March 2008 JPMorgan purchases Bear Sterns at $2 per share. On the same day, the on-air breaking news headline scrolls across the bottom of CNBC screen "Moody's affirms Lehman's A1 Rating: outlook now stable."

- **2008** - The remainder of 2008 is a financial tsunami:
    - Washington Mutual Inc., with assets valued at $307 billion, the U.S.'s largest savings and loan fails and is seized by the Federal Government and sold to JPMorgan Chase & Co. Inc. It is the biggest bank failure in U.S. history.
    - The Federal Government seizes Freddie Mac and Fannie Mae.
    - Lehman Brothers, one of America's oldest investment banks, files for Chapter 11 Bankruptcy.
    - Merill Lynch teeters on the verge of bankruptcy and is bought out by Bank of America.

[18] CNBC David Faber on air report July 10, 2007

[19] Standard & Poor's Ratings Direct July 10, 2007

[20] AP October 26, 2007

[21] New York Times January 11,2008

Community Profile -Economy

- "Two days after Lehman's bankruptcy, the crisis spread to insurance giant AIG. It was now on the verge of failing, too. AIG bet big on credit default swaps, selling insurance policies on collateralized debt obligations (CDO's) made from subprime mortgage securitizations. When the subprime mortgages defaulted, making all those CDO's worth much less, AIG was stuck with bilions in liabilities. All those policy holders wanted their insurance payments for the failed CDO's. In order to prevent an international financial calamity, the U.S. Government took an 80 percent stake in AIG. Many experts called the company "too big to fail" - with tentacles stretched around the world, deeply embedded in the global economy".[22]

- The oldest U.S. Money Market Fund, the Primary Reserve Fund, "breaks the buck", meaning an invested dollar was worth 97¢.

- The Financial system comes to a grinding halt, credit markets freeze, no bank will lend to another bank, fearing the unknown on the other's balance sheet.

- On September 18, 2008, the Federal Reserve Chairman and the Treasury Secretary meet with members of Congress on a Sunday night the congressional leaders were told "that we're literally maybe days away from a complete meltdown of our financial system, with all the implications here at home and globally".[23]

- Congress cannot agree on a bail out/stimulus plan, consequently the Dow Jones Industrial Average plunges 778 points, the largest single day drop in history.

- Congress passes the $700 Billion Troubled Asset Relief Program (TARP).

- The economy is in the deepest recession since the Great Depression.

- Asset values, specifically single family homes, drop. The housing bubble does more that burst, it explodes. Foreclosures proceed at a record pace. Millions of homeowners are "underwater", in that the amount owed on their mortgage exceeds the value of their house.



A solemn crowd gathers outside the Stock Exchange after the crash. 1929. [24]

- Between October 2008 and September 2009 the Federal Government committed more than $10 trillion dollars, which included the $787 billion American Recovery and Reinvestment Act funding, to economic recovery and stimulus packages.

- The unemployment rate rises to 9.7 % and is projected to reach 10% by the end of 2009

[22] CNBC "Too big to Fail", Feds Take Control of AIG

[23] New York Times September 19, 2008

[24] http://www.ssa.gov/history/wallst.html

So, is that the total story of the downward spiral to the "new normal", well, not quite. The over leveraged consumer (credit card debt), a personal savings rate which dropped to zero, corporate greed and ponzi schemes all helped get us here. But you must go full circle back to the Great Depression to understand how the origins of the housing bubble brought us nearly to the second Great Depression.

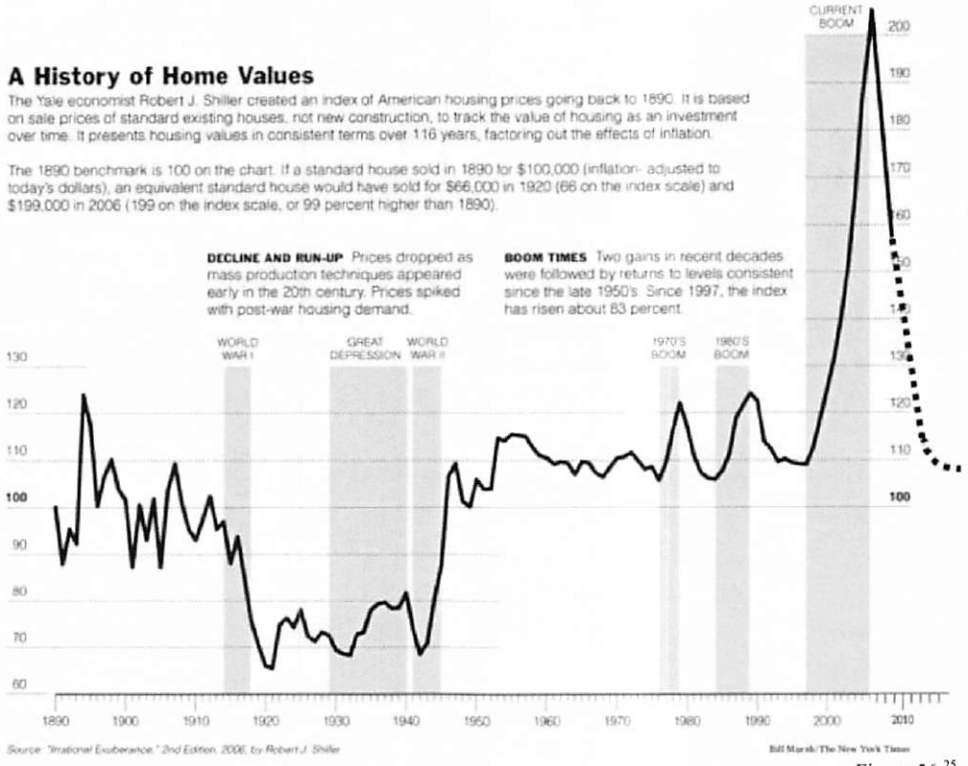


Figure 56 [25]

- In an effort to prevent home foreclosures and as a part of the New Deal in 1933, Congress passed The Home Owners Loan Act which authorized the creation of the Home Owners Loan Corporation (HOLC). The HOLC changed the mortgage industry forever. It changed loan terms to benefit the middle class; it extended payment terms from 15 years to 30 years and modified down payment requirements. The HOLC was under the supervision of the Federal Home Loan Bank Board (FHLBB). HOLC was started with a $200 million purchase of stock by the U.S. Treasury Department. The Agency was authorized to issue up to $2 billion in bonds and Congress increased their limit to $3.5 billion. HOLC also bailed out mortgage holding banks. HOLC granted mortgages to over 1 million people.

- HOLC policy was made by the Federal Home Bank Board (FHBB). The Institute of Real Estate Appraisers was a consultant to the FHBB. Both the Institute and the HOLC developed a rating system for the risk involved in a mortgage loan. The rating systems principles were rooted in the long term preservation of property values and implied in that calculation was segregation. Arthur May, former Dean of the Institute of Real Estate Appraisers stated "homogeneity of the neighborhood and stability of property values go hand in hand and that the mere threat of Negro entry has caused a drop of 25 percent in an all-white neighborhood in some cities".[24] The practice of redlining, that is the practice of not lending or insuring in certain neighborhoods based on racial composition, was instituted by the Federal Government.

[25] "Irrational Exuberance," 2nd Edition, 2006 by Robert J. Shiller

- "There was a tacit agreement among all groups - lending institutions, fire insurance companies, and FHA - to block off certain areas of cities within "red lines", and not to loan or insure within them".[26]

- The Government then went on to create an alphabet soup of agencies that had some role in support of home ownership - HUD; FHA; VA; Fannie Mae; Freddie Mac.

- The Community Reinvestment Act (CRA) became law in 1977. It was essentially a response to prior Federal policies established by HOLC and the FHBB in the 1930's. CRA was enacted to ensure that federally insured banks and thrifts serve poorer neighborhoods. A bank's CRA rating could be used as a factor in deciding if a bank would receive approval to expand.

Now we come full circle. There are those who would argue that CRA, Fannie Mae and Freddie Mac were the cause of the housing bubble. Others will argue it was the greed of Wall Street. As in any argument there is some truth in both side of the argument. There are some facts we know:

- The areas that had originally been red-lined turned out to be the areas targeted for predatory lending practices.

- The Country was brought to the brink of a financial abyss by greed and avarice which took the form of CDO's, MBS, and almost any ludicrous type of mortgage product that you can think of.

- And finally, government intervention, almost always spurs unintended consequences.

The preceding chronology may seem an odd component of a POCD. However, there is no way to explain the condition of the Connecticut economy, and consequently the Montville economy, without some context. "While there is much data employed in this report to describe the landscape of Connecticut, there is rarely sufficient data available at the desired time and with the desired temporal and spatial granularity to satisfy the researcher's needs. Most data appears with a lag that is in some cases up to two years (for example, state GDP)."[27] The most complete census data is now a decade old.

"The events of 2008 and to date in 2009 make reporting and describing the status quo difficult and unrealistic. The U.S. and Connecticut economies have undergone such dramatic changes in the past twelve months and are still undergoing significant changes that it is difficult to describe what was, given what is and what is likely to be. The economies of the state and the nation are struggling on several fronts."[27] For instance, there are mixed signals as to whether the housing market has hit bottom. Some economists believe that the country has emerged from recession. Unemployment, viewed as a lagging indicator continues to rise on the national and state level. We do not know if there will be a double dip recession, a "V" shaped recovery, a "U" shaped recovery, or what I think is probable - a recovery that resembles a square root sign. "We do know that the U.S. and Connecticut economies will not be the same as significant industry restructuring is taking place. This has employment, output, and tax implications that arise from the new industrial structure and the evolving occupational profile of the state."[27]

[26] U.S. National Commission on Urban Problems 1969
[27] Connecticut Economic Strategic Plan (CESP) 2009

Here are some measures of the current economy:

Unemployment Rate

Table 18

National	Connecticut	Montville
9.7	9.2	8.5

Foreclosure trends

Foreclosures continue at a rapid pace on the national level. "Although foreclosures in Connecticut are at lower levels than many other states, foreclosures are increasing. According to the Mortgage Banker's National Delinquency Survey, the total number of foreclosures in Connecticut have almost doubled over the past 18 months."[27]

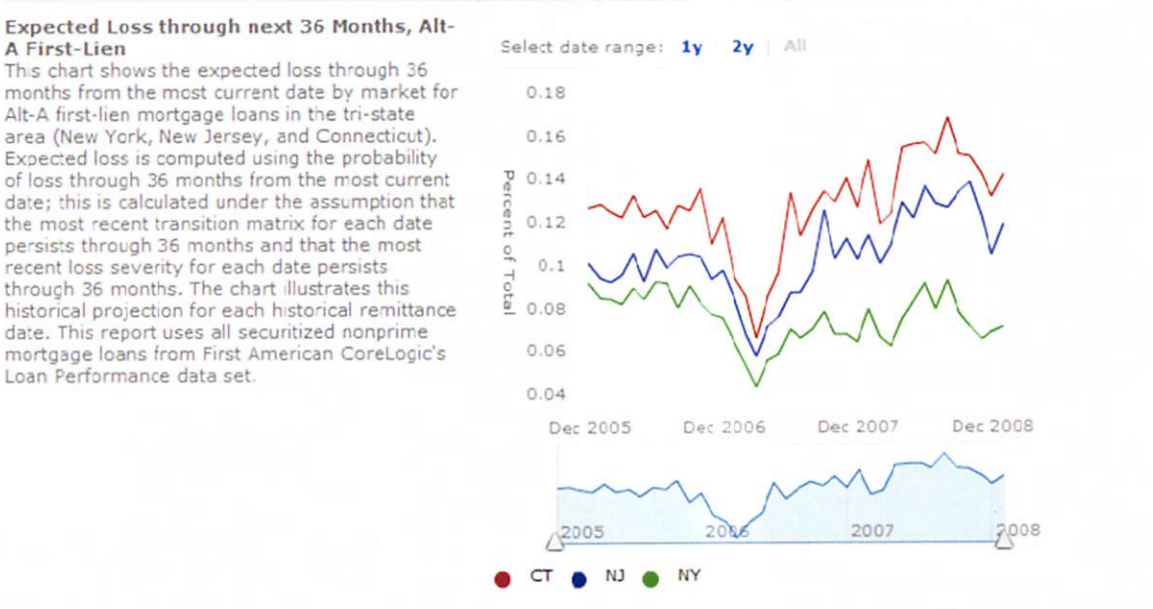


Figure 57 [28]

Table 19

Number of Ct. Loans 90+ Day Delinquent and in Foreclosure[29]						
	4Q 2006	1Q 2007	2Q 2007	3Q 2007	4Q 2007	1Q 2008
Prime loans	2,363	2,538	2,457	3,274	4,205	4,857
Subprime	4,171	4,573	5,616	6,842	8,267	8,753
Total (including FHA & VA)	7,648	8,093	9,107	11,213	13,718	14,931

[28] New York Federal Reserve

[29] Mortgage Bankers National Delinquency Survey

Community Profile -Economy

The Planning Department has tracked Montville foreclosure data since 2007. There have been 196 foreclosure filings during this time period. Surprisingly, the majority of the filings have involved homes constructed prior to 1980 (See Figure 58). The Department does not have the data to analyze how many of the foreclosures have been worked out. However, we can state that this is the highest number of filings in any two year period in the history of Montville.

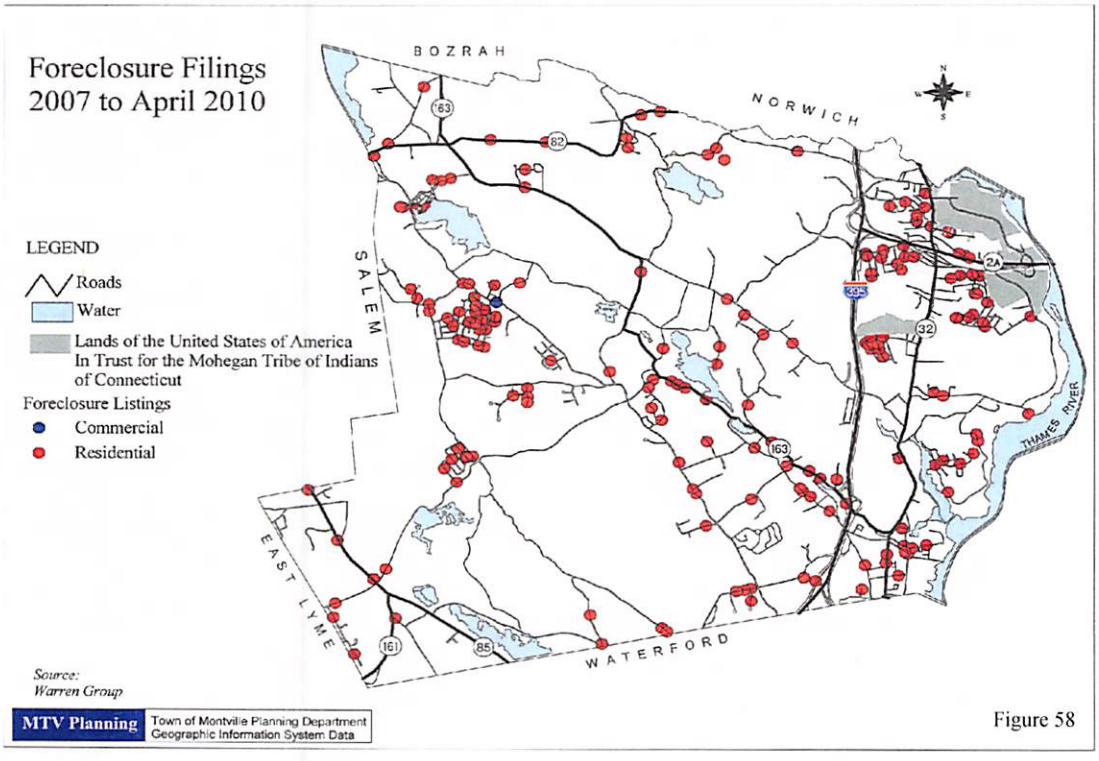


Figure 58

"The need for affordable housing in Connecticut has been exacerbated by the subprime crisis which has prompted higher mortgage costs, delinquencies, and foreclosures for some homeowners. In some cases the demand for rental housing has become even higher as homeowners lose their homes and are forced back into the rental market. In addition, subprime mortgages can also affect owners of multi-family homes and their tenants. By the end of 2007, there were approximately 76,800 active subprime loans in Connecticut."[27] In many cases the value of the home (artificially inflated by mortgage originators) is now less than the mortgage.

Table 20

Montville single family median sales price year to year June to June		
Year	Price $	% Change
2009	195,500	-14.07
2008	227,500	-10.87
2007	255,250	0.14
2006	254,900	-0.43
2005	256,000	22.14
2004	209,600	15.80
2003	181,000	16.03
2002	156,000	9.47
2001	142,500	12.20
2000	127,000	6.32
1999	119,450	5.59

Composition of Connecticut's Economy

Finance and Insurance is the largest industry in terms of contribution to the state gross domestic product (16.5%) (SGDP). This is more than twice the share of national GDP. The other large contributing sectors are Real Estate and Rental, Manufacturing, Professional and Technical Services, Education and Health Care. Manufacturing has declined precipitously from 406,700 jobs in 1997 to 226,000 jobs in 2001 and to 180,500 in February 2009.[30] Announced layoffs in the manufacturing sector have continued through 2009.

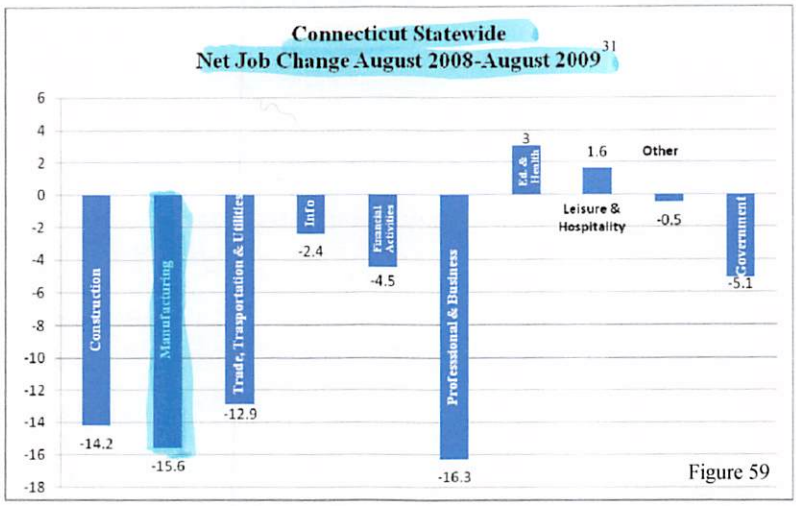


Figure 59

Impediments to growth

- Connecticut has lost a higher percentage of its 25 to 34 year old population than any other state in the nation.
- Ranks 10th highest level of average mortgage debt in nation.
- Ranks 37th in employment growth.
- Ranks 47th in federal share of R&D as a percent of GSP.
- Has extensive infrastructure deficiencies.
- High energy costs.
- State permitting process is not business friendly.

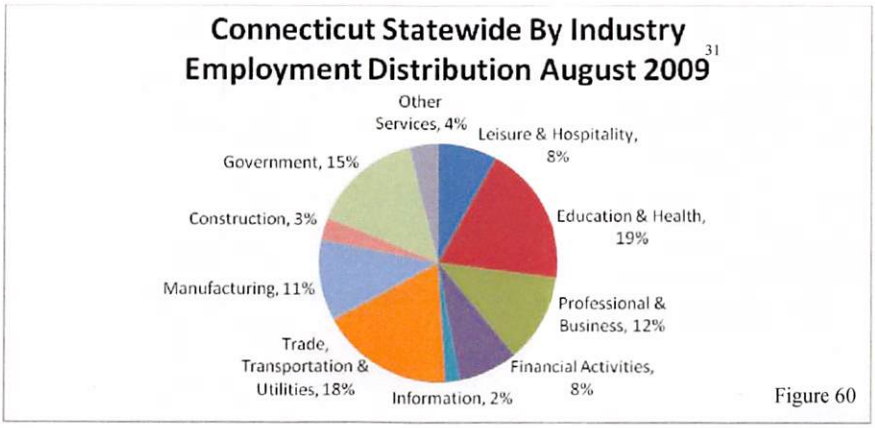


Figure 60

[30] Bureau of Economic Analysis
[31] Connecticut Department of Labor, Office Research Updated September 17, 2009

Composition of Montville's Economy

Table 21

Montville's Top 20 Taxpayers Levy Year 2009	
1. AES Thames, LLC	11. Mohegan Hill Development ,LLC
2. Rand Whitney Containerboard	12. Rand Whitney Realty
3. Connecticut Light & Power	13. Stone Container Paper Board Corp.
4. Montville Power, LLC	14. Burkhard Hotel Partners II LLC
5. Second Family, LLC	15. MTIC Acquisitions, LLC
6. Home Depot USA Inc.	16. Rand Whitney Realty, LLC
7. AES Thames Inc.	17. 91 Leffingwell Road ,LLC
8. Jensen's Inc.	18. Yankee Gas Service Company
9. Margaritaville Enterprises, LLC	19. Mohegan Tribe of Indians of Ct
10. Smurfit Stone Container Ent.	20. Connecticut/Montville Hotel Assoc.

- Parallel to Montville Economy- Mohegan Sun Casino
  - "Foxwoods Resort and Mohegan Sun suffered from their second consecutive year-to-year decline in gross gaming revenues, although there was continued strength in table games revenues and non-gaming revenues during the first half of the year."[32]
  - "The simple lesson of 2008 is that casino gaming is not recession proof, but due to increased reliance on non-gaming amenities (i.e. diversification) and an increase supply of gaming nationally, it is now subject to the same macro-economic factor as many other consumer retail or service industry."[32]
  - "There is no question that the New England (and Northeastern) gaming market is being buffeted by the current recession, but this is a temporary setback that is reversible once the economy recovers."[32]



Figure 61 [32]

  - "The New England gaming market is also being reshaped at the margins by its integration into a larger Northeaster gaming market."[32]

[32] New England Casino Gaming, Update, 2009, Center for Policy Analysis, University of Massachusetts, Dartmouth

Community Profile -Economy

Given the tumultuous history of the past two years, any economic forecast is on shaky ground. Each new piece of economic data will have to be analyzed and the economic forecast will be adjusted accordingly. All forecasts reviewed, including the Federal Reserve, contain one disturbing projection - this will be a jobless recovery.

The normal course of economic development planning would recommend sustainable development, the identification of industry clusters at the state, regional, and local level, and a skilled work force. What clusters are sustainable?

Table 23 examines industry clusters and associated layoffs over the past two years.

Table 22

National Economic Forecast - % change, annual rate, Q4-OVER-Q4 [33]			
	2009	2010	2011
Real GDP	-0.5	2.7	4.2
Personal Consumption Expenditures	0.8	2.0	3.3
Business Fixed Income	-14.7	4.7	11.0
Residential Investment	-11.9	13.1	21.3
Govt. Consumption & Investment	1.7	1.1	0.7
Net Exports (Billions) 2005	-354	-391	-390
Consumer Prices	0.9	0.5	0.1
Inventory Investment 2005	-113	-11	44
Median Price of New Homes (Thousands)	211.0	212.7	218.6
Unemployment Rate	9.3	10.0	9.2

Table 23 [34]

Company	# of workers laid off	Industry
General Electric	7,086	Conglomerates & Aerospace
Pfizer	19,800	Biotechnology
Verizon	8,042	Telecommunications
Boeing	10,930	Aerospace
Dow Chemical	7,500	Chemicals
American Express	4,000	Financials
Microsoft	10,000	Software
Walt Disney	3,100	Media
Caterpillar	27,378	Capital Goods
JPMorgan Chase	14,000	Banking
Las Vegas Sands	11,500	Leisure
Starbucks	6,700	Restaurants
Goodyear	5,000	Consumer Durables
Smithfield Foods	1,800	Food
Cigna	1,100	Health Care
Macy's	7,000	Retail
Intel	5,000	Semiconductors

[33] Mortgage Bankers Association Economic Forecast September 2009
[34] Forbes.com Layoff Tracker

Community Profile -Economy

"Over the last ten years, DECD (Department of Economic and Community Development) has invested approximately $17 million in the Industry Cluster Initiative."[27] The nine clusters identified by the State for development are:

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

It is somewhat ironic that the 2009 Connecticut Economic Strategic Plan states "The most plentiful job openings will be for Cashiers, Retail Salespersons, Waiters and Waitresses, Customer Service Representatives, and Registered Nurses. This indicates the relative importance of retail, and eating and drinking places in the Connecticut economy."[27]

"The Comprehensive Economic Development Strategy (CEDS) for Southeastern Connecticut identified six industry clusters that are important to the regional economy. The six industry groups include:

- Bioscience
- Defense
- Maritime
- Tourism
- Creative (arts and cultural activities)
- Agriculture

An analysis of the available education and employment data indicates a restructuring of the region's economy and a shift away from higher-paying manufacturing-type jobs. One effect of this shift is that without appropriate employment opportunities to match the increasing education level of the region's population, much of the region's workforce will be forced to go elsewhere to find suitable work. During the past 10 to 15 years, the region lost almost 11,000 manufacturing jobs at an annual average wage of $67,000. During the same time period, the service sector increased employment by more than 27,000 jobs at an annual average wage of about $33,000."[35]

The fundamental question has been and will continue to be - can the New London County labor force make a sustainable transition from a manufacturing economy to a service economy?

[35] Regional Plan of Conservation and Development 2007, Southeastern Connecticut Council of Governments

Community Profile -Economy

The Town of Montville has made a concerted effort over the past twenty years to diversify its industry clusters. This has been accomplished by extending utilities in designated areas, targeting the tourism hotel cluster, attracting age restricted housing projects, revisions to the Zoning Regulations and re-zoning to accommodate commercial growth. This strategy has resulted in adding six new entities to the top twenty taxpayer list.



Cristata Hotel on Route 32

These companies include:

- Home Depot
- Second Family, LLC (Montville Commons)
- Jensen's Inc. (Hillcrest Retirement Community)
- Burkhard Hotel Partners, LLC

The Hyatt Place will be added to the list this year. Projects such as Gristmill Plaza and Lombardi Business Park have created an extended opportunity for small business to locate in Montville.

Montville's unemployment rate is 8.5%, which is less than the State and National rate. However, the town's unemployment rate has historically been less than 5%. The shape of the economic recovery and the health of the housing market at the national and state level will have a lasting impact on employment. The focus of the Town's economic policies should be on job creation and retention. The Planning Department commissioned a study to identify future commercial and industrial growth areas within the Town.



Hyatt Place located on Route 32

The results of this buildout analysis by Planimetrics, LLC follow.

Community Profile -Economy

The Commercial and Industrial buildout analysis[36] found that Montville has the potential for significantly more commercial and industrial development than at the present time. Currently there is approximately 1.5 million square feet of development, with the potential for 9 million, or almost six times as much.

If all buildable land is fully developed, the maximum buildout would yield 17.9 million square feet of commercial and industrial development. If Montville continues its commercial and industrial development pattern, the Town can expect approximately 9 million more square feet of development. If commercial and industrial development keep pace with population growth then there may be as little as 2.5 million square feet of development.

As shown in Figure 62, approximately 2,400 acres (close to 9% of land) is zoned for commercial and industrial uses.

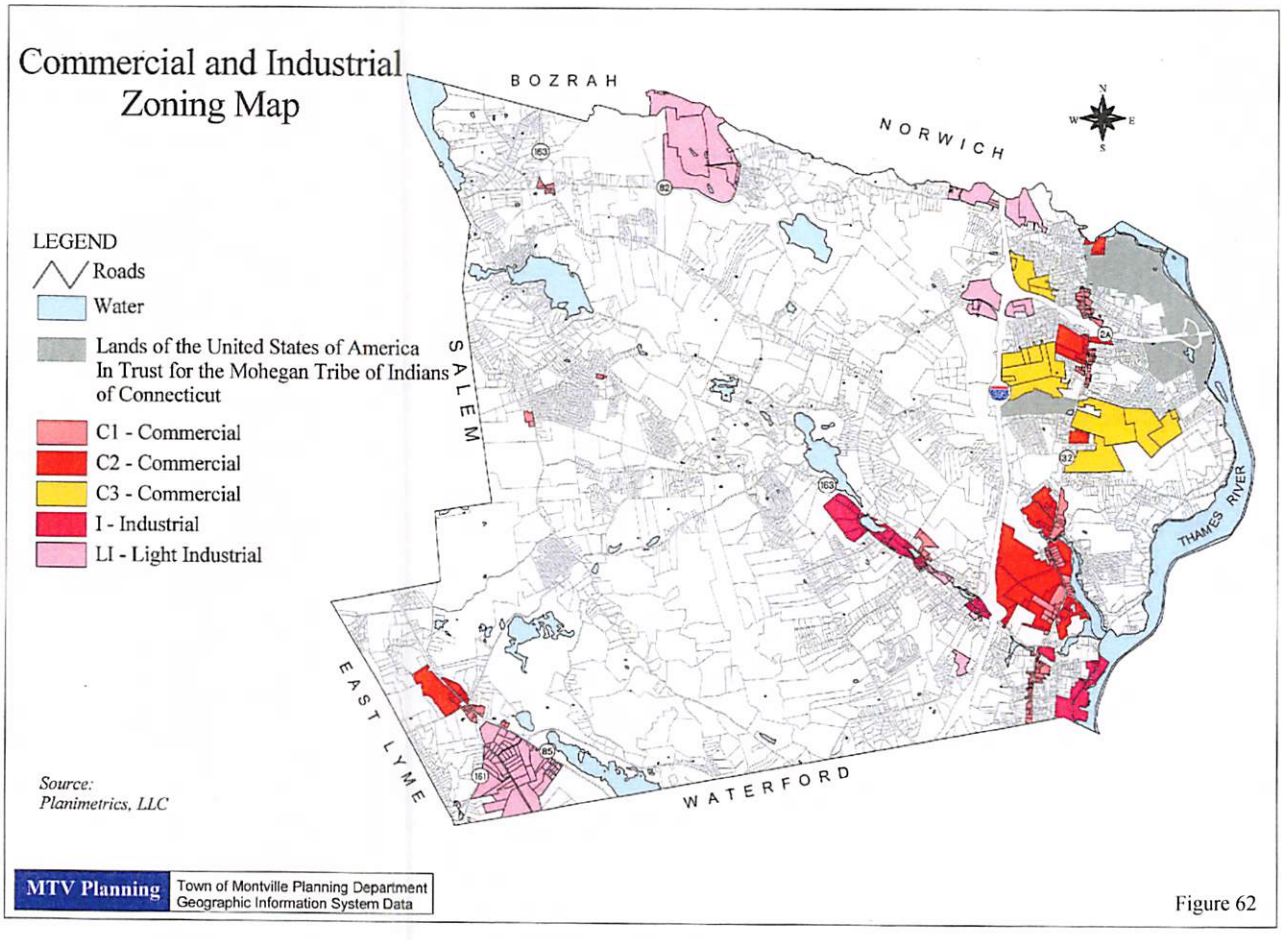
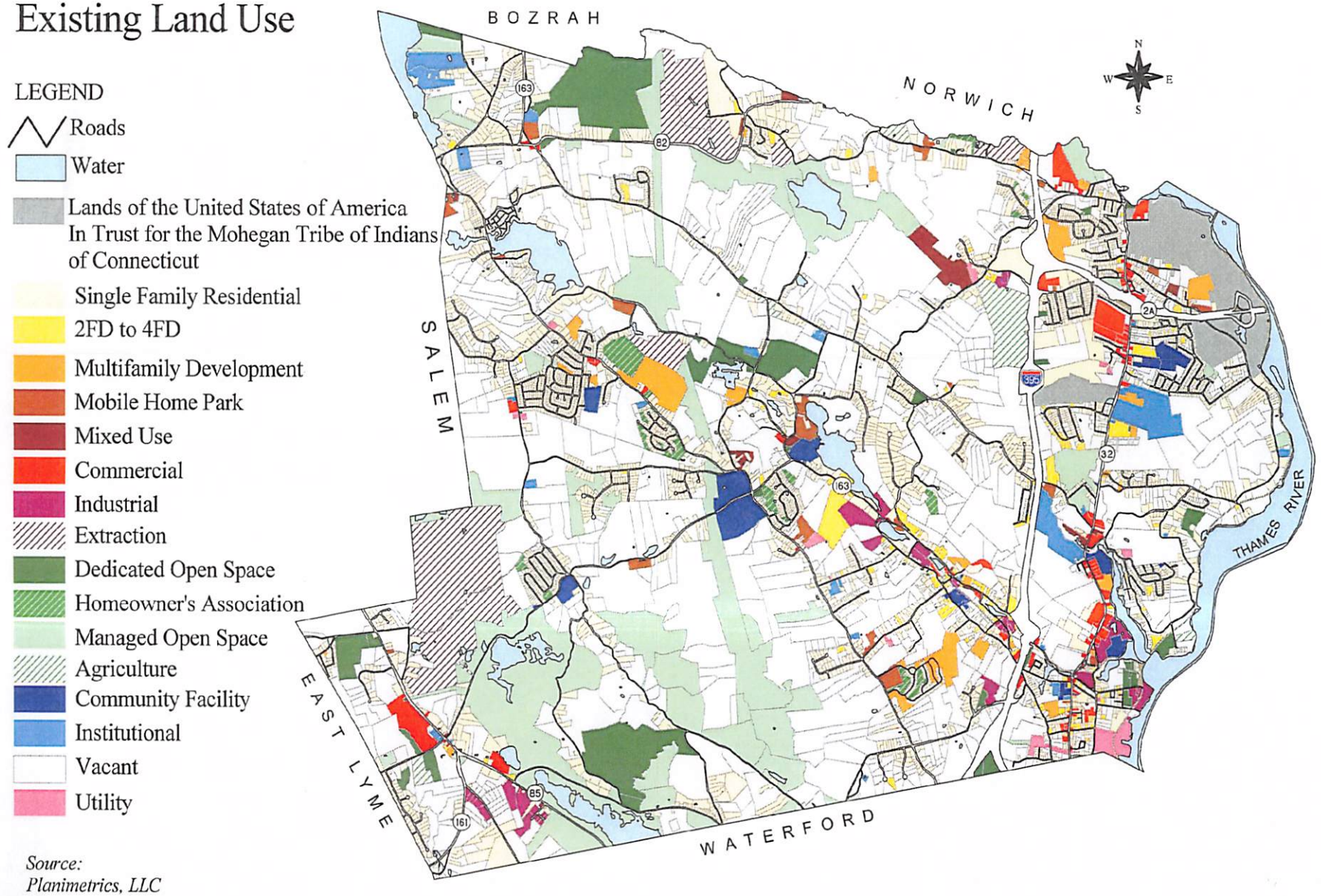


Figure 62

Development potential was calculated by assuming that any residential uses in commercial or industrial zones would be converted to commercial use. Remaining development potential was calculated by subtracting existing commercial square footage from whatever potential square footage is calculated. Vacant land was considered new potential square footage, while open space, institutional uses or community facility uses were not considered in the analysis.

[36] Commercial & Industrial Buildout Analysis: Planimetrics, LLC

Existing Land Use

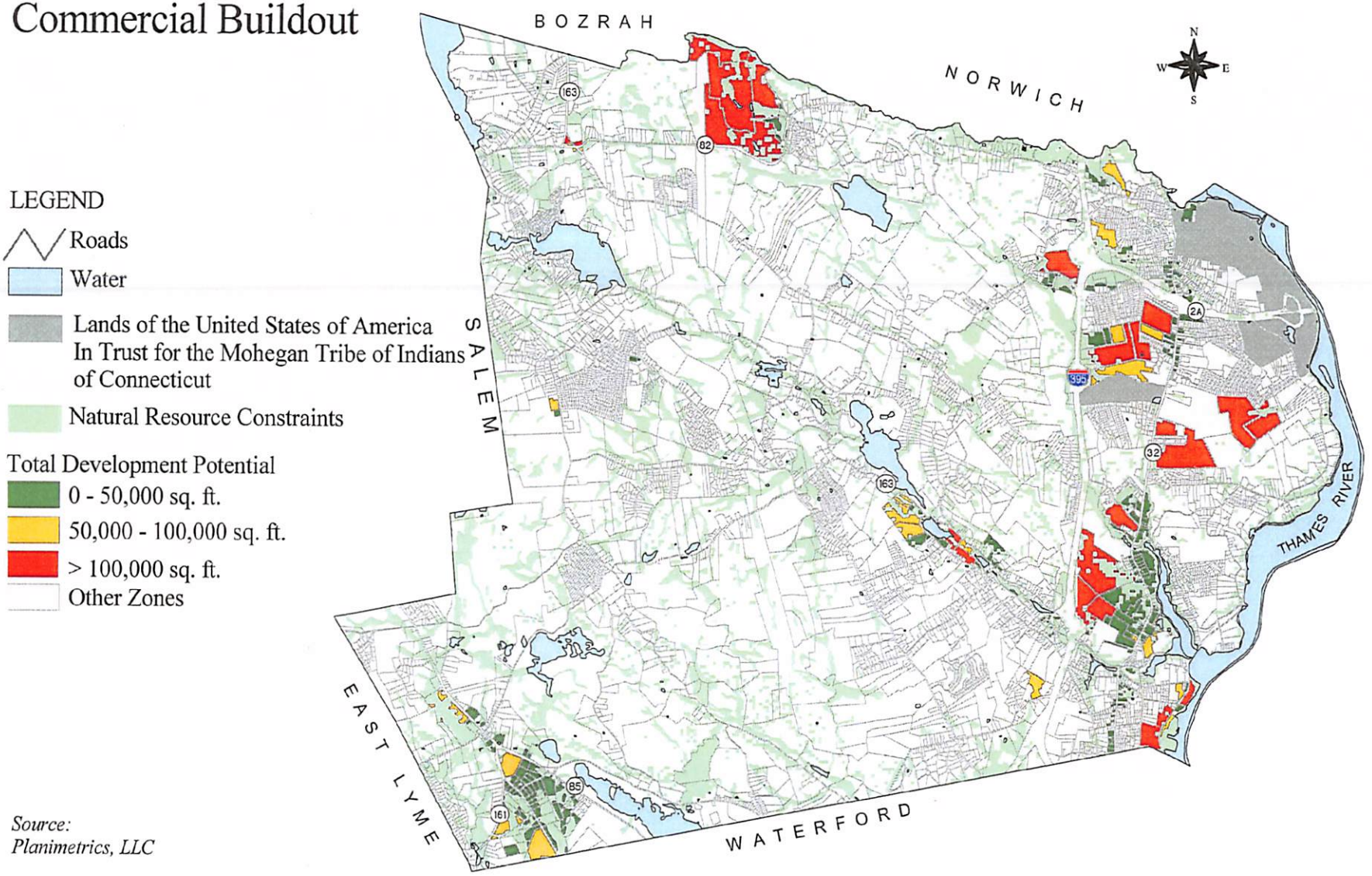


Source:
Planimetrics, LLC

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 63

Commercial Buildout



Source:
Planimetrics, LLC

MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 64

Table 24

Zoning Summary		
Zone	**Acres**	**Percent of Total Land Area**
C1– Commercial	206	0.7%
C2– Commercial	533	1.9%
C3– Commercial	549	1.9%
I– Industrial	235	0.8%
LI– Light Industrial	915	3.2%
Subtotal	**2,438**	**8.6%**
Residential Zones	25,906	91.4%
Total	**28,344**	**100.0%**

The existing business square footage was determined from the assessor's database for commercial and industrial use properties.

In determining the developable land, a two step process was used:

(1) removing of setbacks

(2) removing of environmental constraints

Once these areas were removed, the remaining area on the property is considered developable.

Setbacks from the property lines were determined by a weighted average of the front, rear, and side yard setback requirements for each zone as follows:

(Front Yard + 2(Side Yard) + Rear Yard)/4

= Weighted Average Setback

Table 25

Existing Commercial Sq. Ft.	
Zone	**Square Feet**
C1– Commercial	352,554
C2– Commercial	345,285
C3– Commercial	0
I– Industrial	420,179
LI– Light Industrial	257,628
Other Zones	94,969
Total	**1,470,615**

A 20 foot buffer was used for environmental constraints to estimate development setback, along with the areas of constraint themselves. These areas were removed from development consideration.

The average square footage per buildable acre for commercial and industrial uses and zones was used to calculate normal development patterns. The average was used in calculating remaining development potential.

Community Profile - Economy

Table 26

Buildable Area by Zone	
Zone	**Total Area (acres)**
C1– Commercial	88
C2– Commercial	268
C3– Commercial	367
I– Industrial	99
LI– Light Industrial	421
Total	**1,243**

Table 27

Average sq. ft. per Buildable Acre	
Zone	**Sq. Ft. / B Ac.**
C1– Commercial	12,485
C2– Commercial	9,097
C3– Commercial	N/A
I– Industrial	21,878
LI– Light Industrial	5,395

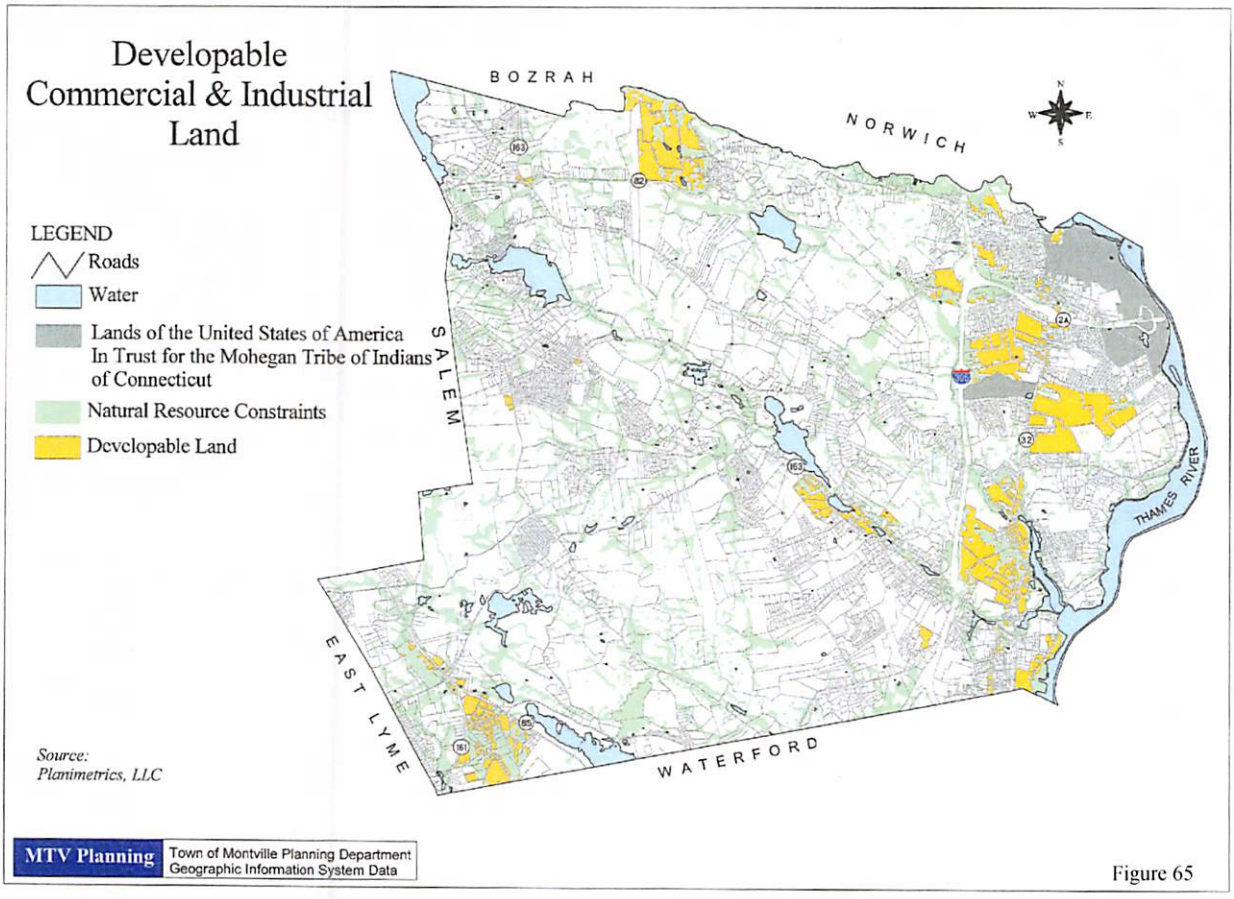


Figure 65

The maximum physical potential square footage was calculated by using the ratio of business usage to parking usage based on a uniform parking standard. Assuming a one-story building, a parking ratio of five spaces per 1,000 square feet and 400 square feet of impervious coverage per parking space:

1,000 sq. ft. of floor area

2,000 sq. ft. of impervious (5 x 400 sq. ft.)

= 3,000 sq. ft. of total impervious

Based on this formula, potential commercial square footage would equal 33.3 percent of available area. Applying this calculation to developable land yields the square footage as shown in Table 28.

Table 28

Maximum Physical Buildout By Zone			
Zone	**Existing Commercial Sq. Ft.**	**Potential Additional Sq. Ft.**	**Potential Buildout Sq. Ft.**
C1– Commercial	352,554	912,713	1,265,267
C2– Commercial	345,285	3,510,387	3,855,672
C3– Commercial	0	5,274,382	5,274,382
I– Industrial	420,179	1,003,759	1,423,938
LI– Light Industrial	257,628	5,798,838	6,056,466
Other Zones	94,969	0	94,969
Total	**1,470,615**	**16,500,079**	**17,970,694**

The maximum physical buildout would only occur if all developable commercial and industrial land was fully covered with development. Believing that this scenario is unlikely and not supported by market forces, we calculate a more reasonable buildout scenario using the existing average square footage per buildable acre. Total square footage is calculated using the square footage per buildable acre average applied to the buildable area. The adjusted numbers are shown in Table 29.

Table 29

Commercial and Industrial Buildout by Zone			
Zone	**Existing Commercial Sq. Ft.**	**Potential Additional Sq. Ft.**	**Potential Buildout Sq. Ft.**
C1– Commercial	352,554	736,157	1,088,711
C2– Commercial	345,285	2,020,017	2,365,302
C3– Commercial	0	2,436,253	2,436,253
I– Industrial	420,179	1,746,912	2,167,091
LI– Light Industrial	257,628	2,015,422	2,273,050
Other Zones	94,969	0	94,969
Total	**1,470,615**	**8,954,761**	**10,425,376**

As with the residential buildout, the one factor the buildout cannot account for is the impact that slopes greater than 10 percent have on potential new development. To account for the impact of such constraint, a three tiered coding system of minimal, moderate, and maximum constraints was used.

Table 30

Slope Constraint Type		
Minimal Slope	Moderate Slope	Maximum Slope
No Slopes >10%	Parcels not categorized as minimum or maximum	((Slopes 20-25%) + (Slopes >25)) >25% of land area
Only Slopes 10-15% present		((Slopes 15-20%) + (Slopes 20-25%) +
All slopes on property <10% of land area		All slopes > 75% of property
((Slopes 10-15%) + (Slopes 15-20%)) < 20% of land area and all Slopes <20% of land area		

For *Minimal Constraints*, it was considered reasonable to conclude that the development yield can be fully realized. For *Moderate Constraints*, it was determined the development yield would be about 75 percent of the potential new development. For *Maximum Constraints*, it was determined that any development would face significant challenges and that only about 25 percent of the potential new development would be realized. The results of applying adjustments are shown in the table below.

Table 31

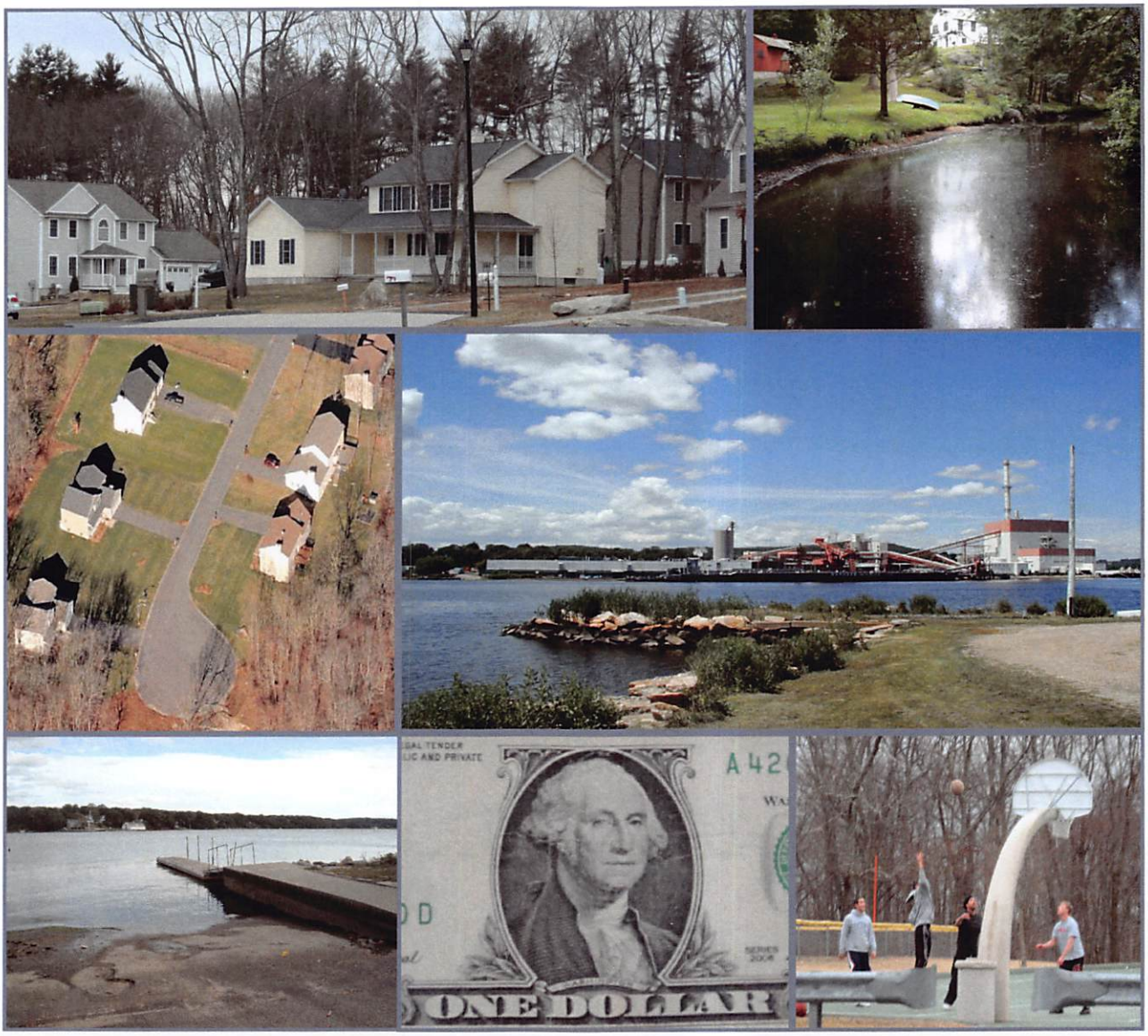
Commercial and Industrial Buildout by Zone				
Zone	**Existing Commercial Sq. Ft.**	**Buildable Acres**	**Potential Buildout Sq. Ft.**	**Potential Adjusted Buildout Sq. Ft.**
C1– Commercial	352,554	88	668,097	1,020,651
C2– Commercial	345,285	268	1,541,766	1,887,051
C3– Commercial	0	367	2,431,599	2,341,599
I– Industrial	420,179	99	1,390,223	1,810,402
LI– Light Industrial	257,628	421	1,616,448	1,874,076
Other Zones	94,969			94,969
Total	**1,470,615**	**1,243**	**7,558,133**	**9,028,748**

Considering the current existing commercial square footage is 1,470,615 and Montville is estimated to be 60 percent built out residentially, the potential commercial square footage might be as little as 2.5 million square feet.

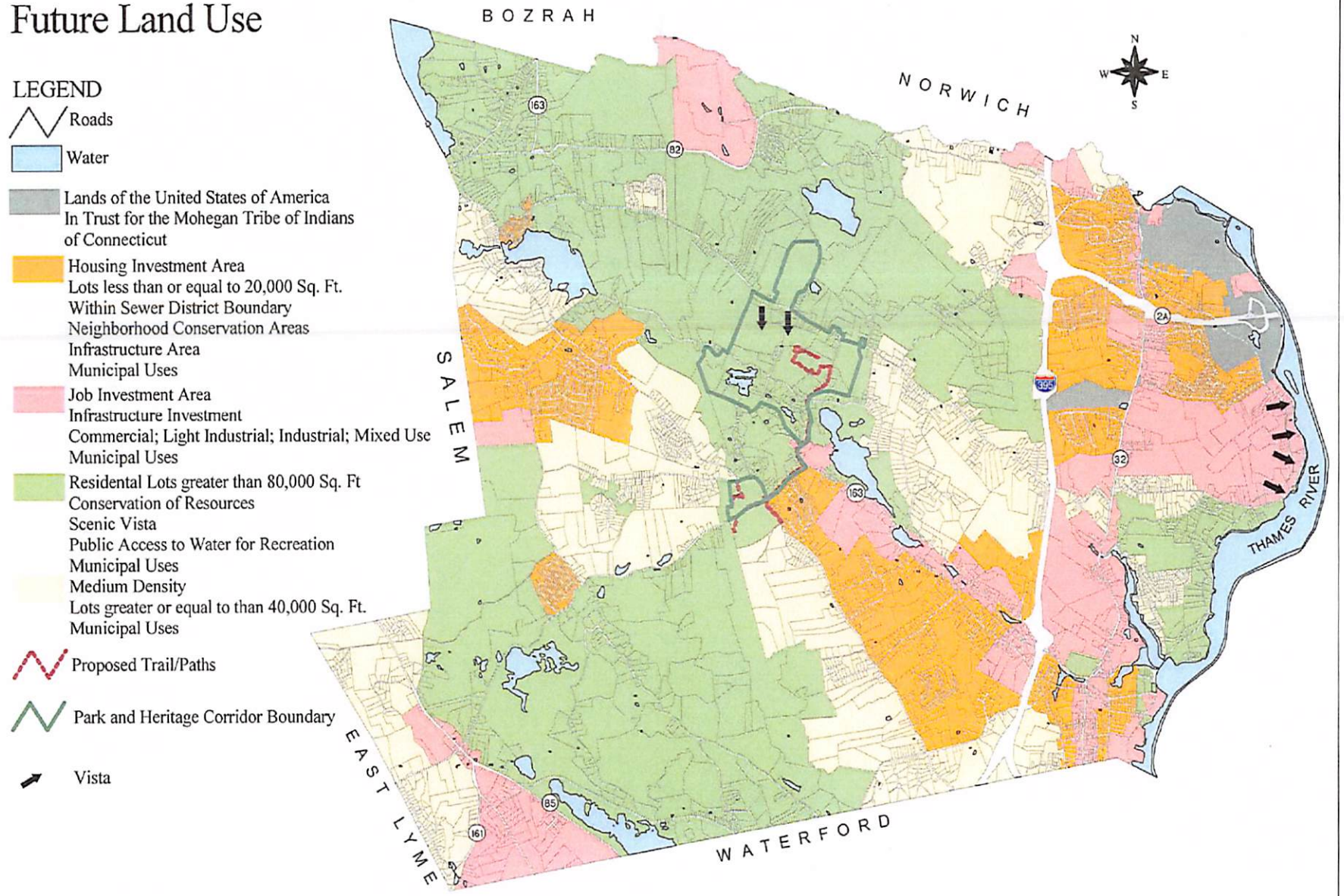
The 2.5 million square feet estimate, may be too low, as it does not take into account external economic forces, such as the casino. Considering this and that the maximum physical buildout is too high, a realistic range for commercial and industrial development potential in Montville is between 2.5 million square feet and the 9 million square feet.

Future Land Use

Much of what will determine Montville's future, as well as our own individual futures, is beyond our control. The global economy, the state's economy and events which will be tomorrow's headlines will impact the Town. So how do we navigate the future? Exercise restraint in succumbing to popular planning trends and avoid reacting to the last crisis. Stay nimble, you can not plan in absolutes, be humble enough to know that there are unknowns. Apply some lessons from the past and establish goals for the future. The goals fall into four broad categories - economy, infrastructure, housing, and conservation.



Future Land Use



MTV Planning | Town of Montville Planning Department
Geographic Information System Data

Figure 66

Plan Implementation

Abbreviation Key: **CC** – Conservation Commission; **EDC** – Economic Development Commission; **DPW** – Public Works Director; **M** – Mayor; **TC**- Town Council **PD** – Planning Director; **PRC** – Parks & Recreation Commission; **PSC** – Public Safety Commission; **PZ** – Planning & Zoning Commission; **TE** – Town Engineer; **WPCA** – Water Pollution Control Authority

PRIORITY - 1: Short term – one to three years - high priority investment and/or action

PRIORITY - 2: Intermediate – three to seven years - priority investment and/or action – adjust priority status if funding becomes available

PRIORITY - 3: Long term – greater than seven years - include in long term capital plan - adjust priority status if funding becomes available

Goal	Action	Implementation	Responsible Entities	Priority
		Policy	**Stakeholder**	
Culture and History				
Preserve the Congregational Church @ Meetinghouse Lane	Form a 401c Trust to insure perpetual preservation of the building	Historic Preservation	TC; Historic Society	3
Park and Heritage Corridor	Establish in accordance with Camp Oakdale Long Range Facilities Plan; Trail Systems Plan (all plans adopted in the 2010 POCD); follow criteria on p.44 of POCD	Apply for Trails Grants, Historic Preservation Grants, include in Capital Plan and Budget - Parks and Recreation Commission, Planning and Zoning Commission, Town Council	PRC; TC; PD;DPW; TE	2
Recreation and Open Space				
Multi-use Trail System	Establish in accordance with Camp Oakdale Long Range Facilities Plan; Trail Systems Plan (all plans adopted in the 2010 POCD)	Apply for Trails Grants; include in Capital Plan and Budget	PRC; TC; PD; DPW; TE	1
Town Dock and fishing area	Increase access to the Thames River – Initiate design; construct handicapped accessible fishing area; improve dock and boat launch	Apply for OLIS funding; pursue land swap with Smurfit Stone Corporation	PD; DPW; TE; TC	2

Goal	Action	Implementation	Responsible Entities	Priority
		Policy	**Stakeholder**	
Recreation and Open Space				
Construct fishing dock on Schofield Pond	Obtain easement from pond owner; construct handicapped accessible fishing area	Include in Capital Plan and Budget; apply for grants	PRC; DPW; PD; TC	3
Allow contributions in lieu of open space	Draft cluster open space regulation	Adopt changes to Zoning and Subdivision Regulations	PD; TE; PZ	1
Community Facilities				
Construct a new Public Safety Building	Building Committee to select project delivery method; develop cost estimate; authorize bid specifications	Bond for project in 2010; apply for available grants	Public Safety Bldg Committee	1
Fair Oaks Community Center	Building Committee to select project delivery method; develop cost estimate; authorize bid specifications	Expend STEAP Grant funds in 2010; include in Capital Plan and Budget	TC; PRC; DPW; PD: Youth Services Bureau	1
Infrastructure				
Replace bridges in the following priority order	Old Colchester Road Bridge over Oxoboxo; Montville Rd Bridge 1. Meetinghouse Lane over Cove River, CTDOT Bridge No. 04741 2. Chesterfield Road over Bogue Brook, CTDOT Bridge No. 095012 3. Pink Row over Oxoboxo Brook, CTDOT Bridge No. 03966 4. Pequot Road over Brook, CTDOT Bridge No. 085013 5. Grassy Hill Road over Latimer Brook, CT Bridge No. 04742 6. New London Turnpike over Trading Cove Brook, CTDOT Bridge No. 03967	Old Colchester Rd Bridge is funded; Montville Rd spans Norwich to Montville. A complete replacement should be constructed as a joint project between the two municipalities. The remaining bridges 1 -10 should be funded through the local bridge program, capital matches and further grants	PWD; TE; TC	1-2

Goal	Action	Implementation	Responsible Entities	Priority
		Policy	**Stakeholder**	
Infrastructure				
	7. Fitch Hill Road over Stony Brook, CTDOT Bridge No. 085006 8. Raymond Hill Road over Stony Brook, CTDOT Bridge No. 085009 9. Moxley Road over Brook, CTDOT Bridge No. 085014 10. Bridge Street over Oxoboxo Brook, CTDOT Bridge No. 4740			
Transfer station gate building	Design\Construct	Include in Capital Plan and Budget	DPW; TE; TC	1
Material & sweepings storage	Identify location and purchase if necessary	Include in Capital Plan and Budget	DPW; TE; TC	1
Local Road drainage projects	Laurel Point Road, Fitch Hill Road near Blais Road	Include in Capital Plan and Budget	DPW; TE; TC	2
Sand/salt shed	Identify location and purchase	Include in Capital Plan and Budget	DPW; TE; TC	2
Establish a road preservation program	Purchase software program	Include in Capital Plan and Budget	DPW; TE; TC	1
Road Standards/Sidewalk Standards	Draft new Road Standards; incorporate LID techniques in standards	Adopt new Road Standards in 2010, revise Zoning and Subdivision Regulations as necessary	TE; DPW; PD;PZ; TC	1
Complete Route 32/2A Drainage Constraints Study	Produce Drainage Constraints Map	Work with State, developers, Town to upgrade systems	TE; DPW; PD; TC	1
Replace the New England Central RR infrastructure, including bridge, between New London's Union Station and the Norwich Transportation Center	Include in Regional Transportation Improvement Plan; Initiate EIS	Apply for regional transportation funding	SCCOG	3
Establish Water Service Districts	Produce Water District Maps; Recommend Extension Areas	Include neighborhood Plans, Capital Plan and Budget	PD; WPCA	1

Goal	Action	Implementation	Responsible Entities	Priority
		Policy	**Stakeholder**	
Housing				
Housing Investment Areas	Designate areas within sewer district boundary (areas with existing public sewer systems) for higher density development, i.e. lots less than 20,000 square feet	Designate areas on Future Land Use Map	PD; PZ	1
Open Space Cluster Development	Develop draft regulations, incorporate LID techniques	Amend land use regulations as necessary	PD; PZ	1
Conserve existing neighborhoods	Maintain and replace infrastructure in neighborhoods containing older housing stock, areas such as Montville Manor; offer affordable housing opportunities	Include in Capital Plan and Budget Include in Housing Investment Areas on Future Land Use Map	PD; PZ; DPW; TC	1-3
Diverse housing	Allow on a long term basis, for the development of diverse housing types, including affordable housing, to help address identified housing needs	Evaluate progress of units built under the Town's existing Affordable Housing Regulation; include in Housing Investment Areas on Future Land Use Map; designate areas within sewer district boundary (areas with existing public sewer systems) for higher density development, i.e. lots less than 20,000 square feet	PD; PZ	1
Environment				
Stormwater management	Draft ordinance for an illicit discharge and detection elimination ordinance (IDDE)	Adopt ordinance in 2010	PWD; TE; TC	1
Low Impact Development - LID	Incorporate in site planning and design; use the 2004 Connecticut Stormwater Quality Manual, as amended, and the 2002 Ct E&S Guidelines, as amended as basis for design guidelines	Amend land use regulations as necessary; require in all Town projects	PD; PZ	1
Open space cluster development	Develop draft regulations, incorporate LID techniques	Amend land use regulations as necessary	PD; PZ	1

Goal	Action	Implementation	Responsible Entities	Priority
		Policy	**Stakeholder**	
Economic Development				
Economic Development Commission	Involve the local business community	Appoint members from the Montville Division of the Chamber of Commerce	TC	1
Retain and attract business	Designate Job Investment Areas on the Future Land Use Map; support small business; invest in and maintain infrastructure in commercial and industrial areas; develop small business action plan	Review land use regulations – ensure regulations are flexible and allow for the siting of new technologies, allow density bonus for job creation and retention – require long term contractual commitment; update the Montville Economic Development profile and brochure – publish the same on the Town Web page	PD; EDC; PZ	1
Develop Neighborhood Areas Specific Development Plan	Use GIS system and Commercial Buildout Study to develop plan	Support Commercial and Industrial Development	PZ; EDC	1
Identify Properties for Town Purchase	Develop Strategic Plan for acquisition	Establish acquisition fund	TC; EDC	2

Acknowledgements

Planning and Zoning Commission

Alan Marcus (Chairman)
Bart Ferrante Jr.
Anthony Siragusa
John Desjardins
William Pieniadz
Robert Baron
Robert Mastrandrea
Allen Polhemus
James Toner

Technical Assistance

Transportation

Southeastern Connecticut Council of Governments
Thomas H. Fenton, P.E. - Nathan Jacobson & Associates, Inc. - Town Engineer

Residential and Commercial Buildouts and Existing Land Use Map

Planimetrics, LLC

Stormwater and Multi-Purpose Trail System

Thomas H. Fenton, P.E. - Nathan Jacobson & Associates, Inc. - Town Engineer

Sewer Avoidance Area Map
URS

Administrative & Clerical Support

Judy LaRose - Administrative Assistant Town of Montville Planning Department

Town of Montville
Plan of Conservation and Development
2010

Town of Montville
Planning and Zoning Commission

Certificate of Adoption

This Plan was adopted at a legally convened meeting of the Montville Planning and Zoning Commission on April 13, 2010. The effective date of this Plan is May 15, 2010.

Alan Marcus, Chairman

William Pieniadz, Secretary

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