

A Case Study

Woodstock, Connecticut

December 23, 2003

Prepared for:

The Town of Woodstock, Connecticut
The Eastern Connecticut Conservation District
and
The Natural Resources Conservation Service

Prepared by:

Assistant Professor Mark Westa
The Program of Landscape Architecture
The Department of Plant Science
The University of Connecticut

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Agriculture and Community

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Acknowledgements

This report and related project information come from the hard work of many different individuals and groups. These people have devoted large amounts time and energy in an effort to make both the process and the final product useful and meaningful.

The Town of Woodstock, the University of Connecticut Program of Landscape Architecture, the Eastern Connecticut Conservation District and the Natural Resources Conservation Service have partnered to complete this study. Each has contributed significantly toward the completion of this project.

Selectmen from the Town are to be thanked for their ongoing support of this report and agriculture in general. These include: First Selectman Delpha Very, Past First Selectman Ernest Wetzel, Selectman Mike Alberts and Past Selectman Roger Gale. In addition Alexander "Sandy" Rotival has played a significant role gathering and coordinating both information and people. Margaret Anderson from the Woodstock Historical Society has helped with her knowledge of the development of agriculture and the town and Elaine Lachapelle helped to provide historic photographs for the report. Jay Livernois has represented the Board of Education. Joseph Adiletta represented the Woodstock Open Space Planning Committee. Ed Higgins has attended meetings as a resident and supporter of agriculture in the community.

It is also important to acknowledge the many citizens who are directly involved in the many faces of agriculture in the town everyday. These people have kept agriculture alive in the community through their hard work and commitment.

Norma O'Leary from the Eastern Connecticut Conservation District has been a long time supporter of agriculture in Eastern Connecticut and has been involved in both this report and many of the efforts described here in. Scott Gravatt, with assistance from Greg Smith, both from the ECCD have managed this study and many other efforts related to agriculture.

Walter Smith from the Natural Resources Conservation Service has supported this study and other efforts in many ways. NRCS has provided funding and provided ongoing technical and management support.

Mr. G. Leslie Sweetnam has generously allowed the use of his aerial photographs in this report.

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Aerial image of South Woodstock (image thanks to G. Leslie Sweetnam)

Project Summary

This case study looks at the importance of agriculture to the community of Woodstock Connecticut and the reciprocal importance and support of that community to agriculture. It also documents both typical and creative steps that have and can be undertaken to support and conserve agriculture, shared community values and the land as examples for other communities.

Below is a brief summary of the findings of this study.

Finding 1

Agriculture is central to the history of Woodstock, Connecticut.

• The land has been farmed for centuries; dating back to at least the 1600's when Native Americans farmed the land, early European settlers continued this use.

Finding 2

The physical attributes of the land, (primarily slope and soil types) and the climate make the land valuable for agricultural production, particularly when looked at in context of a highly urbanized region where much of the remaining rural landscape is not suited for agriculture.

Finding 3

Agriculture has significant value for the community.

- Agriculture and related agricultural businesses play a key role in the economic vitality of the community
- Agriculture plays a significant role in the social and cultural fabric, the visual character and the shared sense "place" of the community.
- The existing agriculture is a significant resource in the event that food or other agricultural products from other countries or regions in the US can not reach the markets of in the Northeast.
- Tourism and agri-tourism continue to increase across the country and the region.
- Woodstock's "relative advantage" for attracting commercial or industrial development is its rural, agricultural character

Finding 4

Recent trends in development and agriculture are having dramatic impacts on the town

- Population growth and new residential construction have expanded rapidly over the last several decades and is predicted to continue at a steady pace. This will continue to create strong demand on the housing market.
- Agricultural use of land and the number of agricultural operations are declining.
- It continues to be difficult for many in agriculture to continue operations. Productions costs are often high, particularly when compared to potential revenues. Labor is also scarce. New techniques and markets must be explored by farmers and the community.

Finding 5

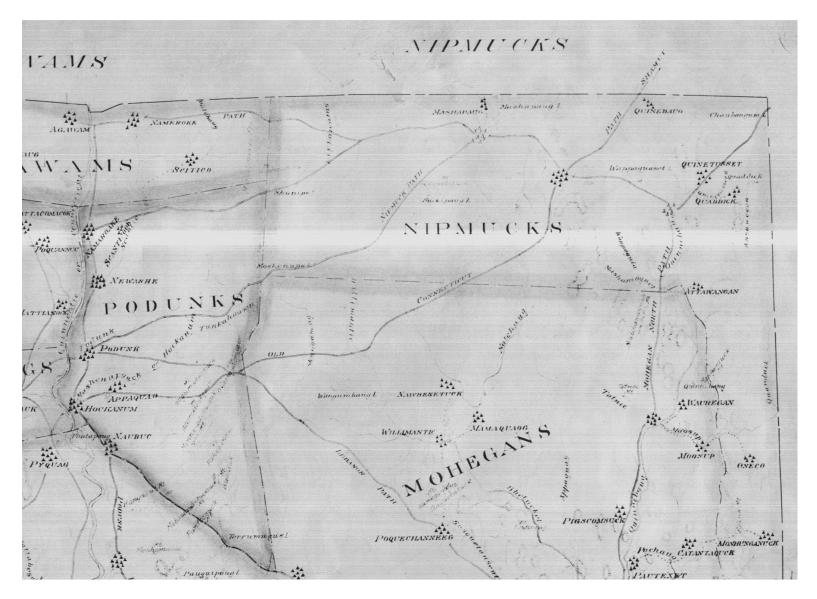
The community, both in the form of Town government led initiatives and the work of ad hoc groups and citizens, has done much to support agriculture over the last 5 to 10 years.

- Town Planning and Zoning Commission
- Town Conservation Commission
- Agricultural Support and Preservation Committee
- Tax incentives and abatements
- Public meetings, agricultural fairs and other events that allow community support to be expressed
- Workshops to assist farmers with business related concerns

Finding 6

Additional steps need to be taken in the very near future to protect agricultural and the rural character of the community. These include:

- Additional studies on land use and development
- Funding for open space
- Planning and zoning policies
- Town personnel
- Economic Development
- Business and marketing support



1625 map of Native American Indian Tribes (Map and Geographic Information Center, University of Connecticut)

Project Overview and Process

This study is intended to fulfill two important needs related to agriculture and community in Woodstock, Connecticut. First it is a case study of how the Town of Woodstock, along with many individuals and groups, has worked to expose and support the connection between agriculture and community. And second, it will provide thoughts and guidance towards future initiatives that can be undertaken to support agriculture and community in this and other towns.

Efforts in the town have brought together people with a strong interest in agriculture, people with a strong interest in community and people with a strong interest in both to further the understanding of the inherent connection of the two.

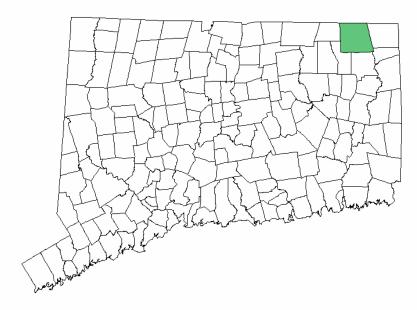
To document this effort the study has gathered information about how agriculture and community have been strengthened through specific actions over the last 5 years. Examples include influencing policy (economic, development and conservation), marketing of agriculture in a general sense, assisting farmers with business and marketing plans, and conservation efforts.

The study also depicts the long history of agriculture in the area, the high quality of the land for agricultural uses and the value of agriculture to the community and character of Woodstock. It links the continuing viability of agriculture with the continuation of the character and way of life that is found in Woodstock.

The second aspect of the study is to suggest ideas that will help further these efforts in the Town of Woodstock. These include influencing policy at the federal, state or local level, addressing residential development and growth, and other ideas related to the marketing of products and of agriculture in general.

This portion of the study is intended to address near term issues, but also discuss policy issues that might take time and effort to change but could significantly benefit agriculture and the community of Woodstock

The report will serve as a record of accomplishments, it will suggest future steps to be taken, and it will serve as a model for other communities facing similar issues.

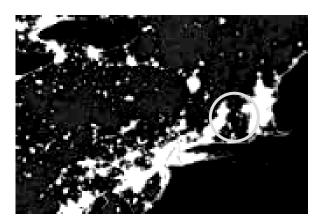


Woodstock is located in northeastern Connecticut

Process

In many ways the process taken to complete this, or any study, is as important as the findings of the study. The methods used to collect and analyze information are critical to the understanding of that information and thus the conclusions drawn. With this in mind it is critical that the key elements of the process, the individuals involved in the process and the resources used are clearly stated at the beginning of this report.

The case study began officially with the signing of an agreement between the Eastern Connecticut Conservation District and The University of Connecticut in May of 2003. This agreement provided funding for faculty in the Program of Landscape Architecture to provide technical assistance with the completion of the study. The funding provided by the Conservation District was part of an Environmental Quality Incentives Program / Educational Assistance Program (EQIP / EA) grant that originated from the Natural Resources Conservation Service.



Nighttime lighting related to development along the eastern seaboard. Woodstock is near the center of the circle.

Meetings

Several meetings related to the development of a case study report occurred in 2002 and early 2003, however the first official project meeting took place on June 16, 2003 and was used primarily to discuss the scope of the study and existing resources available. Thereafter meetings were held approximately once per month until completion. These meeting were used to discuss the progress of the report; review drafts of the report and raise new or related issues.

The second meeting was held on July 23, 2003. This meeting was used to review the resources that were being used to complete the study. These included both existing documents and individuals in the community who could add significant knowledge to the study. Another important part of the meeting was discussing the many specific actions and events that have occurred over the last five years to support agriculture and community.

The third meeting was held on August 26, 2003. At this meeting another draft of the report was discussed. In addition Margaret Anderson displayed a number of historic photograph related to the town and agriculture.

On Thursday, October 2, Mark Westa with assistance from Sandy Rotival met with the Assessor, Lynn Byberg to collect more information about lands used for agriculture and their assessed value. There was also an opportunity for individuals to meet with Mr. Westa about the study that day. We had the good fortune to meet with Diane and Todd Morin of Fairholm Farms to discuss farming and this study.

Additional committee meetings were held on October 16 and November 6. In each of these additional drafts of the report were prepared and reviewed.

On December 4, 2003 a meeting was held with a large group of representatives from the agricultural community. Mark Westa presented an overview of this report and accepted comments from the audience. The group had a wide ranging and very useful discussion of issues related to agriculture in general and the report. Over 30 representatives of the agricultural community were in attendance.

On December 11, 2003 the final draft of the report was reviewed. Comments from that meeting have been incorporated into the report.

Resources

Many different sources of information were used to complete this report. Specific references are included throughout the report when appropriate. General references include:

Environmental Quality Incentives Program / Educational Assistance, Woodstock, Connecticut, Plan of Work, Executive Summary, Windham County Soil and Water Conservations District, not dated.

Application for Sustainable Development Challenge Grant Program (FY1999/2000) United States Environmental Protection Agency, Project Title "Integrating Agricultural and Environmental Viability Into the 21st Century", no date.

"Urban and Agricultural Communities: Opportunities for Common Ground"; Council for Agricultural Science and Technology; Ames, Iowa; May 2002.

"Ordinance Concerning The Right to Farm in the Town of Woodstock", Adopted June 21, 2000.

"Attitudes Towards Farmland Preservation – A Survey of Connecticut Residents", conducted for The Department of Agricultural and Resource Economics, University of Connecticut, February 2000

"Woodstock Planning and Zoning Commission – 2002 Update of the Plan of Conservation and Development", 2002

"Year 2000 Survey of Citizens' Opinions in the Town of Woodstock"

"Resolution – Formation of the Agricultural Support and Preservation Committee of the Woodstock Planning and Zoning Commission", adopted September 21, 2000

"Report on June 21, 2000 Special Town Meeting and Public Forum on Local Agriculture"

"Woodstock Study Circles Project - November 1999-April 2000 - Meeting the Challenges of Growth and Development in Woodstock", Woodstock Residents with the support of the Board of Selectmen and the Planning and Zoning Commission, April 2000

"A Plan of Open Space and Conservation" – Prepared by the Woodstock Conservation Commission and adopted June 20, 2001

"Heritage and Horizons – Woodstock Remembers 300 Years", The Woodstock Tercentenary Committee, Woodstock, Connecticut 1986.

"Endorsement of Agriculture and Community", Board of Selectmen July 15, 2003.

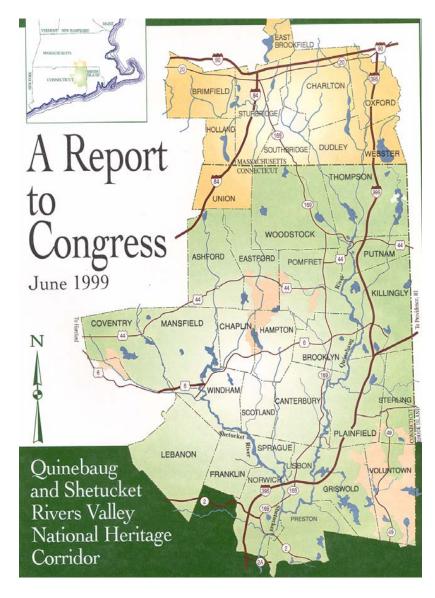
"Does Open Space Pay" Philip A. Auger, Natural Resources Network, UNH Cooperative Extension, not dated.

"Saving Land Lowers Taxes - The Economic Benefits of Open Space and Your Local Tax Rate", Robert Levite, not dated

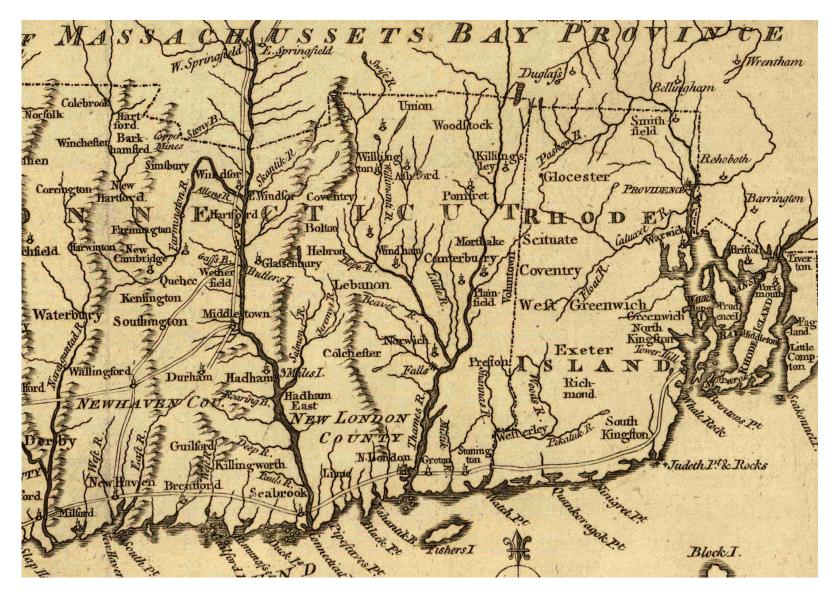
"The Connecticut Dairy Industry: Issues and Challenges", University of Connecticut, Department of Agriculture and Resource Economics, not dated.

"Land Use Problems and Conflicts in the U.S. - A Comprehensive Research Agenda for the 21st Century", The Northeast Center for Rural Development, 2002

Various letters, memos and emails related to the "Sustainable Agriculture and Woodstock Initiative"



Woodstock lies within the Quinebaug and Shetucket Heritage Corridor



A portion of a 1776 map of Connecticut and Rhode Island (Map and Geographic Information Center, University of Connecticut)

Historic Overview

Town Development

Woodstock was originally inhabited by the Wabbaquasset Indian tribe who were well known for their bountiful crops from the Woodstock area. One example of the abundance comes from 1630 when the chief of the Wabbaquassets, along with his son and several others delivered food to Boston where Governor Winthrop's colony was short of food.

By the summer of 1675 with King Philip's War underway the Wabbaquassets deserted their villages looking for protection and safety with the Mohegans. They left the valuable land near Woodstock more or less uninhabited by humans.

In 1682, Massachusetts bought a tract of land from the Mohegan nation. A group of thirteen men from Roxbury, Mass. volunteered to settle the area and called it New Roxbury. Those men were: Peter Aspinwall, John Gore, Thomas Bacon, Benjamin and George Griggs, Matthew Davis, John Marcy, John Frizzel, Henry Bowen, Ebenezar Morris, Nathaniel Gary, Benjamin Sabin, and Jonathan Smithers. They arrived in New Roxbury on April 5,1686, and held their first town meeting on August 25,1686. They planted crops and orchards and established a corn mill and saw mill. Over the next 20 years a trading post was opened and a school and meeting house were built.

On March 12, 1690, Judge Samuel Sewall changed the name from New Roxbury to Woodstock "...because of its nearness to Oxford." and in 1749, Woodstock became a part of Connecticut. Throughout the eighteenth century Woodstock was mainly an agricultural community. The citizens of Woodstock took an

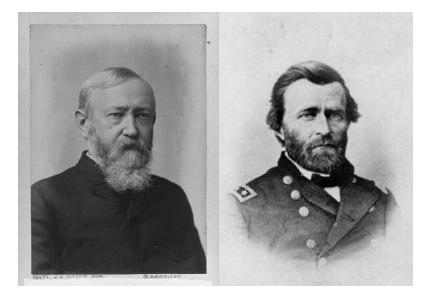
early stand against England's oppression of the colonists. On April 19, 1775 Woodstock sent "troops of horse" and 140 men under Captain Samuel McClellan in response to the Lexington Alarm.

Woodstock Academy was established in 1801. After the War of 1812, industry began to boom and by 1820, there were 2 distilleries, 2 wheel wrights, an oil mill, a fulling mill, carding machines, grist mills, saw mills, a goldsmith, and twine and cotton batting operations. Woodstock Valley was also known for its shoe factories.



Artist's rendering of Woodstock Academy

By the mid-nineteenth century industry had slowed. Woodstock then became a summer residence for the affluent of New York City and other large cities. Native son, Henry C. Bowen, returned to Woodstock in 1846, to build his summer home, Roseland Cottage. He held lavish Fourth of July Galas, in which the likes of Henry Ward Beecher, Gen. John Charles Fremont, President Ulysses S. Grant and President Benjamin Harrison attended. He was also a very large contributor to Woodstock Academy, the local high school.



Presidents Harrison and Grant



Roseland Cottage

In the early 1900s Stillwater Worsted Mills was a major employer in Woodstock. The community slowly moved away from manufacturing during the 20th century and reverted back to its original agricultural heritage. In the later part of the 20th century larger businesses including Linemaster Switch, Rogers Corporation and Crabtreee and Evelyn were established and continue today.

Much of this information was taken from: http://www.townofwoodstock.com/history.html

Agricultural History

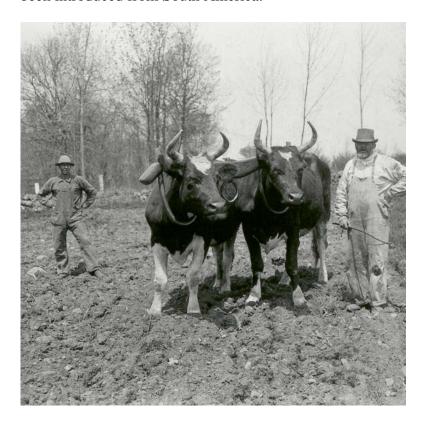
Native Americans farmed the Woodstock area prior to the arrival of European settlers. They employed a process of field rotation where forested land would be cleared and the debris burned leaving ash that would fertilize the field. The field would then be planted with a variety of crops including maize, beans, squash and pumpkins. After three or four years the field would be abandoned and allowed to return to forest through succession.

This method of farming suited the Indians for many reasons. It allowed for the use of land while it was still very fertile without the use of fertilizers which were not available. Also the combining of crops was efficient because crops covered the ground limiting weeding.

The use of the land in the area by Native Americans depicts the inherent quality of the land for many agricultural endeavors. Without the assistance of fertilizers and herbicides they were able to produce a variety of crops, and as described above, often in abundance.

The early English settlers who came to Woodstock also relied on agriculture. They used a system familiar to them which included control of specific parcels of land that where cleared and used for many years. These were typically planted with a single crop at any given time. The continued use of the land for a single crop often required fertilization and increased weeding. The settlers used an "infield-outfield" system where the settler was given a 15-30 acre lot where they typically had their home, plowland, orchards and possibly mowing fields. The outland was beyond the settled part of town and where used for pasturage, mowing and woodlots.

In the early 1700s there was an emphasis on livestock including swine, cattle, oxen, sheep and horses. The ability for livestock to walk to market made them a popular alternative. As farms became dependant on livestock the infield areas were often planted in a manner similar to Native American systems, including corn, beans, squash, pumpkins and potatoes which had been introduced from South America.



Historic image of yoked steers
(Image provided by Woodstock Historic Society (WHS))

By the 1750's agricultural production had begun to shift away from field horticulture and towards animal husbandry. Shipping and new markets made it profitable to export livestock to the West Indies. In Windham County cheese and butter were also exported.

By the early 1800's, due to the consistent lack of crop rotation and fertilization, the area began showing signs of significant soil depletion. In 1817 the Connecticut Agricultural Association was formed to advance improvements and education in agricultural practices.

By the mid 1800's many families had moved to the west or to larger manufacturing areas. Immigrant families often moved onto the abandoned farms and began commercial farms with specialized crops and a reliance on cash incomes for other needs. By 1860 Woodstock led Windham County in the number of farms and productive value of cleared land.



Historic image of cutting corn (WHS)

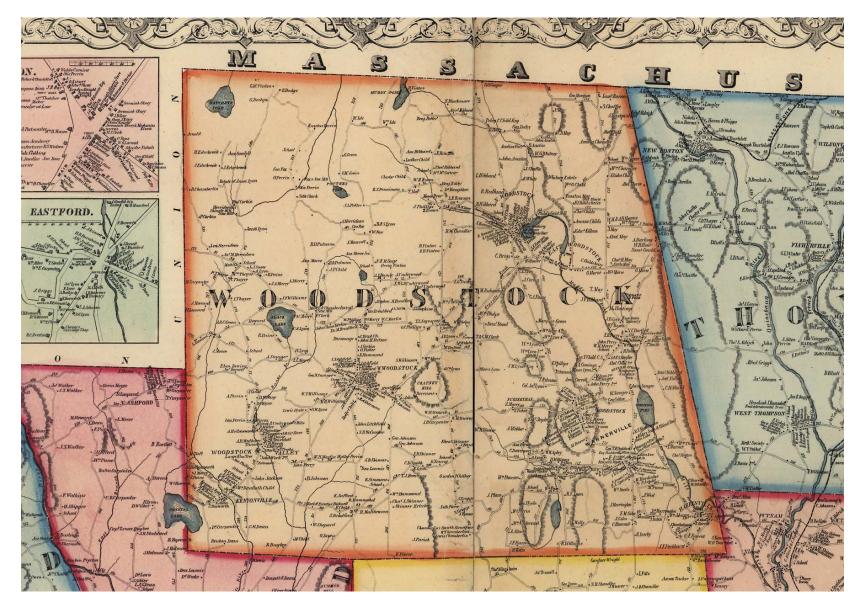
By the early 1900's intensive agriculture began in Woodstock. The number of acres being farmed declined sharply but value of production rose sharply. In 1880 one acre yielded \$10.00. By 1920 that acre produced \$48.57. By 1919 dairying brought more cash than any other crop. Most farmers specialized in dairy, poultry or fruit production, with some vegetable production, floriculture and tree farming.



Historic image of apple picking (WHS)

Market forces since that time have led to an increase in size and specialization of farms and have also led to the decline of the number of farms and total acreage in farming.

Source: Much of this information comes directly from "Heritage and Horizons – Woodstock Remembers 300 Years".



A portion of an 1856 map of Northeastern Connecticut (Map and Geographic Information Center, University of Connecticut)

Natural Setting

On June 20, 2001 the Town accepted a report prepared by The Woodstock Conservation Commission entitled "A Plan of Open Space and Conservation". This report not only is a valuable tool in and of itself but many of the thoughts and findings contained in the report had a significant impact on the "2002 Plan of Conservation and Development Update"

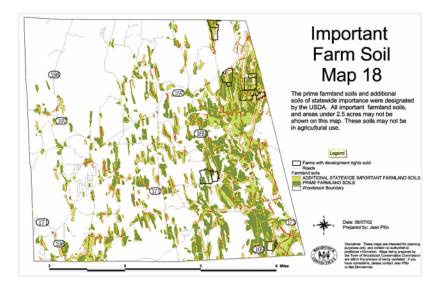
"A Plan of Open Space and Conservation" contains very complete descriptions and mapping of critical cultural resources and natural resources. Most, if not all, of the information in the report has relevance to this report and to the connection between agriculture and community.

Some of the maps that depict the importance of agriculture include:

- Land in Agricultural Use
- Committed Open Space
- Land Use
- Land Cover
- Productive Forest Soils
- Important Agricultural Lands
- Important Farm Soil
- Major Viewsheds

These maps when taken together reveal many important aspects of the relationship of agriculture and community. They show areas where the physical conditions of the land, and particularly the soil type and topographic slope, are suited for a variety of agricultural pursuits. They also show the large land area in

agricultural use and which of those areas have some protection from development.

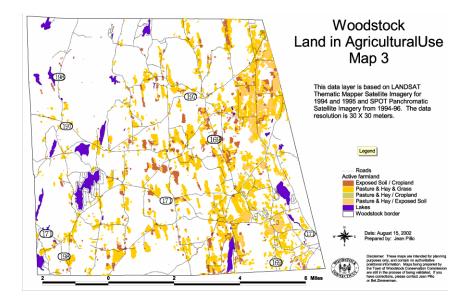


This map from "A Plan of Open Space and Development" depicts prime farmland soils in dark green and additional statewide important soils in lighter green.

These maps come together to show that the physical conditions make Woodstock a significant resources for agriculture production in a highly developed region. The protection of this unique resource may become even more significant as issues of food safety and transportation costs arise in the future. The value of this land resource goes beyond the Town, region or even state. We must think for generations to come and consider the value of this land in agriculture, versus its use for other

purposes, especially residential development that can occur in a broad range of settings.

The maps also show that agriculture plays a very significant role in the character of the community. Fields, forest, orchards, livestock and many other aspects of agriculture are responsible for patterns and open spaces that are enjoyed by many, both residents and visitors.

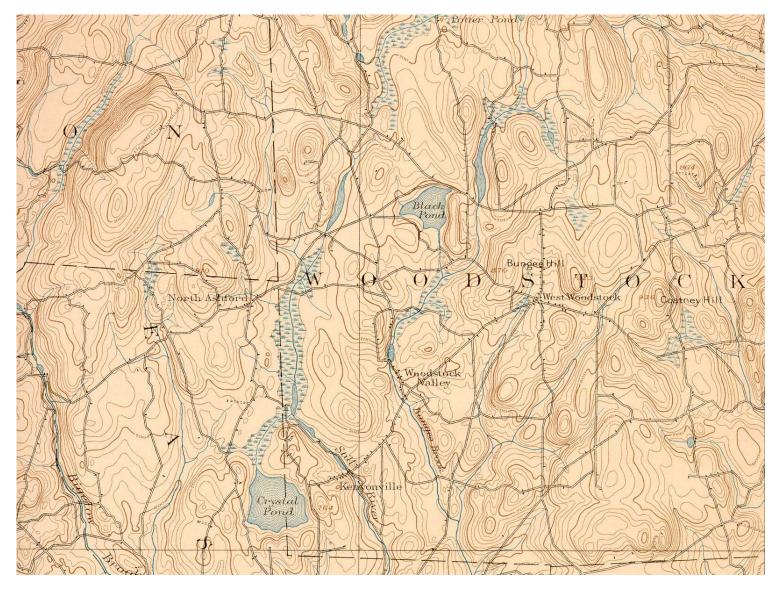


Orange/brown areas depict land used for agricultural purposes

"A Plan of Open Space and Conservation" states that "...developing and implementing a farmland preservation plan appears to be the town's greatest long-term conservation challenge." It goes on to say "... that maintaining a healthy and thriving agricultural community is the backbone of any successful open space plan."



Chopping corn in Woodstock (G. Leslie Sweetnam)



A portion of 1892 USGS 15 minute quadrangle (Dimond Library, Documents Department and Data Center, University of New Hampshire)

Value of Agriculture and Community

In the Town of Woodstock, Connecticut there is no seperation between what is "agriculture" and what is "community". They are a marriage. Without agriculture the very essence of the community would be something other. And without the community there would not be the necessary support and services for farming.

As the earlier "Historic Overview" depicts agriculture has been central to the development of the community throughout its growth. From the time when the land was inhabited by Native Americans until today the two have been intertwined.

Economic Value

As with all communities a strong economic base is critical to its success. In Woodstock agriculture has been the dominant economic force.

"A Plan of Open and Conservation" details many findings related to the economic value of agriculture in Woodstock. It states that at the time there were 47 farms, sixteen of which were family owned dairy farms. Other agricultural operations include 57 acres of apples, five acres of peaches, four acres of blueberries or raspberries, 334 acres of Christmas trees and five nursery, bedding and vegetable operations.

Other agricultural activities include boarding horse farms, beef cattle farms, maple syrup producers, honey producers and a poultry farm.

Dairy farms alone generated approximately six million dollars of gross revenues, while agriculture in general provided just over 100 full time jobs and eighty to ninety part time jobs.



Quasset Orchards in bloom – South Woodstock (G. Leslie Sweetnam)

Visual Character

Agriculture plays a very important role in the visual character of the community. This land which was once predominantly forested has been opened for agriculture from the very first habitation by mankind. Native American Indians opened small portions of land for the crops. Early European settlers also opened the land for both crops and pasture land.

More recently the patchwork of open field and forest land along with village centers and occasional farm house or residences has become the very essence of the community. This combination provides for both the enclosed tree lined roads and the open vistas of rolling farm land and distant hills. The patterned landscape of field and hedgerow, row crops, orchards, Christmas trees, is comprehendible and comforting. It expresses land that is controlled by both man and nature.



South Woodstock (G. Leslie Sweetnam)

"A Plan of Open Space and Conservation" discusses and maps many of the important viewsheds and vistas in the town. Many of these occur because the land is cleared allowing long views. Unfortunately these long views also mean that object places on the open landscape, such as new residential housing often interrupts these long views or can be seen from many vantage points and from a distance.

Culture

Agriculture is a common element that ties many individuals and families together. The very word agri-culture suggests the strong connection between how the community lives and the land. Also the heritage of the community is deeply tied to its agricultural roots. A common sense of community is a key component of a strong and successful community.



Fields and forest (G. Leslie Sweetnam)

Natural Resources

Agriculture, while working the land, typically also protects many of the natural resources found there. Farmers tend to employ the more productive lands while allowing other portions of the land to remain in a more natural state. This provides both significant habitat for plant and animal species, but also links together other large open spaces.

Often agriculture while using the land does so in a way that does not significantly change the function of the land. A good example is the hydrology of the landscape which might continue to function in a manner similar to when the land was forested since slope and permeability may not be significantly altered by farming.



Image depicting stream corridor running through agricultural land (G. Leslie Sweetnam)

At the same time there are some activities undertaken by agricultural operations, and particularly large operations, which have the potential for significant harm to natural resources. In these cases it is critical that proper education and resources be employed to safeguard natural resources.

Food Security

The ability for agricultural operations to supply the basic needs of the nearby population is not one that should be overlooked. While we live in a society where food products come from a myriad of sources and locations it should not be assumed that this will always be the case.

Issues such as international relations, disease, transportation costs and others could reduce the availability of food sources from other parts of the country or the world. While this may not be a large threat, small changes occurring over time could have significant impact.

The cost of protecting land and food resources should also enter into this equation. Allowing high quality land to remain undeveloped is something that could easily be accomplished, particularly at a state or regional level.

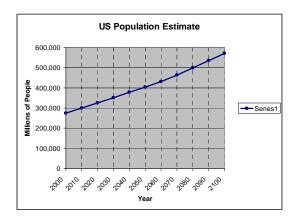


A portion of a 1951 aerial photograph of Woodstock (Map and Geographic Information Center, University of Connecticut)

Recent Trends

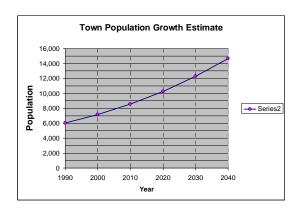
Growth

Changes in the town population, residential properties and other related statistics help to depict how the Town of Woodstock has changed over the last few decades and also leads to predictions for how the Town might change in the upcoming years.



"Middle" estimate of population growth according to US Census Bureau

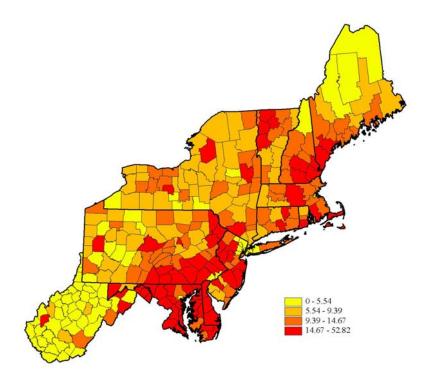
Population has grown significantly over the last few decades. In 1990 the population of town was just over 6,000. By 2001 the population had risen dramatically to 7,332, an increase of over 22%. This also equals an increase of 1.8% per year. At this rate Woodstock's population will grow by over 130 each year and would double from the 1990 number of 6,000 before the year 2040.



Estimate of town population growth based on 1990-2003 rate

In the year 2000 there were approximately 2,754 households in the Town of Woodstock. By 2001 this number had risen to 2,811 households. This equals approximately 1 household for every 2.6 in population. Given the projected rise in population and the general trend in the state of fewer people per households a significant increase in new households can also be expected with the increase in population

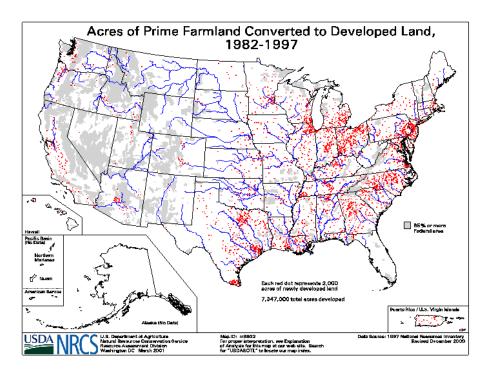
At current rate of population growth it would be expected that at least 50 new households will need to be created per year (130/2.6). This is supported by the approval of 349 residential subdivision lots in Woodstock in the time period between 1991 and 2001. By 2010, if current rates continue, population is expected to rise to over 8,500 with an expect rise in households to over 3,400.



Single-Family Home Building Permits Issued, 1990-2000 (as a percent of existing homes in 1999) (NRCS)

Given current zoning and market trends this market demand would most likely be met by the construction of single family homes on land that was previously undeveloped. Current zoning in the town requires a minimum of 2 acres per lot. This along with a frontage requirement of 200 feet and the generally irregular shape of existing lots means that the typical subdivision lot will be somewhat over the 2 acre minimum. At the current rate of development approximately 125 to 150 acres of land will be developed each year.

Typically the cost of town services to support residential development is greater that the taxes generated. Increased residential development typically requires increased fire and police protection, increased highway plowing and maintenance and most of all increased school requirements. While this increase in residential development will increase the tax base it will not alleviate the tax burden on existing residents and will likely increase that cost to existing residents.



NRCS mapping, each red dot depicts 2,000 acres of farmland converted to developed land. (NRCS)

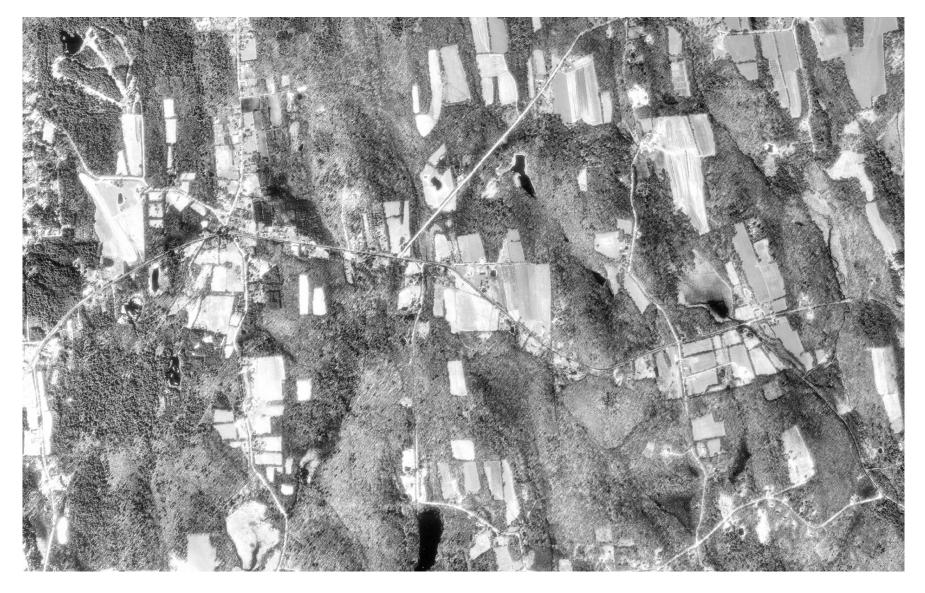
Agriculture

Historically agriculture has been a significant part of Woodstock culture and economy. As stated in the June 2001 Plan of Open Space and Conservation there were 47 farms at that time.

The grand list from 1992 depicts 274 accounts with some portion considered farm. These account for 9,252 acres of land. By 2002 the number of farm accounts had actually risen to 322 however the number of acres had been reduced to 8,518. The increase in the number of accounts is likely related to the tax incentives for farm land. The decrease in farm acres by over 700 acres would likely have been even greater if not for these new farm accounts.

Farmers continue to find viability difficult. The cost of production is high particularly when compared to potential revenues. Labor is hard to find and adds significantly to production costs. At the same time the value and demand for land continues to increase making selling of farm land more enticing.

The 1997 summary of trends in the Quinebaug - Shetucket River Basin also depicts significant land use changes. Over 8,900 acres of active agricultural land was lost while developed land increased by over 21,100 acres.



A portion of a 1995 aerial photograph of Woodstock (Map and Geographic Information Center, University of Connecticut)

Recent steps taken to strengthen agriculture in the community

The Town of Woodstock has enjoyed the strong support for agriculture for much of its history. In many ways this was simply the outcome of its history as discussed previously. Agriculture has been a central part of the economic success and of the culture for centuries.

The Woodstock Fair is one of the most prominent events that clearly depicts the integration of agriculture and community. The fair has long provided a place for agriculture and community to come together to enjoy the success of both.

Over the past five years there has been a concerted effort to enhance the connection between agriculture and community in the Town of Woodstock. In many ways this effort has not been simply to build "good will" support but rather make evident the vital, symbiotic relationship between the two.

The efforts to support agriculture and the community of Woodstock that are part of this case study began in the middle of 1999. Obliviously there have been other significant efforts previous to this time, however in an effort to document a recent cohesive effort and their impacts this time frame was selected.

It is very important to note that the farm community has been working very hard to overcome pressures that affect the viability of their operations. Many have been working to explore new business opportunities, develop new products and reach new markets.

The efforts to support agriculture and community have many facets. As the focus of this report suggests the two are linked and

support of one is a support for both community and agriculture. A time line of initiatives is one way to help illustrate these efforts:

Timeline

In the summer of 1999, a group met to discuss the emerging issue of agricultural viability in the state. Associate Dean Nancy Bull from the College of Agriculture and Natural Resources at the University of Connecticut hosted the group. The group that met included representatives from the Town of Woodstock, Natural Resources Conservation Service, Eastern Connecticut Resource Conservation and Development Area, Very Alive, Windham County Soil and Water Conservation District and others.

In the summer of 1999 an application for funding from the United States Environmental Protection Agency through their *Sustainable Development Challenge Grant Program* was prepared by the Eastern Connecticut Resource Conservation and Development Area. This brought together a number of groups and individuals that had an interest in "Integrating Agricultural and Environmental Viability Into the 21st Century" as the project was titled.

To assist the Woodstock effort the Natural Resource Conservation Service provided the Windham County Soil and Water Conservation District (WCSWCD) with \$30,000 of EQIP Educational Assistance funds. WCSWCD develop a work plan and used these funds to address issues raised by Woodstock farmers and community members.

Agriculture and Community

Woodstock, Connecticut

Around the same time the residents of the Town expressed their concern for protecting important land assets by overwhelmingly supporting an ordinance that created *a land acquisition fund*. This fund is overseen by an appointed commission and funded with annual town appropriations.

On September 15, 1999 a group of Woodstock residents met with Associate Dean Nancy Bull to discuss issues related to agriculture in the town and how the College of Agriculture and Natural Resources at The University of Connecticut could be involved.

The Woodstock Study Circle Projects took place from October 1999 through the spring of 2000. This was a discussion of many issues. Preservation of farmland and open space was identified as a high priority issue.

An opinion survey of town residents was published in May of 2000. This survey was undertaken to assist with the Planning and Zoning Commissions update to the Plan of Conservation and Development.

On June 21, 2000 a *Special Town Meeting and Public Forum On Agriculture* was held. The turn out for the event was more then originally planned with over 450 residents attending. At this meeting the Land Acquisition Fund Ordinance was amended to include the Farmland Preservation Program and a "Right to Farm" Ordinance was adopted.

The Agricultural Support and Preservation Committee was formed via Town Resolution September 21, 2000. The group is comprised of Town officials, citizens and members of the agricultural community. This group has done much to support

agriculture and the community since its inception. It is important to note that this Committee reports directly to the Planning and Zoning Commission and therefore can significantly impact land use decisions in the Town.

A digital base map depicting property lines and linked with assessor's data was created in 2000 by a consulting firm. While this has many uses, the ability to monitor agricultural properties and understand emerging land use patterns will be helpful for those concerned with agriculture in the town.

The Woodstock Conservation Commission prepared "A Plan of Open Space and Conservation" from 2000 – 2001. This document was prepared to help inform the drafting of the "2002 Update of the Plan of Conservation and Development". The Conservation Commission's report states that one goal is to "... preserve farmland and enhance commercially viable agricultural operations in Woodstock..."

A roundtable discussion related to sustainable agriculture and the Woodstock initiative was held January 18, 2001. The meeting looked at the existing condition of agriculture in the region at that time and what could be done to keep agriculture viable.

On June 13, 2001 a public forum was held with representatives of the Nature Conservancy, The Green Valley Institute, Non-point Education of Municipal Officials and local officials to discuss issues of development, natural resource protection, open space and agriculture.

In September of 2001 the first "Celebrating Agriculture" event was held at the Woodstock Fairgrounds. The event highlighted the vitality of the region's agricultural economy and its importance to the area's heritage and quality of life. This event was held again in 2002 and 2003 and is scheduled to be an annual event.

In 2002 Woodstock took steps to double the *tax exemption for farm equipment*.

The "2002 Plan of Conservation and Development Update" is a very important step the Town has taken to support agriculture and community. One of the five chapters in the Update is "Agricultural Issues and Opportunities". This chapter lays out many of the current forces impacting agriculture, it discusses many of the initiatives discussed here and it includes nine recommendations to help support agriculture. This document is critical because of its role in guiding conservation and development over the next 10 years.

The Board of Selectmen passed a resolution endorsing this study "*Agriculture and Community*", July 15, 2003

A study released on Saturday, July 26, 2003, commissioned by the Quinebaug and Shetucket National Heritage Corridor and conducted by the University of Connecticut's Center for Research and Analysis, shows significant support for locally grown agricultural products. Sixty percent of those surveyed said they would spend up to 20 cents more per gallon of milk if they knew it was from a local dairy farm. Many said they would travel out of their way to find fresh, locally grown produce.

A workshop "Protecting Family Lands" was co-sponsored by the Woodstock Conservation Commission (date).

(Much of this information and text is taken from the 2002 Plan of Conservation and Development Update)

Ongoing

Related to these specific events are several ongoing efforts that are directed at strengthening agriculture, strengthening community and enhancing the ties between the two.

- Business and marketing plans Farmers have been able to receive training and assistance in the creation of business plans for their operations. Related to this is the development of plans to help market their products.
- Succession Planning Farmers have been able to receive training and assistance related to passing their land and farm operation on to relatives or others interested in farming
- Specialty Products Farmers have been able to receive assistance with the development of new products unique to the area.
- Manure storage and nutrient management planning workshops



1951 aerial photograph of West Woodstock (Map and Geographic Information Center, University of Connecticut)

Next Steps

There are a number of steps that can be taken at the local level, the state level and the federal level that could significantly impact the future of agriculture, the growth and character of the community.

Local Level

Conduct a Build Out Analysis

One powerful tool to help town leaders and residents understand issues of development and zoning is to complete a build out analysis of the town. This type of study looks at projected population growth, development trends and current zoning regulations and depicts how the town will likely develop in the future.

This is a powerful tool because it both shows the speed with which development occurs and the final build out of the town. While much of the timing and sequence of development of any single parcel is conjecture, the numeric results and the final build out are likely very accurate.

In 2002 The Green Valley Institute completed a "Build out Analysis" for the Town of Brooklyn, CT. The results of this study could be very informative for Woodstock due to the similar nature of the two communities. Also the study could be used as a model for a similar effort in Woodstock.

Conduct a Cost of Community Services study

Studies that also look at the cost of providing services such as police and fire protection, highway maintenance and education can also be undertaken. These often show that residential

development while increasing the tax base of the community will not cover the cost of additional services required. These costs must then get redistributed to existing residents increasing the mill rate and their taxes.

In 2002 The Green Valley Institute completed a similar study for the Town of Brooklyn. The results of this study could be very informative for Woodstock due to the similar nature of the two communities. Also the study could be used as a model for a similar effort in Woodstock.

The American Farmland Trust and other groups have compiled these types of studies from various locations. These depict a range of costs to the community for various land uses. In many cases the information in these studies may be powerful enough that a study specific to an individual town may not be needed.

Continue to update Zoning regulations to support agriculture and open space

Zoning and other regulations such as frontage and setback requirements play a strong role in the pace and form of development. Given the expected rise in population and the related demand for residential development in many areas of the state, including Woodstock, these play a critical role.

It is important to realize that for many communities zoning will not significantly slow growth but rather is the proscribed form that development will take. Given time and demand development will fill out the town more or less exactly as depicted in zoning documents. It is critical for Woodstock to revisit their zoning requirements and assess if they are and will create the community they envision for the future.

Educational presentations about the impacts of zoning regulations, setbacks and related issues are available from several groups including The Green Valley Institute.

Encourage increased funding for the purchase of open space In 1999 the town set up a land acquisition fund which can be used to purchase lands. This program is funded through annual appropriations. Increases in these appropriations would allow increased purchases of open space and could provide substantial funds to purchase lands that are critical elements in the overall open character of the landscape.

It is important to note that Federal funds are available to help with the purchase of agricultural lands. These funds can be used to assist with a local initiative. The funds will match local efforts, effectively doubling the local investment.

Encourage Cluster / Conservation Development

Cluster development allows the movement of development density within one property. Typically an "as of rights" plan is developed that depicts the maximum number of housing units that could be built given the land, which may contain unbuildable areas such as wetland or steep slopes, and given zoning for the parcel. That number of lots can then be constructed on a smaller portion of the parcel. This can allow the developer to build the allowed number of lots while protecting other areas of the parcel, often to protect natural or visual resources.

The developer can benefit from this type of design because infrastructure costs, particularly roadway lengths can be reduced, and the town can benefit by the protection of important resources. The decision on which resources should be protected is often difficult. The value of prime agricultural soils, open views, forested habitat, watersheds, riparian corridors and others can all be appropriate resources to be protected. The community must set priorities through an open space planning process.

Encourage Purchase of Development Rights / Conservation Easement

The value of a property has historically been divided into several different layers of value, for example the mining rights of a property can been sold separately from use of the land's surface. The value of the land that is derived from market forces to develop the land can also be sold separately from the land itself.

Purchasing the development rights allows the existing use of the land, whether residential or agricultural to continue, but sells of the ability to further develop the land. This is often beneficial to the land owner who realizes some or all of the potential value of development and also meets other goals such as limiting development in an area of town.

Conservation easements work in a similar manner by placing an easement on the property which stops development from occurring.

Encourage Transfer of Development Rights

Similar to the purchase of development rights, rights can also be moved from a "sending" property to a "receiving" property. This is typically a private sale with the rights sold by one land owner to another. This is an excellent strategy in a town that

wishes to have some areas with low growth and other areas where more densely developed areas are encouraged. This could allow quality agricultural land to remain undeveloped while allowing increased density in an appropriate village area.

Encourage a right-of first refusal program

This type of program would allow the Town to purchase from land owners the right to be notified if a property is being put up for sale. The Town would then have a set time period in which to develop an offer to purchase the property.

This would keep the land in private ownership and at the same time provide the town some ability to make a decision as to the importance of a property.

Require Landscape Architects Seal on appropriate development drawings and documents

Licensure law in the State of Connecticut states that the practice of landscape architecture means rendering the service of site planning. It further describes this to include "the investigation, selection and allocation of land and water resources for appropriate uses,...preparation, review and analysis of master plans for land use and development; production of overall site plans... and related details and specifications"

Several towns in Connecticut, including Mansfield, are requiring landscape architects to complete an analysis of sites prior to development. In other places, such as Devens, Massachusetts a landscape architect's seal is required on the project site plan. Given the training, environmental ethics and language in licensure law this can significantly improve the design of site development projects.

Continue to use economic development tools to support existing agricultural operations.

Economic development tools typically used to attract and support industrial, manufacturing or commercial operations can continue to be used to support agriculture. These include loan programs, tax abatement, aid in business planning, aid in marketing and sales, and other similar efforts.

Agriculture is a significant, ongoing industry in the town, not only the agricultural entities themselves but related distributors and suppliers. The town must continue to support these operations as a keystone to the economic development of the town.

Encourage development of appropriate business that would benefit from and promote community character

Attracting businesses for which quality of life is a key element in their location decisions would also benefit the town. These companies would increase the tax base and provide employment. At the same time they would also likely value and help to protect the existing character and quality of life of the town.

Encourage development of appropriate agricultural research and technology businesses

There are many new areas of research, technology and production related to agriculture that could benefit from the existing agricultural infrastructure in Woodstock. These types of ventures could provide significant economic growth while fitting into the culture and character of the community.

Economic development should continue to explore these possibilities including joint ventures and the development of incubator facilities to attract these types of businesses.

Encourage Balanced Growth

Many towns including Woodstock have economic development committees or commissions that promote industrial and commercial growth in the community. This is critical to a well balanced community both in the sense of creating jobs and services needed in the community and to support the tax base. It is important to note that many studies in similar towns show that the cost of community services (such as schools, police and fire protection) for most residential development are not covered by the taxes generated. Industrial and commercial uses on the other hand provide much more tax revenue than the cost of community services. These do however, often generate additional residential development.

While the town enjoys relatively easy highway access and is centrally located in the New York City / Boston area, it has few advantages compared with other nearby towns. These would typically include such things as low taxes, low cost of living, utilities and other infrastructure, or designated state or federal development zones which are not found here. Woodstock does however enjoy a very high quality of life. This is Woodstock's relative advantage and can be directly tied to visual character, sense of "place" and sense of community.

Explore alternate business models to support agriculture

The value of agriculture in many ways is shared by the entire community of Woodstock. At the same time the costs are bourn by the land owners and farm operators. There are many business models that allow shared investment in a business operation. While the motivation for these business models is typically a return on the financial investment there is nothing that prevents the return from being other values such as the continuation of open space or a share of the product generated.

Continue to revise tax policy to support agriculture and open space

Reduction or abatement of land and equipment taxes can aid agricultural operations that are distressed. Often because of development pressures the value of the land is very high compared the agricultural business. State tax laws do provide relief however local policy can also help.

Continue and expand ties to the University of Connecticut The link between Woodstock and the University of Connecticut, and particularly the College of Agriculture and Natural Resources, could be enhanced. The high quality agricultural

Resources, could be enhanced. The high quality agricultural land in Woodstock could be used for test plots and demonstration areas. There are also opportunities for joint ventures or incubator projects, particularly in situations where the facility could be better suited for a location off campus.

Continue to provide business and successional planning information to agricultural business

Workshops and other opportunities to help agricultural operations with business planning can greatly aid farmers. Often these might allow for a decrease in costs, or more efficient use of time.

Estate planning and the transfer of land and other assets is a complex issue. Legal and financial expertise in these areas can help agricultural operations continue across generations.

Provide information related to sale of land or development rights to third parties.

There are tax and other benefits for land owners who sell the land or development rights to third parties. Often these can be arranged to provide income and tax relief to the current owners while protecting the land asset for the long term.

Continue to hold community events that encourage understanding of agriculture

Events that educate the community about agriculture practices can help develop an understanding of the needs and benefits of those practices before they become a source of dispute between home owners and farmers. Continued ongoing communication is very important.

Also events that encourage social interaction and show neighborly support for agriculture can do much to support agriculture as a whole.

Marketing

Marketing of regional produce and specialty products is a has a large potential impact on the success of agriculture in the region. The recent study commissioned by the Quinebaug and Shetucket National Heritage shows that shoppers are willing to spend more for locally grown produce.

In addition there is the potential to link tourism and product marketing with specialty products. This could include a wide variety of farms products that are unusual or of extremely high quality. Specialty cheeses, meats or wines are all good examples of products that could fill a niche market. These could add to the regional identity a draw people to the area.

State level

Lobby for increased open space funding

Currently the State of Connecticut has an Open Space Fund that is used to purchase land. Increased funding of this important initiative could benefit Woodstock if funding was available.

Encourage fee in lieu of open space

Currently developers are required to set aside areas of open space within developments. Often these are small and relatively inconsequential. Instead developers could pay a fee to the town in lieu of the providing the open space. Those monies could be accumulated and used to purchase larger more significant parcels of undeveloped "open space".

Lobby for increased Tourism support for the town and region Local, regional and State agencies and groups must continue to tap into the expanding tourism opportunities for the region. Tourism can bring significant revenue to the area and

Tourism can bring significant revenue to the area and opportunities to see agricultural operations is one of the many draws that can be promoted in the area.

Recently the state consolidated the tourism board of northeastern Connecticut with that of southeastern Connecticut. It is critical that the assets of Woodstock and the surrounding towns continue to be advertised.

Lobby for increased funding to help farmers put manure management facilities in place

Recent regulations related to manure management, primarily to reduce nutrient runoff to streams and lakes, are often difficult for farmers to put in place. The regulations appear to have significant benefits for the environment and the public at large,

however much of the cost for implementation is being carried by individual farmers. Technical and financial assistance are needed to support these efforts.

National Level

Lobby for the support of agriculture in Connecticut

The U.S. Department of Agriculture, while enjoying increased funding has shifted much of its focus to accommodate the environmental problems associated with large agricultural operations as seen in the Midwest and far West. These large operations do produce a large portion of the product. Nonetheless smaller, family farms, like those in New England and Woodstock need support from the Department of Agriculture. Efforts should be made to depict the benefits of these smaller, family run operations and garner support.

The Natural Resources Conservation Service in Connecticut is challenged to fashion national programs to meet the needs of diverse agricultural operations and communities in this state.

Lobby for fair food pricing policy

Currently federal policy controls the pricing for many agricultural products. Because production costs are not fixed and continue to rise this often makes economic viability of farming very difficult to attain. Efforts should be made to develop fair pricing that will allow economic viability.

Lobby for support of Farmland Protection Funds

Farmland Protection Funds are available to help individual communities protect valuable farmland. Both the amount of funding and the target of these monies can be impacted through lobbying efforts.

Agriculture and Community



1995 aerial photograph of West Woodstock (Map and Geographic Information Center, University of Connecticut)

Future initiatives

In addition to the basic steps outlined above there are many other ways that Town government and the citizens of Woodstock could influence change to agriculture and the community. These are longer range steps or ones that might take a significant amount of effort to bring to fruition. Also these are ideas that should be discussed but may or may not be suitable for any individual town, including Woodstock.

Local Level

Traditional Village Development

Increases in national, state and town population appears to be inevitable, especially over the long term. Given a fixed amount of land area in which to fit this increase there are two patterns that could emerge. The first maintains current density of buildings in areas of town already developed. Areas of town which are currently undeveloped or open will slowly be filled in with a more or less even pattern of development.

The second option would be to promote, encourage and/or require several more densely developed areas of town. This could occur both around and within some of the existing village areas and in new "village centers". This type of development would fit with the current pattern of village and farm. It could reduce the pressure to build in areas of town that are valued as physical resources, recreational resources or as visual resources. Areas where infrastructure, especially sewerage systems, are already in place or could be put in place would be prime areas for this type of development.

Rural Zoning

Develop a zoning category for land that is currently in a rural setting or agricultural use that is a middle ground between allowing only the current use to continue and medium density residential uses. Specifically this would mean creating a truly rural zoning category with large lots in the 10 to 40 acre range.

This would protect much of the land as an agricultural or natural resource asset and also do much to protect the land as a financial asset for the owner. Further, allowance to "cluster" the development, that is build the allowable number of residences into a smaller, highly suited area, could further protect the land and the financial asset.

Town Investment in PDR

In some towns studies have shown that the cost of purchasing development rights on open land is a wise investment. It not only protects valuable community assets but can reduce the increased costs that residential development often brings.

In Pittsford, NY a town outside of Rochester, an economic study showed that tax rates would grow more quickly if the land was developed compared to if the development rights to the land were purchased by the Town.

Town residents agreed to use bonds to pay for the investment and purchased the development rights to over 1,200 acres in the town. The land was protected from development and tax rates, even with the repayment of the bonds, are kept below the expected rate if development was allowed.

State level

Lobby to revise state tax policy

Taxation of land dates back to a time when significant wealth was often preserved through land holdings. Today wealth can be held in many other forms including cash, stocks bonds, vehicles, etc. Taxation based on all investment holdings, income and/or spending (sales tax) would reduce the burden on property owners and particularly property owners with large holdings of land.

Tax systems that rely on property taxes have many significant down sides. At the local level taxes increase as development pressure increases the potential use of the property regardless that the current owners have not changed use or their ability to pay.

At a regional or state wide level the property taxes tend to encourage migration of families and inefficient use of built resources. Lower taxes attract new residents to an area. They leave behind a community which must either redistribute the cost of community services among the remaining residents or lower the level of services being provided. Both of these cause increased out migration from the area, further exacerbating the problem. Meanwhile in the area receiving increased population new services of increased schools, police protection, etc. must eventually be put in place.

Resources that are available in one community go underutilized while new resources are being developed in the other. This system is inefficient for all involved. Particularly since taxes in the new area will eventually be increased causing the cycle to continue.

Recently a study "Connecticut Metropatterns" developed by Ameregis, showed the reliance on local property tax is causing significant harm to many communities. Urban, suburban and rural communities are all being impacted. The report depicts how moving away from the current tax system to a tax base sharing system would benefit over 70% of the states population.

Lobby for a strong Office of State Planning

In most other states in the nation there is an Office of Planning at the state level that helps to determine the vision of land use, development, conservation and preservation. The three neighboring states all have these type of offices. New York. Massachusetts. Rhode Island.

These types of offices often lead the charge to develop the entire state in a rational cohesive manner. Typically these look to encourage development and redevelopment in areas with appropriate services and infrastructure while limiting development in other areas. Protection of resources including physical/natural resources, economic resources, historic resources, and visual resources all play a role.

Several states such as Maryland and New Jersey where there has been intense growth pressure for many years have taken strong steps at the state level to direct appropriate growth or conservation. Until Connecticut has such institutional structures in place, decisions will be made in a piecemeal, town by town manner.

Lobby for the return of a separate Department of Agriculture Recently the functions of the Connecticut Department of Agriculture were moved to be housed within the Department of Consumer Protection. The move is significant because it depicts farming as purely a service to consumers and it marks that agriculture has lost its economic and political import in the state. Agriculture no longer "has a seat at the table" in the Executive branch.

Lobby to promote shared well and or septic systems to allow for moderately dense development in appropriate areas.

Spacing between individual septic system and between individual well systems is an important health issue. Often the spacing of development, particularly residential properties, is limited by this spacing. Shared septic systems and/or shared well systems allow areas to be developed in a manner that is denser.

A shared well system can allow spacing to be reduced to the minimum separation between individual septic systems. A shared septic field can allow even denser development because individual wells can often be spaced fairly closely. Often these fields can be placed in an area where visual open space is important while the residences are in a wooded area or unobtrusive area.

Connecticut's regulations and use of Sanitarians to approve these systems often means that they are not proposed or approved.

National Level

Lobby for transportation funding that discourages sprawl and encourages locally grown products

The cost of transportation is likely the most influential element in the pattern of development and the downfall of small farming operations. The highway network was constructed almost exclusively out of general tax funds and today users of highways and local roads do not pay anywhere near the cost of the construction and maintenance of these facilities.

This artificially reduced cost has significant implications. Travel costs are so low that they are not considered in decision about where to live. Also transportation costs diminish the value of locally produced items because products from distant points that can be produced more cheaply can be shipped to distant point at negligible cost.



Farms, village, fairgrounds and forest (G. Leslie Sweetnam)

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