



COLUMBIA CONNECTICUT 2016 PLAN OF CONSERVATION AND DEVELOPMENT



TOWN OF COLUMBIA
2016 PLAN OF CONSERVATION AND DEVELOPMENT

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Ann Dunnack, Chair, and the members of the Conservation and Agriculture Commission
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Ann Dunnack, Chair, and the members of the Open Space Committee
Nikki Keldsen, Chair, and the members of the Recreation Commission

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Marc Volza, Recreation Director
Ingrid Wood, Town Historian

The many Columbia residents who responded to the 2015 Opinion Survey, and attended the listening session and Public Hearing, and especially Joan Hill and Carol Schofield.

The Planning and Zoning Commission adopted this 2016 Plan of Conservation and Development on June 27, 2016.

Planning and Zoning Commission

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CHAPTER 1

INTRODUCTION

PLAN PURPOSE

Connecticut State Statutes require each town to prepare and adopt a Plan of Conservation and Development (POCD) every ten years. The purpose of each Plan is to provide a vision for that town's future, along with specific strategies and an Implementation Plan, for achieving that vision. Columbia's Plan tries to address and direct long-term changes that will occur within the Town over the coming years. It also offers guidance for shorter-term decision making. Every Town Commission and employee will be guided to some extent by the goals and objectives included in the Plan as they make day-to-day decisions.

HISTORY OF PLANNING IN COLUMBIA

In 1959 Connecticut enacted Section 8-23 of the Connecticut State Statutes requiring each town's Planning Commission to adopt a Plan of Development every ten years. In 1995, the State revised the Statute to include a focus on conservation. Columbia took the first step toward a clearly expressed plan for the future in its Plan of Development completed in 1965. However, it was more a statement of current conditions than a forward-looking vision. In 1988, the town demonstrated its commitment to planning by creating a full-time Town Planner position both to plan the future of the town and to act as zoning agent. The town's next plan became effective in 1991 and had a strong influence on land use regulation and patterns of development in Columbia. In 2000 the Town formed a committee of representatives from the Board of Selectmen, Town Commissions and interested organizations to prepare the 2006 Plan of Conservation and Development. That Plan has been the guide for Columbia over the past ten years.

This Plan will give the Town a more up-to-date and detailed tool to guide its future. Continued revision and updating will allow the Town to move in the direction favored by its residents with guidance from the most recent information sources.

THE 2016 PLAN OF CONSERVATION AND DEVELOPMENT PROCESS

In the Spring of 2015, Columbia's Planning and Zoning Commission directed the Town Planner to begin the process of updating the Plan with input from the Town's Boards and Commissions.

To understand the community's needs, the update began with a survey of Town residents. Questions were developed over a few months, reviewed and edited to balance the need for information with the time it would take a resident to complete the survey. The survey asked questions about living in Columbia and what about Columbia is important to the responder. Other questions asked what type of housing and business development should be encouraged in the future, and the best

CHAPTER 1

INTRODUCTION

place for new business development. The survey asked “how are we doing” regarding certain aspects of the community, including what is most important to retain and what should be changed. To ensure that responders had the opportunity to elaborate or offer additional thoughts, many questions were open ended; that type of response is harder to tally, but important to hear. The survey used the on-line Survey Monkey website and had paper copies available. The survey was available for six weeks, from August 27th to September 30th. Residents were notified of the survey by flyers, e-mails and a post card mailed to each postal delivery in Columbia. The results on individual questions are presented in the form of charts and statistics that appear throughout the Plan and were used to guide the direction of the Plan.

Many Commissions were involved in drafting areas of the Plan, notably the Conservation and Agriculture Commission, the Open Space Committee, the Recreation Commission and Inland Wetlands and Watercourses Commission. A draft of the Plan was posted on the Town’s website and residents were encouraged to comment. Prior to the Public Hearing, the Planning and Zoning Commission held a listening session for Commissions, Boards and others to comment.

POCD CONSIDERATIONS

Connecticut State Statute 8-23 defines the components that must be addressed in a town’s POCD, and requires that each town shall consider the following:

- (1) the community development action plan of the municipality, if any,
- (2) the need for affordable housing,
- (3) the need for protection of existing and potential public surface and ground drinking water supplies,
- (4) the use of cluster development and other development patterns to the extent consistent with soil types, terrain and infrastructure capacity within the municipality,
- (5) the state plan of conservation and development adopted pursuant to chapter 297 of the statutes,
- (6) the regional plan of conservation and development adopted pursuant to section 8-35a,
- (7) physical, social, economic and governmental conditions and trends,
- (8) 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,
- (9) the objectives of energy-efficient patterns of development, the use of solar and other renewable forms of energy and energy conservation, and
- (10) protection and preservation of agriculture.

The POCD is now completed, but the most important step is yet to come, and that is the implementation of its recommendations. It will take the diligent efforts and committed support of the residents and officials of the Town to see that the Plan is put into effect, and that the future Columbia takes shape as desired.

POCD STRUCTURE

The POCD follows the outline of the 2006 POCD. The first three chapters are introductory in nature. The next eleven chapters focus on specific issues: three on conservation, followed by eight focused on development and infrastructure. The final two chapters focus on future land use and implementation of the POCD.

The format for each of the chapters that focus on a particular issue is:

OVERVIEW: Brief discussion of the topic and its importance to Columbia

TOPIC DISCUSSION: An inventory and discussion of relevant factors

ASSESSMENT: A discussion of the existing situation and a projection of future needs

GOAL: A broad-stroke statement on the vision the Town will be working toward

STRATEGIES: Long-term and continuing policies designed to advance and support the goal.

Chapter 15 includes a Conceptual Future Land Use Map, a visualization of Columbia as the goals of this POCD are woven into the existing fabric of the Town.

Chapter 16 is the Implementation Plan detailing the specific steps needed by each Commission to achieve the goals and strategies of the 2016 Plan of Conservation and Development.

CHAPTER 2

PLAN SUMMARY

OVERALL PLAN PHILOSOPHY AND GOALS

- *Protect what Columbia residents value while the town continues to grow.*
- *Encourage development that is compatible with our rural character.*
- *Protect natural and cultural resources for future generations.*

CONSERVATION: COMMUNITY & CULTURAL RESOURCES



Goal:

Protect Columbia's cultural resources to preserve the things that make Columbia special.

CONSERVATION: NATURAL RESOURCES



Goals:

Protect the quality of Columbia's wetlands, surface waters and ground waters for future generations.

Promote development that will allow indefinite town-wide use of private wells and septic systems; protect farmland soils; promote practices that protect soils from contamination and erosion.

Protect and foster a rich diversity of plants and animals in Columbia; protect large contiguous habitats; offset fragmentation with wildlife corridors.

CONSERVATION: OPEN SPACE



Goal:

Continue to protect priority properties based on a strict standard of criteria as determined by the Open Space Committee.

CHAPTER 2

PLAN SUMMARY

DEVELOPMENT: COMMUNITY



Goal:

Columbia’s future pattern of development will meet the needs of our residents and preserve our rural character.

DEVELOPMENT: HOUSING



Goals:

Columbia’s residents of all ages can have their housing needs met without leaving our community.

New subdivisions will create neighborhoods and enhance Columbia’s rural character.

DEVELOPMENT: BUSINESS AND ECONOMIC



Goals

Columbia’s existing businesses are able to grow and prosper and new businesses will find opportunities in town.

With the Route 6 Hop River Corridor Master Plan as a guide, the Routes 6 and 66 East business area is expanded with regulations that encourage economic development.

A mixed-use zone is established along Route 66 in the town center that incorporates the existing businesses.

DEVELOPMENT: AGRICULTURE

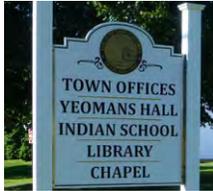


Goals:

Columbia continues to support existing agriculture businesses and encourages their expansion, and welcomes new agriculture.

A long-range strategy is in place to preserve farmland and enhance agricultural production.

DEVELOPMENT: COMMUNITY FACILITIES & SERVICES



Goals:

Enhance the interconnections of municipal facilities in the center of town to create a strong sense of place with the Town Green as a prominent feature.

Ensure that all Town offices and facilities meet the needs of staff and residents, and services offered meet the needs for all Columbia residents.

Continue the public safety practices that result in our residents feeling safe.

Maintain and enhance Columbia Lake and the Town's recreational lands and trails to benefit residents' quality of life.

Continue to steward Columbia Lake through water testing and enforcement of ordinances and regulations.

DEVELOPMENT: RECREATION



Goals:

Provide the facilities at Recreation Park and Columbia Beach that are desired by our residents.

Offer a variety of outdoor and indoor recreational and social activities for people of all ages and abilities.

INFRASTRUCTURE: TRANSPORTATION



Goals:

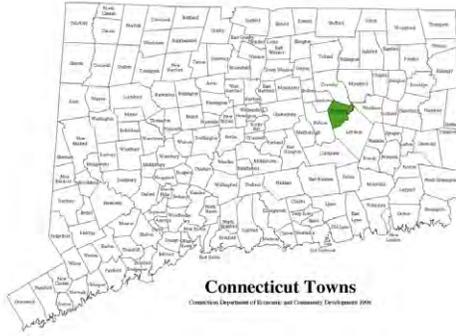
Provide a safe and accessible transportation system of vehicles, pedestrians and bicycles for in-town travel, and transit services to other communities.

INFRASTRUCTURE: UTILITIES

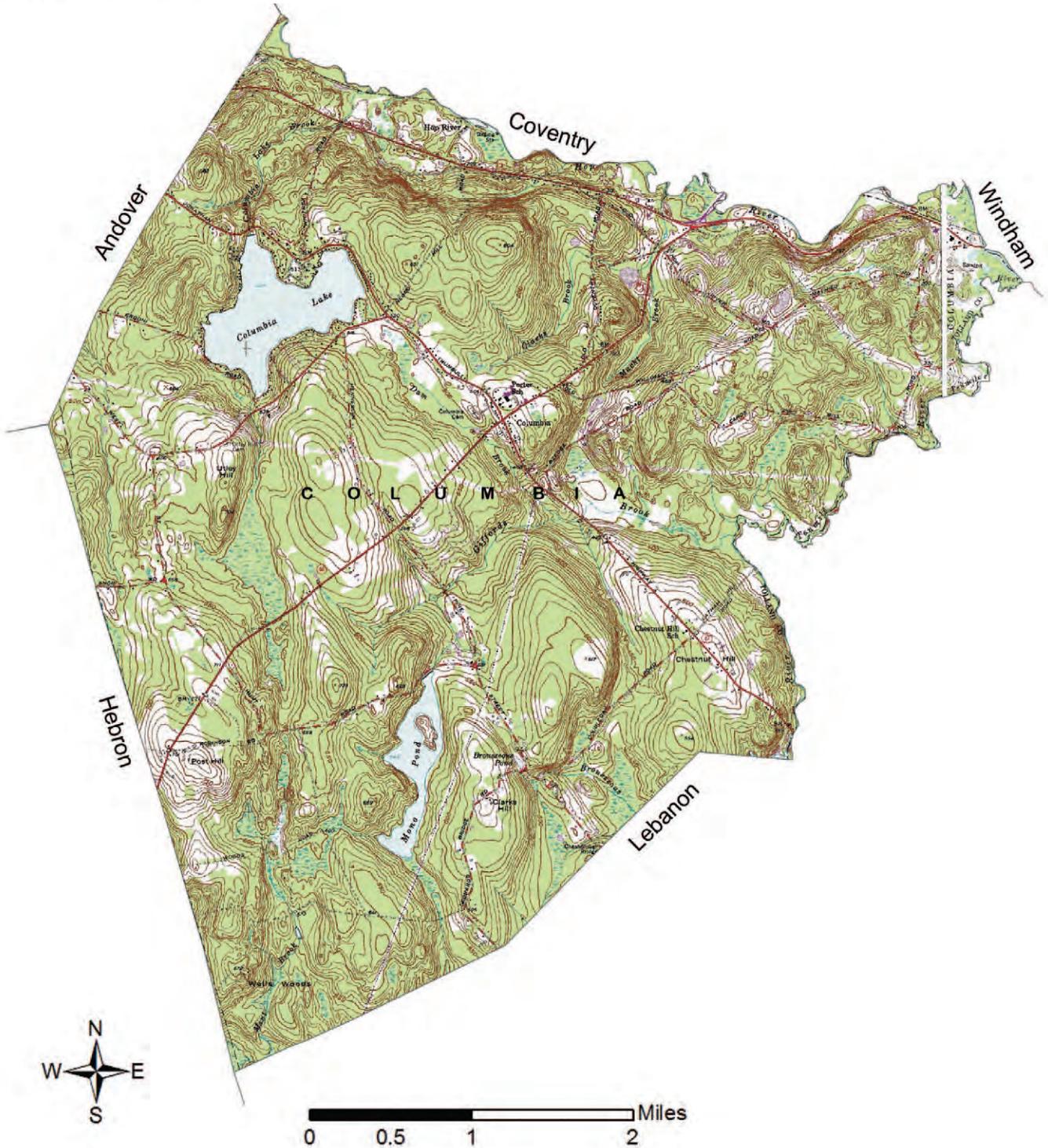


Goals:

Continue to protect the quality and quantity of ground water supplies; dispose of wastes in an effective and environmentally responsible manner.



Town of Columbia Location Maps



CHAPTER 3

TOWN OVERVIEW

LOCATION

Located in Tolland County in northeastern Connecticut, Columbia is 21.4 square miles in area with the Town's center at the crossroads of state Routes 87 and 66. To the north is Coventry, to the west are Andover and Hebron, to the southeast is Lebanon and to the northeast is Windham. Columbia is located about 25 miles east of Hartford, and is part of the 38-town Capitol Region Council of Governments planning area.

SWOT ANALYSIS

At the beginning of the POCD process, the Planning and Zoning Commission used a planning technique to objectively look at a broad-stroke image of Columbia. The technique is used frequently in strategic planning as it identifies Strengths, Weaknesses, Opportunities and Threats (SWOT). Columbia will strive to build on its strengths, overcome its weaknesses, seek opportunities and mitigate threats. The table below lists the main findings of the analysis.

<p style="text-align: center;">Strengths</p> <p style="text-align: center;">Community spirit Town Hall Campus Location Strong fiscal management Education system Columbia Lake Agriculture Unique</p>	<p style="text-align: center;">Weaknesses</p> <p style="text-align: center;">Few retail businesses Lack of employers Few community events Bedroom community Economic development Site limitations Zoning regulations</p>
<p style="text-align: center;">Opportunities</p> <p style="text-align: center;">Business zone expansion Revised commercial regulations Open space preservation Farmland preservation</p>	<p style="text-align: center;">Threats</p> <p style="text-align: center;">Over development Losing middle class Aging population Loss of rural character</p>

CHAPTER 3
TOWN OVERVIEW

PEOPLE

The 2010 US Census shows Columbia to have a population of 5,492 people. This is an increase of 516 people, 10.4%, over the previous ten years. The changes in total population numbers and the percentage of growth between decades are summarized below. The figures for 2020(e) are population estimates projected by the Connecticut State Data Center for the Office of Policy and Management.

Total Population

	1940	1950	1960	1970	1980	1990	2000	2010	2020(e)
Total	853	1,327	2,163	3,129	3,386	4,510	4,976	5,492	5,793
% Change	31.6%	55.6%	63.0%	44.7%	8.2%	33.2%	10.3%	10.4%	5.5%

CURRENT AND ESTIMATED AGE DISTRIBUTION IN 2025

The age distribution among residents is an important factor in planning for the future needs of our residents. An increase in the 25 – 34 year age range would indicate an increase in the under-5 population in the near future. A rising number of children under 5 would indicate an immediate need to plan for future educational facilities. An increase in the senior population would indicate an increased need for services for this age group, especially housing suited to the mobility and health limitations of seniors.

The projections for Columbia’s population for 2025, the farthest year forecasted, show a 7% growth overall from 2010 to 2025. The preschool group is projected to decline overall, but with an increase over the 2020 estimate. The 20-34 age group is projected to increase by 23% indicating an increase in children a few years later. The over-65 population is projected to double in the next fifteen years to 1,682 individuals; of those, almost 400 will be over 80.

Age Distribution

Age Range	2010	2020(e)	2025(e)	15 Year % Change
Under 5	232	197	216	-7%
5 to 19	1,055	845	743	-30%
20 to 34	668	761	823	23%
35 to 54	1,820	1,482	1,339	-26%
55 to 64	878	1,117	1,072	22%
65 to 79	629	1,098	1,290	105%
Over 80	210	293	392	87%
Total	5,492	5,793	5,875	7%

EDUCATIONAL ATTAINMENT

Connecticut Economic Resource Center shows that the residents of Columbia are a highly educated group. Of all Columbia residents over the age of 25, 76% have finished high school or higher. This percentage exceeds the state average by 5%. Among that same group of Columbia residents, 40% have received a Bachelor's Degree or higher.

EMPLOYMENT

The employment data reflects the residents' high educational level by the high number of the Town's residents employed in management or professional occupations. Columbia is also fortunate in the low unemployment rate among our residents: in November 2015 the unemployment rate was 3.7%, down from 5.3% the previous November and is one of the lowest in the State.

INCOME

Both the higher educational attainment of our residents and their level of employment are reflected in the income they earn. The median household income of Columbia's residents, as well as their per capita income, exceeds the average for the State.

Columbia's Income

	2000	2014
Per Capita Income		
Columbia	\$29,446	\$41,476
State	\$28,766	\$34,380
Statewide Ranking	73	70
Median Household Income		
Columbia	\$53,935	\$93,953
State	\$70,208	\$69,899
Statewide Ranking	40	46

POVERTY

In 2000, the percentage of Columbia residents living in poverty was 4.2%; the estimate for 2014 is 4.8%. Although higher than in 2000, it is considerably below the state average for 2014 of 10.5%.

CHAPTER 3 TOWN OVERVIEW

FISCAL CONDITION

REVENUE

As with all Connecticut municipalities, the primary source of revenue is from local taxes. Columbia's total revenues in 2014 were \$17,538,333, with 72% from local taxes and the balance from state and federal sources. The 2014 Grand List of assessed value for all property in Columbia was \$463,992,644, an increase of 40.5% over the past 10 years. Not surprisingly, 81.1% of Columbia's Grand List is for residential property, almost 9% is commercial property, equipment and vehicles, and the balance is personal motor vehicles and other assets.

EXPENDITURES

Columbia spends about \$17 million a year to provide services to its residents and property owners. Between 2005 and 2014, those expenditures have grown 29%; during this period cumulative inflation grew 21.2% and the Town's population grew by 6.2%.

Educational costs are approximately 73% of the Town's expenses. Over the last 10 years, the student enrollment decreased by 25% while education expenditures rose 36%. The Town's per-pupil expenditure in 2014 was ranked 40th out of 169 Connecticut towns.

Towns issue bonds to finance large capital projects. Columbia's expenditures for annual debt service (principal and interest payments) has decreased over the past 10 years, from 8% of the budget down to 3% as the long-term debt owed has significantly decreased.

FISCAL SUMMARY

The interest rate on municipal bonds is determined by a town's bond rating. In 2005, Columbia had an A1 bond rating; in 2010 it was increased to Aa2 indicating a very strong fiscal position. In Connecticut, only 31 towns have a higher bond rating.

Columbia's Fiscal Indicators

	2005	2010	2014
Bond Rating	A1	Aa2	Aa2
Mill Rate	29.2	23.01	27.13
Total Revenues	\$13,505,858	\$16,708,253	\$17,538,333
Total Expenditures	\$13,415,183	\$15,786,349	\$17,353,008
Total Long-Term Debt	\$7,490,000	\$3,675,000	\$1,503,911
Annual Debt Service	\$1,138,513	\$919,133	\$542,088

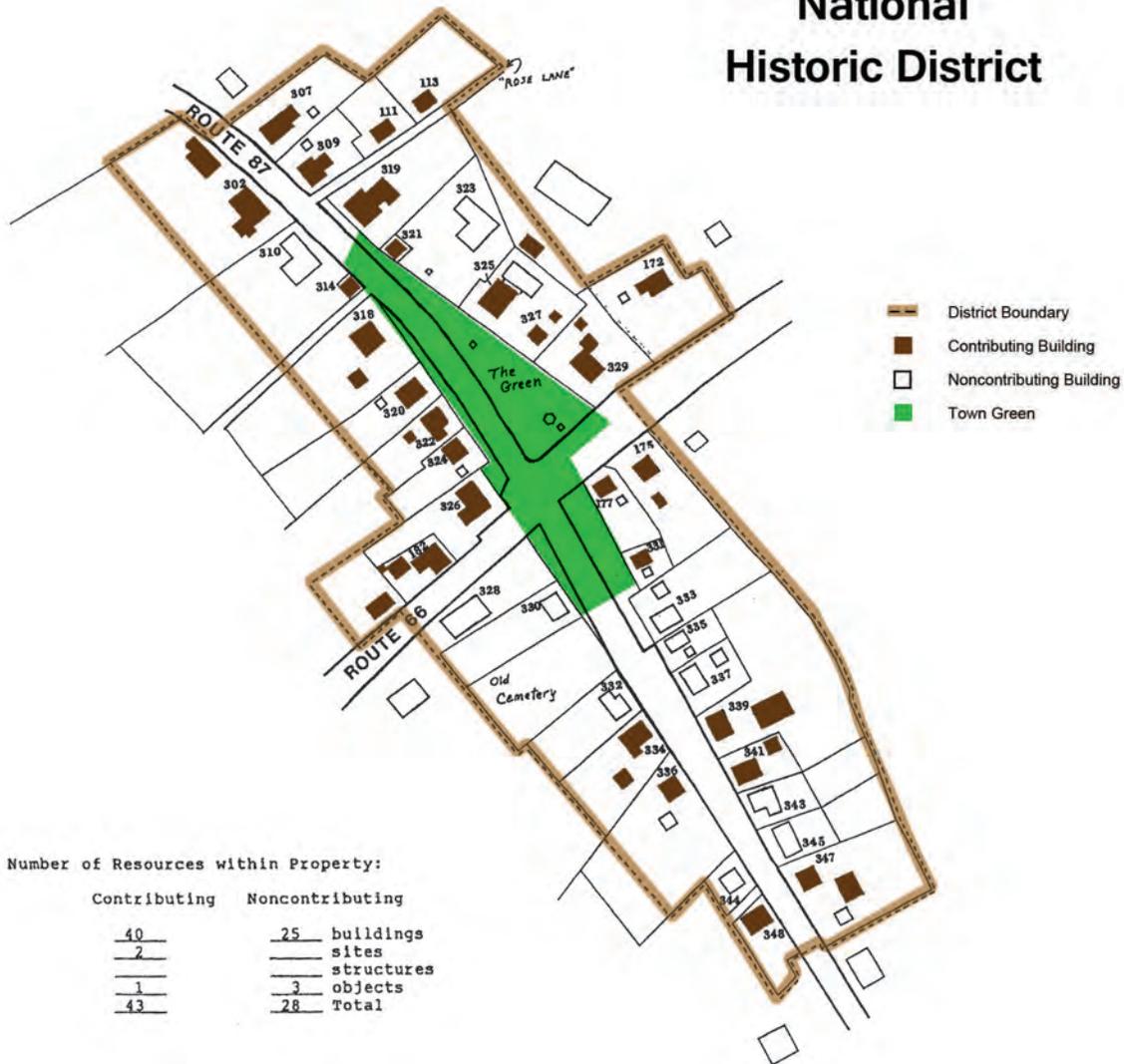
THE FUTURE

Columbia's population is projected to continue to grow over the next decade, but the greatest impact will be from the shift in the age distribution of our residents. It is estimated that 47% of Columbia residents will be least age 55 by 2025; only 16% of the residents will be under age 20, and 37% will be between ages 21 and 54, the traditional age group of the workforce and parents. This change in the demographics of our residents will need to be addressed soon.

The overwhelming comments made by our residents focus on the desire to maintain Columbia's rural character. We need to be mindful of balancing conservation with development as we grow, and use zoning regulations and policies to ensure that future development will fit within the context of the rural character our residents value.

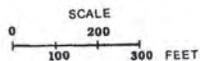
The chapters of this Plan that focus on conservation detail the community, cultural and natural resources that are important to retain for our future. The chapters that focus on development describe the ways we can meet our housing needs and encourage businesses while honoring our rural character.

Columbia Green National Historic District



Number of Resources within Property:

Contributing	Noncontributing	
40	25	buildings
2		sites
1	3	structures
43	28	objects
		Total



Columbia Green, Looking South, c.1910. Elm trees planted in 1852 frame the landscape on the elongated green. Baseball, Columbia's favorite pastime, was enjoyed by spectators seated on the grass. The Congregational Church, administrative town offices, Yeomans Hall, Center School, the library, post offices, general stores and early inns defined the village center in the 19th and 20th centuries. The roads were unpaved, but a new rotary is in evidence at the corner of present-day Routes 66 and 87. Source: *Images of America Columbia* by John Allen, De Ramm, and Ingrid Wood for the Columbia Historic Society,

CHAPTER 4

COMMUNITY & CULTURAL RESOURCES



Preserve Columbia's cultural resources for future generations to enjoy while the town continues to develop.

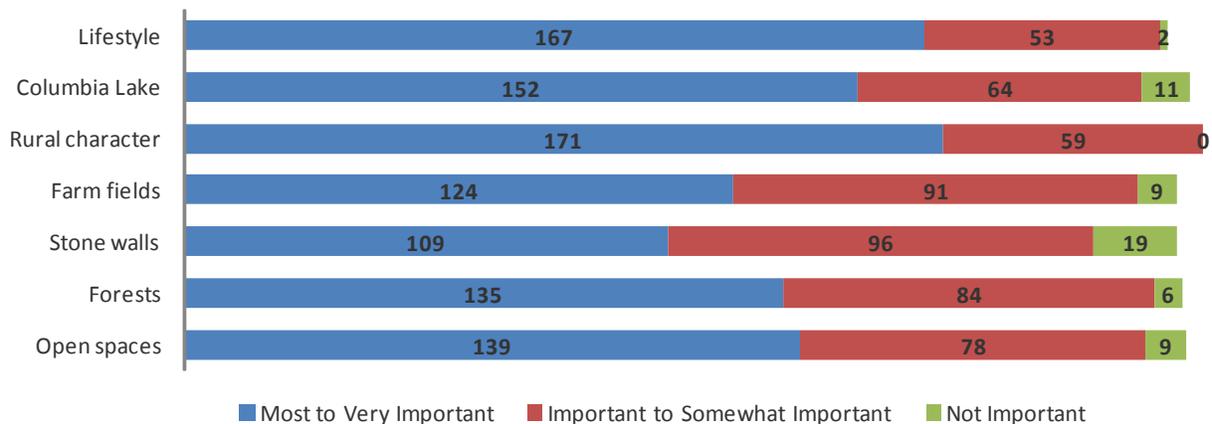
OVERVIEW

Columbia residents love the rural, small town feel of their community. That is one of the main reasons that brought them to Columbia, and what keeps them here. They love the large forested areas, farm fields, and the trees and stone walls along the narrow, winding roads. They enjoy the signs of the town's past evident in historic houses, the town green, old cemeteries, and ruins of earlier mills. They enjoy the clean and abundant drinking water, the beauty of Columbia Lake, the scenic views from hilltops and along streams, and the abundant wildlife that shares the land with them. The shared appreciation of these aspects of Columbia fosters community pride, and from that pride comes the willingness to take part in the many town organizations that rely on volunteers.

Ironically, the very qualities that draw people to Columbia may be threatened by the growth in population. Townspeople are now concerned that Columbia's unique character could be lost if steps are not taken to guide future development and to protect that which makes Columbia a special place to live.

2015 SURVEY RESULTS

The following are the responses to the question: What is it about Columbia that is important to you?



COMMUNITY & CULTURAL RESOURCES

COLUMBIA'S HISTORY

Scientific evidence shows that Paleo-Indians first settled here 10,000 years ago. The Mohegan Tribe migrated here from the Lake Champlain area in the 1500s and used this area as hunting grounds. By the early 1600s European settlers began to compete for the land and its resources. Uncas, the leader of the Mohegan Tribe favored collaborating with the Europeans, and in 1676 the tribe conveyed 1,500 acres to Rev. Thomas Buckingham. In 1700, the Connecticut General Assembly consolidated 80 square miles of that land to form the town of Lebanon, which extended northward to Andover. What was to become Columbia was known as Lebanon's Second Ecclesiastical Society, Lebanon's North Parish, or by the nickname Lebanon Crank, after a sharp turn in the road from the center of Lebanon.

Lebanon Crank established five public school districts in 1773, each with a one room schoolhouse. Lebanon Crank was a colonial crossroads used by General George Washington en route to the Trumbull War Office. Three thousand of Washington's Continentals and 5,000 of General Comte de Rochambeau's French troops marched here during several military campaigns from 1776 to 1782.

In 1804, the Crank was separated from Lebanon; "Columbia" was selected as the poetic and aspirational name for a northeast Connecticut township of 834 people whose families had already embraced the 22-square-mile highland frontier for over a century.

The hilly terrain and plentiful water sources were conducive to early milling industries. There were many small mills on the Hop River, Ten Mile River, Utley Hill Stream, Gifford's Brook, Macht Brook, Clark's Brook and Mint Brook among others. In the 1700s and 1800s, workers milled corn, rye, sorghum, buckwheat, lumber, spindles, and baseball bats, and there was a large cotton mill in Hop River Village. Wool plantation hats were manufactured at eight smaller mill sites in Columbia; hat fabrication involved both a carding mill and a fulling mill. These hats were sent to the South before the Civil War; fancy hats were shipped to New York City markets.

The history is recorded in our street names too; William Card had a grist and saw mill on today's Cards Mill Road, and there was a thriving basket weaver with 13 employees on what became Basket Shop Road.

Images of America: Columbia by John Allen, De Ramm, and Ingrid Wood for the Columbia Historical Society Inc., published in 2013 provides a wealth of information and pictures of the history of our community, and was used in the writing of this history.



North District School (Whitney Rd) c. 1914

IMPORTANT HISTORIC RESOURCES

Cultural resources are those that have significance due to prehistoric, historic, or current use by humankind. While prehistoric sites have been identified by the state, their exact locations are not published to ensure their preservation. Historic sites include early homes, mills, and schools, as well as cemeteries. The Columbia Historical Society and Town Historian maintain archives that document these sites as well as other aspects of Columbia's history. The Town Historian is currently working on a project to document all the houses in town that were constructed prior to 1860.

The map on page 14 shows the Columbia Green Historic District that was entered into the National Register of Historic Places in 1990. The Register states that the district meets the criteria because: "Columbia Green is a significant resource because the Green and

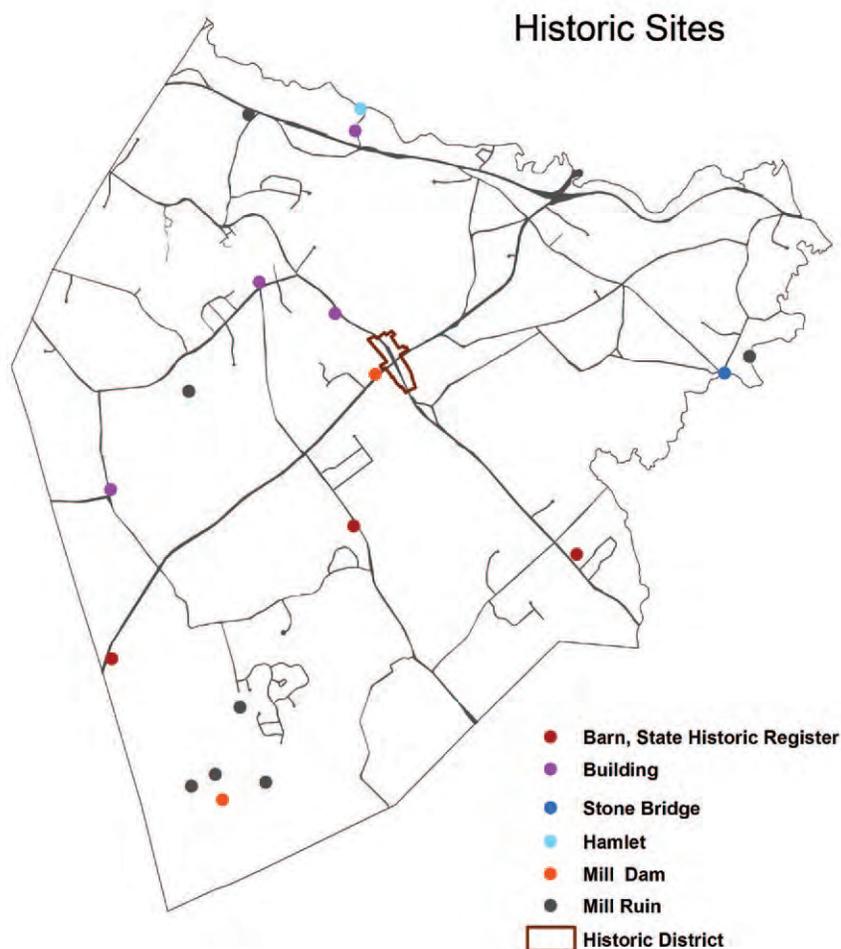


Columbia Green, looking north c.1909

COMMUNITY & CULTURAL RESOURCES

the buildings and sites surrounding it recall the location's historic role as the town's political, religious, educational, commercial, and social center (Criterion A). From the construction of the first Congregational meetinghouse in 1724 up to the present, the crossroads formed by present-day Routes 66 and 87 has been the location of virtually all the important institutions of Columbia's community life: the church of the town's once-predominant religious body, the oldest burying ground, the public library, and where town meetings were held. With its former taverns, meeting places, and blacksmith shop, the district also evokes the time when the area was Columbia's social and commercial center. Some of the buildings have architectural significance as locally notable examples of particular styles or types of construction, and the cemetery contains numerous significant examples of the 18th-century stonecarver's art (Criterion C). Finally, the Green itself has significance as a physical feature: it is typical of the village commons which emerged in the early 19th century, as towns turned reserved town land into central green spaces which, if not quite parks, were consciously maintained as areas of lawn surrounded by shade trees (Criterion C)."

In addition to the Columbia Green Historic District, there are many other historic buildings and sites within our borders. Columbia's Historical Society has identified many of these sites, but a full inventory has not been undertaken. The Connecticut Trust for Historic Preservation conducted a statewide survey of historic barns; it found 65 historic barns in Columbia with four listed as a State Historic Resource.

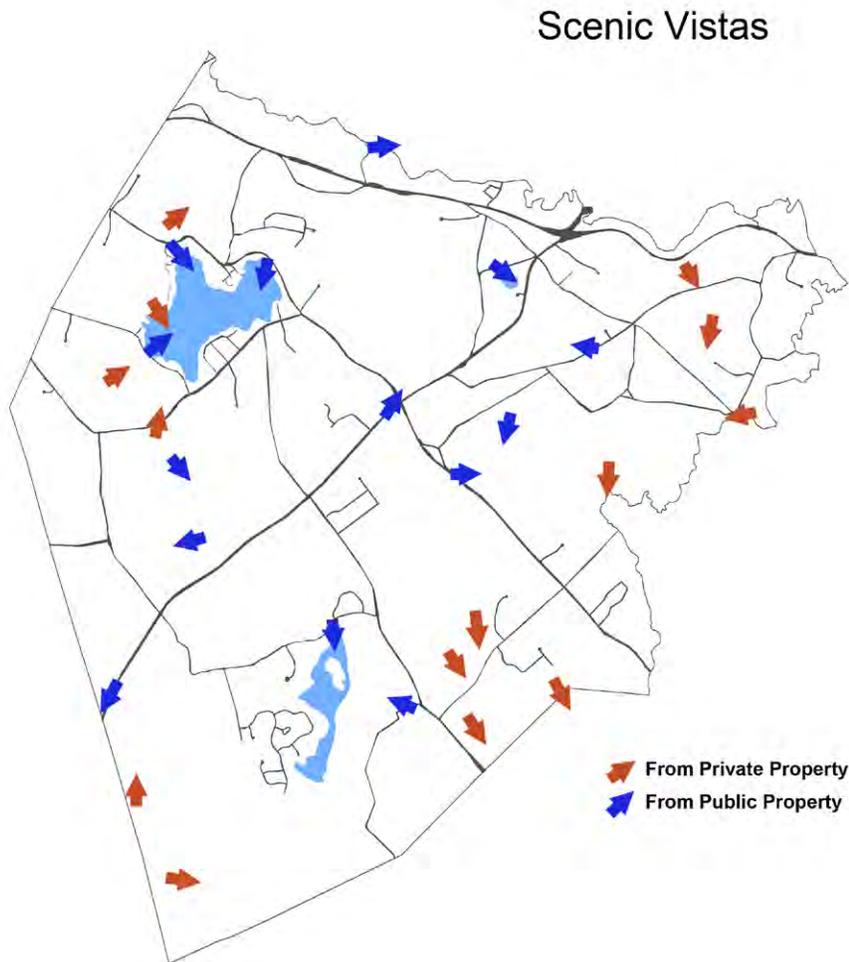


CHAPTER 4

COMMUNITY & CULTURAL RESOURCES

IMPORTANT SCENIC RESOURCES

Scenic resources are those that emphasize natural beauties. Since “beauty is in the eye of the beholder”, the identification of scenic resources is necessarily subjective. However, the Columbia Conservation Commission has identified a number of scenic vistas, which probably include most of those familiar to and beloved by Columbia residents.



COMMUNITY SPIRIT

Perhaps Columbia’s greatest cultural resource is the people who live here. Their pride in Columbia can be seen at the 4th of July parade, or when they campaign at the transfer station, enjoy the beach, organize youth soccer tournaments and softball games, dine at the Senior Center and volunteer to serve on Town Boards and Commissions.

ASSESSMENT

COMMUNITY & CULTURAL RESOURCES

Columbia is what it is today because of its cultural resources. We see the rich history on the land ranging from artifacts of Paleo-Indians found when land proposed for the Algonquin gas line was studied by the State Archeologist, to bayonets from Rochambeau's army found in farm fields, from the stone walls built by farmers as they created tillable fields, to the ruins of mills along streams and to the historic homes still standing.

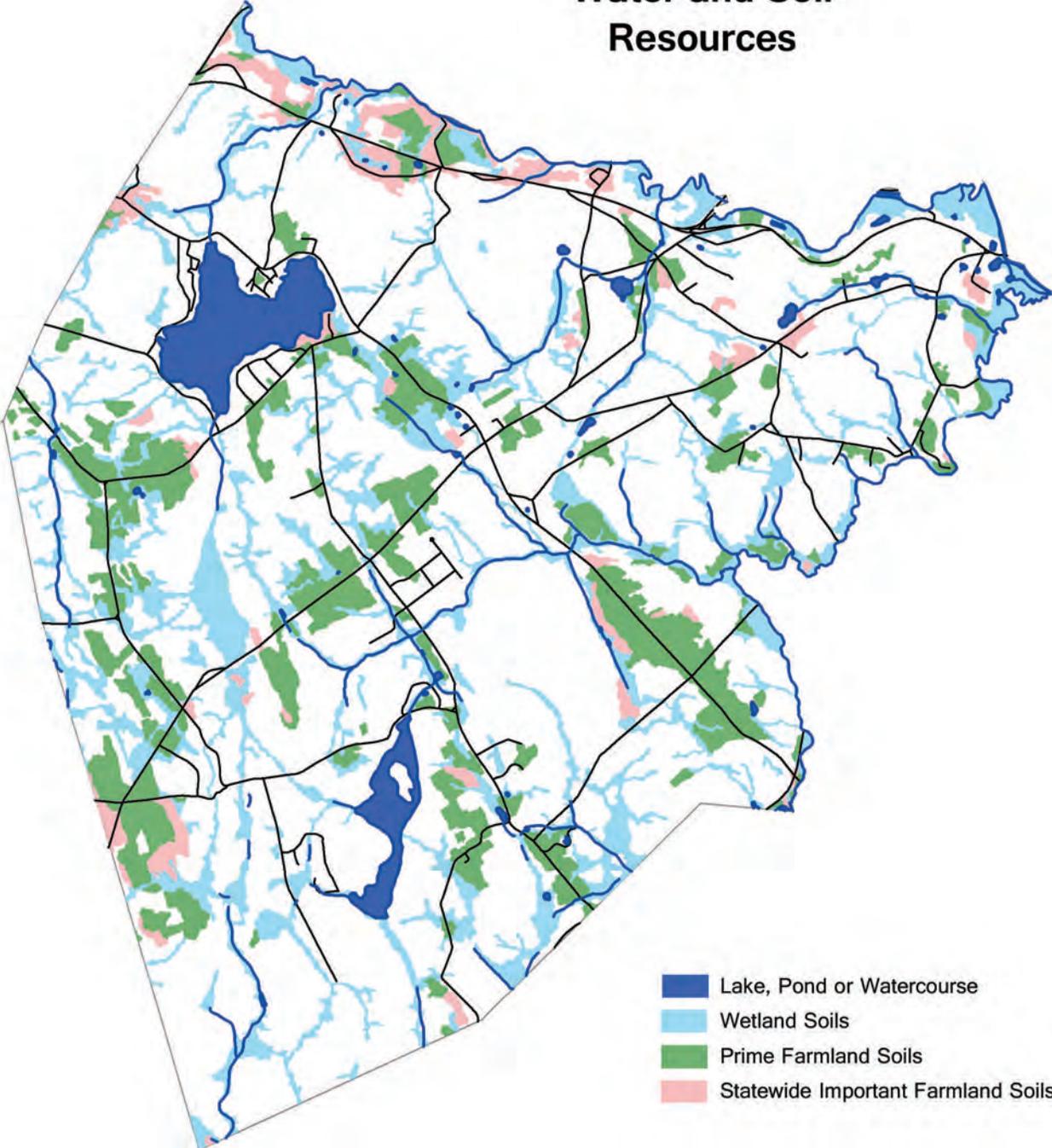
Both physical elements and community spirit are important aspects of defining community's character. In town-wide surveys, residents have always emphasized the importance of protecting the town's rural character.

Goal: *Protect Columbia's cultural resources to preserve the things that make Columbia special.*

Strategies:

- *Develop town-wide inventories of historic buildings, cemeteries and other sites.*
- *Include the preservation of historic and archeological sites, scenic vistas and other important visual features in land use regulations.*
- *Protect historic structures by encouraging adaptive reuse and implementing a demolition delay ordinance.*
- *Prioritize scenic vistas and other important visual features in open space preservation.*
- *Create a scenic road ordinance for local town roads.*
- *Continue to educate the public about Columbia's history and cultural resources.*
- *Designate a permanent site for Columbia's historic artifacts, and ensure that the public of all ages has the opportunity to learn from our past.*

Water and Soil Resources



CHAPTER 5

NATURAL RESOURCES



Protect our soil, water and wildlife resources for our benefit today and for future generations.

OVERVIEW

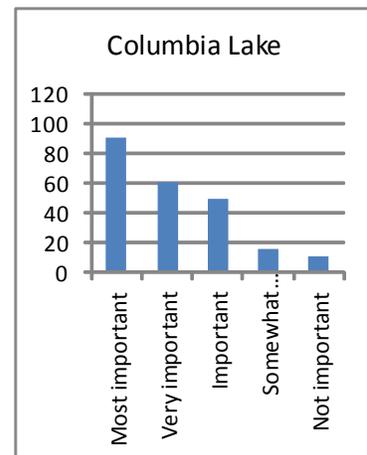
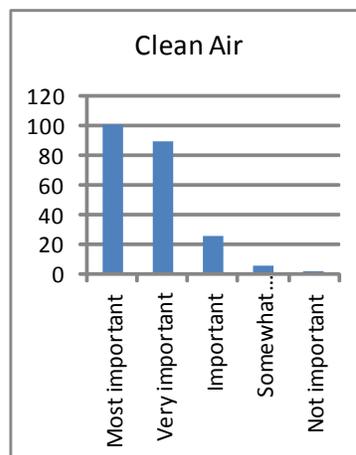
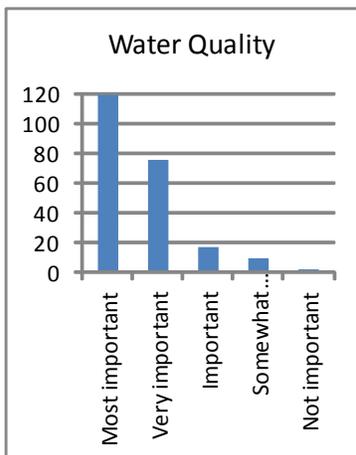
Natural resources are the basic components of the environment that sustain the life and health of all living things. They contribute to our daily lives and directly impact Columbia's quality of life.

Groundwater provides safe drinking water to our families, and soils allow for the safe disposal of wastes. Surface water provides lakes and rivers for swimming and boating. Forests produce the oxygen we breathe; their porous soils soak up rainwater and release it gradually to lessen flooding and to replenish our ground water. Forests provide trails to explore nature. Forests and marshes provide various habitats for many species, including some that are at risk. Natural resources are an interdependent eco-system vital for the health of our environment and our own health and well-being.

It is important to understand the value of our natural resources, and to plan for their future protection as we plan for Columbia's future development.

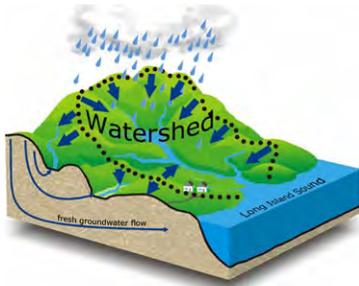
2015 SURVEY RESULTS

The following are the responses to the 2015 survey question on how important certain aspects of living in Columbia are to the respondent.



WATER RESOURCES

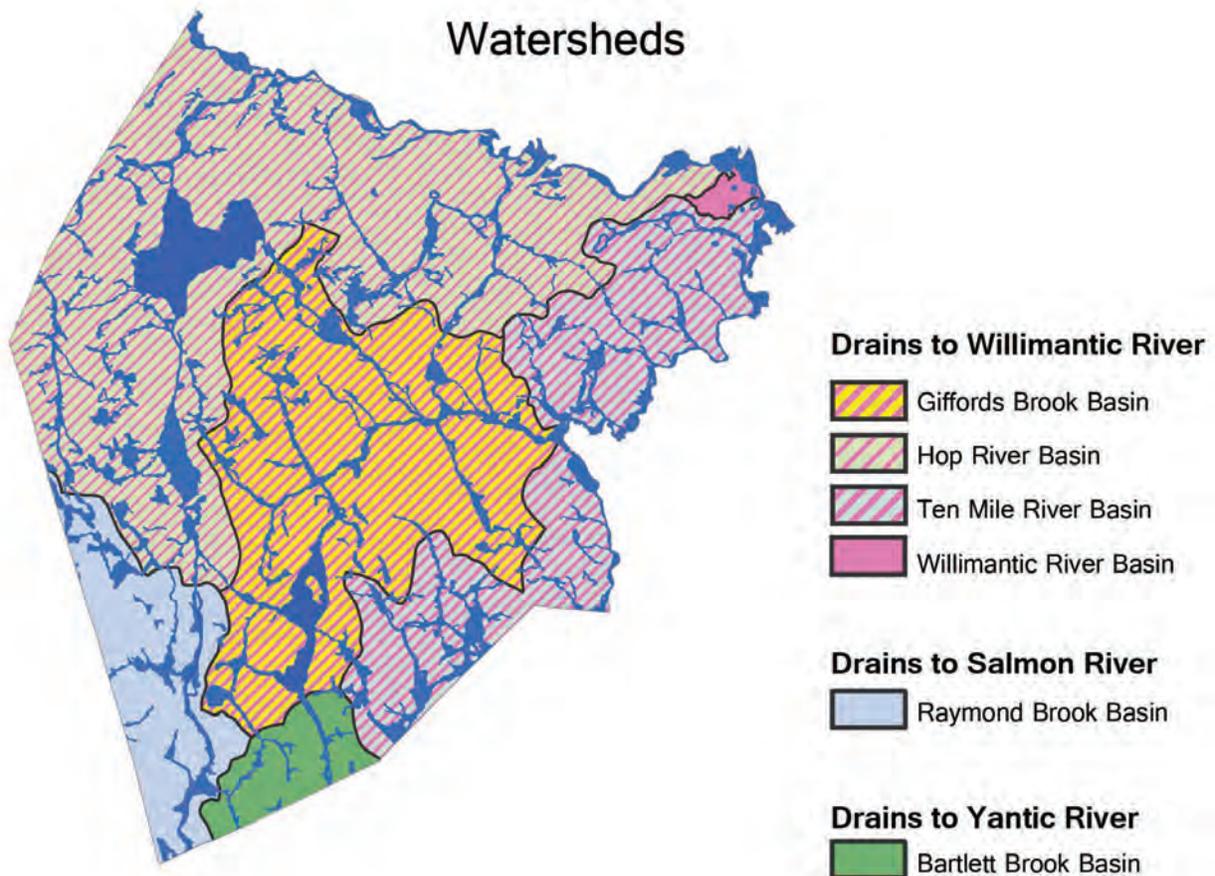
Columbia is in the unusual and enviable position of having nearly all its water originate within its own boundaries. The only exceptions are the Hop River and Ten Mile River on the northern and eastern borders.



A watershed is the area that acts like a bowl to collect precipitation, rain and snow, that then flows downhill, pulled by gravity, eventually to a single outlet. In this illustration, rain that falls within the “bowl” or “basin” of the watershed, travels down the hills in small streams that gather together eventually to a river that flows to the Long Island Sound. The top of hills, called the ridge line, divides the watersheds.

Columbia has six major watersheds. The two largest watersheds drain 88% of all precipitation that falls within Columbia’s borders into the Willimantic River, with 38% flowing first into Hop River and 50% flowing first into the Ten Mile River. The remaining water drains towards the southeast and into the Salmon River (9%) and south towards Lake Williams and feeds into the Yantic River (3%).

Within these watersheds are streams and watercourses and along those waterways are riparian corridors, a unique natural environment rich in varied resources.



LAKES AND PONDS

The Town has 408 acres of open water (2.9% of the Town's area). The largest water bodies are town-owned Columbia Lake (281 acres) and state-owned Mono Pond (110 acres). Both are artificial impoundments whose water level and management program are controlled by dams. Both are used for recreation and have public access. The Town also has numerous smaller ponds, most of one acre or less, which lie on private property.

Columbia Lake was created as a reservoir for a Willimantic textile mill in 1865 and was purchased by the Town in 1932. It is maintained by the Town for its scenic and recreational values. The lake shore is almost completely developed with dense housing. A large church camp owns a significant portion of the undeveloped shoreline. The town-owned beach and boat launch areas are important lake shore features.

The lake bottom is mainly sand and gravel with interspersed boulders, creating a relatively sterile environment limiting plant growth. Annual draw-downs of water level limit plant growth along the shoreline. The main watercourse flowing into the lake is Utley Brook, an A-quality stream. Much of Utley Brook's watershed is protected by town-owned and land trust-owned lands. Because the lake is a highly valued resource, the Town formed the Columbia Lake Management Advisory Committee to monitor the quality of the water. In 1998, with the help of a limnologist (a specialist in the study of freshwater ponds and lakes) a comprehensive Columbia Lake Management Plan was developed (see ColumbiaCT.org). In 2003, the Planning and Zoning Commission created Columbia Watershed Protection Overlay Zones to prevent degradation of water quality with a goal to limit the phosphorus runoff to a level that Columbia Lake can support. The Overlay Zones consist of three individual areas that together comprise the lake watershed. As part of any application for a land use activity within these Overlay Zones, the phosphorus runoff must be calculated; if it exceeds the maximum allowed, Best Management Practices for stormwater treatment will need to be implemented.

Mono Pond is maintained by an earthen and concrete dam built at the turn of the century and repaired in 1987. The pond was for many years managed as a private game preserve, but in 1993 was bought by the State of Connecticut under the Natural Heritage and Recreation Area program. It is now managed for wildlife and recreational values. The pond has a limited watershed of 1.1 square miles and is a seasonal tributary of Gifford's Brook. The portion of the pond north of its twelve acre island is characterized by open water ranging from two to eight feet in depth. South of the island is a marsh and swampland with water standing at four feet or less. The pond bottom is composed primarily of a layer of peat up to 30 feet thick. State land protects the pond's entire shoreline on the eastern side, and about half of the remaining shoreline is protected by dedicated open space and conservation easements.

WETLANDS

Wetlands generally are found between the better drained, and rarely flooded uplands and the areas of permanent surface waters of lakes, ponds and rivers. Wetlands include the variety of marshes, bogs, swamps, shallow ponds, and bottomland forests. They are low areas subject to periodic flooding or surface water ponding. Some wetlands, however, occur on slopes where ground water seeps to the surface.

Wetlands play a role in the environment and provide significant benefits. Wetlands improve water quality, increase water storage and supply, and reduce flood and storm water risks. Wetlands are highly productive ecosystems with diverse habitats and vegetative structure. The various types of wetlands are a critical habitat for plants, fish, and wildlife, providing food and cover for a variety of wildlife.

In 2000, the Inland Wetlands Commission hired a consultant to complete an evaluation of all the Town's major wetlands. The study rated each wetland for five values: ecological integrity, wildlife habitat, groundwater recharge, nutrient/sediment trapping opportunity and nutrient/sediment trapping efficiency. The study also identified those with a particularly important attribute as "noteworthy wetlands." Based on this study, the Conservation Commission identified Priority Wetlands for protection, see the map on page 35.

Vernal pools are a subclass of wetlands. A vernal pool is a small, shallow temporary water body that usually dries up entirely during a portion of the year, is not connected to a watercourse, and contains no fish. These characteristics create a special habitat area that is home to a number of rare and endangered species. A number of vernal pools have been identified through aerial photos of Columbia, but it remains to do a comprehensive mapping and evaluation of these special wetlands.

CHAPTER 5

NATURAL RESOURCES

AQUIFERS AND GROUNDWATER

An aquifer may be thought of as an underground reservoir where water is stored. More technically, it is a water-bearing stratum of permeable rock, sand, or gravel. Columbia depends entirely on these underground supplies for its drinking water.

Rock aquifers tend to have a small flow, suitable for wells serving single households. Where more dense populations must be served, sand or gravel aquifers (stratified drift) are usually tapped as they yield much greater amounts of water.

Columbia has a number of stratified drift aquifers of varying depth and water quality. Most are only about ten feet deep. While they hold water that will help recharge nearby wells, they will probably never be sufficient for a town-wide supply. The three largest of these lie under and adjacent to Dam Brook, Gifford's Brook, and the Ten Mile River. Deeper aquifers, ranging up to eighty feet in depth, lie under and adjacent to the Hop River, with the deepest and most extensive aquifer lying nearest Willimantic.

In the Ten Mile and Hop River corridors, much of the groundwater is of B quality and unsuitable for drinking, due to past siting of landfills. The only deep, high-yielding aquifer with drinking water quality is along the Hop River at its junction with the Willimantic River.

It is important that the water quality of these aquifers be carefully monitored and protected. Unfortunately, the Town's commercial zone lies over the Town's most extensive aquifer. While aquifer protection is state-mandated for aquifers used as public drinking water supplies, Columbia's aquifers are used by private wells and therefore have no legal protection. When a reservoir is underground, it may easily be neglected or abused. A heightened awareness of the function and importance of this water resource is needed.

ASSESSMENT OF COLUMBIA'S WATER RESOURCES

Since the initiation of the comprehensive Lake Management Plan, Columbia Lake's annual water testing conducted by a limnologist has found the water quality to be better than in 1998 when the Lake Management Plan was implemented. Columbia Lake is considered one of Connecticut's best lakes for its quality of water.

Columbia's Inland Wetland Commission and its agent diligently review all applications for land disturbance activity within 100 feet of any wetland soils; any approval includes conditions that must be met to ensure wetland protection.

Goal: *Protect the quality of Columbia's wetlands, surface waters and ground waters for future generations.*

Strategies:

- ***Continue to enforce the Columbia Lake Watershed Management Plan.***
- ***Actively pursue acquisition, easements and regulation revisions to limit future development.***
- ***Enact appropriate protection measures for priority wetlands through regulations and open space acquisition.***
- ***Institute stormwater management practices that will minimize water pollution and sedimentation and maximize infiltration and ground water recharge.***
- ***Proactively work to control invasive species.***
- ***Map the vernal pools.***

SOIL RESOURCES

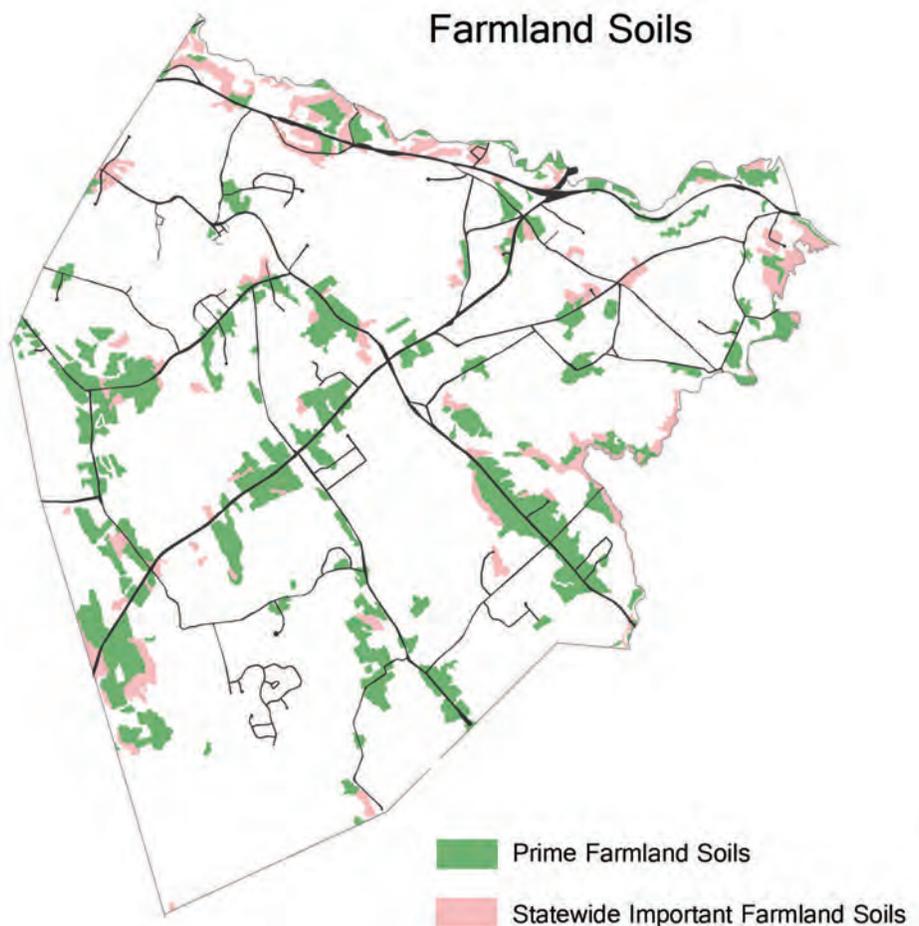
Soil is made up of air, water, minerals and organic material and is one of the most important natural resources on earth. Most life on earth depends on soil as a direct or indirect source of food. Plants and animals get their nutrients from the soil, and it is home to many different forms of life.

The Town's soil resources are the result of thousands of years of interaction between the bedrock geology of the Town and the climate. The most significant climatological factor has been the glacial activity, which ground the bedrock into smaller stones, deposited glacial till, and formed the hills and valleys of Columbia.

The most evident link between the soil and humans is its use to grow our food, feed animals and produce timber. But there are other values as well. For example, soil filters our drinking water and protects against flooding.

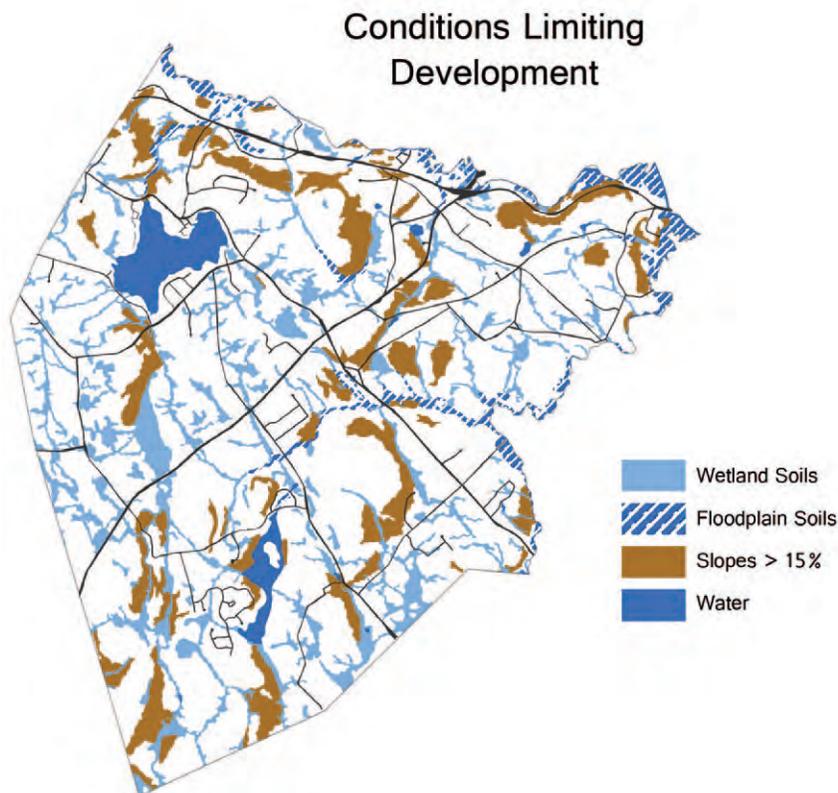
Awareness of the topography of Columbia is basic to an understanding of its soils. Columbia has high land in its southern and western ends which slope down to major rivers. Two of those rivers (the Yantic and Salmon) lie outside the Town borders. The other two, the Ten Mile and the Hop River, make up the Town's eastern and northern boundaries. During periods of glaciations, the higher elevations were scoured by tons of ice leaving glacial till, a nearly impenetrable hardpan layer, in the uplands. These glacial till soils presented problems for farmers in the past and still do for the developers today. In areas that were lower-lying, glacial outwash streams deposited finer glacial till (sand and gravel) in stratified layers, most notably along the Hop River. In some of the uplands, bedrock and large boulders remain exposed as soils fail to build up on the steep slopes. In natural depressions or where surface drainage has been impeded by man-made or beaver-made dams, wetland soils have developed. Over time many of these depressions have come to contain deep deposits of peat soils. In the flatter areas between slopes and wetlands are found the Town's best farm soils.

The Town's soil resources have greatly influenced Columbia's pattern of development. In the past, farming was tried in most parts of Town, but proved unsuccessful in many areas. The farms that persist today lie largely in areas of prime farm soils where such operations can still prove economical, mostly along Routes 66 and 87.



ASSESSMENT OF COLUMBIA'S SOIL RESOURCES

Not all soils are suitable for development. Columbia's earliest settlers selected sites in flatter areas that were high and dry. However, as population has increased, areas with severe or moderate soil limitations began to see housing appear. Today's Planning and Zoning and Inland Wetland Commissions work to monitor and limit development in these less suitable areas. All proposed land use activity must be reviewed by the Inland Wetlands Agent, and may be referred to the Inland Wetlands Watercourse Commission (IWWC) for approval. Today's residential building lots must include 30,000 square feet that are neither wet nor steep, and must provide a suitable site for a well and a properly functioning septic system. The map below shows the extent of lands limiting future development. However, these areas are not useless; many of these areas are very important to wildlife and to maintenance of groundwater quality.



Goals: *Promote development that will allow indefinite town-wide use of private wells and septic systems; protect farmland soils; promote practices that protect soils from contamination and erosion.*

Strategies:

- *Study the future impact of current zoning lot requirements and development practices for land disturbance; revise regulations accordingly.*
- *Prioritize farmland soils for open space protection.*
- *Provide public information on soil health, contamination and erosion.*

LIVING RESOURCES AND HABITATS

The living community of plants and animals is also a key resource in Columbia. It is easily taken for granted until a noticeable change in one of them warns us that all is not well. A pond choked with algae and aquatic plants tells us of pollution. A dying tree species can tell us of the loss of birds that feed on disease-spreading insects. Deer in our backyards can tell us of loss of habitat or natural predators. In the natural world, everything is interdependent; if one population fails, the entire system is compromised. As we live in a house that protects us from the elements, and shop at a supermarket rather than hunt or grow food, it's easy for humans to lose sight of this connection. It is nonetheless there. We are dependent on the living things around us.

Plants play a major role in maintaining a plentiful supply of quality water. They also produce the oxygen we breathe, helping to counteract polluted air that comes to Columbia from sources beyond local control. Green surroundings are a primary means to good air quality. Plants are also a food source: for humans, in the agricultural products that are produced in Columbia; and for wildlife, in the leaves, nuts, and fruits that sustain them. In addition to increasing air quality, trees reduce the heat island effect generated by paved surfaces around development and keep streams cool enough to support trout. Trees may also provide a renewable source of wood products for human use.

Wildlife also plays an important role in Columbia. When we think of wildlife, we often think only of mammals, which make their presence obvious – deer, skunks, raccoons, squirrels. We forget those seldom seen amphibians who eat the mosquito larvae that would otherwise overwhelm us. We see the wild turkeys and blue jays that invade our yards, but forget those forest-loving warblers who also play a key role in controlling insect pests. We notice beavers when their dam-building causes nuisance floods, but we don't notice them when the ponds they created help hold back storm waters and reduce pollutants. Some of us enjoy watching wildlife. Others enjoy hunting and fishing. However, we all enjoy the unrecognized benefits animals bring us without which our quality of life would suffer.

PLANTS

A detailed study of the plant species in Town has not yet been undertaken. Vegetation information is available for about two-thirds of the wetlands from the 2000 Wetland Study. The State has developed a general map of the vegetative types throughout the Town, and also has identified the areas where threatened species were reported in the past. The Conservation Commission has also identified a number of sites with special botanical interest such as the stand of paper birch on the steep slopes above Route 6 and the hemlock grove lining portions of Clarks Brook. While not rare species, such plants are not numerous within our Town and provide an important mini-habitat area as well as being scenic.

WILDLIFE

Animal species within Town are not well documented, but increased sightings of previously unusual species are occurring. These include fishers, black bears, bobcats, bald eagles, wild turkeys, pileated woodpeckers, black ducks and wood ducks. Much of this increase is due to the return of woodlands on previously cleared lands. Other animals previously considered unusual such as coyotes, beavers, and bluebirds are now considered common.

FISHERIES

Four watercourses in Town are stocked with trout by the state: the Willimantic, Hop and Ten Mile Rivers and Giffords Brook. From these watercourses, some fish move into tributaries such as Gifford's Brook and Lake Brook. In general, many of the Town's streams are of appropriate water quality and temperature to provide spawning areas for our native fish species. Five stream segments were included in the 2000 Wetland Evaluation Study, and were found to provide significant fishery resources.

Columbia Lake, Jones Pond, and Mono Pond all provide good habitat for fish that tolerate warmer temperatures. Jones Pond and Mono Pond with their well-vegetated shallows provide superior habitat. Many smaller ponds have also been stocked with panfish and bass, but all these remain in private ownership.

CHAPTER 5

NATURAL RESOURCES

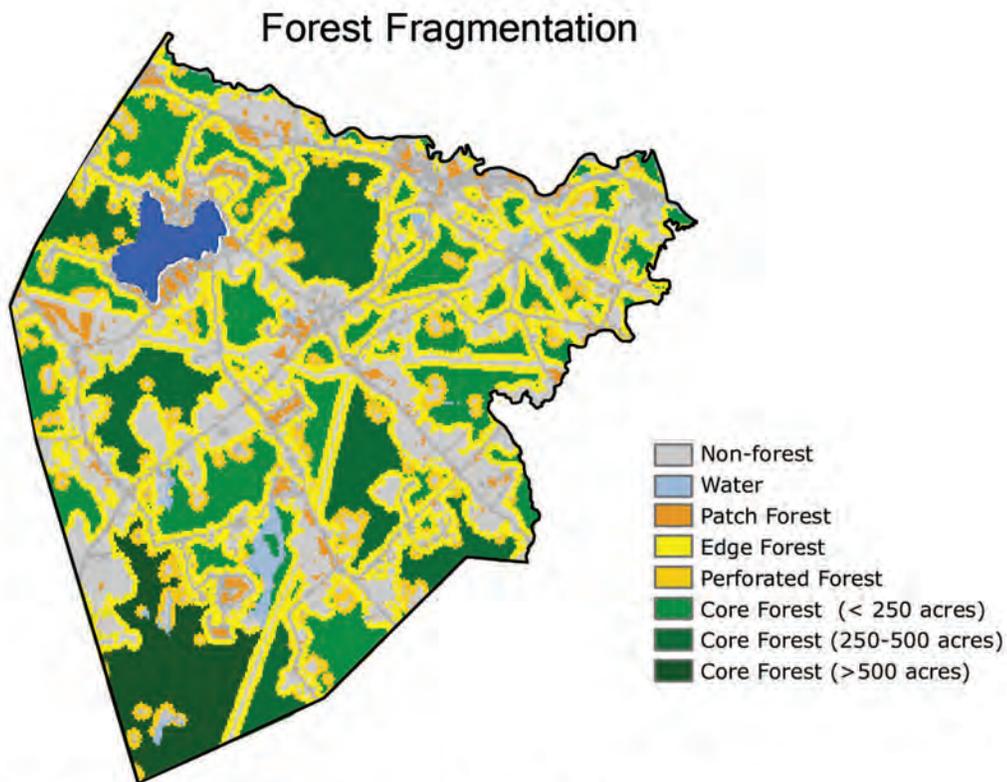
HABITAT

A habitat is an ecological or environmental area inhabited by a particular species of animal, plant, or other type of organism. Many species need different types of habitats to survive, perhaps one area to hunt, another to raise a family and another to sleep. To survive, they need to travel between these different habitats. Development changes an existing habitat, usually from a forest habitat to a lawn habitat. Over time, development results in the division of large, contiguous habitats into smaller, more isolated remnants; the large contiguous habitat is now fragmented with a significantly lower environmental value as a habitat.

Thousands of scientific studies now show unequivocal evidence of the environmental impacts of habitat fragmentation. The division of large, contiguous habitats into a greater number of smaller patches that are isolated from each other have an exponential effect. Although the same in total acres, 100 acres of a contiguous habitat is not the same as ten individual 10 acre habitats.

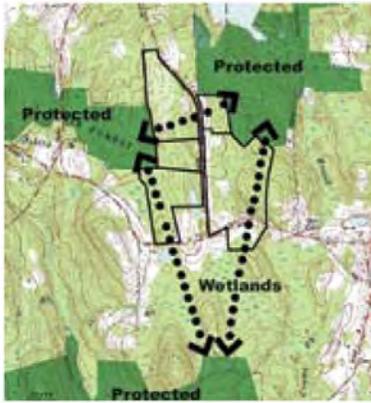
Fragmenting the landscape impacts the survival and distribution of many species. Protecting core natural areas for wildlife and providing linking corridors is an important conservation strategy. Environmental corridors are naturally occurring landscape features like wetlands, ridgelines and stream courses. Other important wildlife corridors can be the result of disturbances or management such as utility lines and vegetated strips along roadsides.

Corridors serve multiple functions for wildlife including: habitat, migration, reproduction, protection and filtration, among others. The structure or physical components of a wildlife corridor, such as width, length, connectivity and vegetation, will determine if it meets the needs of a specific wildlife population. Wildlife corridors may not provide all of the resources necessary for a species but they can help animals travel through their range to successfully feed, breed, nest and reproduce. The land along streams, called riparian corridors, provides some of the most important wildlife connections in our landscape. Vegetation near riparian corridors is often more structurally diverse and abundant than some upland habitats. Riparian corridors can provide food and shelter — as well as water, insects, fish and other necessary resources for wildlife.



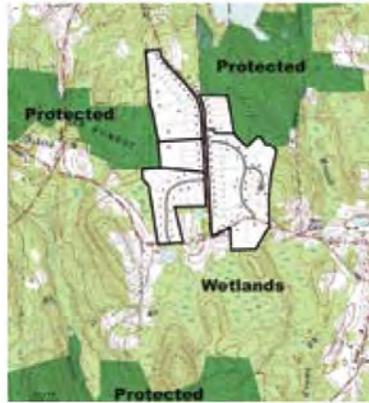
This map is a product of the Center for Land Use Education And Research (CLEAR) at the University of Connecticut; created 5/7/09.

The subdivision of land for development can be designed to limit fragmentation of forests and provide for wildlife corridors. In this example there are five undeveloped parcels between large areas of permanently protected open space and a large area of wetlands that cannot be developed.



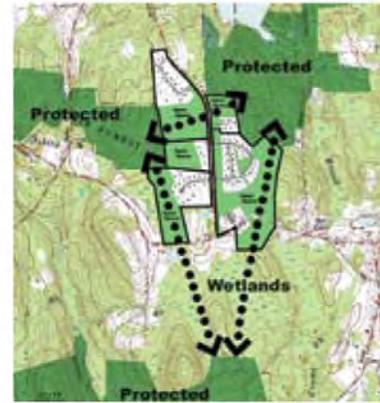
Current Condition

Wildlife can move freely throughout this area of wetlands, and forested land.



Impact of Conventional Subdivision

If those five parcels were developed with conventional subdivisions, forest would be fragmented and wildlife corridors would be lost.



Benefit of Open Space Subdivision

If those same parcels were developed as open space subdivisions, the same number of homes could be built while the forest and wildlife corridors are protected.

ASSESSMENT OF COLUMBIA'S LIVING RESOURCES AND HABITATS

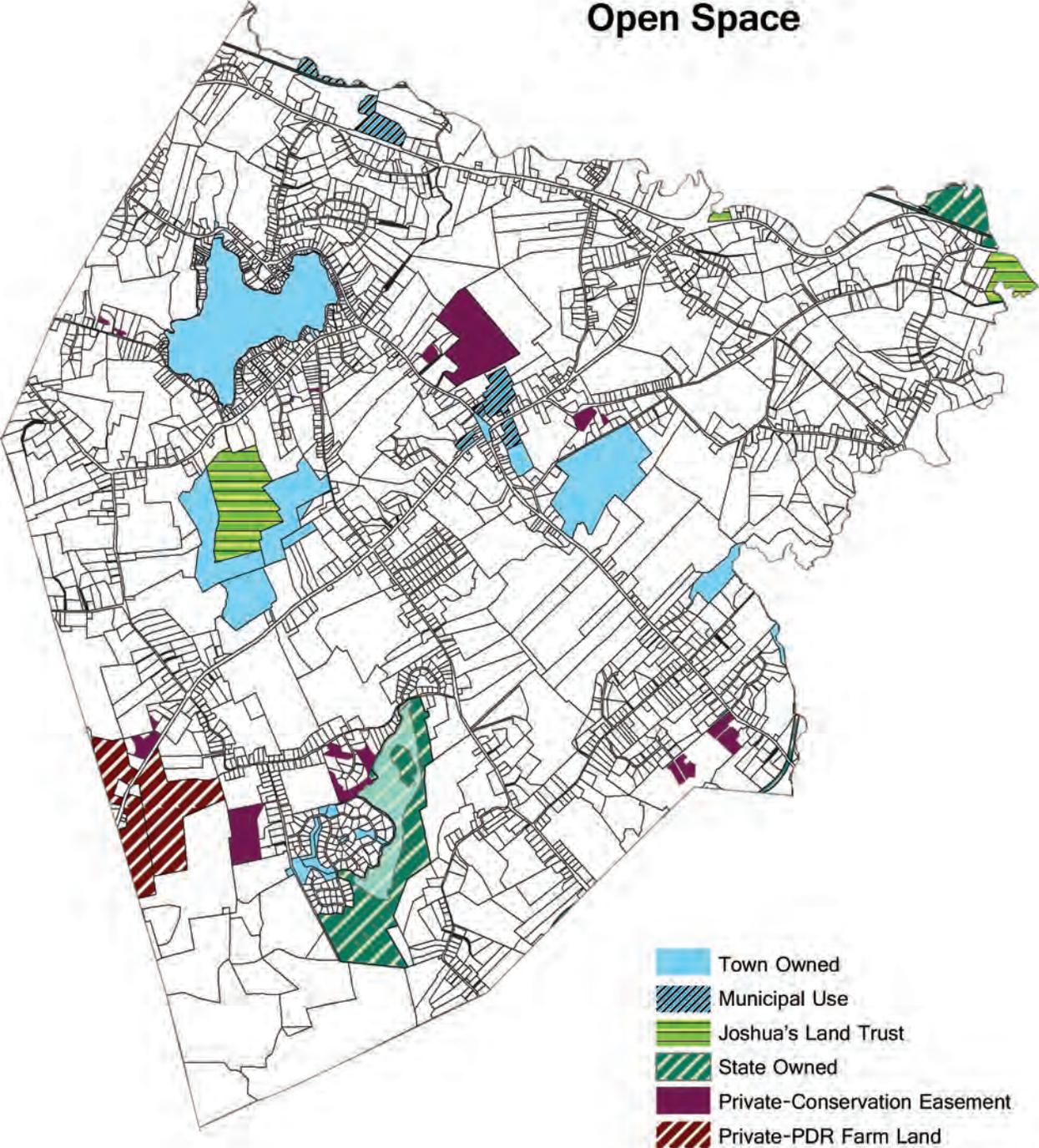
Columbia provides a wide range of habitats including upland forest, pasture, and cultivated field, pond and lake, swamp, and marsh, floodplain and alluvial terrace. There are consequently a wide range of plants and animals in Town. At present, no nationally threatened or endangered species are known to exist in Columbia, but there are a number of state-listed species. As with most Connecticut towns, our roadways and residential development have fragmented habitats.

Goals: *Protect and foster a rich diversity of plants and animals in Columbia and protect large contiguous habitats; offset fragmentation with wildlife corridors.*

Strategies:

- *Identify important contiguous habitats within, and abutting, Columbia's borders; revise open space plan accordingly.*
- *Update the potential wildlife corridors map as needed; establish preservation of these corridors when considering open space set aside in subdivisions.*
- *Prioritize large contiguous habitats for open space protection.*
- *Proactively work to control invasive species.*

Open Space



CHAPTER 6

OPEN SPACE



Plan for the protection of Columbia's valued natural and cultural resources while the Town continues to grow.

OVERVIEW

The words “open space” refer to undeveloped land or land in its natural state. In 1997, the governor of Connecticut set a goal of 21% of the state's lands to be preserved as open space by the year 2023. 10% of the open space land was to be preserved by the state; the other 11% was to be protected by municipalities, land conservation organizations, and water companies.

Connecticut set this goal in recognition that in appropriate quantities and locations, open space can:

- Protect natural resources, including water supplies
- Shape development patterns
- Offer outdoor recreation
- Protect scenic features and historical sites
- Protect and define community character
- Conserve natural communities and habitats for plants and animals
- Maintain a landscape that promotes the harvest of farm and forest products
- Enhance the quality of life for residents, businesses, and visitors to Columbia

Protecting open space has other significant benefits that are often overlooked. Open space can actually bring fiscal and economic benefits by reducing the cost for needed services and elevating property values while retaining the Town features that we love.

Effectively, the preservation of open space slowly permits a community to stabilize its tax rate by lessening new impacts and increasing the per-property value of existing properties. Additionally, town-owned open space can generate its own tax dollars through farm and forest management income, further helping with the cost revenue balance.

2015 SURVEY RESULTS

One survey question asked how the respondent would distribute \$50, in \$10 increments, across various categories. The survey results showed the importance of open space as 50% of the respondents spent the first \$10 on either protecting open space or for additional trails:

- 50% {
- 28% Protecting open space
 - 22% Additional hiking/biking trails
 - 16% Additional youth programs
 - 15% More fire and police protection
 - 12% Improving community buildings
 - 7% New ball fields at recreation park

CHAPTER 6 OPEN SPACE

FISCAL BENEFIT

Studies in Connecticut and across the country have found that open space has a positive effect on the mill rate. When land is subdivided for residential use, the new home will increase the town's Grand List but the cost to deliver the required services to those residents also increases, usually in an amount that exceeds the increased tax revenue.

Cost of Community Services (COCS) studies are a case study approach used to determine the fiscal contribution of existing local land uses. A subset of the much larger field of fiscal analysis, COCS studies have emerged as an inexpensive and reliable tool to measure direct fiscal relationships. These studies identify all town revenue and expenses by three types of property use: residential use, commercial/industrial use, and open spaces/farm/vacant use. COCS studies are snapshots in time of costs versus revenues for each type of land use. They do not predict future costs or revenues or the impact of future growth. They do provide a baseline of current information to help local officials and citizens make informed land use and policy decisions.

COCS studies across the country conducted over the past 30 years show the open space/farm/vacant category generate more public revenues than they cost in public services. Their positive impact on mill rates is similar to that of commercial and industrial land uses. On average, because residential land uses do not cover their costs, they must be subsidized by these other land uses.

Four separate Cost of Community Services Studies have been conducted for surrounding towns, and the results mirror other COCS studies conducted across Connecticut and the country. Each of these studies found that, collectively, for every \$1 paid in local taxes on a house, the town spent \$1.06 to \$1.15 to provide services such as road maintenance, schools, police protection, etc. The other two land use categories made up the difference, as they paid more in local taxes than the town needed to provide their services.

Connecticut COCS Studies			
The dollar cost of services for every dollar paid in local taxes			
	Residential	Commercial Industrial	Open Space Farm/Vacant
Bolton (1)	1.05	.23	.50
Brooklyn (3)	1.09	.17	.30
Colchester (3)	1.14	.18	.18
Coventry (3)	1.06	.25	.25
Durham (2)	1.07	.27	.23
Hebron (1)	1.06	.47	.43
Farmington (2)	1.33	.32	.31
Lebanon (3)	1.12	.16	.17
Litchfield	1.11	.34	.34
Pomfret (2)	1.06	.27	.86
Windham (3)	1.15	.24	.19

(1) Geisler; (2) SNE Forest Consortium; (3) Stahl

Cost of Community Services Studies for Connecticut towns indicating that the more developed towns have increased demand for services from residential properties.

LOWER INTEREST COST ON BONDS

Communities adopting conservation plans have been shown to improve their bond rating resulting in lower borrowing costs. One factor determining bond ratings is how well growth is managed; towns that grow too quickly put a strain on town's fiscal health, and affect the ability to make bond payments.

LOWER UTILITIES COSTS

Conserving our natural resources allows private drinking water wells and private septic systems today and in the future, thereby avoiding the cost, and resulting higher mill rates, to provide public drinking water and sewer systems.

INCREASED PROPERTY VALUES

Although a community's purchase of open space removes that property from the tax rolls, over a short period of time the property surrounding the preserved property (not just the abutting property) grows in value. This increase in valuation runs from 6% or more in rural areas to as much as 40-50% in urban areas, and the increased value can affect homes as far away as one-half mile from the preserved open space. Natural open space and trails, in return, are attractive to potential home buyers, resulting in a quicker turn-over of these homes. Put this together with a study done for the real estate industry by American Lives, Inc., which found that the presence of quiet, open space, nature and bike trails and gardens were the essential characteristics that home buyers are looking for, and you have a winning combination.

INVENTORY OF COLUMBIA'S OPEN SPACE

The map on page 30 shows Columbia's protected open space and other town-owned land. These open space lands have different distinctions; some are permanently protected with public access for hiking and other passive recreation, other lands are permanently protected but not open to the public or are town owned and used for municipal purposes.

Description	# acres	Ownership
Columbia Lake	281.0	Town of Columbia
Town Beach	1.8	Town of Columbia
Recreation Park	77.6	Town of Columbia
Brand Property	47.9	Town of Columbia
Lake Rd (west of Utley Preserve)	73.9	Town of Columbia
Szedga Farm	132.9	Town of Columbia
Fireman's Field	11.8	Town of Columbia
Island Woods at Mono Pond	34.5	Town of Columbia
Ten Mile River access Sunrise Dr	25.7	Town of Columbia
Ten Mile River access Samuel Hill	4.0	Town of Columbia
Town Green	4.6	Town of Columbia
Small (several)	14.5	Town of Columbia
Utley Hill Preserve	124.0	Joshua's Land Trust
Potter's Meadow	33.0	Joshua's Land Trust
Goldberg Parcel	4.0	Joshua's Land Trust
Conservation Easements (several)	193.0	Privately Owned
PDR farmland (three)	198.0	Privately Owned
Mono Pond State Park	287.1	State of Connecticut
Hop River Trail	13.5	State of Connecticut
Willimantic River Access	52.0	State of Connecticut
Airline Trail	8.0	State of Connecticut
Total Open Space	1,622.8	
Horace Porter School	23.7	Columbia Town Buildings
Town Hall and Library	2.6	Columbia Town Buildings
Columbia Volunteer Fire Department	8.8	Columbia Town Buildings
Transfer Station and Town Garage	26.4	Columbia Town Buildings
Beckish Senior Center	4.6	Columbia Town Buildings
Total Open Space and other Municipal parcels	1,688.9	

CHAPTER 6

OPEN SPACE

Not all open space is permanently protected by deed language that prohibits, or limits, development. For example, some of the lands that the State owns will most likely remain as they currently are, but there is no language in the deed that would prohibit them from being sold and developed. Properties shown as Private Conservation Easement or Private PDR Farm Land are lands that are permanently protected; these lands are private and not open to public access. Joshua's Land Trust lands are all permanently protected and are open to the public for passive recreation. Some of the town-owned lands are permanently protected while other lands are intended to be open space but without the restriction that would limit the Town from building. Still other Town lands have municipal buildings and are not true open space, but could be used by the public and may serve as future trail connections.

The past 10 years have seen an increase of the lands in Columbia that are dedicated open space and permanently protected from 2% to 6%. When combined with public lands which are not deed restricted but will most likely remain undeveloped the total open space increased from 6% 10 years ago to 10.6% today.

COLUMBIA'S OPEN SPACE PLAN

Without planing for open space today, those aspects of Columbia that Columbia residents value could be lost forever.

Columbia's Open Space Plan is focused on protecting Columbia's valued natural and cultural resources for future generations. These resources are discussed in detail in Chapter 4: Cultural Resources and Chapter 5: Natural Resources.

Open space protection is not limited to the outright purchase of land; there are numerous other methods, including private ownership, to achieve the same results.

Establishing priorities and goals for open space is a way to balance conservation and development. In Columbia, many attributes of a particular property are studied before it is considered for protection as open space. Those attributes are tied to the following specific goals and selection criteria; the more attributes a property has the more advantageous it would be to protect.

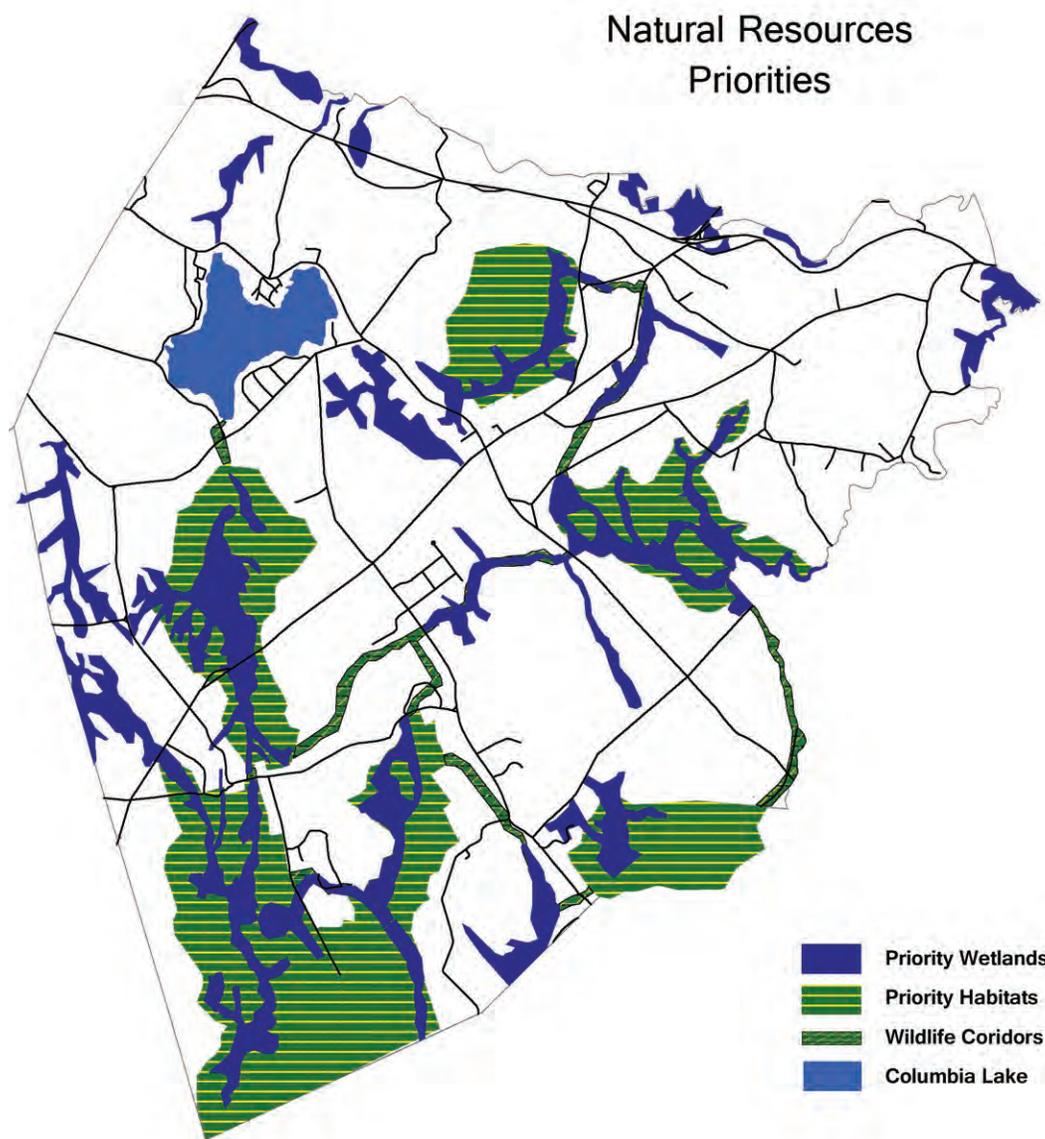
Protect valuable natural resources:

- Quantity and quality of drinking water supplies
- Quality and accessibility of recreational waters
- Unique or sensitive environmental resources
- Farmland soils
- Habitat areas for Columbia's game and non-game wildlife, including large unfragmented forest blocks
- Wildlife corridors, particularly those along perennial streams and water bodies
- Sites that abut or connect existing dedicated open space

Protect valuable cultural resources:

- Rural Character of the town which includes scenic vistas and roads, agricultural uses and structures, and historic or cultural sites
- Sites that provide opportunities for passive recreation such as hiking, biking, nature study, cross country skiing, canoeing or kayaking, fishing and hunting
- Sites suitable for active recreation as identified and prioritized by the Recreation Commission

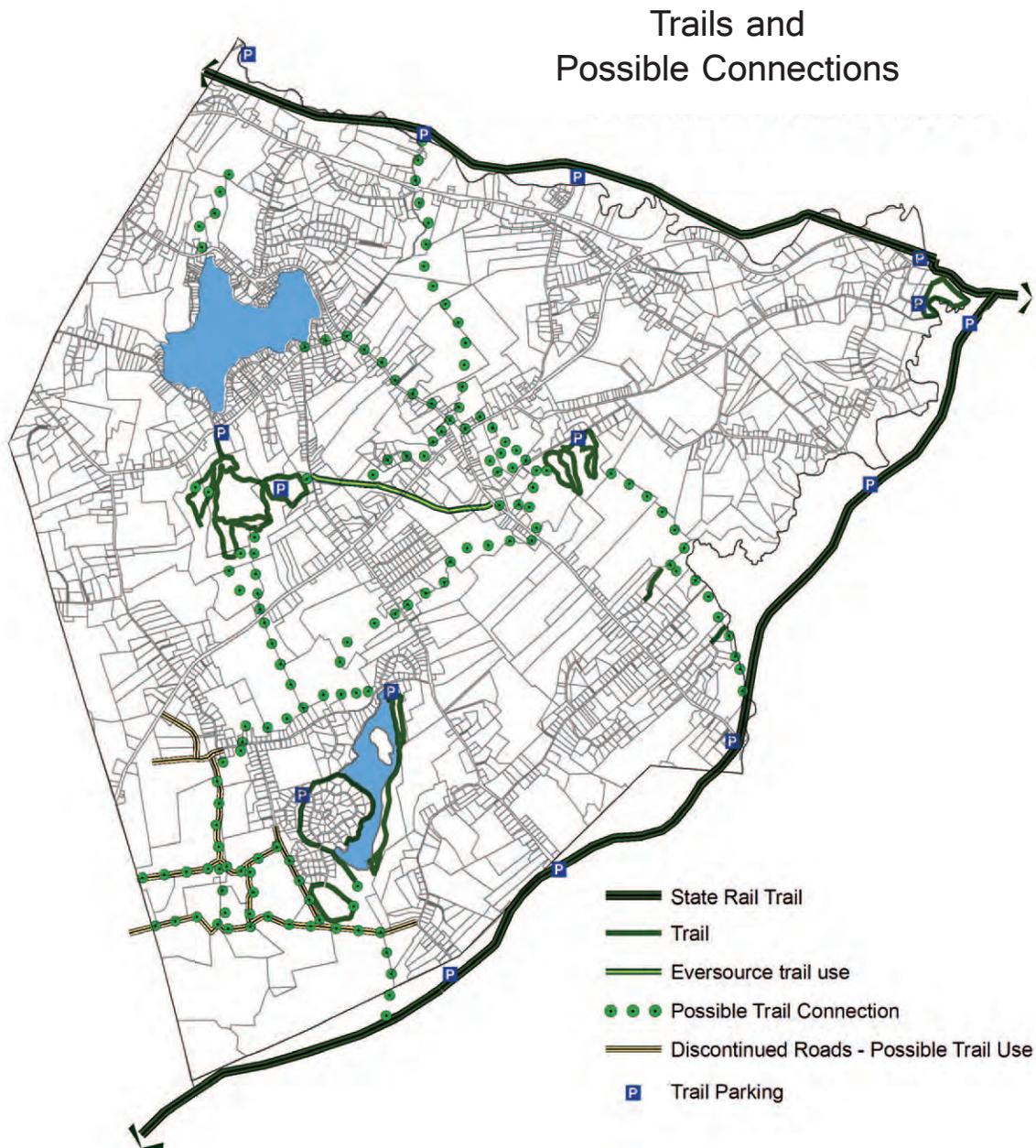
The Town has identified priority natural resource areas, several of which overlap. The value of the natural resources are described in detail in Chapter 5: Natural Resources. The map below shows the priority wetlands, habitats and wildlife corridors on a town-wide basis using ArcMap, a Graphic Information System (GIS) software program. This data is an important tool for planning. As an individual property is analyzed, data specific to that site will be analyzed, and valuable resources on that site may be identified that are not depicted on this map.



CHAPTER 6 OPEN SPACE

Columbia is between two major long distance State trails: along our southern border is the Airline Trail South, and along our northern border is the Hop River Trail, a segment of the 2,900 mile East Coast Greenway. Within Columbia are several other trails, discussed in detail in Chapter 12: Recreation.

Survey results in both the 2001 and the 2015 surveys of residents found that additional trails and pathways for passive recreation were important. The Town has many trails that accommodate walking, jogging, bicycles, cross-country skiing and horse-back riding. Many of the trails are either loop trails, or do not connect to other trails or town facilities; it would be ideal to have more trail connections. A goal of the town is to plan for an inter-connected trail system to link residents to other trails and provide a greater enjoyment of our natural areas. The map below shows the existing trails in Columbia with a broad-stroke plan for linking trails.



CRITERIA FOR OPEN SPACE PROTECTION

Columbia's Open Space Plan states that the protection of open space must be tied to specific goals and selection criteria. Each property under consideration for protection is analyzed based on the following goals:

Protect quantity and quality of drinking water supplies, with priority given to:

- Properties including large ground water recharge areas and/or stratified drift aquifers
- Large wetland areas lying high in the watershed
- Forested parcels abutting the above two types of land
- Properties that include perennial springs
- Watershed areas of community wells

These lands include those adjacent to Dam Brook, Giffords Brook, and the Ten Mile River. Some of the larger wetlands areas are: Utlely Swamp, the Mint Brook/Wells Woods area, Brousseous Marsh, and lands in the Giffords Brook watershed.

Protect quality and accessibility of recreational waters, with priority given to:

- Undeveloped properties lying in the Columbia Lake Watershed
- Properties lying in the Mono Pond watershed
- Shoreline properties on Mono Pond, Columbia Lake, Giffords Brook, the Ten Mile River, Columbia Lake Brook, Mint Brook, Clark Brook, and the Hop River

Protect the rural character of the Town which includes scenic vistas and roads, with priority given to:

- Lands overlooking view sheds, particularly those with public access
- High places and ridge lines, especially those visible from long distances
- View sheds, especially those visible for long distances
- Views from the Airline and Charter Oak Rail Trails

Some scenic view sheds visible from roads include looking north to Coventry from the Brand Farm on Old Willimantic Road, the view towards Hebron from Skyline Farm on Route 66, views of Columbia Lake from Lake Road and Route 87, and Columbia Green from the intersections of Route 87 and Route 66.

Protect the rural character of the Town agricultural uses and structures, by protecting farmland and encouraging the opportunity to farm, with priority given to:

- Land with prime, important and locally important farm soils
- Farms, crop fields, orchards, retail stands, timber forest, or horse farms
- Farm structures such as barns, silos, and sheds

Protect the rural character of the Town historic or cultural sites, with priority given to:

- Historically significant properties that are endangered
- Properties listed in the state or national registers of historic places
- Properties within designated historic districts
- Properties with cultural features such as museums, art galleries, or archaeological sites
- Properties with historic industrial significance such as mill or factory sites, stone walls, wells, cellar holes and bridges
- Properties with significance in past events such as the Revolutionary or Civil War

All above types of properties have higher priority if they can be publicly accessed. Many of Columbia's oldest homes and Town buildings lie along Rt. 87. Most of the old mill structures and ruins of homes lie in the Wells Wood area, the Utlely Brook area, and the Hop River Village.

CHAPTER 6

OPEN SPACE

Protect unique or sensitive environmental resources, with priority given to:

- Steep slopes
- Wetlands with high ratings for ecological integrity
- Floodplains
- Mature forests and those forests with productive forest soils
- Land or water within a Critical Environmental Area
- Lands or waters that provide habitat for state endangered or threatened species of plants and animals
- Vernal pools

Some lands or waters identified as significant are: Columbia Brook Ravine, Lower Gifford Brook Marshes, the sandy floodplains near the Charter Oak Rail Trail, the Mint Brook wetland system.

Protect habitat areas for Columbia's game and non-game wildlife, including large unfragmented forest blocks, with priority given to:

- Unfragmented forest blocks of 200 acres or more
- Wetlands with high ratings as wildlife habitat
- Grasslands mown only once every 1-3 years
- Floodplains
- Shorelines of water bodies and watercourses

Six large undeveloped woodland areas with priority wetlands within them have been identified. They abut Utlely Swamp, Upper Giffords Brook, Mint Brook, Mono Pond, Lower Giffords Brook, Clarks Brook and Brousseous Brook.

Protect wildlife corridors particularly those along perennial streams and water bodies, with priority given to:

- Land within 150 feet of streams which connect the six forest blocks described above
- Land within 100 feet of all perennial streams and water bodies

Eight corridors have been documented that connect the priority forest habitats.

Protect sites that provide opportunities for passive recreation such as hiking, biking, nature study, cross country skiing, canoeing or kayaking, fishing, and hunting, with priority given to:

- Sites that provide opportunities for more than one of the above activities
- Sites that will provide safe, public access
- Sites which include a variety of topographies and habitats
- Sites that abut quality finfish habitat

Most of these recreational activities can and should take place on lands already protected under the preceding attribute listings. However, public ownership of the land outright or access by conservation easement will be needed on those properties which have the highest recreational values.

Protect sites that abut or serve to connect existing dedicated open space, within Columbia or in partnership with neighboring towns, with priority given to:

- Sites connecting Town properties: the Town Green, Horace Porter School, Columbia Lake, Recreation Park, Beckish Senior Center, and Fireman's Field, especially those providing safe, public access
- Sites connecting land owned by the state or land trust to each other and to town-owned lands
- Lands abutting those lands named above

Ownership or easement may be needed to ensure public access where it is appropriate.

Protect sites suitable for active recreation as identified and prioritized by the Recreation Commission, with priority given to:

- Lands abutting Recreation Park
- Existing open space lands in close proximity to large neighborhoods of residences if active recreation meets the original open space designation

If a particular property under consideration for protection has the attribute of a priority property under the above goals, several methods can be used for protection. Frequently a combination of protection methods are used including private ownership with an easement, open space set aside in a subdivision, federal or state grants, or purchase.

ASSESSMENT OF COLUMBIA'S OPEN SPACE PLAN

The Open Space Plan is based on a clear assessment of a property's attributes. This strict set of criteria focuses the Town's goals on priority attributes. This Plan, over time, can successfully protect the natural and cultural resources our residents value today so future generations can enjoy them as well.

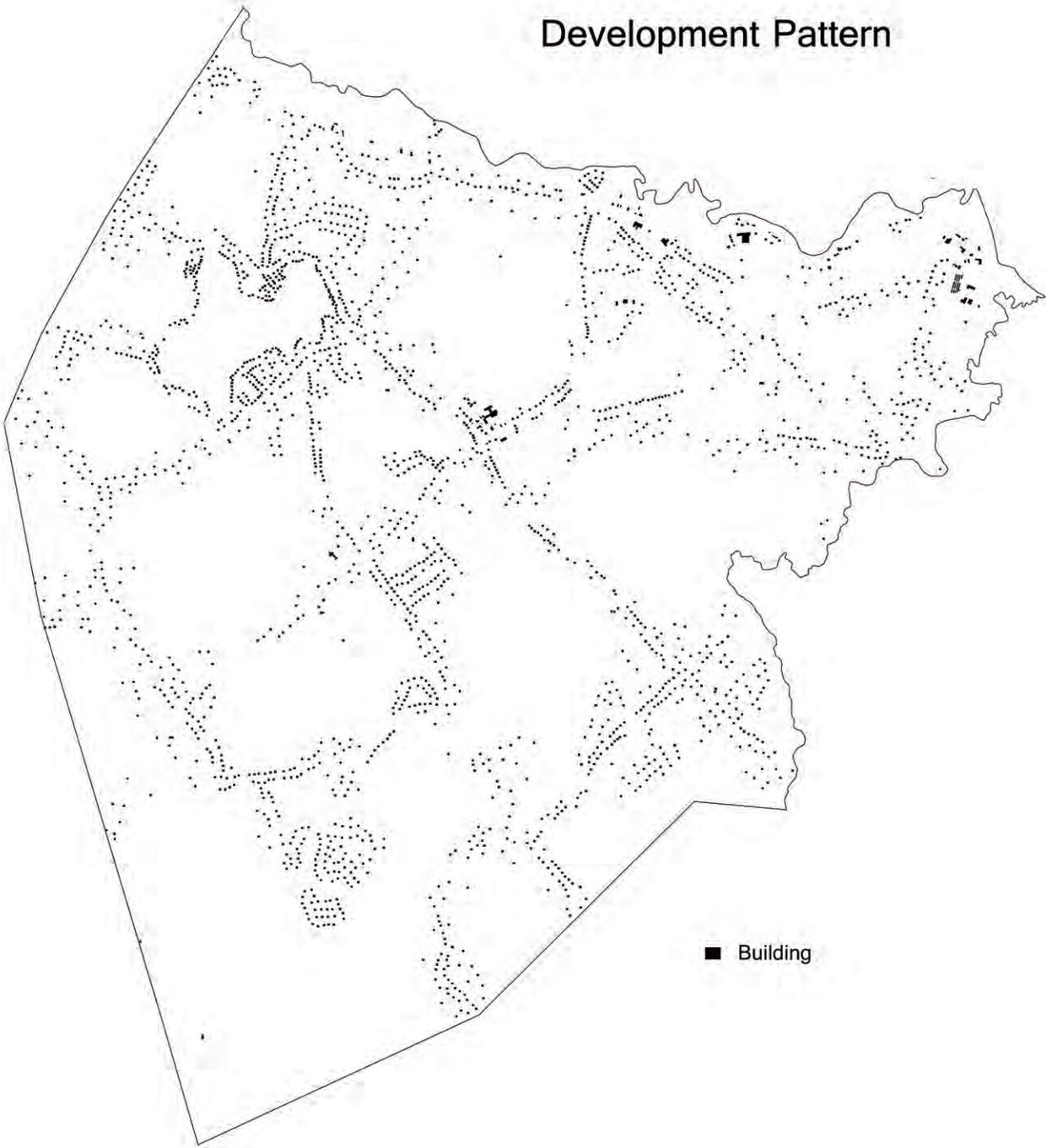
Residents have consistently approved open space acquisitions at Town Meetings and by voting to fund open space. When asked in the 2015 Survey to distribute \$50 in spending to various categories, the majority chose additional hiking/biking trails and protecting open space as their priority.

Goal: Continue to protect priority properties based on a strict standard of criteria.

Strategies:

- **Review subdivision regulations and revise where necessary to allow for conservation subdivisions as a viable open space protection tool.**
- **Work with landowners who are considering permanently protecting some or all of their land for future generations.**
- **Analyze available priority property for possible acquisition using grant funds.**
- **Coordinate with other governmental agencies and land trusts to support open space goals.**
- **Continue to monitor conservation easements and manage town-owned open space.**
- **Facilitate donations of lands or funds for open space protection.**
- **Permanently protect town-owned land when appropriate.**
- **Budget for minimum allocation to open space to maintain sufficient balance.**

Development Pattern



CHAPTER 7

COMMUNITY DEVELOPMENT



Plan for a pattern of future development that will result in strengthening Columbia's community.

OVERVIEW

The historic pattern of development in most New England towns was that of a village centered on a public green. The green was surrounded by homes, businesses and churches with narrow lanes to the outlying farms. Frequently, small hamlets developed around crossroads or small mills.

In many ways, Columbia's pattern of development conformed to this historic pattern. Columbia's Town Green was surrounded by homes and churches, with an inn and a general store. Hamlets formed near our mills and eight school districts, each with a one room schoolhouse, were established near these hamlets.

The businesses in the Landmark, Collins Garage, and First Niagara Bank continue the tradition of small businesses locating in the center of Town. Columbia's outlying hamlets have faded away with the end of the local mills and district schoolhouses, yet clusters of historic houses still remain at many of those locations.

Over time, the narrow lanes were widened to roads and lined with homes. The heavier traveled roads became State Routes 6, 66 and 87.

Columbia's pattern of development changed when the Town acquired Columbia Lake in the 1930s, and summer and year round residences were built around the lake.

The map on the previous page show all the buildings in Columbia. Not including the roads makes it easier to see the pattern of development today with homes along the Columbia lakeshore, along roadways and in the grid pattern of newer subdivisions.

CHAPTER 7 COMMUNITY DEVELOPMENT

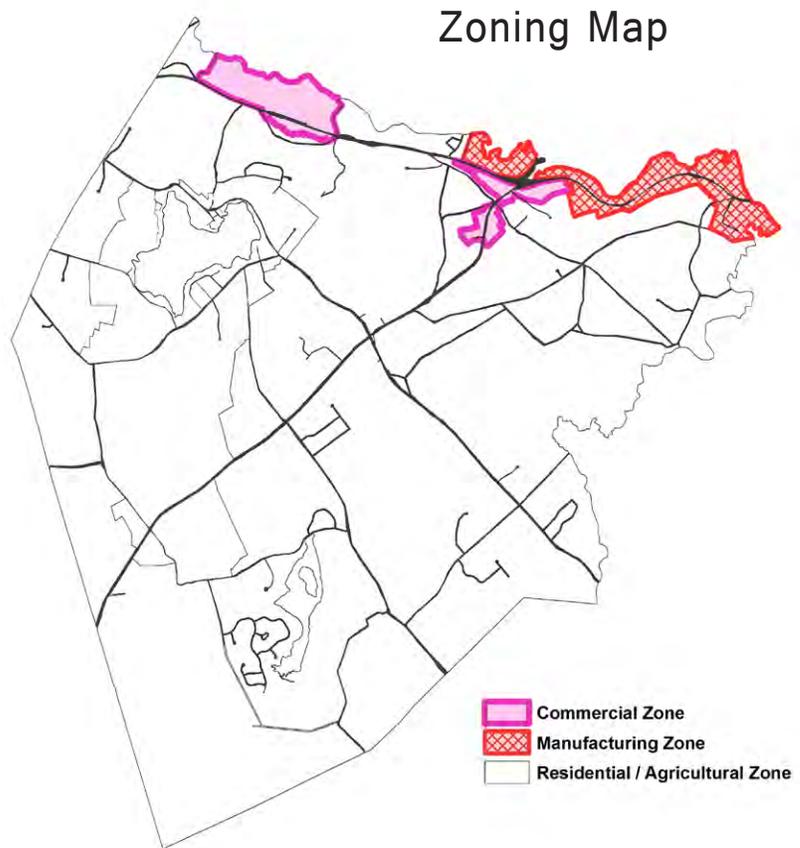
COLUMBIA'S DEVELOPMENT HISTORY

As with other towns around the country, Columbia sought to guide its future development to meet the goals of the community. A Zoning Commission was established in 1941, and the Town adopted zoning regulations in 1947. Later, the Commission became the Planning and Zoning Commission and subdivision regulations were adopted in 1954. Before zoning regulations, houses and businesses could be built on any size lot, anywhere in Town and for any purpose. In 1947, three zones were created in Columbia. Zone-A was a residential district within 1,000 yards of the intersection of Routes 87 and 6A (now Route 66). Zone-AA was a residential district within 1,000 yards of the high water line of Columbia Lake. The rest of Columbia was Zone-B, a district that had no restriction for the type of use.

Zoning regulations define the types of uses, the minimum lot sizes, setbacks from property lines for buildings and other requirements for each zone in that Town. Over time, when the needs of a community change, regulations are changed to address those needs. In 1947, the minimum lot size was only 7,000 square feet, about 1/6 of an acre. That was increased in the 1950s to 15,000 square feet which is about 1/3 of an acre. Columbia and many other towns began to increase the minimum residential lot size as scientific research established standards for septic systems with a minimum distance from a well used for drinking water. In the 1960s and 1970s, Columbia had two residential zones, one with a minimum lot size of 40,000 square feet, and the other 65,000 square feet.

One of the characteristics of Columbia that residents value is its rural character and open spaces. Over the decades, the Planning and Zoning Commission has worked to revise the zoning regulations to meet the wishes of its residents. In 1983, the two residential districts were combined and minimum lot sizes changed to 50,000 square feet which is about 1.15 acres. This is the same today.

Another change in Columbia zoning regulations over the years was to create areas of town for new commercial and manufacturing businesses along Routes 6 and 66 on the northern border of Town. The Zoning Map to the right shows that the Town has 3 zones: 94% of the Town is zone residential, 3.4% is commercial and 2.6% is manufacturing.

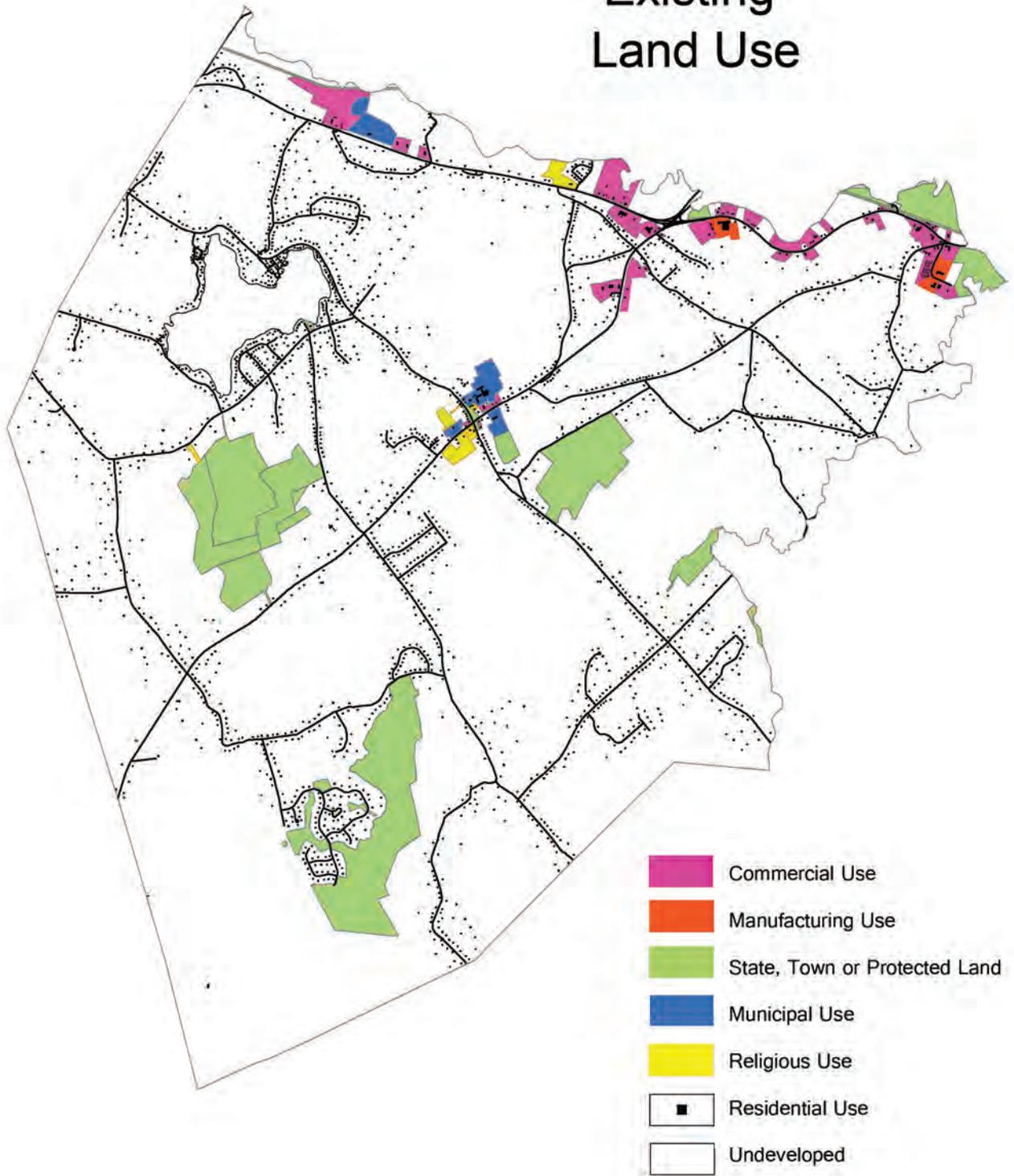


CURRENT LAND USE PATTERN

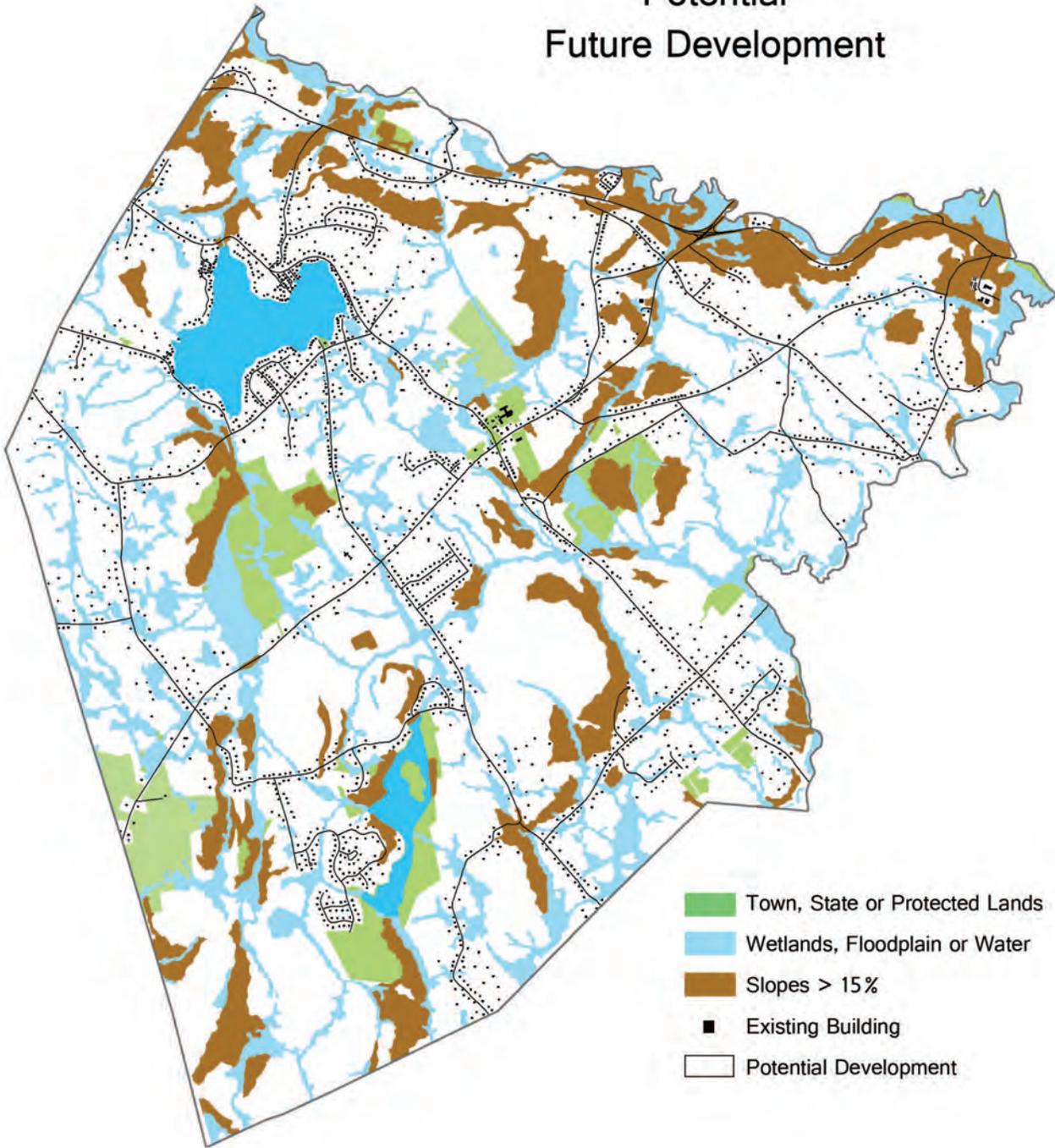
Land use describes the primary way the land is used. Land uses can be grouped by similarities, such as residential, commercial, manufacturing, religious, governmental, protected open space, and undeveloped.

The Land Use Map on the next page shows the type of land use currently in Columbia by these categories. Looking at the map, it's easy to see that Columbia is primarily residential with large areas of undeveloped land. There is commercial and manufacturing along Routes 6 and 66. There is also a concentration of government, commercial and religious uses in the center of Town.

Existing Land Use



Potential Future Development



POTENTIAL FUTURE DEVELOPMENT

GIS, Geographic Information System, is a computer program that uses layers of digital data of environmental and other information that is geo-rectified (geographically aligned to each other). It's an excellent tool for broad-stroke planning; however, the data is not site specific and cannot be used to determine the specific attributes that would permit or prohibit development of a parcel. For planning purposes, the maps in this POCD were generated using GIS.

The map on the left is a broad-stroke look at the areas in Columbia that could potentially support future development. On the map, the white areas denote areas that have no development, are not identified as wetlands or steep slopes and are not permanently protected or not owned by the State or Town – in other word, areas that could potentially be developed in the future. Some of the white areas might not be developable after site specific analysis, as the parcel might have wetlands or it might be too cost prohibitive to build a road to it.

Driving on many of our roads, it might seem as if Columbia is almost completely developed but, based on GIS analysis, approximately 28% of the Town could potentially support future development.

PLANNING FOR COLUMBIA'S FUTURE DEVELOPMENT

*“If you don't know where
you are going,
you'll end up someplace else.”*

— Yogi Berra

There is an underlying truth in most Yogi-isms. Without planning the pattern of development that will meet the needs and desires of Columbia's residents, developers will decide Columbia's future. Many communities in the western part of Connecticut implemented two-acre zoning for all residential development to preserve their rural character. Unfortunately, they achieved the opposite result: virtually entire towns were developed with few open spaces and their rural character was lost.

Columbia is very fortunate as the rural character valued by our residents is still very much in evidence. To maintain our rural character, Columbia must balance future development with the conservation of our natural and cultural resources. Randall Arendt, the noted expert on preserving a town's rural character while it continues to grow, recommends changing the pattern of development to one that reflects our heritage. He notes that “one need only look at communities with no discernible structure to realize that community character is adversely affected by random development without thought to overall community structure and organization.”

Many of Mr. Arendt's recommendations are applicable to Columbia. Conservation subdivisions can be designed “with the land” to protect the rural character and environment while providing homeowners privacy and open spaces to enjoy. Studies have shown that conservation subdivisions are valued by home buyers who are willing to pay a premium for the benefit of having protected open space nearby. Because there is less road to construct for the same number of house lots, the developer has lower building costs; developers find that this type of subdivision is more profitable than a conventional subdivision.

Below are examples by Mr. Arendt that compare the two types of subdivisions.



A. Example of a 33-lot subdivision using traditional subdivision regulations.



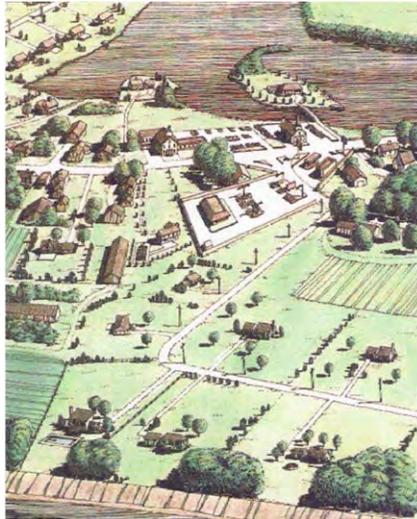
B. Example of a 33-lot subdivision using conservation subdivision regulations.

CHAPTER 7 COMMUNITY DEVELOPMENT

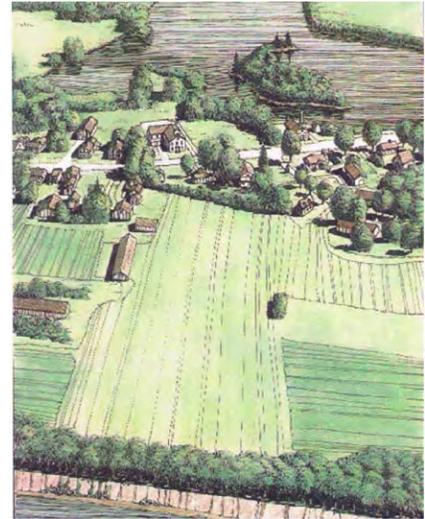
Mr. Arendt finds that traditional commercial development results in loss of community and rural character, but he also offers suggestions on zoning changes that would result in a pattern that fits in with a New England character and support rural character. These illustrations from *Rural by Design* show how regulations can encourage development that retains rural character.



A. Before new development, the pattern is of a rural village with farm fields.



B. With traditional zoning regulations, the rural character is lost.



C. With changes in regulations, an equivalent amount of development still retains the rural character.

ASSESSMENT OF COLUMBIA'S CURRENT DEVELOPMENT PATTERN

In planning for Columbia's future development, it's important to listen to the resident's comments. In the 2015 survey, when asked if they saw themselves living in Columbia in 10-15 years, twenty-four percent replied "no" because the Town didn't offer what they needed. The majority of the "no" answers fall into distinct groups:

35% are at or nearing retirement age and feel Columbia has few options for seniors

28% would move because of taxes and the high cost of living here

13% the lack of activities here, such as social activities for youth, shopping or dining

10% said they were undecided

14% had other reasons such as Columbia doesn't invest in itself, or they would move when empty-nesters, or to be closer to work.

Residents also said that they wanted walkable neighborhoods, more hiking trails, and the ability to live near shops and restaurants.

When Columbia residents have been asked about the Town Green area, residents have stated that they wanted to:

Preserve the Town Green since it is the heart of Columbia,

Improve the character of the center of Town by reducing large paved parking and driveway areas and adding plantings at the firehouse to give it more of a "village feel",

Make the center of Town more walkable by encouraging pedestrian use and activity through the addition of walkways to connect public spaces and facilities, and

Re-using existing structures for new purposes while maintaining the scale of the buildings.

There is, of course, no single planning or design solution to ensure that new developments in small towns will fit in comfortably with their physical surroundings. Towns vary too much in their layouts, typography, history, economy, culture, and functions to allow for any standard approach followed in most communities – such as given free rein to suburban subdivisions and shopping strips – can be validly criticized for imposing standardized patterns on towns regardless of their particular features or unique character.

Randall Arendt, *Rural by Design*

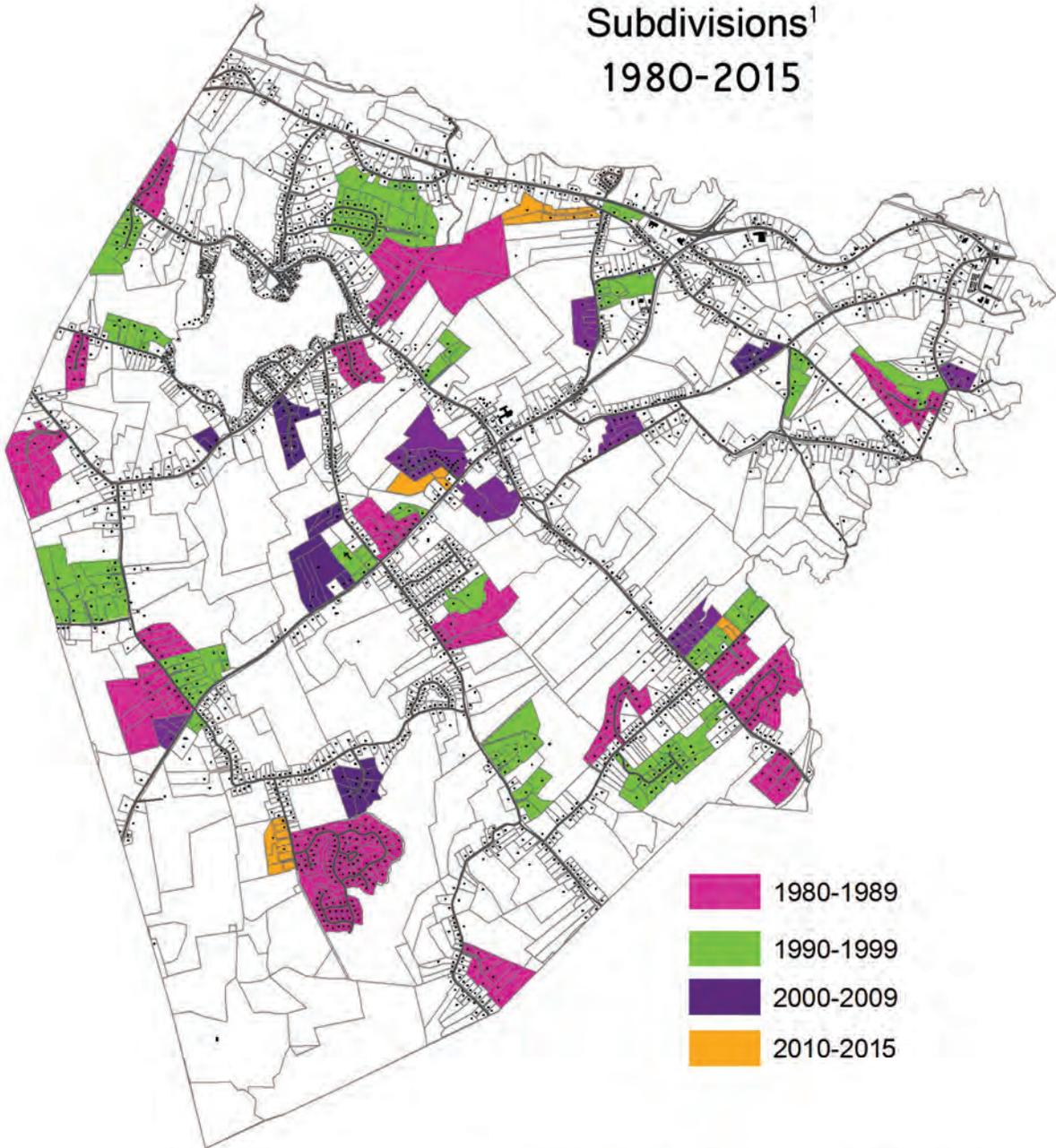
Within the next two chapters, the future residential and commercial development patterns are discussed in more detail.

Goal: *Columbia’s future pattern of development meets the needs of our residents while preserving our rural character.*

Strategies:

- *Review regulations and revise as needed to protect natural and cultural resources and enhance Columbia’s rural character.*
- *Explore revising commercial zones to include other potentially developable areas.*
- *Seek opportunities to create walkable communities.*

Subdivisions¹ 1980-2015



¹Subdivisions creating a minimum of two new lots

CHAPTER 8

RESIDENTIAL DEVELOPMENT



Promote new housing that meets the varied needs of Columbia residents and encourage the creation of neighborhoods.

OVERVIEW

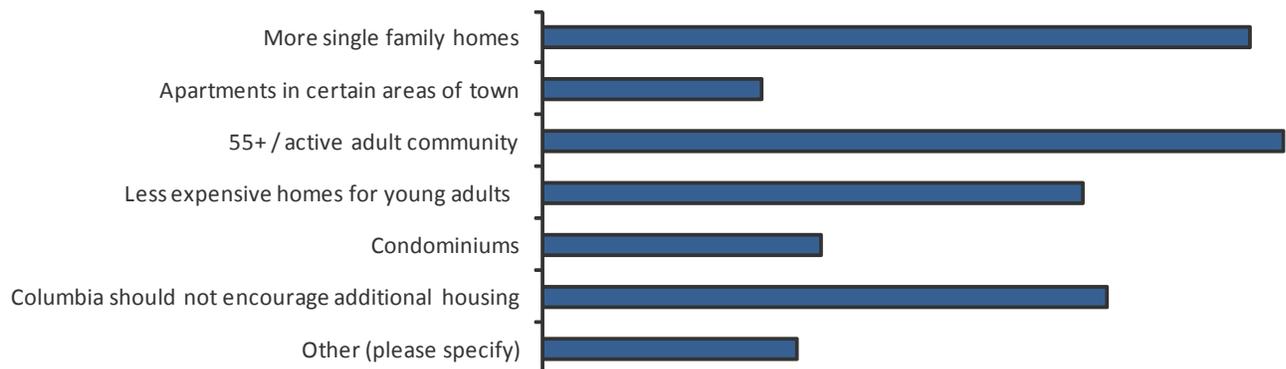
94% of Columbia's area is the Residential-Agricultural Zone. As a result, residential housing development patterns have an overwhelming impact on the Town's rural character and quality of life. Additional Town residents could affect many topics discussed in this Plan as population growth would impact Town facilities, services and infrastructure.

Housing needs must be considered for people of all ages and all income levels. The addition of new housing is an opportunity to strive to balance development with conservation, and balance the needs for services with the ability for the Town to provide those services. It is also an opportunity to seek to create new neighborhoods, and strengthen existing ones.

The map on the previous page shows the subdivisions added each decade from 1980 - 2015.

2015 SURVEY RESULTS

The following are responses to a survey question asking what type of new housing Columbia should encourage; respondents could choose multiple options.



CHAPTER 8 HOUSING DEVELOPMENT

HISTORY OF RESIDENTIAL DEVELOPMENT

At the 2010 Census, Columbia had a total of 2,168 housing units. This is an increase of 180 units, a 9% growth, since 2000. The US Census has estimated housing units for 2014 as 2,210. Not surprisingly, single family detached homes comprise 90% of Columbia's housing, and 87% of Columbia's houses are owner occupied.

	1970	1980	1990	2000	2010
Dwelling units (US Census)	1,107	1,262	1,754	1,988	2,168
Change in number		155	492	234	180
% change		14%	39%	13%	9%

	2014 (est.)	
Dwelling units	2,210	
Single Family detached homes	1,991	90%
Other dwelling units	219	10%
Owner Occupied	1,800	87%
Renter Occupied	279	13%
rent above 30% of household income	145	52%
subsidized housing	90	32%
Mortgaged units	1,285	71%
Un-mortgaged units	515	29%
1-2 bedrooms	430	19%
3 bedrooms	1,079	49%
4+ bedrooms	701	32%

Source: US Census Fact Finder and Connecticut Economic Resource Center

NEIGHBORHOODS

The Lake Community

The homes on and around Columbia Lake form the greatest housing density in Columbia, as most of the lots are less than one-half acre. Many were built in early subdivisions in the late 1930s and 1940s before the Town had zoning regulations. The first zoning regulations recognized the uniqueness of the homes around the lake and established a separate zone for property within 1000 yards of the lakeshore. Gradually the seasonal cottages have given way to larger year-round homes. Today, the homes around the lake are zoned the same as all other residential property, with a minimum required lot size of 50,000 sq.ft. Because most of the house lots do not meet that minimum, the expansion of most existing homes requires approval by the Zoning Board of Appeals after careful review to determine if the expansion is within the character of the surrounding homes, or if there is a hardship with the land.

Island Woods

This is the only subdivision built to date under the Town's Cluster Housing provision. There are 108 homes surrounded by State lands, Mono Pond and hiking trails. Cluster regulations are similar to Conservation Subdivisions; the same number of homes can be built as a traditional subdivision but the minimum lot sizes are usually 50% less leaving significant open space for all residents to enjoy.

Other Neighborhoods

Some other subdivisions have created neighborhoods, and when you enter them you feel a "sense of place." For example, Heritage Farms, Randazzo Drive, Columbia Landing, Homestead Lane, Fox Run and Pine Hill have a neighborhood feel.

AFFORDABLE / WORKFORCE HOUSING

The median sale price of houses in Columbia has risen from \$162,100 in 2000 to \$263,700 in 2014, an increase of 63%. From 2000 to 2014, the median household income has risen from \$53,935 to \$93,953, an increase of 75%. Using the rule of thumb that a household can afford a house priced at 2.5 times its annual income, the median income household can afford a \$235,000 home, which is lower than recent median home prices in Columbia.

However, there are also those who are significantly below the median household income, especially those just starting their careers or who are recently retired, and may not be able to afford a home in Columbia. One alternative for lower cost housing is rental units; Columbia has a limited number of rental units. There is no government subsidized affordable housing in Columbia; however some residents receive a housing subsidy, such as Section 8.

RENTAL UNITS

There is only one rental complex in Columbia, Dartmouth Village, with 24 apartment units for seniors. Currently, Columbia's zoning regulations do not permit apartment buildings or condominiums unless age-restricted for seniors. Zoning regulations do permit any detached single-family home to have one accessory dwelling unit. The size of the unit is limited to 30% of the primary dwelling size. These units are frequently called in-law units, however that is a misleading phrase as there is no required family relationship required for the accessory dwelling unit. Columbia has approximately 85 approved accessory dwelling units.

In 2015, the zoning regulations for over-55 housing were revised to expand the opportunity for additional rental units; currently there is a development in the planning phase.

The Route 6 Hop River Corridor Master Plan includes the potential for a mixed-use village along Route 6 that could include a mix of rental units with commercial businesses. This pattern harkens back to the days of shopkeepers living above their stores and is a style that would fit contextually with Columbia's rural character. A mixed-use village could also meet the needs of seniors wishing to live near stores, restaurants and other services.

CHAPTER 8 HOUSING DEVELOPMENT

TRADITIONAL SUBDIVISIONS

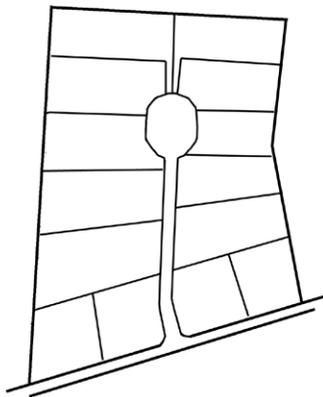
The design of a traditional subdivision begins by laying out the road, then dividing the land into individual lots as illustrated by the drawing on the left. This layout typically results in a cookie-cutter subdivision; the photo on the right is of a traditional subdivision along Route 44 in northeast Connecticut.



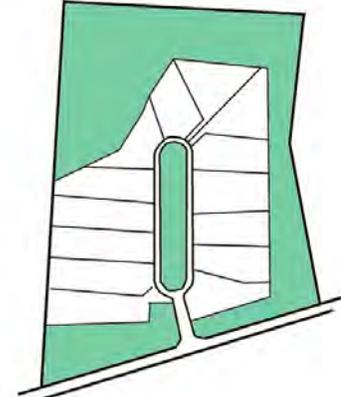
CONSERVATION SUBDIVISIONS: “DESIGNING WITH THE LAND”

The design of a conservation subdivision starts by understanding the land. Determining the best soils for septic systems is the first step, followed by deciding what areas would be best for trails and open spaces, then a road location is determined, and the last step is drawing the lot lines.

Deer Meadow Subdivision in Woodstock CT (below) could have been built as a 14 lot traditional subdivision, with 4 lots lining Route 197 and a short cul-de-sac road serving the other 10 lots. Instead, the developer built a 14 lot conservation subdivision with the homes surrounding a 2.9 acre green and an additional 12 acres of open space with trails. The residents can enjoy open space, and the rural character is preserved along Route 197. A recent advertisement by a listing realtor for one of the homes said “Nice setting at the end of a great subdivision with common area in front and walking trails behind.” Buyers value the open space and the neighborhood created with this design.



Traditional design with 14 lots



Conservation design with 14 lots

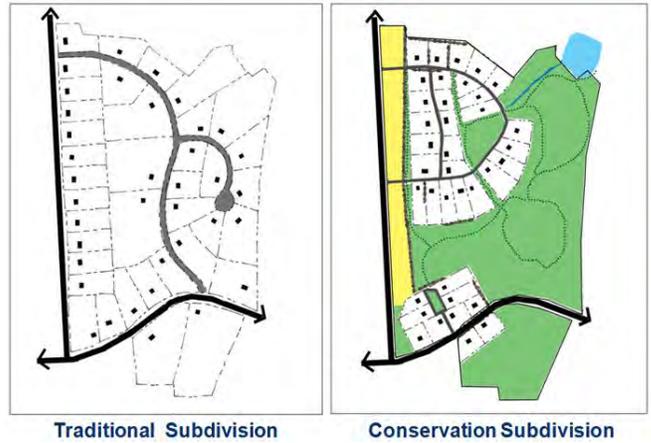


WIN-WIN OF CONSERVATION SUBDIVISIONS

These two examples are of a 112 acre parcel divided into 38 house lots. Currently the parcel has farm fields edged with stonewalls along the road, quintessentially a rural scene, and the rest is wooded with large wetland areas and a pond to the north. The traditional subdivision converts the farm fields into house lots and divides the interior into larger lots that include the wetlands.

The conservation subdivision retains the farm fields, and protects the wetlands and wooded habitats. Each lot is about one acre, but the separation between the houses is virtually the same on most lots as the traditional subdivision. There is a choice of house lots: some are wooded and some are in a small hamlet with a green; all connect directly to open space.

With a conservation subdivision the construction area is smaller and the developer would have lower development costs. Buyers are willing to pay a premium because each is purchasing one house lot with a bonus of direct access to another 65 acres. The layout preserves the rural character residents value and protects wetlands and wildlife corridors. Assessed values are based on these higher sales prices, and the town would receive more tax revenue. With all these benefits, conservation subdivisions are a winner for all.



VILLAGE-STYLE CONSERVATION SUBDIVISION

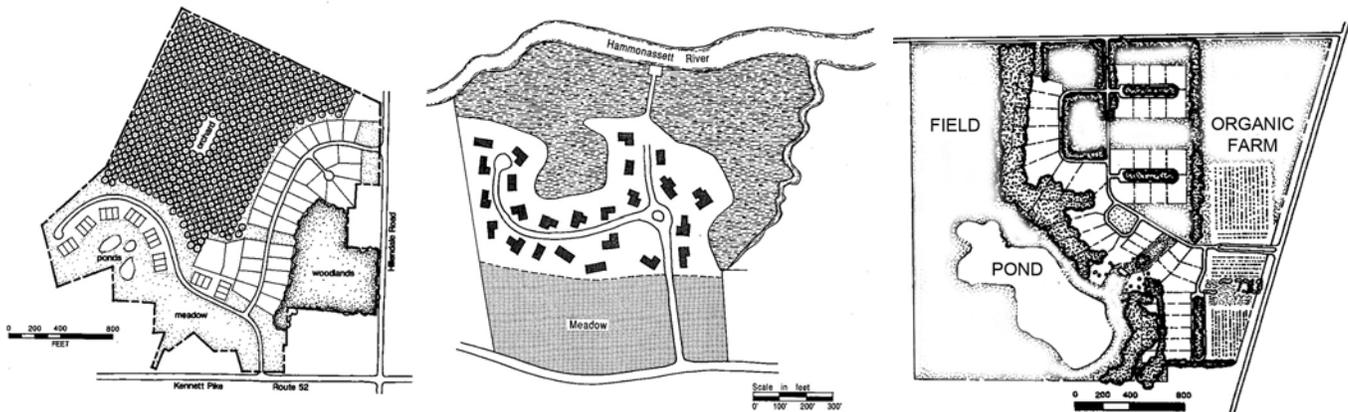
Some developers choose to include homes on village-sized lots in the conservation subdivisions, similar to a village or hamlet of old. The photo on the left is of Strathmore Farms Subdivision in Madison, CT; the photo on the right is an older neighborhood in Thompson CT. They look very similar - but were built 200 years apart.



Strathmore Farms was designed to protect the rural character along River Road and the estuary habitat of the Hammonasset River while creating a neighborhood community. This was the first subdivision of its kind in Connecticut, and the developer waited for the town's regulations to be revised because he knew this type of development would be more profitable and easily attract buyers.

CHAPTER 8 HOUSING DEVELOPMENT

Each conservation subdivision is unique for each parcel. The feature to be conserved could be an orchard, a pond, a wooded habitat, a working farm (known as an agrihood), a meadow, or a combination of several features. Below are examples of conservation subdivisions that have been built.



ASSESSMENT OF RESIDENTIAL DEVELOPMENT

The pattern of suburban-styled traditional subdivisions is in conflict with the residents' goal of preserving rural character. Although current regulations would allow a new subdivision similar to Island Woods, the regulations have not been updated and don't follow current best practices for conservation subdivisions.

There are few housing options in Columbia for people just starting their careers or who are retired. There is a potential opportunity to meet those needs if regulations permitted a new mixed-use village, perhaps as a component of the Route 6 Hop River Corridor.

There is no opportunity for residents to travel to work and services without a car. There are no mixed-use residential and commercial areas with access to public transport, also known as a transit-oriented development (TOD).

Goals: *Columbia residents of all ages can have their housing needs met without leaving our community.*

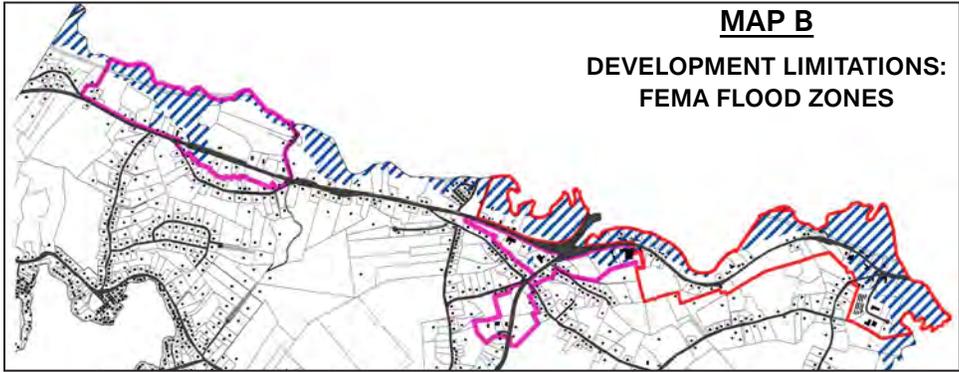
New subdivisions create neighborhoods and enhance Columbia's rural character.

Strategies:

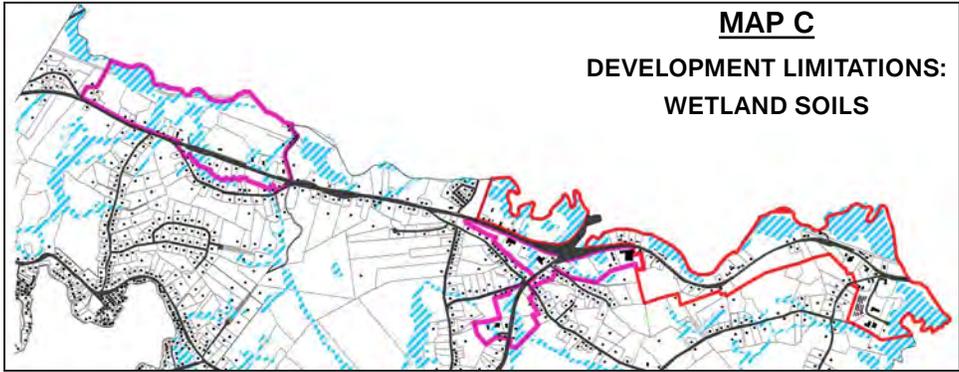
- *Revise subdivision regulations to encourage conservation subdivisions that are designed with the land to protect important natural and cultural resources and provide an enjoyable setting for homes.*
- *Include transit-oriented mixed-use (residential and commercial) in the Route 6 Hop River Corridor.*
- *Integrate new residential development into the context of the existing neighborhood. Create hamlets in, or adjacent to, new subdivisions that include compatible commercial uses (small eatery, small grocery) in a scale appropriate to that neighborhood.*
- *Seek ways to encourage developments that include a representative cross-section of the population: a mix of income levels, ages and ethnicities.*
- *Encourage subdivision plans to incorporate passive energy techniques where practical.*
- *Encourage conservation subdivisions for all parcels over 10 acres in the Residential-Agriculture Zone.*



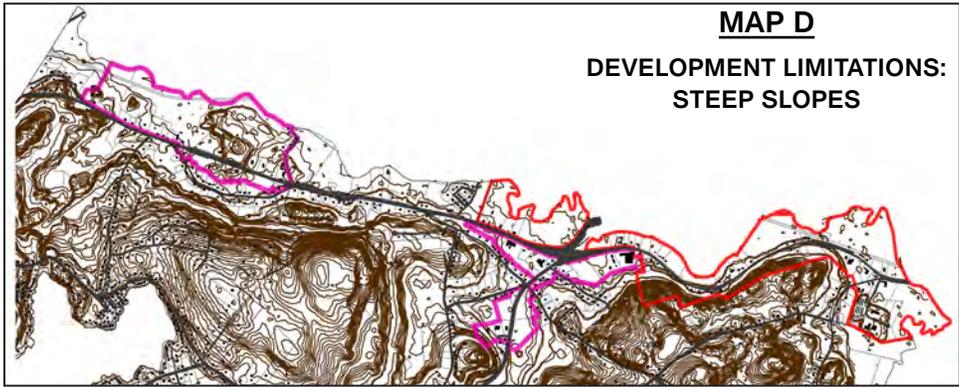
Map A. The outlined areas show the Commercial and Manufacturing Zones. These zones are along portions of Route 6, all of Route 66 East and the northern portion of Route 66.



Map B. The areas in blue stripes are classified as Flood Zone A by FEMA. Since hurricanes Katrina and Sandy, the national building code now requires special construction materials and methods within Flood Zone A.



Map C. These areas in blue stripes signify wetland soils. State Statutes limit development in wetland areas. Columbia's Inland Wetlands and Watercourses Commission reviews any development activity within 100' of wetland soils.



Map D. Each brown line indicates a 5' change in elevation; the closer the lines, the steeper the slopes. Access to and construction on steep slopes may be too cost prohibitive for development.



CHAPTER 9

ECONOMIC DEVELOPMENT



Encourage economic development that meets the needs of Columbia residents while preserving the town's character.

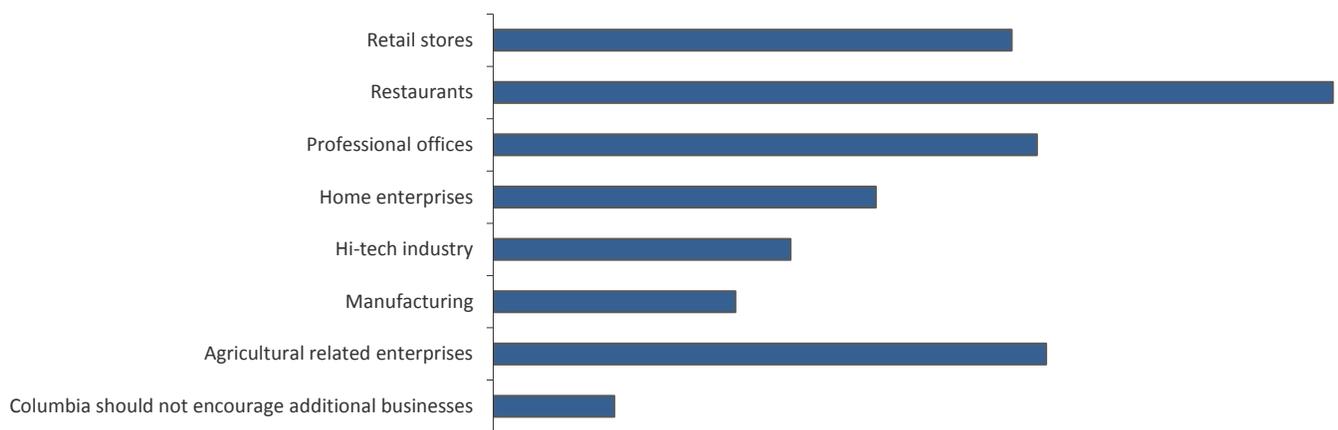
OVERVIEW

Commercial businesses serve three main purposes in any town – they provide jobs, expand the grand list, and provide services needed by residents. They provide a fiscal benefit by bringing in more local tax revenue to a town than they require in services. However, there is a point when the amount of commercial and manufacturing businesses can require a town to make significant investment in infrastructure for sewers, water and road upgrades.

In a town like Columbia that is primarily residential, the location of commercial zones, and the uses permitted in them need to be carefully planned and monitored to avoid negative impacts to adjacent residential properties. Traffic, light pollution and noise associated with commercial businesses might not be compatible with nearby homes.

2015 SURVEY RESULTS

The following were responses to the question on what type of business Columbia should encourage; respondents could choose multiple options. Another question asked where the new businesses should be located; the majority of responses indicated either near existing businesses or along Routes 6 or 66.



CHAPTER 9

ECONOMIC DEVELOPMENT

ECONOMIC DEVELOPMENT

Commercial and manufacturing businesses are only a small component of the Town today, both in terms of acres used and local tax revenue generated.

Columbia's Manufacturing and Commercial Zones are along Routes 6 and 66 East and the northern portion of Route 66. Each zone permits specific types of business, primarily requiring Planning and Zoning Commission approval to establish a new use. Prior to the change in the zoning regulations that created the Commercial and Manufacturing Zones, residential use was permitted in these areas and is still the dominant use. However, these zones no longer permit residential use, and the existing residences are now considered a nonconforming use that can continue but may not be able to expand.

In these two zones there are significant site limitations (wetlands, flood plains and steep slopes) making many parcels difficult, or impossible, to develop.

In the past, businesses were allowed to locate in most parts of the Town and some can still be found in the Residential-Agriculture Zone. Because business use is not permitted in that zone, the existing businesses are now considered a nonconforming use that can continue but may not be able to expand.

MANUFACTURING ZONE

The current land use within the Manufacturing Zone does not reflect the intent of the zone. In fact, the major manufacturing firm, Columbia Manufacturing, is not in this zone.

The zone is along Route 66 East and lies between the Hop River and steep hillsides; expansion of existing businesses and the addition of new ones is limited for many parcels of the zone. The portion of Route 66 near Route 6 and to the east of Flanders Road is in a FEMA flood zone A; any new development must adhere to the strict State standards for building in a flood zone.

	<u>Parcels</u>	<u>Acres</u>
Use - Manufacturing	3	12
Use - Commercial	30	91
Use - Residential	15	56
State and Open Space	11	100
Undeveloped:		
Severe Limitations	5	69
Potentially Buildable	7	35
Total: Manufacturing Zone	71	363

COMMERCIAL ZONE

The current land use within in the Commercial Zone does not reflect the intent of the zone. The majority of developed parcels in the Commercial Zone are in residential use.

Although there are some wetlands in this zone, there are somewhat fewer site constraints to developing new businesses in this zone. The major use in the zone is residential, and any commercial development, if located too close to a residence, could pose a potential conflict if there is significant activity or noise.

	Parcels	Acres
Use - Manufacturing	1	8
Use - Commercial	18	196
Use - Residential - Single Fam	29	66
Use -Residential - Multi-Fam	8	58
State, Town	8	64
Undeveloped:		
Severe Limitations	2	11
Potentially Buildable	6	62
Total: Commercial Zone	72	465

OTHER BUSINESS IN COLUMBIA

Eversource and Algonquin Gas own, or have easements on, several parcels in Columbia, and both have significant infrastructure in Columbia and contribute to the tax base.

Agriculture once was the major economic activity in Columbia, and is still present. There are farms growing grapes for wine, corn and hay as animal feed, vegetables, and pasturing of livestock and horses. Chapter 10: Agriculture discusses this segment of business in more detail.

Within the center of Town there are several businesses along Route 66 that serve to bring a focus to the area. However, none of these existing businesses are permitted in this location, and are considered nonconforming and may not be able to expand, and no new small business could be added. Many towns with a similar goal to preserve a town’s rural character have zoned an area within their center for small businesses and residences to reflect the heritage of New England town centers.

Columbia has many entrepreneurs with home businesses. There are just under 100 home businesses registered with the Town, from contractors to day care to artisans.

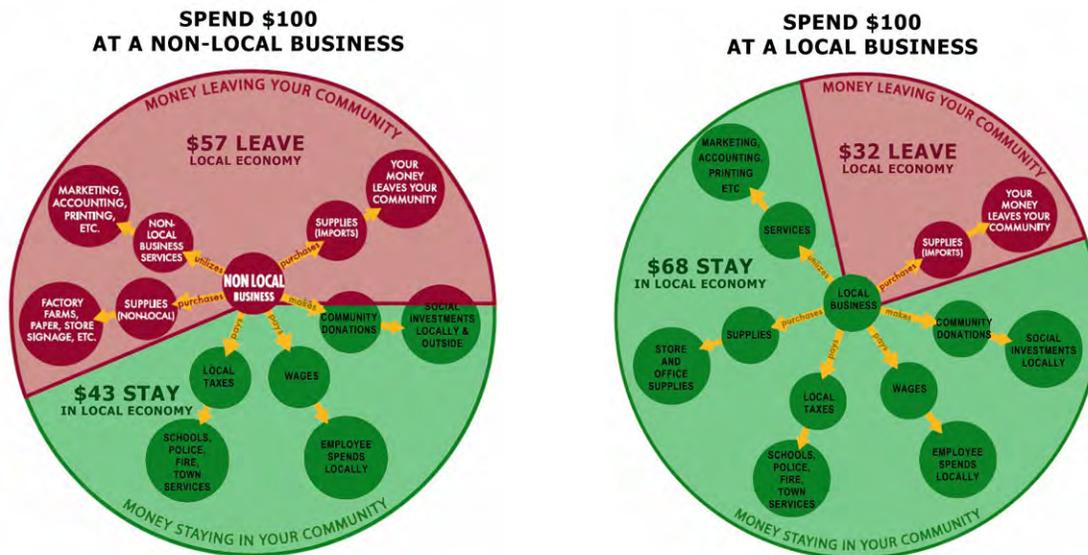
CHAPTER 9 ECONOMIC DEVELOPMENT

FISCAL BENEFIT TO THE TOWN OF COLUMBIA

Columbia derives several fiscal benefits by having local businesses. One is the tax base from both real property and personal property (business equipment). Cost of Community Services Studies have shown that businesses have a low need for town services, and the services provided typically cost only 16 to 25 cents for every dollar of local taxes paid. Contrasted to residential use where the cost to provide services exceeds the taxes paid.

The other fiscal benefit of local businesses is the multiplier effect of keeping dollars flowing in the local economy. Across the country, studies by the fiscal analysis firm Civic Economics have found that money spent at local businesses stays in that local economy, while far less money spent at national chain stores stays local. The charts below are the results from one of their in-depth local studies.

Communities that encourage and support local businesses can increase the local multiplier effect within their local economy.



ECONOMIC DEVELOPMENT AND RURAL CHARACTER

Many communities fear that economic development means the loss of their rural character, and that does happen when the developers determine what the town will look like.

One of the endearing qualities of New England is the historic village, yet most zoning regulations would not allow a village to be built today. Regulations can be changed to permit a higher building density in certain areas of town for retail spaces and offices, and design guidelines can ensure that a pedestrian-scaled environment reflecting our village history is created. This economic development would then enhance the rural character of a town.

-- Randall Arendt

Regulations that allow flexibility in the minimum lot size and site planning based on site conditions reduces development cost. Design guidelines that encourage a development reflective of a town's rural character is attractive to local customers. Design guidelines also assure the developer that any new development nearby will only enhance his/her business.

Examples of nearby commercial businesses, with site layouts and building designs that would fit contextually with the rural character of Columbia.



Route 44, Pomfret CT



McDonalds in Stowe VT



Garden Gate, South Woodstock, CT



Walgreens, Bedford, NH



CVS, Glastonbury, CT

ROUTE 6 HOP RIVER CORRIDOR

The Route 6 Regional Economic Development Council was formed in 2005 by the towns of Bolton, Coventry, Andover and Columbia. The goal of the Council was to create a unified vision for the 12.4 miles of Route 6, recommend appropriate economic development and zoning, market properties and apply for grants. After receiving a substantial grant from the Connecticut Department of Economic and Community Development, the Council hired a team of firms to develop a master plan for the corridor which was completed in October 2010. The resulting plan was based on environmental features, site analysis, market and traffic studies and several listening sessions to hear residents' comments.

The Columbia Planning and Zoning Commission amended the Town's 2006 POCD to add the Route 6 Hop River Corridor Economic Development Strategy and Master Plan Study and the Route 6 Hop River Corridor Transportation Study, effective May 1, 2013.

CHAPTER 9

ECONOMIC DEVELOPMENT



The following quotation from the study is the observations and development potential for Columbia:

Columbia Meadows

Continuing east along Route 6 in Columbia is the land occupied by the Town Garage. This area is open with limited trees and the working yard is considered unattractive. This view shows an increased island width with street trees, screen shrubs, and light fixtures designed to improve the view at the street.

Opposite the Town Garage is a grouping of 6-7 residential properties which are currently zoned Business. These properties could be developed as a 2-3 story mixed-use village. The design idea captured in this image is that buildings would be “residential” in style and be located at the rear of the street. Parking would be at the rear and there would be multiple buildings linked by small parking areas. Subsurface sanitary disposal systems (SSDS) would serve the building located south of the parking areas. This small village, known as Columbia Meadows, would be primarily professional offices with more offices or apartments above. Restaurants or limited retail would be appropriate here.

Lighthouse Corners

Identified throughout this report as the Route 6 / 66 Intersection, this area has been known historically as Katzman’s Corners, or more recently Lighthouse Corners. Due to the distinctive octagon building known as the “Lighthouse”, the REDC has determined that this area should be known as Lighthouse Corners. This area is one of the existing Corridor nodes and the Route 6 Hop River Corridor Master Plan increases its importance as a critical node in the future. Providing a counterweight to Bolton Crossroads, Lighthouse Corners could be developed as a Mixed-Use Village with the reconfiguration of the Route 6 / 66 Intersection. At this time, the Route 6 / 66 Intersection is large, restrictive, and heavily paved. One proposed alternative is a roundabout configuration which would eliminate the traffic light but provide for continuous movement through the intersection. Using green planted traffic flow delineators (islands) and a planted circle, a new configuration would highlight the importance of this intersection as a gateway to the Route 6 Hop River Corridor. A Gateway Sign with Corridor logo could be placed at the center of the circle or at the entry lanes. In addition, the Lighthouse building at the Route 6 / 66 Intersection has been identified as a significant architectural element. Efforts should be made to develop this area to present the building as a more prominent location and as an architectural focal point.

Development in this node could include the creation of a new retail oriented mixed-use village which would connect to the existing Leventi’s Plaza. The existing shopping center could be reconfigured and connections made between the new properties. A new center-focused development would be prepared at the old gravel operation site. Buildings would be located on a new ‘Main Street’ with sidewalks on multiple small parking areas. These buildings will be visible both internally and from Route 6 so the architectural detail and style should be high quality on all four sides and human scale. This area would be ideal for restaurants with decks looking over the pond and for enjoying the pedestrian environment. Development of this level of intensity would require a community subsurface sanitary disposal system or small package wastewater treatment plant.

In the northwest quadrant of this intersection, a multi-building Corporate Park is proposed. These buildings would be served by individual subsurface sanitary disposal systems (SSDS) and buildings would range in size from 24,000+ SF to 90,000+ SF Office, research, and medical offices are the preferred uses for this Corporate Park. A tree lined boulevard is proposed with trails and sidewalks. Access to the river should be provided and public parking as a commuter lot and river access should be integrated into the design. This parcel of land was the subject of many discussions during this project. The amount of development possible on this parcel would need to be balanced by the on-site wetlands. There is currently insufficient reliable information to accurately anticipate the areas of developable land. Due to the proximity of the river, studies should be done to identify the flood levels affecting this property before approvals are granted. This property was considered to be both ideal for development and ideal for conservation. Additional work to define the environmental constraints should be undertaken in the future.

Columbia East Gateway

Currently, Route 66 at Cards Mill Road is an intersection of conflicting right-of-ways, overhead utilities, and auto-related uses. There are no visual clues that this is the gateway to the Route 6 Hop River Corridor. Exhibit ES-53¹ shows how this area could be improved with a reconfiguration of the road access to potentially create a “T” intersection rather than an island. This would alter the sign and planting to be located on a new peninsula rather than an island. The new design would allow the introduction of sidewalks, light poles and banners, and flowering trees. In addition, the overhead power lines have been placed underground in this picture to show what a positive visual effect that would be. A Corridor Gateway Sign is proposed at the new reconfigured intersection at Cards Mill Road. This Gateway Sign and streetscape improvements would provide a notable beginning or end to the Corridor. Also, the sidewalk, sign, and streetscape improvements on the north side of Route 66 would allow and encourage pedestrian traffic from the proposed trail access and parking area on lands of the State of Connecticut to uses at this intersection.

The study also included recommendations to meet the goals of the Corridor:

1. Since CERC's Site Finder Inventory is a primary online tool used to look for available commercial and industrial properties, the four towns of Route 6 Regional Economic Development Council should assure that all available properties are included in this information source.
2. New development in the corridor should generally be small scale, high quality and visually attractive and/or unobtrusive.
3. The 4 towns of the Route 6 Hop River Corridor should agree on a definition of “big box”, and if these are not desired at all in the corridor, this should be reflected in the zoning regulations for the corridor.
4. A site should be sought for development of at least one modestly sized, high quality, mixed use business park.
5. Marketing of the Route 6 Hop River Corridor should include its many outdoor recreation opportunities. A cluster of businesses catering to this market should be sought.
6. Because of the mixed-use nature of the corridor (including clusters of residential, business, agriculture, and open space) and varying land characteristics, future development should be clustered in nodes.
7. Package treatment plants should be used to provide sewage treatment in suitable locations.
8. The region will need to work with the Connecticut Office of Policy and Management and the state's Office of Responsible Growth to assure that additional nodal development along Route 6 is seen as appropriate in the state plan and supported by the state.
9. Zoning regulations for the Route 6 Hop River Corridor should allow for the conversion of residential structures to business uses, while at the same time preserving the historic architecture of these structures.
10. Future development must be guided by a widely shared vision that both reflects the desires of the 4 communities comprising the Route 6 Hop River Corridor and clearly conveys the types and characteristics of desired growth to prospective businesses and developers.

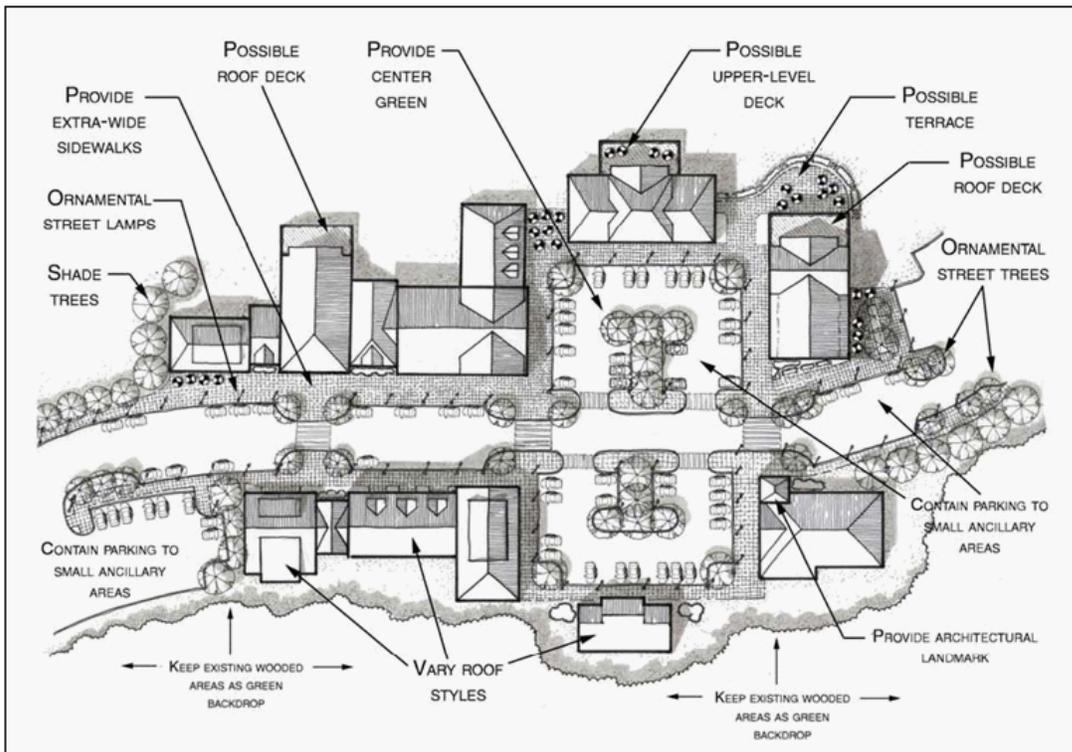
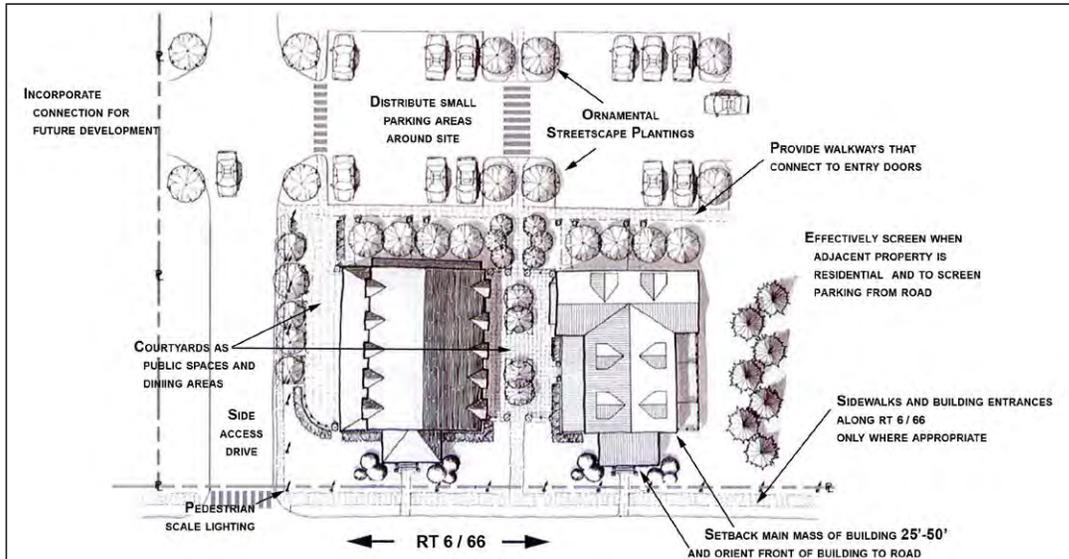
¹ See page 102

An early recommendation was for the four Corridor towns to unify the zoning regulations, with all applications approved by the Route 6 Regional Economic Development Council, and with all municipal costs and tax revenues equitably distributed among the four towns. Although both ideas are laudable, the practicality and statutory hurdles would be difficult to overcome.

CHAPTER 9 ECONOMIC DEVELOPMENT

In the Fall of 2014, the planning staff of Bolton, Coventry and Columbia (Andover does not have planning staff) began drafting the Route 6 Hop River Corridor regulations. They anticipate presenting a draft to the Council in 2016, and then to the individual town's Planning and Zoning Commission.

A key component of the Route 6 Hop River Master Plan included general criteria for site planning and building details accompanied by illustrated design guidelines on ways to meet the criteria. Both Coventry and Bolton currently use design guidelines for commercial development. For example, below are two illustrations from the 2010 Route 6 Hop River Master Plan: one for a project with two buildings, and the other for a mixed-use village project.



ASSESSMENT

REGULATIONS AND ECONOMIC DEVELOPMENT OPPORTUNITIES

Future economic development is dependent on regulations that enable existing businesses to expand and new businesses to establish while respecting adjacent residentially zoned properties.

Since Columbia initially adopted the Commercial and Manufacturing Zones, the regulations in each zone have been revised over the years, and today there is little distinction between the uses permitted in the two zones, with the major distinction being the application process.

Several existing uses, including residential, are non-conforming. The minimum lot size is 80,000 sq. ft., about 1.8 acres, with buildings excluded within 100' of the front and rear property lines. Small businesses are forced to be on unnecessarily larger lots, resulting in a separation from each other. These regulations have resulted in sprawling businesses and an inefficient use of the land in Columbia's limited business zones.

Columbia residents have stated that they want to preserve the Town's rural character, yet there is no requirement for a new business to be in harmony or compatible with the Town's rural character.

The areas along Routes 6 and 66 East that are currently zoned either commercial or manufacturing have limited opportunity for additional development because of the large minimum lot size and setbacks required in an area that also has severe site limitations.

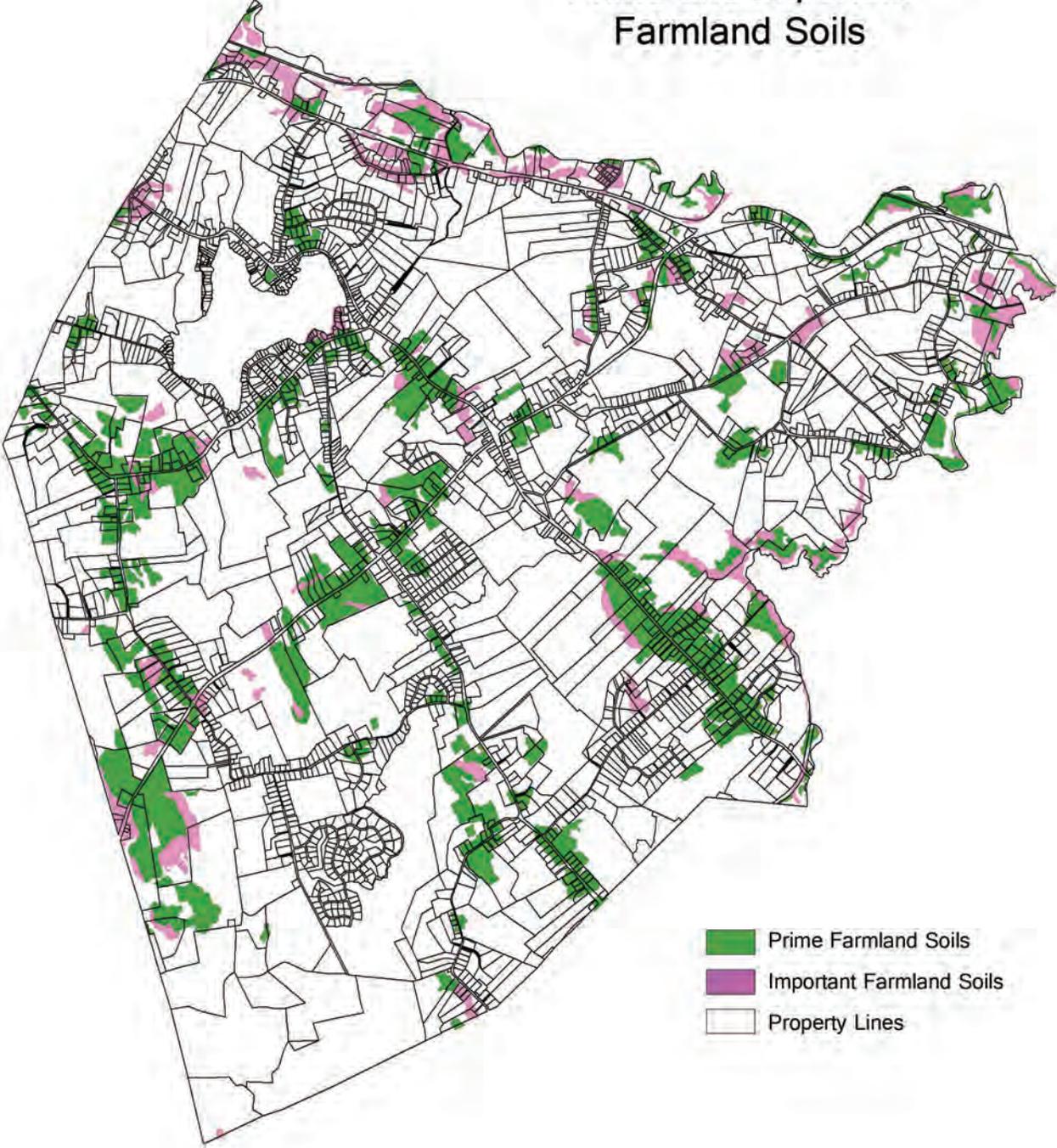
Currently, the center of Town contains a variety of municipal functions, a post office and a few scattered businesses, however the zone is Residential-Agriculture. When the post office was first built it served as a distribution center as well as a local post office; currently it only has counter and box services as all sorting and distribution is handled by the Willimantic post office. Under the current regulations for this zone, no new business could open, and all existing businesses are considered non-conforming uses and may not be able to expand.

Goal: *Columbia's existing businesses are able to grow and prosper and new businesses find opportunities to establish in Town.*

Strategies:

- ***Implement components that are appropriate for Columbia in the Route 6 Hop River Corridor's recommendations for zone locations, design guidelines, and regulations.***
- ***Adopt a small, pedestrian-friendly mixed-use district along Route 66 in the town center.***
- ***Support the efforts of the Columbia Economic Development Commission.***

Prime and Important Farmland Soils



CHAPTER 10

AGRICULTURE



Agriculture contributes to local economies directly through sales, job creation and by purchasing from other local businesses.

OVERVIEW

Agriculture was the economic base for the residents of Columbia from its first settlement in 1700 until WW II. Since then, agricultural land use has declined while residential land use has soared. Today, agriculture plays only a small economic role in Columbia, but it still plays a large role in the Town's historic and rural character and is highly prized by Columbia's residents.

AGRICULTURE

RESIDENTS ENGAGED IN AGRICULTURE

The US Census Fact Finder, based on the 2010 Census, estimates that today there are 50 Columbia residents whose occupation is in agriculture. In addition, there are other residents who engage in agriculture as a part-time business or hobby. In all there are about 42 business that offer agriculture products and services in Columbia. These include those engaged in "pick your own" or farm stand produce operations, maple syrup operations, apples and cider, livestock raising, and equine facilities.

The 2015 Grand List includes 155 parcels, with 104 different owners, with all or a portion of the parcel coded as agricultural lands. These agricultural lands total 5,161 acres, or 38% of all the assessed land in Columbia. Of those agricultural lands, 4,020 acres are coded as forest or woodlands and 1,141 acres are coded as either tillable or pasture lands.

FARMLAND SOILS

Not all soils are conducive to agriculture. In the 1950s, the U.S. Soil Service classified all soils by composition (rocky, sandy, wet, organic matter, etc), including two categories for agricultural use. "Prime" and "Important" farmland soils have the appropriate fertility, depth, drainage qualities, and slope to be used for agriculture. The map on the preceding page shows Columbia's farmland soils.

Prime agricultural soils in Columbia are found along Routes 66 and 87 with another substantial cluster along West Street. Many of the Town's current farming operations remain on these preferred soils. Columbia's important farmland soils are mostly located on the steeper edges of the prime farm soil areas, or lie in the floodplain areas along Routes 6 and 66 and Giffords Brook. Much of this floodplain land is not in active agricultural use. Columbia's total prime and important farmland

CHAPTER 10 AGRICULTURE

soils are 2,335 acres, or 16.7% of the Town's land. A town can also choose to identify "locally important" farmland soils. This can be done in consultation with the Natural Resources Conservation Service (NRSC) formerly named the U.S. Soil Service. In general, "locally important soils" have slightly more limitations for agriculture, such as surface stones, but may nonetheless be vital to farm operations. Recognizing the value of local soil resources can help communities plan for the needs of agriculture and may identify land containing these soils as eligible for the federal Farmland Protection Program. Lebanon, Ashford, Canterbury, Chaplin and Eastford are some of the towns in Connecticut that have identified "locally important" farmland soils.

FORESTRY

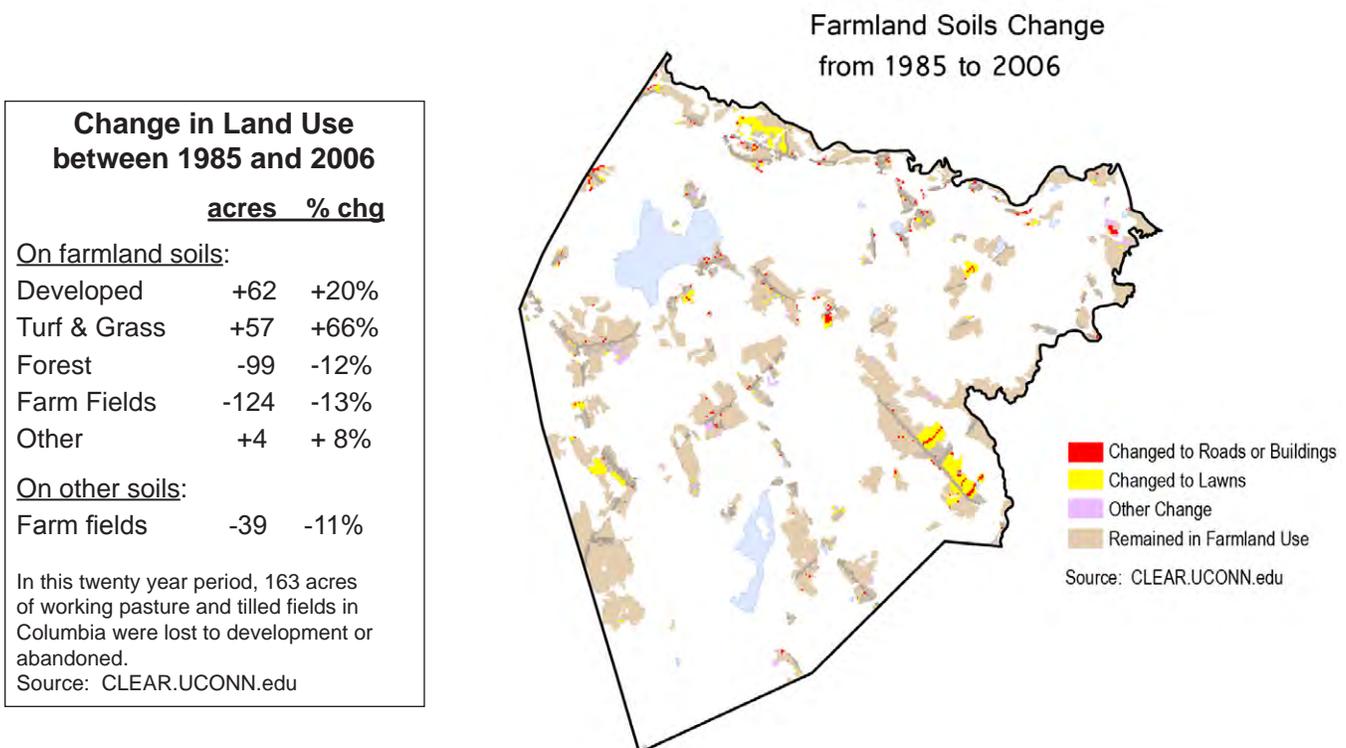
Forestry is defined as the growing and harvesting of timber and by its very nature is somewhat hard to quantify. Connecticut's legislature adopted PA-490 that provides a tax assessment reduction to forest land in excess of 25 acres. In Columbia, 93 parcels totaling 3,936 acres are in the State PA-490 Program as Forest Land. Most likely there are other parcels in Columbia that are forested but either do not qualify because of the parcel size or because the owner has chosen not to participate in the Program.

CHANGE IN AGRICULTURAL SOIL'S LAND USE

The University of Connecticut's Center for Land Use Education and Research (CLEAR) conducted a study of Connecticut's changing landscape. The results of the study compared the change of the type of land uses in 1985 to those of 2006. Using satellite imagery CLEAR was able to identify those lands used as an agricultural field. In 1985, 1,304 acres in Columbia were used as agricultural fields (948 acres were farmland soils and 356 acres were other soil types). By 2006, 163 acres of those working agricultural fields had been lost to development or abandoned.

Those agricultural fields that are not on either prime or important farmland soils are considered "locally important," and with NRCS verification, could be so identified making those lands eligible for farmland preservation grants.

The table below shows this change in acreage, and graphically on the map.



AGRICULTURE COMMISSION

Columbia has an active Conservation and Agriculture Commission. The Commission meets monthly with a focus on conservation activities, encouraging farmland preservation and promoting agriculture as a component of economic development.

SALE OF DEVELOPMENT RIGHTS

The ownership of land includes many individual, and separable rights, which are bundled together in land ownership. Examples include the right to hunt, to fish, to grow and harvest crops or trees, to sell your property, to leave it to your heirs, to keep access private, to build buildings and to subdivide the land according to town land use regulations.

Because these rights are “separable,” a landowner may choose to remove one or more of these rights from the bundle of rights, while retaining all other rights. A farmer who sells his/her development right to the State Department of Agriculture is a good example of this principle in action.

That farmer can no longer subdivide or develop the land, but can still do everything else he/she always has, including farming the land, enjoying the private use of the land, selling the land to another farmer, or willing it to heirs.

To determine the monetary value of the development rights two appraisals are conducted. The first appraisal determines the value of the land if it were to be sold for development; the second appraisal determines the value of the land if it could never be developed. The difference between the two appraisals is the value of the development rights. If the property owner wants to sell the development rights, he/she is paid for the value of those development rights. In this way, the owner continues to own the land and has received payment for the rights that were given up.

AGRICULTURAL PRESERVATION

The State has an Agricultural Preservation program in place that allows the State to purchase the development rights associated with a farm. In this way the farmer can realize much of the financial gain that he/she might realize if the property was sold for development, yet the land would remain forever in agricultural use.

Not only can the farmer reinvest that money in his or her farm operation, but the reduced value of the land after the development rights are removed may make it possible for entry level farmers to purchase land they can afford.

To date, 261 acres of farmland has been preserved in Columbia. The protection of these farms was through various funding mechanisms: CT Farmland Protection Program, Town funds with assistance from CT Open Space Grant Program, or private easement conservation by US Department of Agriculture Grassland Reserve Program.

**FARMLAND PRESERVATION
IN COLUMBIA**

		<u>Acres</u>
2007	PDR	109.4
2008	PDR	38.3
2008	Columbia/State	35.5
2013	USDA grassland	29.9
2014	PDR	<u>47.9</u>
Total		261.0

PDR: Purchase of Development Rights through Connecticut DoAG program



BENEFITS OF AGRICULTURE

ECONOMIC BENEFIT

Agriculture is a component of Columbia's business community and produces vegetables, fruits, maple syrup, cheese, poultry, livestock, eggs, dairy, equine, silage corn and hay. Studies have shown that local businesses, including agriculture, contribute to the local economy in a far more beneficial way than non-local businesses. Agricultural businesses reinvest in their community by hiring local workers and by buying local products and services. Conversely non-local businesses buy more products and services outside the local economy removing money from the local economy.

FISCAL BENEFIT

Studies in Connecticut and across the country have found that the cost to provide services to a residential property far exceeds the revenue received from taxes. Cost of Community Service (COCS) Studies are case studies using a consistent methodology to determine the fiscal contribution of current land uses of a particular town. A COCS Study is a snapshot in time and analyzes revenues and expenditures for three types of land use: residential, commercial/industrial and open space/farm/vacant land.

Several COCS Studies have been conducted for towns in Connecticut. The results of the studies show that for every \$1 paid in local taxes by a residential use, more funds are need to provide the services needed. For example, in Colchester for every \$1 paid in local residential taxes, \$1.14 is used in services, meaning that residential uses do not provide sufficient tax revenue to support the cost of services provided to them. Another COCS Study conducted for Lebanon showed that for every \$1 paid in local taxes by a residential use, \$1.12 is used in service.

Although counterintuitive, studies across the country show that development increases local mill rates. There is an immediate increase in tax revenue, but gradually the demand for increased services and the need to upgrade infrastructure exceeds the increased revenue, resulting in an increased mill rate.

Even new commercial development can trigger an increase in residential development, require additional infrastructure, increase traffic, and have other impacts that contribute to an increased cost of services, also resulting in a higher mill rate.

Many towns in Connecticut have adopted an aggressive agricultural land and open space acquisition policy to offset the fiscal impact of development. Funding sources are usually a partnership among the town, state and federal agencies and local and regional non-profits.

RURAL BENEFIT

The results of the 2015 survey showed that 74% of the respondents believed that our rural character was very important to them. This mirrors the results of the 2001 survey that found 78% of Columbia residents said the Town's character was very important, and 70% believed that working farms were an important component of the Town's character. These surveys show that most residents consider Columbia's rural character as a benefit and want to protect the rural, small-town setting found in Columbia today.

ENVIRONMENTAL BENEFIT

Agricultural businesses are stewards of the land. Farm and forest land provides fish and wildlife habitats, improves water quality through filtration, slows water runoff, retains soils, lower air temperatures, improves air quality by oxygen production, and absorbs and sequesters carbon.

FOOD SECURITY BENEFITS

The 2012 University of Connecticut report *Community Food Security in Connecticut*, an evaluation and ranking of the 169 towns, found that residents in Columbia have a below average risk of food insecurity. Although food is not readily available within our borders, there are retail options nearby in Hebron and Willimantic.

ASSESSMENT OF AGRICULTURE

The Town's farming heritage is certainly a major draw when residents are asked what attracted them to Columbia. A few Columbia residents call farming their full-time occupation, but there are several who operate a part-time agriculture businesses.

Farmland soils comprise 2,335 acres, almost 17% of the Town; as of 2006, 6% was farm fields and pastures, 5% forested land, but the remaining 6% of Columbia's farmland soil has been lost to development. CLEAR found another 318 acres of other soil categories that were in agricultural use as farm fields and pastures. In total, farm fields and pasture land comprise 8% of the Town's total land use.

Over the past decade, Columbia has supported agriculture in a number of ways:

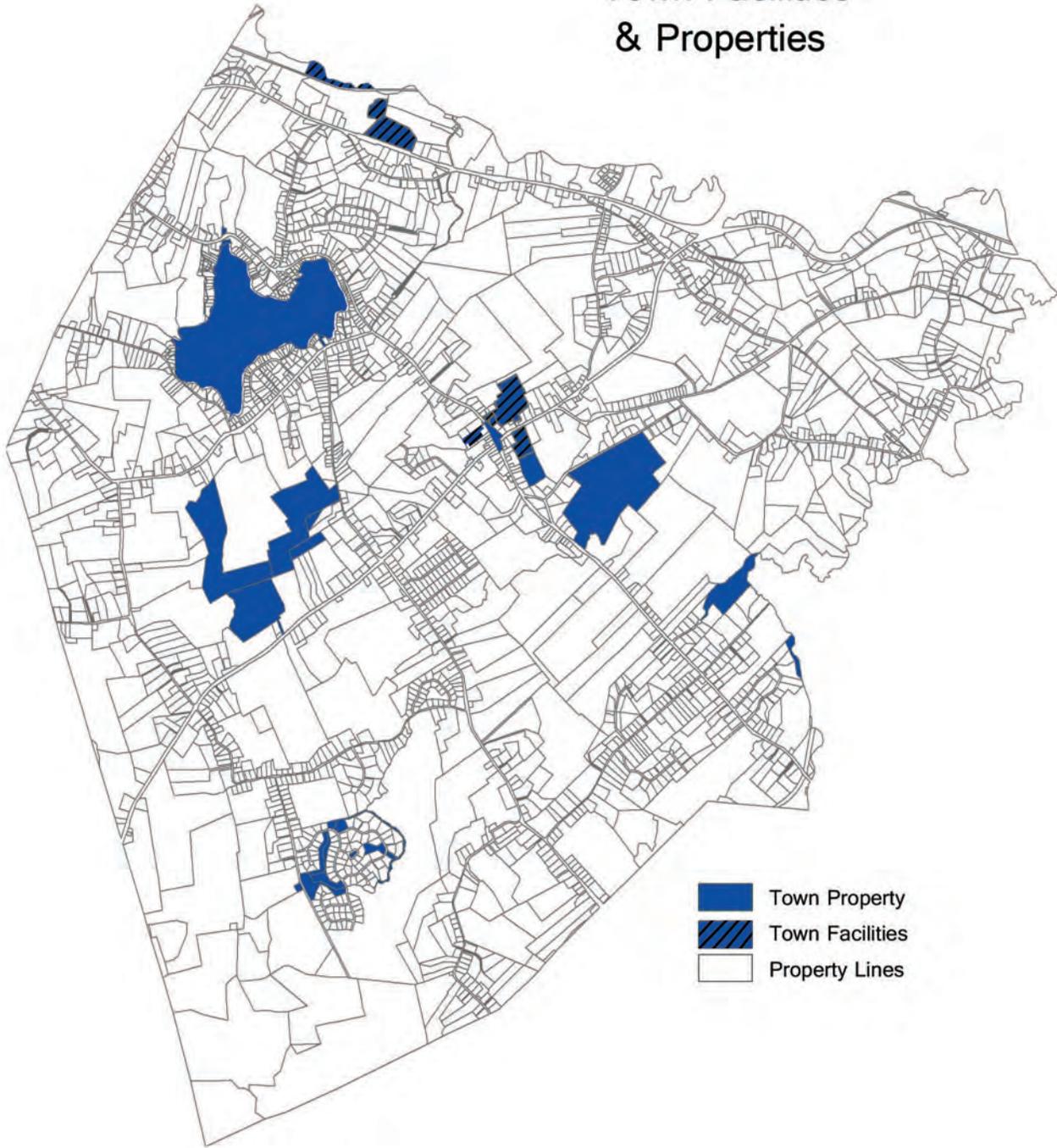
- Created an Agriculture Commission
- Started an annual farmers market to facilitate farmer-resident interaction
- Produced a brochure of products and services available
- Assisted three farms in obtaining Farmland Preservation Grants that protected 196 acres of farmland
- Surveyed agricultural businesses to learn their needs
- Adopted a "Right to Farm" ordinance
- Expanded the definition of agriculture in the zoning regulations, and revised regulations to allow multiple accessory structures on one parcel

Goal: *Continue to support existing agricultural businesses and encourage their expansion, and welcome new agriculture.*

Strategies:

- *Revise regulations to facilitate the approval process for farm related business.*
- *Develop a long-range strategy to preserve and enhance agriculture production.*
- *Create a farm inventory map.*
- *Petition for NRCS recognition of Locally Important Farmland Soils.*

Town Facilities & Properties



CHAPTER 11

COMMUNITY FACILITIES & SERVICES



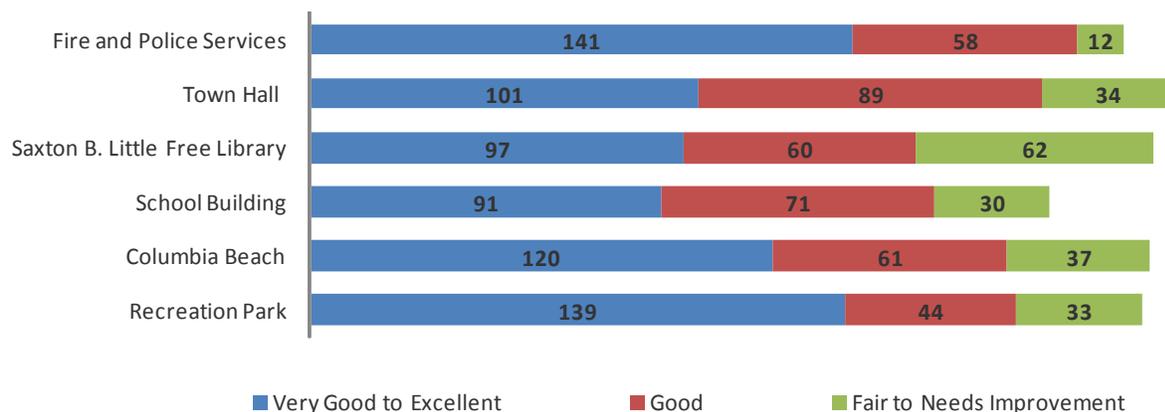
Provide the services and facilities to meet the needs of the town and contribute to a high quality of life for Columbia residents of all ages.

OVERVIEW

A Plan of Conservation and Development must review the distribution, availability, condition, and capacity of a Town's community facilities and municipal infrastructure in order to meet the current and projected needs of residents and businesses. For this Plan, community facilities are defined as public buildings (including schools, police and fire stations) community/senior centers, and general government facilities that serve the general or specific needs of the public must be maintained by the Town. Facilities such as the Saxton B. Little Library, while not operated by the Town, are also considered. The overall aspect of Columbia's active and passive recreation facilities is addressed here, and in more detail in Chapter 12. The following, along with Chapter 12, presents an overview of the current inventory of community facilities and services and identifies proposed improvements necessary to resolve existing concerns and/or accommodate forecasted needs.

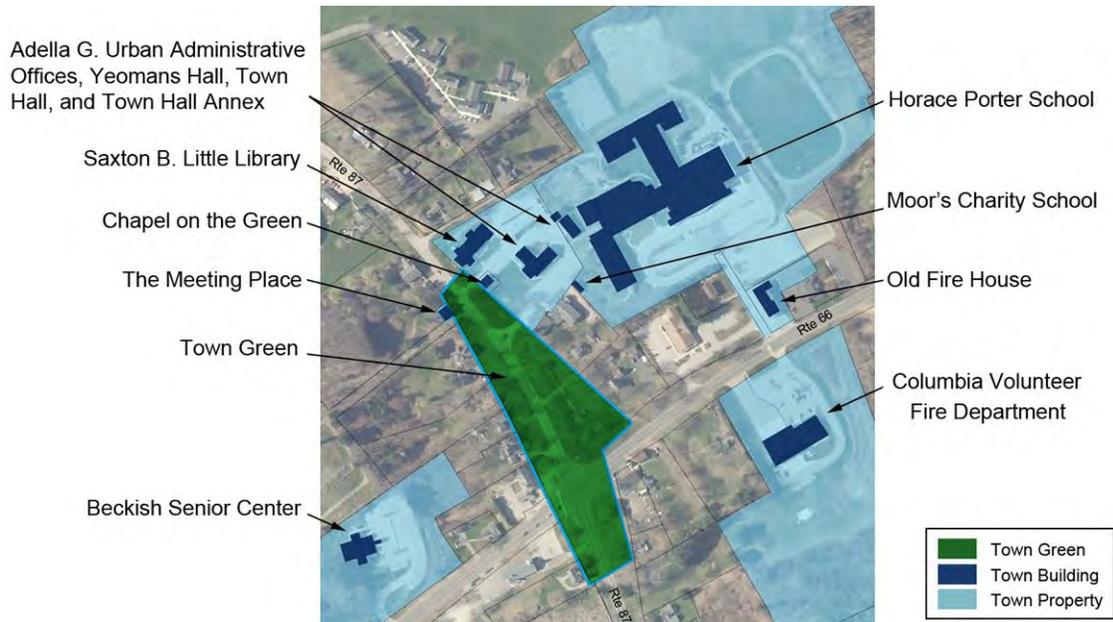
2015 SURVEY RESULTS

2015 Opinion Survey: The following are the responses to the question: How would you rate the following areas? In other words, how are we doing?



TOWN HALL CAMPUS

Located on Route 87, near the intersection of Route 66 in the center of town, is the Town Hall Campus. The Campus is adjacent to the Town Green and contains Town Hall and Adella G. Urban Administrative Offices, Yeomans Hall, Town Hall Annex, The Meeting Place, Saxton B. Little Library, Chapel on the Green, Moor's Charity School and Horace Porter School. The grounds are landscaped and have several war memorials around the flag pole and other memorials that have been placed over the years. Nearby is the Beckish Senior Center, the Columbia Volunteer Fire Department building and the old fire house.



ASSESSMENT OF TOWN HALL CAMPUS: It is rare for a town to have so many of its buildings and services located in the center of the Town and in such close proximity to each other. Although there are interconnections and shared parking among some of the buildings, the benefit of the close proximity isn't fully realized. Often, the heart of a community is in its center; there is an opportunity to create a strong "heart of the community" in the center of Columbia.

Goal: *Enhance the interconnections of the municipal facilities to create a strong sense of place in the center of Town.*

Strategies:

- *Develop a master plan for the Town Hall Campus that enhances the historic character and interconnections of the buildings and areas of the Campus.*
- *Incorporate both visual and physical interconnections into all current and future projects.*



THE TOWN GREEN

This picturesque center of Columbia is bounded by the Columbia Congregational Church, Yeomans Hall, Town Hall, the Chapel on the Green, small businesses and beautiful historic homes in a setting that reminds us of our New England heritage. There is a gazebo, donated by the Columbia Lions Club, on the Green that serves as a gathering place for small events and is frequently the background for wedding photographs.

ASSESSMENT OF THE TOWN GREEN: The Green is almost five acres in size and extends beyond all four corners of the intersection of Routes 66 and 87. That location should afford it great prominence, however, the placement of the trees visually confines the Green to the area of the Gazebo; driveways and an ever expanding asphalt intersection combine to make its presence diminished if not overlooked.

Goal: *The Town Green is a prominent feature in the heart of Columbia.*

Strategy:

- *Develop and implement a comprehensive plan for the enhancement of Town Green.*

TOWN HALL AND ADELLA G. URBAN ADMINISTRATIVE OFFICES AND YEOMANS HALL

Mary B. Yeomans provided the resources for the first town hall in 1900 and left \$1,500 to the Town with the interest to be used to paint the hall “with a good quality paint” every four years as long as it retains the Yeomans name. After being destroyed by fire in 1940 it was rebuilt in 1941 in its present location. Yeomans Hall still provides a convenient meeting room for many Town boards and functions and is the site of traditional New England Town Meetings. The land use department is in the lower level of Yeomans Hall.

The Town Hall portion of the building was constructed in 1972. In 2009 it was named after Adella G. Urban, as a memorial to Columbia’s First Selectman from 1985-2003. It houses Columbia’s government offices for the Administrator, First Selectman, Town Clerk, Assessor and Tax Collector as well as vaults for Town and public records. One large meeting room is used by various boards, commissions and committees.



CHAPTER 11

FACILITIES & SERVICES

ASSESSMENT OF YEOMANS AND TOWN HALL: The buildings have been well maintained and have had minor renovations over the years. However, there is need for additional office and vault storage space for the departments currently in the buildings. There is no room to meet any future staffing needs nor to relocate the finance and recreation departments and Resident State Trooper within Town Hall and Yeomans Hall.

The traffic flow and parking configuration could be improved, as in some areas it does not meet the current engineering standards for vehicular movement, and in other areas it far exceeds the standards. Pedestrian and vehicular circulation should be improved.

Goal: *All Town offices meet the needs of staff and residents, with improved parking and walkways.*

Strategies:

- *Budget for any capital projects needed to meet building requirements.*
- *Make the needed interconnections for campus walkways, and incorporate efficient and safe parking.*

TOWN HALL ANNEX

In 2002 the finance departments for the Town and the Board of Education were merged into one; neither Town Hall nor the school had appropriate space to house the new department. After much discussion, a 1,600 sq. ft. modular building was placed between Town Hall and Horace Porter School. The facility houses the finance department and the recreation department. The building is self-contained with heating, cooling and plumbing, and is ADA compliant.



ASSESSMENT OF THE TOWN HALL ANNEX: This facility was purchased 14 years ago as a temporary solution for office space. The ideal situation is to have the finance and recreation departments located within Town Hall. The annex building is showing signs of aging, and is in average condition.

Goal: *Determine if the Annex should continue as office space.*

Strategy:

- *Based on that determination, either continue to maintain the Annex, or plan for the alternative spaces needed to accommodate those offices and remove the Annex building.*

MOOR'S CHARITY SCHOOL

Built in 1755 on the Columbia Green, it served as the Moor's Indian Charity School until 1769. It was the original site of Dartmouth College founded by Dr. Eleazar Wheelock. When Dr. Wheelock moved his college to Dartmouth, NH, the one-room building became the Lebanon Crank's Center School in 1778 and was used as an over-flow classroom until 1956. The facility, with no plumbing or heating, was relocated four times and is now situated between Horace Porter School and the First Congregational Church. It received a face-lift in 1994 and a new wood-shingled roof in 2011. Although it is a Town facility, the Columbia Historical Society oversees it and opens it for historical exhibits on special occasions.



ASSESSMENT OF MOOR'S CHARITY SCHOOL: Although infrequently used, this building has historic significance and should be maintained.

Ongoing: *Continue to maintain the building and share its history with others.*

THE MEETING PLACE

The Meeting Place, located across Route 87 from the Town Hall, was built in 1903 as the Town library on a 45' by 45' plot of land that Joseph Hutchins gave to the Town. It served as the Saxton B. Little Library until 1985, and when the library was relocated, the building was renamed the Meeting Place. It has two meeting rooms, one on each level, which have been available for use by Town organizations and committees. In 2015, the Board of Selectmen approved the temporary relocation to the Meeting Place by the library during its renovations, and thereafter for the building to be used as the repository of Columbia's historic documents and artifacts.



ASSESSMENT OF THE MEETING PLACE: The building continues to be well maintained, but has had limited use because of its small size, limited plumbing, parking and lack of easy access.

Goal: *The building is visually linked to Town Hall Campus and is used as a repository for historic artifacts.*

Strategies:

- *Establish it as the location for the Columbia Historical Society and the Town Historian, and rename the building to one that signifies its use.*
- *Provide better connection to other parking on the Campus.*

CHAPTER 11 FACILITIES & SERVICES

CHAPEL ON THE GREEN

The Chapel is an 1870 Greek revival structure on a 50' by 50' plot of land located in front of the Town Hall. It was originally owned and used by the Congregational Church but stood vacant for many years. In 2003, the Congregational Church offered the Chapel to the Town at no cost with a stipulation in the deed that ownership would revert if the Town didn't maintain the building. At a Town Meeting on November 18, 2003 the citizens approved taking ownership of the chapel. Since that time, the Town has maintained the building by replacing sills and clapboards, installing an HVAC system and replacing the roof shingles. It is currently used for the quarterly book sale fundraiser by the Friends of the Library.



ASSESSMENT OF THE CHAPEL ON THE GREEN: The Chapel is in good condition with heating and cooling, but does lack plumbing and insulation. With its central location and convenient parking, it may serve the Town better if it were used more often.

Goal: *The Chapel is incorporated into the Campus Plan with an active use.*

Strategies:

- *Determine if an alternative use of the space would be preferable*
- *Provide better visual and physical connection to the other Campus buildings.*

SAXTON B. LITTLE FREE LIBRARY

Townpeople in Columbia have supported a free public library since 1883, and funded its first building in 1903. In 1985, the library was able to expand when the Town purchased the historic Rice-Sorachi house adjacent to Town Hall. The building is owned by the Town, however the library is governed by the Saxton B. Little Free Library Association, a 501(c)(3) nonprofit corporation; its operating expenses are funded by grants from the Town and State.

In May 2015, residents approved a Town budget that included funds for the re-configuration of the interior space and an expansion of the building by 2,500 square feet. A State library grant provided the majority of the funding. The project will be completed in 2016 with sufficient space to meet the needs for the foreseeable future.



ASSESSMENT OF THE SAXTON B. LITTLE LIBRARY: Public needs and demands have always shaped library services in Columbia. Those needs along with State standards for library space made it clear that the present library facility had exceeded its capacity. When the present building was designed in 1983, it was planned to meet needs for twenty years. Now thirty years later, the Town population has grown over 60%. With the 2016 expansion to the building and internal re-configuration, the building will meet the needs of Columbia's residents for the next several years.

Ongoing: *Continue to support the Library with operating grants.*

HORACE PORTER SCHOOL

The Horace Porter School serves Columbia's children from pre-k to eighth grade. The 100,000 square foot facility is located on 24.65 acres in the center of Town. The school was built in 1948 and was last expanded and renovated in 1995 at a cost of \$12 million dollars. The 1995 expansion included twenty classrooms and computer lab rooms, and enhancement of science, life skills, art, music and band rooms. A large gymnasium and library/media center were also added for school and community use. As of October 1, 2014, the Horace Porter School had an enrollment of 455 students, which is 30% less than in 2005.



ASSESSMENT OF HORACE PORTER SCHOOL: A demographic study, completed in April 2014, projected a decline in K-12 school students over the next eight years, negating the need for any additional facilities.

In July/August 2014 a new roof was installed on the entire structure and the air exchange system was completely updated. The district completed a security and safety audit in 2013, and in 2013/14 new security doors and cameras were installed.

In April 2014, the Board of Education began to develop a Long Range Plan to determine how the district will respond to the challenges of declining student population, federal and state mandates and changing student needs. The plan was completed in June 2015.

Ongoing: *The Board of Education will continue to implement, and revise as needed, a Long Range Plan for the Horace Porter School.*

EMERGENCY SERVICES

Fire, rescue and emergency medical services are provided by the Columbia Volunteer Fire Department. The CVFD operates from a state-of-the-art emergency facility located on Route 66 near the center of Town. The building is owned by the Town of Columbia with operating costs funded by grants from the Town and others. The building has 10 bays, offices, bunkrooms, kitchen, large meeting room, lavatory facilities and equipment storage. Built with a brick facade, it is in keeping with the historic character of the Town. The firehouse has been designated as the official polling place and can be used for elections.

The Town has an Emergency Management Director who is responsible for preparation for, and the coordination during, an emergency or disaster.



ASSESSMENT OF EMERGENCY SERVICES: The Columbia Volunteer Fire Department facility is still relatively new. The CVFD requests funding for equipment upgrading when they feel it is needed to provide safety services to Columbia's residents. Staffing is strictly a volunteer basis which may present problems for timely daytime response.

Ongoing: *Continue to support the CVFD, and seek their recommendations regarding future needs. Continue to implement natural hazards mitigations as outlined in WINCOG's plan.*

CHAPTER 11

FACILITIES & SERVICES

SENIOR SERVICES

By 2025, demographic projections indicate that 47% of the town's residents will be over 55. Of that, 1,290 will be between the ages of 65 and 79, and almost 400 will be 80 or older. This shift in Columbia's demographics creates challenges that warrant attention.

Columbia's Commission on Aging conducted a survey of Columbia residents in 2015, the results indicated that lack of transportation and affordable housing, and social isolation were the primary problems seniors experienced. Other concerns expressed related to home repairs, household chores and lack of information on local events and activities.

The Beckish Senior Center was constructed in 1996 on land donated by Peter Beckish off Route 66, not far from the center of Town. The Center is fully ADA compliant and serves as the hub of activities for many of Columbia's older citizens. Activities include lunches, art workshops, card games, quilting, dancing, Zumba, exercise, billiards, Wii games, bingo, ping-pong and more. The Beckish Senior Center also hosts special events such as dances, musical performances, pancake breakfasts, pot luck parties, and ice cream socials.



ASSESSMENT OF SENIOR SERVICES: The Beckish Senior Center, opened in 1997 and expanded from the original 4,000 square feet to 6,100 in 2008, is one of the newer facilities in Town and remains in good condition. Although there are many services and activities offered, only a small portion of Columbia's senior residents frequent it.

The Town contracts with Windham Dial-A-Ride to provide transportation for Columbia residents, however transportation is limited to the Windham Region Transit District area of nine towns located northeast and east of Columbia.

Goal: *Columbia's senior residents have the services needed to allow them to continue to reside in Town.*

Strategies:

- *Plan for the community services to meet the needs of a growing senior population.*
- *Continue to maintain the Beckish Senior Center facility, and support the programs offered.*
- *Reach out to those seniors not served by the Senior Center to ensure that their needs are also met.*
- *Maintain and enhance town programs and services for seniors such as transportation, meal programs and household maintenance assistance.*
- *Seek ways to communicate information on services and activities.*

OLD FIREHOUSE

On Route 66, at the entrance to Horace Porter School, is the building that housed the Columbia Volunteer Fire Department from August 1947 until 2002. Originally deeded to the Fire Association by Horace W. Porter, the Fire Department deeded this property to the Town when it moved to the new firehouse across the street. The facility has two floors; the first floor has few interior walls, the second floor has a kitchen, an office and a large room that had been used for meetings. The building is currently used for storage of public works equipment, workshop space for maintenance of Town facilities and for file storage.



ASSESSMENT OF THE OLD FIREHOUSE: Ten years ago a committee was appointed to look at possible uses for this building. However, because of the potential presence of hazardous material and the cost for ADA compliance required for public space, no consensus was reached and no action taken. Currently it is serving to alleviate overcrowding at the Town Garage by providing equipment storage and an area for a maintenance workshop.

Goal: *A decision is reached on the future use of this property.*

Strategy:

- *Implement the best use for the property.*

OTHER TOWN FACILITIES & SERVICES

POLICE PROTECTION

Like many small towns in Connecticut, Columbia contracts with the State Police to have a Resident State Trooper assigned to Columbia. The office for the trooper is in the Murphy House.

ASSESSMENT OF POLICE PROTECTION: There has been debate over the years about how best to provide police coverage for the Town. It has been suggested that an additional trooper is needed; however, there is no consensus on this. The difficulty is that the trooper reports to the barracks in Colchester and must respond as assigned by them and is not always available in Columbia.

Goal: *Provide the needed police protection for the residents of the Town.*

Strategy:

- *Continue to monitor the future police protection needs of Columbia residents and businesses and address those needs as they arise.*

TOWN GARAGE AND TRANSFER STATION

The Town Garage and Transfer Station are on 20 acres of Town property on Route 6. The garage, constructed in 1977, is a 5,500 square foot building for equipment storage and office space. It has fuel pumps and serves as the parking area for the school buses used to transport Columbia school children. Also on the property is a 2,000 square foot salt storage shed to hold salt and sand needed to treat the Town roads during the winter.

Adjacent to the Town Garage is the Transfer Station with designated dumpsters for residents to deposit their waste and recycling. This site was once a landfill which has been capped and is monitored and tested.



ASSESSMENT OF THE TOWN GARAGE: The size of the garage building is not sufficient for the Town's needs, and the old firehouse in the center of Town is currently being used for equipment storage. The continued addition of new Town roads will bring the need for even more maintenance equipment storage and salt storage. There is room to expand the garage building at its current location; however that site could also be used for economic development. The adjacent transfer station's portion of the property has sufficient area for a large garage building, the salt shed and room to park the school buses. An alternative for school bus parking could be at Horace Porter School as that parking lot currently isn't fully utilized.

In 2010, The Route 6 Hop River Corridor Master Plan Study concluded that the Town Garage property "is open with limited trees and the working yard is considered unattractive." The study suggested increasing the width of the island at the road edge and planting it with street trees and shrubs for screening, and adding street lamps. If the garage remains at this location, these suggestions could be implemented without causing security or safety concerns.

ASSESSMENT OF THE TRANSFER STATION: The current transfer station layout is adequate for the needs today and the foreseeable future. There is room for additional expansion should that be necessary as the town grows. The major issue facing this service is how to fund continuing increase in costs associated with waste disposal and recycling. This issue is covered more fully in Chapter 14: Utilities.

Goal: *Provide appropriate and adequate facilities for the Town's public works activities and the Town's transfer station.*

Strategies:

- *Plan for the needed expansion of the Town Garage so all staff and equipment can be housed in one location.*
- *Incorporate the Route 6 Corridor Study suggestions to enhance the appearance of the Town's property.*

COLUMBIA'S PUBLIC LANDS

COLUMBIA LAKE

Columbia Lake is a man-made lake created as a reservoir for the American Thread Company in 1865. By 1932 the mill no longer needed the lake and the citizens of Columbia voted to purchase it for \$25,000 for the enjoyment of its residents. The lake is almost 300 acres in size with four miles of shoreline dotted with seasonal and year-round homes. The Town has two beach areas, one off Lake Road and another on Erdoni Road. There is also a children's camp, Camp Asto Wamah, owned and operated by the First Church of Christ in Hartford, CT.



For many years Columbia Lake has been a resource highly valued by Columbia residents. Columbia's Lake Management Advisory Committee was established to study the lake and to make recommendations on maintaining the quality of the water. In 1998, with the help of a limnologist (a specialist in the study of freshwater ponds and lakes) a comprehensive Lake Management Plan was developed and implemented. The lake water is frequently tested and is considered one of the best lakes in Connecticut in terms of water quality. It is unusual for a town to own a lake bed; there is only one other town in Connecticut that does.

ASSESSMENT OF COLUMBIA LAKE: The Lake Management Advisory Committee continues to be a good steward of Columbia Lake. Water testing results indicate that the quality of the water is high. Strict enforcement of zoning regulations for all property within the Lake's watershed is important for the continued health of the Lake which can be negatively affected from overbuilding and surface runoff. Another factor that affects a Lake's health is septic problems; to avoid the need for future sewers, the Town should consider adopting a pump-out ordinance to ensure all systems near the Lake are functioning properly.

Ongoing Actions: *Continue to steward the lake through water testing and enforcement of ordinances and regulations.*

TOWN BEACH AND MURPHY HOUSE

The Town Beach is a man-made sandy beach off Lake Road that offers many summer activities including supervised swimming. There is a boat ramp and trailer parking, and seasonal moorings are also available. In 2011, a covered deck was added over the boat house creating a pavilion that can be rented for small events. In 2015, a new solid dock was added, along with a kayak storage building.

In 1990, the Town acquired the adjacent parcel and its Victorian home from the Murphy family enabling the expansion of the Town Beach and parking area. The first floor of the Murphy House is divided into two separate uses, one as the office for the lifeguards and marine patrol officers and the other as an office for the Resident State Trooper. The second floor has never been completed and is used for year-round storage of recreation equipment.

The Town also has a small beach off Erdoni Road with unsupervised swimming.



ASSESSMENT OF THE TOWN BEACH AND THE MURPHY HOUSE: In the past, the beach continually lost sand to erosion, and almost every year new sand needed to be added. The new dock has alleviated much of the erosion as the dock was designed to interrupt the wave action. The beach itself is narrow and fairly steep, providing limited accessibility to the beach area.

The exterior of the Murphy House has been repaired and the downstairs space has been updated. However, the second floor has not been updated as it's currently used only for storage. The upstairs may be under utilized, as storage may not be the best use of the space.

The swimming area on Erdoni Road is well used by nearby residents.

Goal: *Provide residents access to enjoy Columbia Lake and make the best use of the Murphy House and other facilities.*

Strategies:

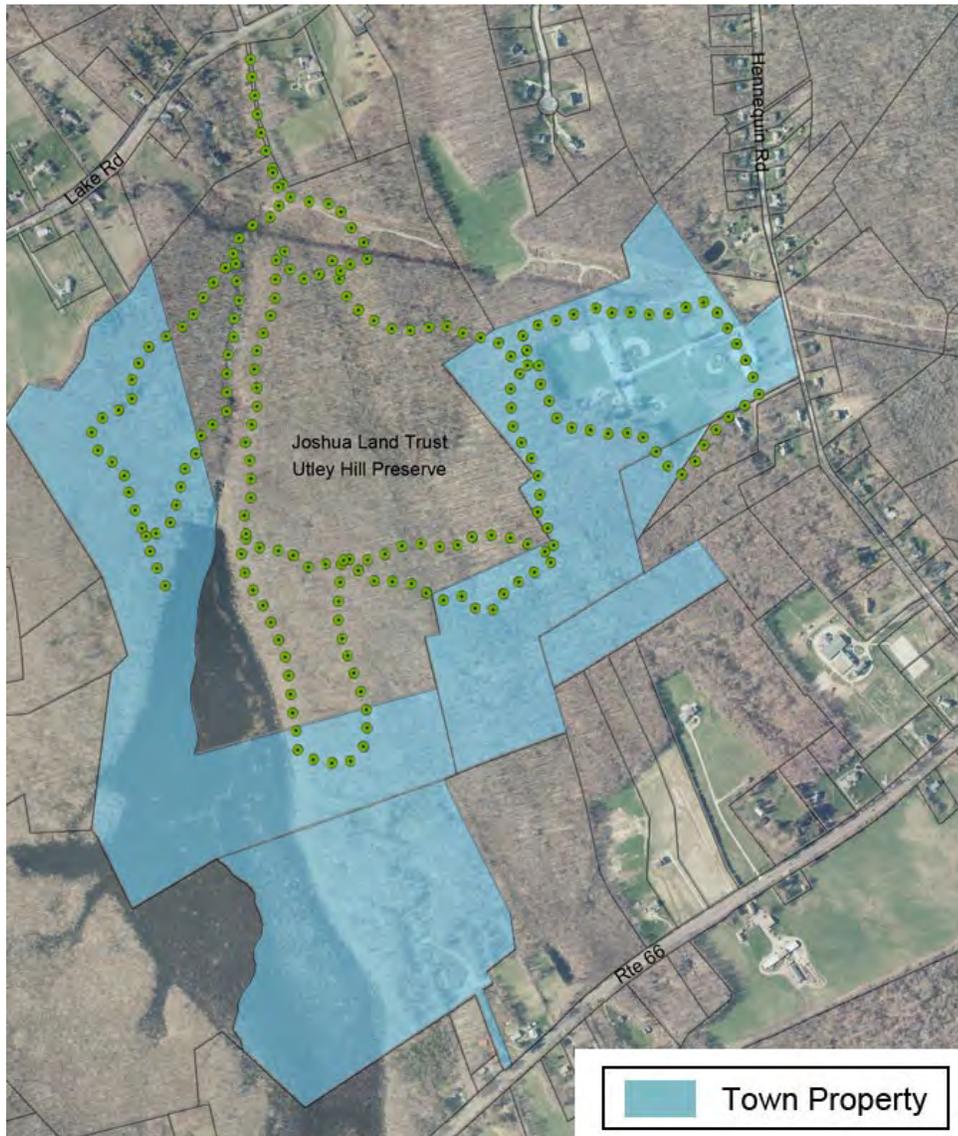
- *Redesign the beach to increase the area of sand and provide areas with both sun and shade.*
- *Provide ADA compliant parking and beach access.*
- *Determine the best future use for the Murphy House in and out of season.*

RECREATION PARK AND CONTIGUOUS TOWN LANDS

Columbia owns several parcels of contiguous land totaling about 194 acres between Lake Road, Hennequin Road and Route 66 for recreation and natural resource protection.

Within this area is Recreation Park with about 28 acres used for ball fields, tennis and basketball courts, trails, two playscapes and a pavilion. For a detailed inventory of Recreation Park, please see Chapter 12 - Recreation.

The area to the west of Recreation Park is within the watershed for Columbia Lake; all activity in the watershed has a direct impact on the water quality of the Lake. With the Lake in mind, Columbia purchased land adjacent to Joshua's Trust Utley Preserve in the 1980s. In addition to providing protection for the Lake's water quality, there is opportunity for passive recreation as trails have been developed connecting Joshua's Trust trails to the trail at Recreation Park. Through the open space provision in Columbia's Subdivision Regulations, 11 acres adjacent to Recreation Park were acquired in 2000. In 2014, the Town purchased a 48 acre parcel from the Ellis-Mund family, using funds donated to the Town from Henrietta Brand.



CHAPTER 11

FACILITIES & SERVICES

ASSESSMENT OF RECREATION PARK AND SURROUNDING PUBLIC LANDS:

There is a tremendous opportunity for expansion of passive and active recreation on the lands contiguous to Recreation Park. Of the 194 acres of contiguous Town land, some have already been developed into ball fields, trails and other recreational uses. Much of this land is also needed to protect the water quality of Columbia Lake; however approximately 50 acres could potentially be developed into passive or active recreation. Now is the time to plan for the future by developing a master plan that will lay out where roads, fields and trails should be built as funds become available.

See Chapter 12. – Recreation for a detailed assessment of Recreation Park.

Goal: *Provide for the active and passive recreation needs for all Columbia residents.*

Strategies:

- *Develop a master plan that includes trails and internal roadways connecting active and passive recreation areas.*
- *Determine the appropriate phases for development of active recreation.*

SZEDGA FARM

Acquired in 2008, funded by Columbia's Open Space funds and a State of Connecticut DEP grant, Szedga Farm is 134.5 acres with frontage on both Szedga Road and Route 87. The Town has added trails for hiking and cross-country skiing, community garden spaces, a well and a pole barn. In addition, twenty acres of prime farmland soil is actively farmed today. The Szedga Farm Management Committee is the steward.



ASSESSMENT OF SZEDGA FARM: This parcel was acquired to meet several goals of the 2006 POCD: to preserve Columbia's agriculture heritage, to protect large blocks of forest land for wildlife and passive recreation, and to protect the quality and quantity of ground water.

Ongoing: *Continue to steward this land while encouraging the use of the trails and community gardens and providing land for active agriculture.*

OTHER TOWN-OWNED OPEN SPACE LAND

FIREMAN'S FIELD. As part of the agreement to build the new CVFD facility, the 11.8 adjacent acres, known as Fireman's Field, was deeded to the Town to be used for passive recreation trails.

ISLAND WOODS. Through the open space provision in the Columbia's Subdivision Regulations, almost 32 acres in Island Woods was deeded to the Town for natural resource protection. From the trail head on Lake Ridge Drive, trails offer the opportunity for exploration. There are areas that could provide additional recreation.

TEN MILE RIVER ACCESS. Other open space is located off Sunrise Drive and Samuel Hill Road, both providing public trail access to Ten Mile River.

ADJACENT TO HOP RIVER TRAIL. Ownership of 6.4 acres of land between the Hop River and the rail trail cannot be determined and the ownership is currently listed as the Town. The property is primarily wetlands.

ASSESSMENT OF OTHER TOWN-OWNED OPEN SPACE LAND: Fireman's Field was donated to the Town by the Columbia Volunteer Fire Department for passive recreation; no trails have been developed.

Most of open space within the Island Woods subdivision was acquired to protect the water quality of Mono Pond and to provide passive recreation; however, low impact active recreation, such as tennis or basketball, might be appropriate in a few sites.

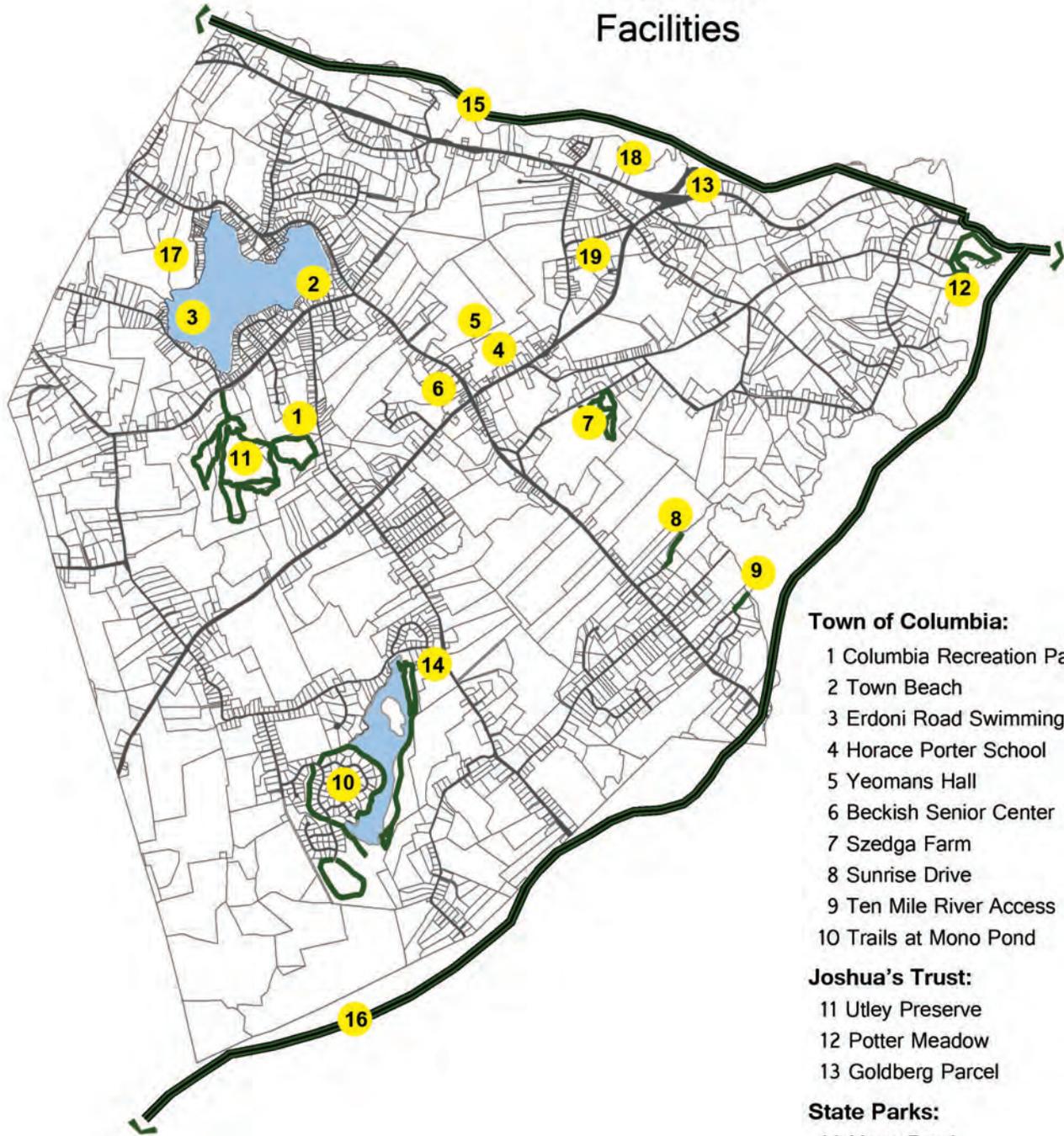
The trails to Ten Mile River are used by neighboring residents.

Goal: *Town-owned open space is used by residents.*

Strategies:

- *Include all Town-owned land in a comprehensive plan for future use and connectivity.*
- *Balance opportunity for land acquisition with compatibility to the comprehensive plan.*

Recreation Facilities



Town of Columbia:

- 1 Columbia Recreation Park
- 2 Town Beach
- 3 Erdoni Road Swimming Area
- 4 Horace Porter School
- 5 Yeomans Hall
- 6 Beckish Senior Center
- 7 Szedga Farm
- 8 Sunrise Drive
- 9 Ten Mile River Access
- 10 Trails at Mono Pond

Joshua's Trust:

- 11 Utley Preserve
- 12 Potter Meadow
- 13 Goldberg Parcel

State Parks:

- 14 Mono Pond
- 15 Hop River Trail
- 16 Airline Rail Trail State Park

Private:

- 17 Camp Asto Wamah
- 18 The Batting Cage
- 19 Center Sports

CHAPTER 12

RECREATION



Provide recreational and social opportunities for Columbia residents of all age groups, interests and abilities.

OVERVIEW

The availability of active and passive recreational activities and social opportunities for residents of all ages is a major factor in measuring any town's quality of life. Organized programs facilitate new relationships while providing for physical fitness and/or the acquisition of useful skills. Walking trails, public access to water bodies, historical and scenic sites provide for relaxation and educational opportunities. Recreation Park, Columbia Beach and Mono Pond Recreation Area provide group and family meeting places with passive and active recreation, encourage community identity and new friendships. There are many trails on Town, Joshua's Trust and State properties, and the East Coast Greenway and Airline Trail South follow two of our borders.

The 2006 POCD had a goal to create a separate commission to plan and co-ordinate Town-wide recreational and social activities. In response, the Board of Selectmen held a Town Meeting to establish the Columbia Recreation Commission. The Commission is charged with the development, operation and oversight of recreational activities within the Town, and is responsible for the planning of facilities including, but not limited to, parks, ball fields, playgrounds, beaches, facilities and equipment.

The Town's Recreation Department handles the planning and scheduling of activities, services and facilities and promotes activities for all ages through their website and Facebook. The Public Works Department maintains all recreation facilities, and has worked on developing trails and ball fields. In addition, the Senior Center offers activities for the senior population. Scouting groups offer other opportunities for the elementary and secondary school age population.

This Chapter addresses the need to effectively integrate the use and development of all recreational facilities within Columbia as well as the need to provide opportunities for those of all ages and varying physical abilities. Information and recommendations within this Plan are designed to assist Town officials and residents in planning to meet those needs.

Most of Columbia's current recreational and social programs are focused around Town-owned facilities and property. In addition State, Joshua's Land Trust, and privately owned lands also play an important role in providing recreational opportunities for Town residents.

This Chapter inventories the facilities currently available in Columbia and the recreational and social activities that may or may not be available here.

RECREATIONAL FACILITIES

RECREATION PARK & CONTIGUOUS TOWN LANDS

In 1963 the Town purchased a 68 acre parcel on Hennequin Road for a future recreation area. Two other adjacent parcels were added in 2000 bringing the total to 79 acres. Since the 2006 POCD, the Town has developed a one-mile stone dust loop trail that encircles the park and connects to trails on the adjacent Utley Hill Preserve owned by Joshua Trust. Other additions include a soccer field, fencing, a new playscape for ages 2-5, and exercise stations along the loop trail. Today about 28 acres is being used for active and passive recreation. The following facilities and activities are at Recreation Park:

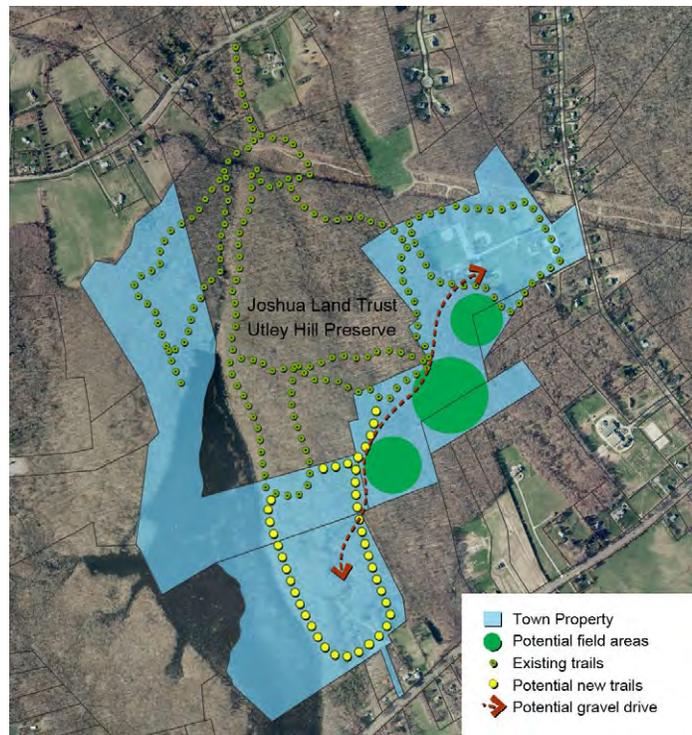
- 5 playing fields
- Volleyball court
- Pavilion, barbecue facilities
- Stationed exercise equipment
- Tennis court
- Softball scoreboard
- Nature study
- 1-mile loop walking trail with connection to other trails
- Basketball court
- Two age-specific playscapes
- Concession stand
- Bathrooms

The park is maintained by the Public Works Department, with activities either arranged or coordinated by the Recreation Department.

Of the 40 acres of undeveloped land at Recreation Park, some areas are too steep or too wet for use as fields, but there are also areas that could be developed for fields, a gravel drive and parking. The area will need to be more closely studied to determine specific locations, sizes and orientations for any new fields, but there appears to be enough suitable land for between 3 and 6 new fields (see map to the right).

In the 1980s, primarily to protect Columbia Lake's water quality, the Town purchased 67 acres to the west and south of Joshua's Land Trust Utley Hill Preserve; trails were developed on the Town land that connect to nearby trails.

In 2014 the Town acquired additional land to the south of these properties using funds donated by Henrietta Brand. The parcel is 48 acres; about 25 of those acres are either Utley Pond, other wetlands or a wetlands buffer, and about 23 acres could be used for recreation. The property has 50' of frontage on Route 66, however, there may not be safe access for more than very light traffic because of limited sight lines. This property is an excellent opportunity for passive recreation with trails along the pond that then connect with other trails on Utley Preserve and at Recreation Park, and could be part of a wider connection of trails. Active recreation geared to adults and a gravel drive connecting to Recreation Park is also a possibility.



ASSESSMENT OF RECREATION PARK AND CONTIGUOUS TOWN LANDS

In the 2015 survey, 48% of the respondents said they or a family member participated in activities at least moderately often at recreation park. When asked to rate our public areas, in other words “how are we doing”, 64% of the respondents gave Recreation Park an excellent to very good rating, and another 20% gave it a good rating.

Recreation Park is used by many families whose children participate in different activities. Having playing fields and activities on adjacent areas is a benefit for families with children involved in different sports or at different age levels; future field expansion should be near existing activities. The Columbia Recreation Commission recommends adding two multi-purpose fields in the near future: one for active use, and the other to enable Public Works to allow one field to rest for a growing season.

Some of the facilities are showing age and should be repaired or replaced, including one of the playscapes, the concession stand building and the pavilion. Although there is a tennis court and a basketball court, neither is well used as multiple courts are needed for any teams or groups to play. Because none of the fields have lighting, play is limited to daylight hours.

Goal: *Columbia Recreation Park has the facilities and activities to meet the needs of all Columbia’s residents.*

Strategies:

- *Budget for needed repairs and replacements of equipment and facilities.*
- *Develop a master plan for Recreation Park and contiguous Town lands; develop trail and driveway connections.*
- *Implement the master plan to address needs determined by current and previous outreach efforts and surveys.*
- *Address the need for additional Town staff hours to meet the need of residents for additional recreation and social opportunities.*

TOWN BEACH AND COLUMBIA LAKE

The Town has owned the lake bed since 1932, and has maintained the beach and lake using only local tax dollars, thereby assuring the lake and beach remains open only to residents and their guests. About 160 homes have frontage on the lake, and many more close by have right of way access, providing direct access to the 281 acre lake for swimming and boating.

Off Lake Road is the Town Beach with seasonal supervised swimming, youth swimming lessons, kayak rental and areas for picnics. There is a boat launch, trailer parking, and moorings available for boaters. On Erdoni Road there is another small swimming area.

Marine activity on Columbia Lake is governed by a Town ordinance adopted in 1964. Columbia Marine Patrol Officers, appointed by the Board of Selectmen, enforce the safety laws established by the State of Connecticut and the local ordinance and educate the public on boating safety.

For many years, sand from the Town Beach has washed away each year from wave action during winter storms. In 2014, the pier next to the boat launch was replaced with a solid pier, which has served to reduce wave action and reduced sand erosion. With the sand beach stabilized, in 2015 the Town began to plan a beach reconstruction which is projected to be completed by the summer of 2017.

The following activities are available on Columbia Lake:

- Boat launch & mooring
- Paddling and boating
- Water skiing and tubing
- Pleasure motor-boating
- Fishing
- Wind surfing & sailing
- Supervised & unsupervised swimming
- Swimming lessons
- Pavilion
- Kayak rentals
- Erdoni Rd swimming

ASSESSMENT OF THE TOWN BEACH AND COLUMBIA LAKE

The assessment, goals and strategies of the facilities are discussed in detail in Chapter 11: Facilities & Services. Both the Town Beach and Columbia Lake are actively used for recreational activities. The existing Town beaches are able to adequately serve the Town's current needs and are crowded only on a few unusually hot days.

Goal: *The Town Beach and Columbia Lake provides recreational opportunities for Columbia residents of all ages, abilities and interests.*

Strategies:

- *Continue to provide supervised swimming and lessons while also reaching out to those with special needs.*
- *Increase the opportunity for residents to attend a variety of social activities.*

INDOOR RECREATION FACILITIES

HORACE W. PORTER SCHOOL

The recreation facilities at the school are primarily for the use of the students. The Recreation Department has arranged the use of the indoor gym for adult basketball and youth team basketball.

YEOMANS HALL AND BECKISH SENIOR CENTER

Both Yeomans Hall and Beckish Senior Center offer space for group exercise, yoga and other recreational and social activities. The facilities available are:

- | | | | |
|--------------------------|-------------------------|----------------------|-----------|
| at Yeomans Hall | • Auditorium with stage | • Kitchen | |
| at Beckish Senior Center | • Multi-purpose space | • Games & activities | • Kitchen |

EASTCONN (Route 66)

EastConn is a regional educational service center providing services to schools, educators, students and adults; this facility includes a gymnasium that the Town leases for basketball.

ASSESSMENT OF INDOOR RECREATION FACILITIES

In Chapter 11: Facilities & Services the assessment, goals and strategies for the three Town facilities are discussed in detail. These facilities are primarily used for other activities and recreational use must be scheduled around those primary activities.

Goal: *Provide the opportunity for a variety of indoor recreational activities.*

Strategies:

- *Continue to partner with the Board of Education for the use of the indoor and outdoor facilities.*
- *Plan for the long-term need for indoor recreational activities including basketball, volleyball, exercise, yoga and social events and activities.*

OTHER TOWN-OWNED PASSIVE RECREATION AREAS

SZEDGA FARM

Szedga Farm was acquired in 2008 with funding from Columbia's Open Space funds and State of Connecticut DEP grant. The goal is to preserve open space and passive recreation and enable active use of agricultural lands. Szedga Farm includes 1.5 miles of hiking trails. Facilities and activities at Szedga Farm are:

- Pole barn for picnics and activities
- Hiking trails
- Nature study
- Sledding hill
- Community garden

TRAILS AT ISLAND WOODS, trailhead and parking off Lake Ridge Drive

SUNRISE DRIVE PRESERVE, located off Sunrise Drive with a hiking trail to the Ten Mile River

UTLEY SWAMP TRACT next to Joshua's Trust Utley Preserve off Lake Road, trails connect to the Trust's trails

TEN MILE RIVER ACCESS, located off Samuel Hill Road, has hiking trails and fishing in the Ten Mile River

FIREMAN'S FIELD, behind Columbia VFD Station, has the opportunity for hiking trails

ASSESSMENT OF OTHER TOWN-OWNED AREAS

Through open space requirements in Columbia's land use regulations the Town has been able to provide additional areas for outdoor recreation. Each application for a subdivision of land greater than 10 acres requires open space be considered; the Open Space and Conservation Commissions study the proposal to see if the land is within the Town's open space or trail connection priority areas. If it is, the Commissions make recommendations to the Planning and Zoning Commission to accept the open space set aside land; otherwise, it would recommend the Town accept a fee in lieu of open space.

As part of the agreement to build the new Columbia Volunteer Fire Department facility, Fireman's Field was deeded to the Town for passive recreation; however, to date no trails have been developed. Because it's in the Town center, there is opportunity for a trail that would be part of a larger interconnected trail system. Concern for potential access to the rear of the CVFD facility can be addressed by locating the trail at the southern portion of Fireman's Field.

The Recreation Commission has suggested that an outdoor basketball or tennis court could be installed on Town-owned land closer to a residential neighborhood as neither involves large groups or demands large parking areas.

Goal: Continue to seek appropriate areas for passive recreational activities and encourage their use.

Strategies:

- **Plan for a future interconnected trail system.**
- **Increase public awareness of passive recreation that is available.**

OTHER RECREATION AREAS

MONO POND NATURAL HERITAGE AND RECREATION AREA (State of CT)

A 218 acre State Park Reserve off Hunt Road with boat launch, fishing, hiking on three miles of trails; bow hunting is allowed in certain areas by permit.

HOP RIVER TRAIL (State of CT)

This is part of the East Coast Greenway, a 2,900 mile trail from Key West, Florida to Calais, Maine. Seven and a half miles of the trail is along Columbia's northern border on a former railroad bed that follows Route 6 and the Hop River. A portion of this trail has been improved, and the Town is working with the State on improving the rest of this section. In 2015, a joint project between Columbia, Windham and the State to deck the bridge over the Willimantic River was started, and should be completed by 2017. To the northwest, the Greenway trail is complete to Manchester, and to the northeast, once over the Willimantic River, the trail is complete to Pomfret. Trail use is limited to walking, biking and horseback riding.

AIRLINE RAIL TRAIL STATE PARK (State of CT)

This former railroad bed is a linear trail completed from East Hampton to Pomfret, with additional sections being completed to Thompson. In 2015, Windham decked the trestle over the Willimantic River that connects this trail to the East Coast Greenway. The trail follows the southeastern border of Columbia with a small parking area on Rte 87.

POTTER'S MEADOW (Joshua's Land Trust)

This is located off Commerce Drive with a 1.5 mile loop trail for hiking with access to the Ten Mile and Willimantic Rivers for fishing and nature study.

UTLEY HILL PRESERVE (Joshua's Land Trust)

Can be accessed from Lake Rd and Recreation Park and has 2.5 miles of trails to explore the woods, Utley Pond and a mill ruin.

GOLDBERG PARCEL (Joshua's Land Trust)

At the junction of Routes 6 and 66, it provides access for fishing on the Hop River.

PRIVATELY OWNED RECREATION

Camp Asto Wamah off Route 87, is a camp for 8-14 year olds

The Batting Cage on Route 6

Center Sports on Orlando Drive

ASSESSMENT OF OTHER RECREATION AREAS

Having additional areas for recreation is beneficial to Columbia residents. The Town promotes the State and Joshua's Land Trust areas on the website and through the Recreation Department.

Ongoing: *Continue to partner with the State, Joshua's Land Trust and others to increase the availability of recreational opportunities.*

RECREATIONAL & SOCIAL ACTIVITIES

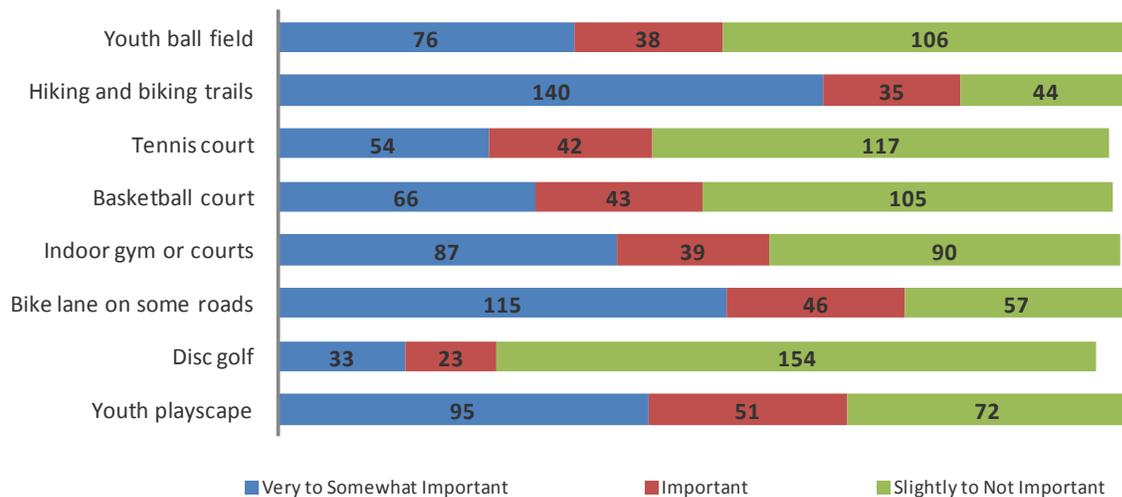
Activity	Age Group Served	Availability in Columbia
Swimming	all	Columbia Lake
Swimming lessons	youth	9 classes during the summer at the Lake
Water sports	all	Columbia Lake, Mono Pond
Cardio exercise	adult	Fit-fusion and Zumba at Yeomans and Senior Center
Basketball	all	1 outdoor court; 1 indoor court for team use at Porter School
Open gym basketball	adult	2 evenings during school year at Porter School and EastConn
Sports camps	youth	Various summer camp programs
Tennis	all	1 paved court; no organized activities
Soccer	all	Columbia-Windham Soccer Club arranges activities
Lacrosse or football	youth	Not available
Disc Golf	all	Not available
Girls/boys softball	youth	Columbia Little League arranges activities
Adult softball / baseball	adult	Not available as an organized program
Volleyball	all	Not available as an organized program
Ice skating	all	Not available
Social	all/youth	Dinner and a Dip; Chili Cook-off; Cupcake Challenge; Columbia Market
Social	adult	Paint and Sip; various activities at the Senior Center
Social	youth	Teen Nights; Paint Night; Taekwondo
Yoga	all	Weekly at Yeomans and Senior Center; at Columbia beach in summer
Stretch/energize	adult	Morning Stretch & Energize at Senior Center
Sport camps	youth	Multi-sport, baseball camp, softball, field hockey
Bicycling	all	Off-road on the State rail trails and other trails; no on-road bike paths
Walking and hiking	all	Several loop trails, and some interconnected trails
Cross-country skiing	all	Most trails are suitable
Golf	all	none in Columbia, several courses nearby
Equestrian	all	State rail trails

ASSESSMENT OF RECREATION ACTIVITIES

Columbia’s Recreation Department staff and the Recreation Commission work to address the activity needs of Town residents. They are limited however by the facilities available for use, and staff time available to schedule and supervise.

2015 SURVEY RESULTS

The following was the response to the question that asked how important additional recreational opportunities were. The respondents could choose multiple options.



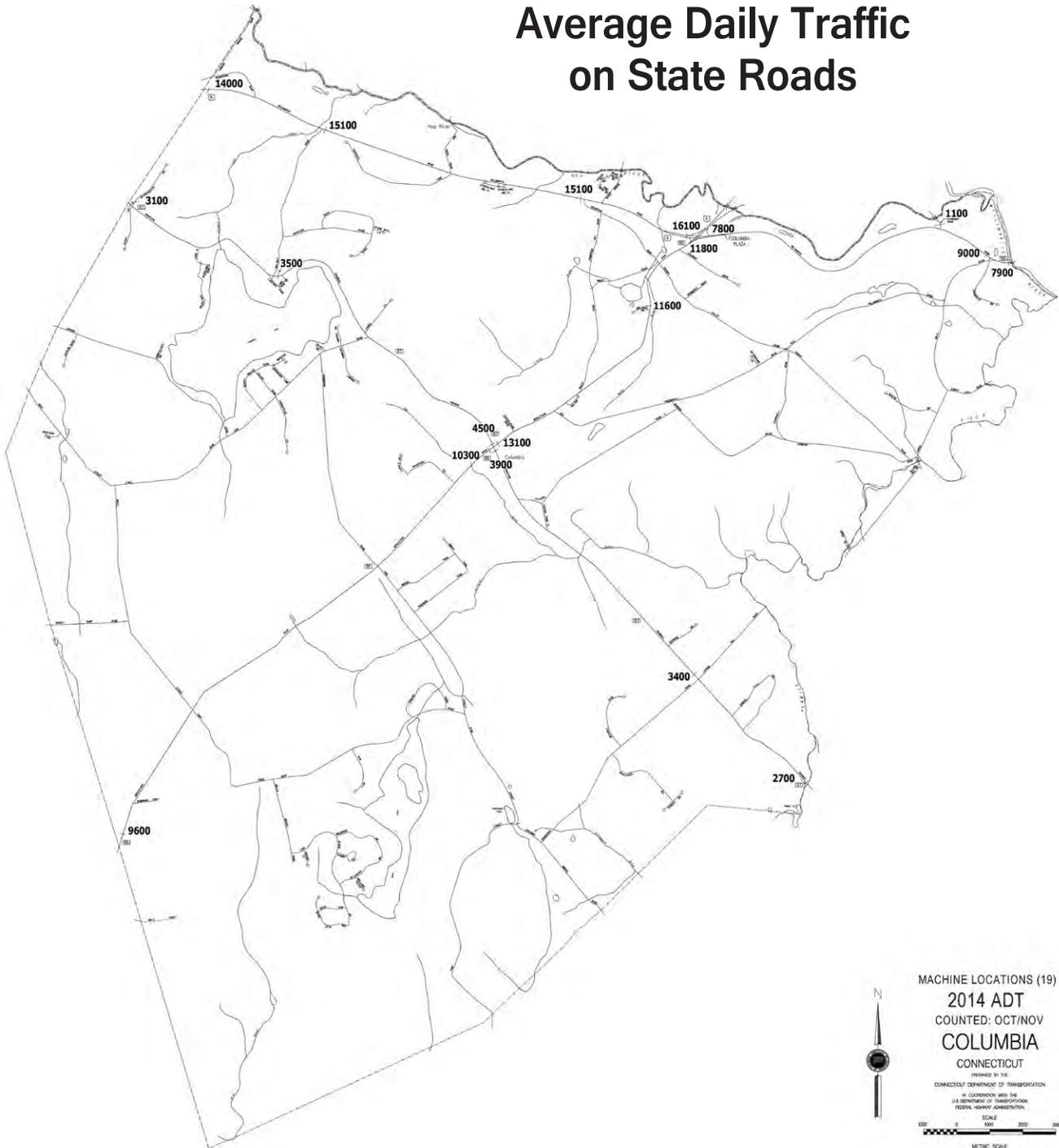
Survey responses also mentioned the lack of opportunities for special needs people, an indoor air conditioned gymnasium or activity center, more activities at Recreation Park, adult ball fields, and more winter activities. There are other activities, particularly for adults, not available in Town that should be considered; some activities suggested are ice skating, indoor sports and disc or Frisbee golf.

Goal: A variety of outdoor and indoor recreational and social activities are available to Columbia residents.

Strategies:

- Offer a more diversified group of programs to meet the needs of additional residents not currently being served.
- Address needs for additional indoor recreational and social activities.

Average Daily Traffic on State Roads



CHAPTER 13

TRANSPORTATION



Provide a safe and efficient vehicular and pedestrian transportation system that meets the needs of Columbia residents.

OVERVIEW

Columbia's transportation system has been, and will be, an important factor in its growth and development. To a bedroom community, ease and safety of the daily commute to work are paramount. At the same time, accommodations must be made for a variety of travel methods within Town for vehicles, bicycles, and pedestrians that are equally efficient, safe, and in keeping with the Town's historic character and consistent with Connecticut's 2009 Complete Street Policy. With increasing residential development, planning must assure development of new roads and transportation services that will serve the Town's residents.

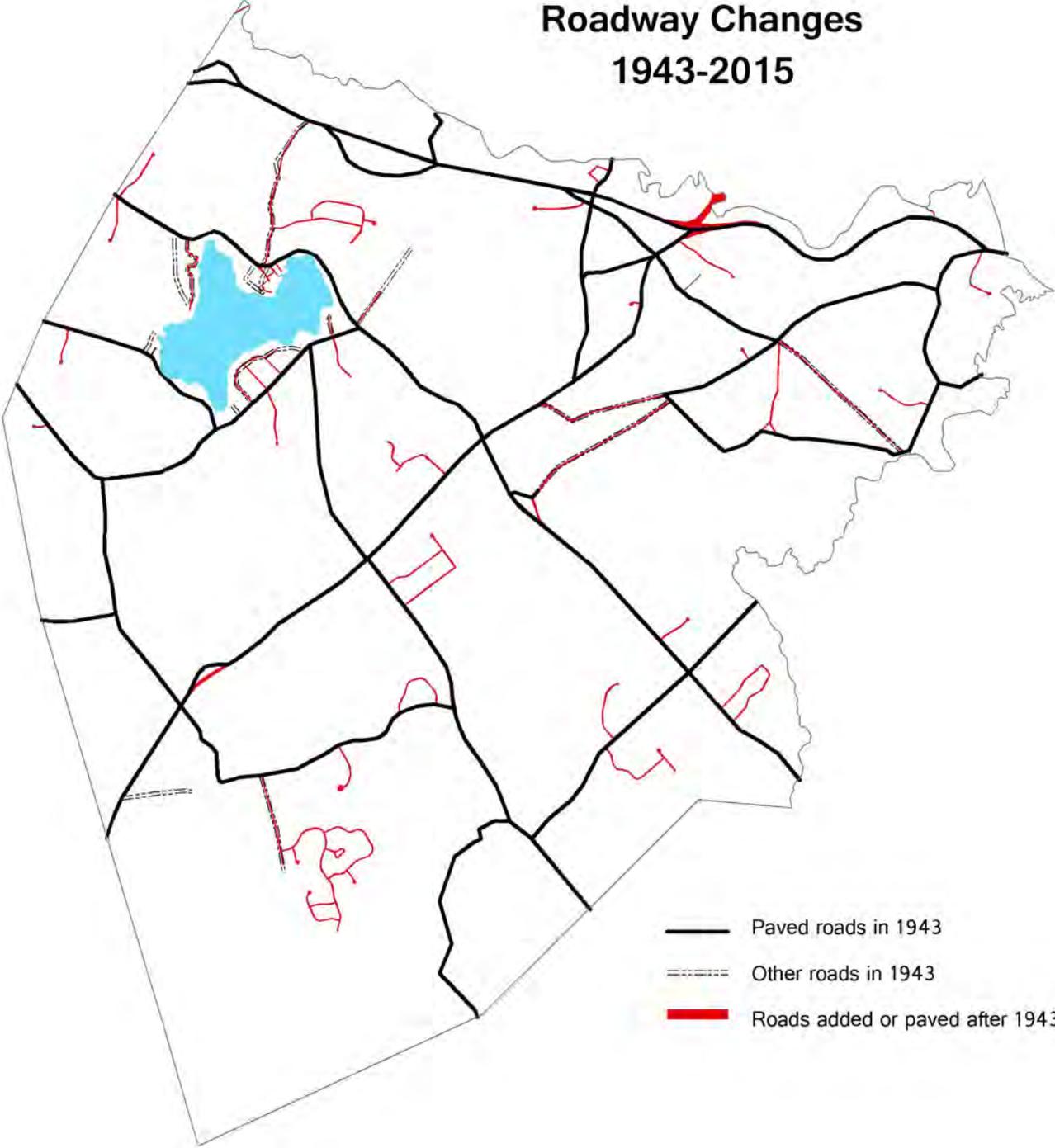
Currently the Town owns and maintains 42.57 miles of public roadway. All Columbia Town roads are either local through roads or cul-de-sac (dead-end) roads. The local through roads provide access to abutting properties and connect to other Town or State roads. Cul-de-sac roads may be permanent dead ends that will only serve the properties on that road. Other cul-de-sac roads are only temporarily dead end and may be extended when contiguous land is developed.



TRANSPORTATION: STREETS, ROADS AND BRIDGES

Fourteen miles of roads in Columbia are owned and maintained by CONN DOT. Routes 6 and 66 are classified as Principal Arterial roads and are intended to move a large number of vehicles regionally and to provide good accessibility to surrounding communities. Route 87 is classified as a Collector road that gathers local traffic and directs it to one of the Principal Arterial roads.

CONN DOT studies traffic volumes on all State roads and uses that data to determine upgrades needed for public safety and convenience. CONN DOT also uses the data when they consider an application for any additional curb cuts for driveways onto a State road. To obtain the data, traffic counters are placed at various locations along a State road; the data is tabulated for peak volumes and Average Daily Trips (ADT). The map on the opposite page shows the 2014 average daily traffic counts based on counts made on week days in November and December of 2014.



For Columbia's State roads in 2014, the average number of cars per day was:

14,000 to 16,100 along Route 6 between the Andover border and the intersection with Route 66

9,600 to 13,100 along Route 66 between the Hebron border and the intersection with Route 6 with the highest ADT at the intersection of Route 87

7,800 to 9,000 along Route 66 East between the intersection with Route 6 and the Windham border

3,100 to 3,400 along Route 87 between the Andover border and the Lebanon border

The Town is bounded on two sides by the Hop River and the Ten Mile River with a number of substantial bridges at the Town's boundaries with Coventry, Willimantic, and Lebanon. The bridges on State roads are the concern of the State. There are seven bridges on Town roads that are maintained by the Town. The Village Hill Road bridge was reconstructed in 2002, Jones Road bridge in 2003 and Parker Bridge in 2008. The bridges on Roses Bridge Road and Baker Hill Road were reconstructed in 2015 in partnerships with Coventry and Lebanon respectively. There are two bridges that have not been recently refurbished: the Hop River Road and Flanders Road bridges, both over the Hop River.



Village Hill Road bridge pictured here was reconstructed in 2002 using simulated stone masonry to reflect the history of the old bridge construction methods.

ASSESSMENT OF STREETS, ROADS AND BRIDGES

STATE ROAD ASSESSMENT. Not surprisingly, the traffic volumes in Columbia are highest at the intersection of Routes 6 and 66. The intersection at the center of Town, Route 66 and Route 87, has the second highest traffic volume. Interestingly, over the past 10 years the traffic on Route 6 has slightly increased (5-7%) while the traffic on Route 66 East has decreased (-13% at Route 6 intersection, and -6% at the Windham border); Route 87 traffic is slightly higher at the Andover border and slightly lower at the Lebanon border. In 2007-2008 CONN DOT made considerable improvements to Route 6 to improve safety and efficiency.

Traffic volume on Route 6, especially at peak commuting times, makes entering or exiting the roadway difficult. The intersection of Route 87 and Route 66 in the center of Town also can have heavy traffic volume with long waits for turning traffic.

In order to maximize the capacity and the efficiency of the existing circulation system, the Town should continue to implement access management techniques along the State roads. Such strategies include minimizing curb cuts, separating access points for road and driveways, interconnecting commercial developments and other techniques that minimize turning traffic on major roads.

Route 87 is a historic highway with many scenic qualities including historic buildings, stonewalls and mature trees that once lined a country lane; today some of these historic assets are in close proximity to the paved roadway. Route 87 qualifies for designation as a Scenic Highway which would limit future widening of the roadway, removal of stone walls or mature trees by CONN DOT. Continuing to restrict commercial development along Route 87 also serves this purpose.

CHAPTER 13

TRANSPORTATION

TOWN ROAD ASSESSMENT. Many of our roads date back to the colonial era. They were developed to connect major residential areas and the town centers in Columbia and surrounding communities. Their layout was based on existing property lines and natural features and wound around wetlands, ledges, and steep slopes. Today these historic roads are seen as scenic, and most residents want to keep them narrow, winding, and tree-lined. With increased development, safety issues have arisen as the roads and intersections were not designed for the current traffic levels, especially where our Town roads intersect with State roads.

One problem intersection noted in the 1991 regional transportation plan was the intersection of Old Willimantic Road and Route 66 where the topography of Route 66 shortens the sight line to the west. Another safety concern is when roads do not intersect at right angles; including the intersections of Macht Road and Route 66 and Szedga Road and Route 87. The intersection and triangle at the intersection of Cards Mill Road, Commerce Drive and Route 66 East was cited in the Route 6 Hop River Corridor Transportation Study as needing improvements; the study included this concept plan to improve access and gateway enhancement.

New roads have been built to higher standards and avoid the steep slopes and poor drainage, and are wider than the older roads. Still, new local roads are largely built to meet needs of the subdivision that creates them. Columbia's Subdivision Regulations stipulate the minimum width of new roads and the standards for construction.



Intersection Improvement Concept
Cards Mil Road at Route 66 East

Goal: *Columbia's State and Town roads will meet the future needs of residents and other travelers.*

Strategies:

- *Review subdivision regulations, and revise where necessary, to allow for appropriate width of new streets, and cul-de-sac length.*
- *Plan for future roadways and revise subdivisions regulations to incorporate into site plans.*
- *Provide new roads and improvements that support other planning goals.*
- *Proactively address natural hazards mitigations as outlined in WINCOG's plan.*

OTHER TRANSPORTATION MODES

TRANSIT SERVICES

Except for commuter buses to Hartford, Columbia is not served by regular scheduled public transit service. Weekday door-to-door services for the elderly and disabled are provided by the Windham Regional Transit District's Dial-a-Ride. Columbia's Commission on Aging conducted a study in the Spring of 2014, and many respondents expressed the need for better transportation options for seniors.

PEDESTRIAN & BICYCLE PATHS

Columbia is on the East Coast Greenway (ECG), a 2900 mile multi-use long distance trail from Key West, Florida to Calais, Maine primarily on abandoned railroad land (www.greenway.org). Nearly 30% of the total length of the ECG is already on traffic-free greenways, creating safe, accessible routes for people of all ages and abilities. The ECG has 190 miles through in Connecticut, with 33% complete and another 27% in development.

The Hop River Trail is a state-owned 12.5 mile section of the ECG between Bolton and Windham. So far, 8.6 miles of the trail has been improved to meet ECG surface standards in the towns of Bolton and Andover. As the trail continues past Andover, it follows the straight line of the railroad track for four miles along the meandering Hop River, sometimes in Columbia and sometimes in Coventry. Currently, the off-road trail ends at the Willimantic River. Columbia has partnered with Windham on a project to deck the trestle bridge that crosses the Willimantic River allowing the Hop River Trail to connect to the ECG trail segment in Willimantic and beyond.

Along our southern border is another state-owned rail-trail known as Airline Trail South that begins in East Hampton, continues to Colchester and Hebron, then follows the Columbia-Lebanon border for seven miles to Windham and a connection to the ECG.

Both rail-trails are for pedestrian, bicycle, equestrians, cross-country skiing and sledding with some parking available at most roadway crossings.

Columbia has a number of other walking trails on Town, State and land trust properties as well. The trails are at Recreation Park, Utey Hill Preserve, Szeda Farm, Potters Meadow and Mono Pond State Park. Many of these trails have been created and are maintained by volunteers.

There are virtually no paved sidewalks in Columbia, other than immediately adjacent to public facilities in the Town center. Subdivision regulations provide the Planning and Zoning Commission with the right to require sidewalks in subdivisions where pedestrian traffic is expected to be high, but to date this provision has not been used.



CHAPTER 13

TRANSPORTATION

The 2015 Survey of Town residents indicated that there is a need for walkable areas in Columbia that are similar to the stonedust path on Lebanon Green, namely one that is easy to walk within a public area. There is an opportunity for a stonedust path within the State right of way on Route 87 from the Town Center to Lake Rd.



Bicycles routes in Columbia rely predominately on roads and streets. There are no marked bike routes, although the state has designated the entire length of Rt. 87 as a recommended bike route. With the exception of the two greenways mentioned above, there are no separate linear bike paths.

ASSESSMENT OF OTHER MODES OF TRANSPORTATION

TRANSIT SERVICES ASSESSMENT. Projected growth in the total Town population means additional transit services will be needed, including more frequent commuter bus service and more commuter parking lots. Land use regulations do not currently address the need for commercial application to include access points for future transit service.

Many communities have incorporated Transit Oriented Development (TOD), a mixed-use residential and business development adjacent to transit services, into zoning regulations. TODs are developments where residents can easily access public transportation and services without needing a car.

More seniors mean a greater need for such services as Dial-A-Ride; some communities have a dedicated van for seniors.

PEDESTRIAN & BICYCLE PATHS ASSESSMENT. Residents at public forums have stressed their desire to see existing Town open space and public facilities connected by trails. There are several interconnected trails between Recreation Park and Joshua's Trust; all other Town trails are loop trails that do not connect. The Conservation Commission has developed a concept map that envisions an interconnected Town-wide trail system and is shown on Page 36.

Concerns have also been raised about the safety of residents jogging and bicycling on the State roads in the center of Town. The Town explored a walkway along Route 87 from the Town Green to Lake Road in the 1990s. Because federal funds would have been used, a wide and hard surfaced sidewalk would have been required. Local residents did not approve of the sidewalk as many trees would be lost. If local funds were used, a narrow stonedust pathway could be used, similar to the path on Lebanon Green, that would curve around trees and might be better received by residents. The Town did approve a Heritage Walkway system for the center of Town in 1997, but that has not been implemented.

Sections of the East Coast Greenway on either side of Columbia have been upgraded to ECG surface standards. The trail between Andover and Willimantic needs a pedestrian bridge and portions of the trail in Coventry need to be upgraded. The State is currently beginning the planning process to upgrade the section and to add the bridge.

Goals: *A safe and accessible transportation system of vehicles, pedestrians and bicycles is available for in-town travel, and needed transit services to other communities is provided.*

Strategies:

- *Plan for, and develop, a system of interconnected trails.*
- *Incorporate Transportation Oriented Development into Route 6 Corridor Plans.*
- *Consider a stonedust pedestrian walkway on Route 87 that would connect to Town Center walkways.*
- *Incorporate Connecticut's Complete Streets Policy whenever feasible.*

CHAPTER 14

UTILITIES



Meet the needs of our residents for drinking water, waste disposal and new communication technologies.

OVERVIEW

Up-to-date and cost effective utilities are an important element in making a town livable for both its residents and businesses. Columbia's utilities are adequate to the present population and land use, but must be carefully monitored as population growth continues.

UTILITIES

DRINKING WATER

Columbia's residents rely on private wells for all their drinking and household water needs. While there remain some older and shallow dug wells, the majority of wells are drilled and provide an adequate supply of potable water. New wells must meet State standards, and are tested for both quality and yield before approval by the Town Sanitarian. There are four small community well systems (Woodland Terrace, Sunnyslopes Road, Colonial Drive, and Columbia Heights) that provide for a total of about 152 individuals in residential households. These wells and the number of individuals served are monitored annually by the Department of Health. Finally, there are several water systems categorized as "transient public water supply" such as those for Horace Porter School, Town Hall, Beckish Senior Center and Dartmouth Village. These also are approved and monitored by the state Department of Health.

SANITARY WASTE DISPOSAL

Columbia does not have a public sewer system. Its homes and businesses rely on individual septic systems to treat waste. Systems with a design capacity under 2,000 gallons per day or less are regulated by the Town Sanitarian. Larger systems, such as for Horace Porter School, are regulated by the State.

Septic systems in areas of dense development, especially around Columbia Lake have been of special concern. Many systems pre-date modern standards and were designed for seasonal homes. As houses are converted for year round use, their septic systems may no longer be adequate. In 2016, the Town began considering a pump-out ordinance for the homes on and near Columbia Lake. Another densely developed area, that of Island Woods, has raised some concern about septic system adequacy on the small lots located so close to wetlands.

Public sewers and public water support urban scale development and are not compatible with the Plan's overall goal to protect rural character; the only exception would be to encourage commercial development.

CHAPTER 14 UTILITIES

SOLID WASTE DISPOSAL

Residents can drop off solid waste for disposal at the Transfer Station on Route 6, currently open on Wednesdays and Saturdays. Many residents choose to contract with private solid waste removal companies for weekly curb-side pick-up.

The Town encourages recycling and accommodates a wide variety of recycled materials: co-mingled containers, corrugated cardboard, newsprint, and scrap metal. For a fee, it provides for disposal of appliances and other bulky items such as tires and propane tanks. With the exception of used motor oil, antifreeze, Freon, and car batteries, hazardous wastes are not handled at the Transfer Station, but must be brought by individuals to the Hazardous Waste Disposal Facility in Willington which is only open seasonally. Columbia currently composts and recycles leaves which are turned into organic mulch for gardens and made available to residents at no cost. Trees are recycled as wood fuel for residents and brush is recycled through vendors either into landscape chips or bio-mass fuels for energy.

The non-recycled materials are disposed of by incineration at a “trash to power” plant in Preston. The Town is a member of MidNEROC, the Mid-Northeast Recycling Operating Committee, a consortium which negotiates competitive contracts for recycling processing as well as operating the household hazardous waste facility in Willington.

People’s awareness of resource recycling and the need to dispose of hazardous waste in an appropriate manner is seen in action at the Transfer Station. They also appreciate the opportunity to recycle goods such as clothing, books, and items with plenty of use left at the Swap Table and in the charitable donation containers at the Transfer Station.



COMMUNICATIONS

The Town is served by up-to-date wired communications services providing cable television and high speed internet access as well as standard telephone service. Many wires remain above ground, and are subject to temporary outages due to accidents or weather related damage. All new subdivision developments are required to provide these services entirely through underground wires unless site conditions, such as ledge, make it virtually impossible.

Wireless telecommunications services are provided by towers in Columbia and nearby towns, and today there are few places in Columbia without seamless coverage. State Statutes have changed over the years, and municipalities no longer have any control on where towers are located; the Connecticut Siting Council now processes all tower applications.

ASSESSMENT OF UTILITIES

DRINKING WATER ASSESSMENT. To date, the Town has had few problems regarding quality or quantity of water supply. With residential development, some subdivisions may need to use community wells. It will be important to balance development with conservation to ensure a reasonable recharge area for these wells.

Commercial development, with expanded uses and larger areas of impervious surface, bring the need for additional vigilance in protecting water quality near these areas. When development is over an important aquifer, drinking water aquifer standards should be followed so that this aquifer may remain a resource for quality drinking water.

The creation of a public water service would probably be carried out by a private concern and would have little negative financial impact on the Town budget.

SANITARY WASTE DISPOSAL ASSESSMENT. Private septic systems are adequate and appropriate to the types of land use proposed in this Plan of Conservation and Development. Care in placement, sizing and engineering of such systems should make them safe and practical as long as development density remains at the level of the current Zoning and Subdivision Regulations.

Nevertheless, the Town needs to actively implement a sewer avoidance policy, such as a mandatory pump-out ordinance, to ensure the longevity of private systems. Few towns choose to install sewers. Most often they are required to remediate widespread septic system failures. In this region, such failures have most commonly occurred in densely settled lake communities similar to that around Columbia Lake. A key element to sewer avoidance is stringent inspection criteria and regulations for the operation and maintenance of existing systems. Mandatory pump-out at certain intervals should be established by ordinance, and the Town should be prepared to see that there is sufficient staff to oversee and enforce these regulations.

SOLID WASTE DISPOSAL ASSESSMENT. The increase in the overall and proportionate amount of material that is not recycled is of considerable concern, both because of the expense to the Town and because of potential environmental impact. Proper disposal of waste and stringent recycling is not only crucial for our environment, but reducing the amount of material entering the waste stream will reduce the rising costs of waste disposal.

The Town needs to research all available convenient and cost-effective recycling programs. Increased efforts to provide information, education, and incentive to recycle would most likely more than offset any cost. We need to help residents understand recycling; that it not only helps them conform to legal requirements, but is also advantageous to the entire Town.

The cost of operating the Transfer Station, including hauling fees, currently is less than offering curbside delivery contracted by the Town but that may change over time.

COMMUNICATIONS ASSESSMENT. Economics and new technology will determine the future infrastructure that will be needed for wireless communications. At the pace of the development of new technology, it is difficult to project what will be needed in the next few years, let alone the next 10 years. Control regarding infrastructure needed for communication systems, wired or wireless, was taken out of the hands of local zoning agencies and given to the Connecticut Siting Council.

Goal: *Columbia utility infrastructure can meet the needs of the Town's residents and businesses now and in the future.*

Strategies:

- *Pursue cost effective and environmentally friendly solid waste disposal policies.*
- *Protect the quality and quantity of groundwater supplies through regulations, ordinances and public awareness education.*

CHAPTER 15

FUTURE LAND USE

OVERVIEW

To visualize the future of Columbia with the goals of this 2016 Plan of Conservation and Development (POCD) implemented, a Conceptual Future Land Use Map was created. This map reflects an image of Columbia as the POCD's goals and strategies are woven into the existing fabric of the Town. It's important to remember that the map is only conceptual, the actual conservation and development that will happen over the next ten years will evolve over time as the community implements components of the POCD and when unexpected opportunities arise.

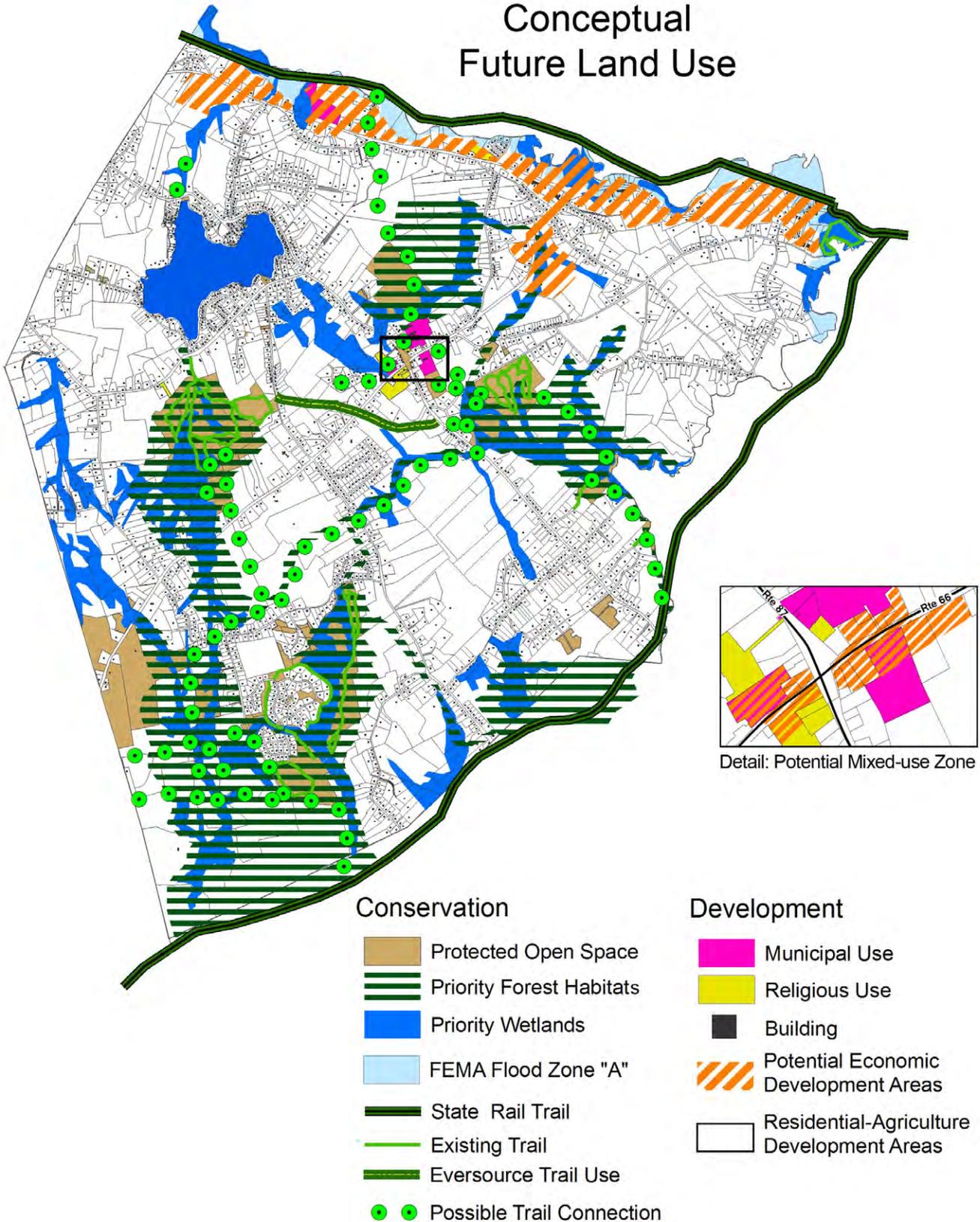
The Conceptual Future Land Use Map identifies existing conservation areas, priority areas for future conservation while building upon the areas of existing development to meet the needs of Columbia residents and the POCD's goals.

OVERALL 2016 POCD PHILOSOPHY AND GOALS

- *Protect what Columbia residents value while the town continues to grow,*
- *Encourage development that is compatible with our rural character, and*
- *Protect natural and cultural resources for future generations.*



Conceptual Future Land Use



LAND USE DESCRIPTIONS

CONSERVATION

Protected Open Space. The map shows the existing dedicated open space in beige. Future protected lands should be focused in the areas of the priority wetlands and priority forest habitat areas.

Priority Forest Habitats. Wooded and undeveloped forest land of at least 200 contiguous acres, or co-occurring with a priority wetlands, have been prioritized for protection by easement or acquisition. In addition, wildlife corridors following natural pathways along perennial streams that connect priority habitats are included.

Priority Wetlands. The wetlands that were deemed environmentally significant during the 2000 wetland study have been prioritized for protection.

FEMA Flood Zone "A". These floodplain areas are based on FEMA mapping of potential areas that would be inundated by a one-hundred year flood.

Existing Trails. Columbia has State rail-trails along two borders, access across Eversource lands, areas of loop trails, and three areas of interconnected loop trails.

Possible Trail Connections. The circles on the map indicate potential future trail connections achieved over time through acquisition and subdivision set asides.

DEVELOPMENT

Municipal Use. The Map reflects parcels with existing municipal uses: Horace Porter School, Columbia Volunteer Fire Department, Beckish Senior Center, Town office buildings, the Town Public Works buildings and Transfer Station. No expansion of these uses is forecasted.

Religious Use. Columbia has several parcels owned by religious organizations, and three cemeteries.

Buildings. Primary buildings on all parcels are depicted; many parcels with a building also have substantial excess land that could be developed.

Potential Economic Development Areas. Much of the area along the northern border is currently zoned Commercial or Manufacturing. Columbia's POCD recommends that these two zones be combined and expanded where appropriate. The list of permitted uses would be more clearly identified with setback requirements reduced unless abutting residential use or zone. Columbia's POCD also recommends that a mixed-use zone be created along Route 66 at the intersection of Route 87 to encompass the existing non-conforming businesses, and some of the municipal and religious uses; permitted uses would be limited to mixed-use buildings that could included small-scaled commercial business.

Residential-Agriculture Development Area. The majority of Columbia is zoned Residential-Agriculture, and future housing and agriculture development would be limited to that zone.

CONSISTENCY WITH OTHER PLANS

Section 8-23(d)(5) of the State Statutes requires that municipalities take into account the State Plan of Conservation and Development and note any inconsistencies. According to the State Plan, there are six Growth Management Principles with which a municipal POCD should be consistent. It should be noted that "...the statutory mandate for consistency with the State Plan only applies to State agencies, as outlined in CGS Section 16a-31. The State Plan is advisory to municipalities, due to the fact that there is no statutory requirements for municipal plans, regulations, or land use decisions to be consistent with it." Nonetheless, it is important to illustrate the ways in which Columbia's updated POCD is consistent with the Growth Management Principles in the State Plan, that mirror the statutory requirements for POCDs contained in CGS Section 8-23(e)(1)(F).

2013-2018 CONSERVATION AND DEVELOPMENT POLICIES: THE PLAN FOR CONNECTICUT

Growth Management Principle #1: Redevelop and revitalize regional centers and areas with existing or currently planned physical infrastructure.

The Economic Development chapter of this POCD contain elements that are consistent with this general growth management goal including a mixed-use area in the center of town along Route 66.

Growth Management Principle #2: Expand housing opportunities and design choices to accommodate a variety of household types and needs.

The Housing Development chapter recognizes the changing demographics and the need for continued evolution of the town's housing needs to include new types of housing to meet the needs of a range of ages and income levels.

Growth Management Principle #3: Concentrate development around transportation nodes and along major transportation corridors to support the viability of transportation options.

The Economic Development chapter contains elements that are consistent with this general growth management goal including the corridor approach to revitalizing Routes 6 and 66 East.

Growth Management Principle #4: Conserve and restore the natural environment, cultural and historical resources, and traditional rural lands.

Throughout the POCD there are elements that are consistent with this general growth management goal.

Growth Management Principle #5: Protect and ensure the integrity of environmental assets critical to public health and safety.

The Natural Resources and Open Space POCD goals are consistent with this general growth management goal.

Growth Management Principle #6: Promote integrated planning across all levels of government to address issues on a statewide, regional, and local basis.

This POCD recognizes and addresses the importance of Columbia's role in its regional economy especially along the Route 6 Hop River Corridor and contains elements that are consistent with this general growth management goal. In addition, the POCD offers numerous ways for local committees and departments to collaborate on common goals.

State Plan Locational Guide Map

The Conceptual Future Land Use Map for Columbia's 2016 POCD is generally consistent with the Locational Guide Map contained in the 2014-2018 State Plan. Columbia has priority conservation areas that are consistent with the State's Balanced Priority Funding Areas, but also has identified several other areas of priority conservation. The State's Village Priority Funding Area at the intersection of Routes 6 and 66 includes significant areas within the floodplain. Columbia's Conceptual Future Land Use Map includes potential economic development areas along Routes 6 and 66 that are based on the Route 6 Hop River Corridor Master Plan, funded by Connecticut Department of Economic and Community Development.

CHAPTER 16

IMPLEMENTATION PLAN

OVERVIEW

This is the most important chapter of the 2016 Plan of Conservation and Development (POCD) for without implementation, the plan for Columbia will never come to fruition. Connecticut State Statutes give the Planning and Zoning Commission the responsibility of preparing the Plan, but the implementation requires much effort and coordination among many town boards, commissions, committees, staff and Columbia residents.

The POCD also serves as a guide for all residents, applicants, agencies and individuals interested in the future of Columbia.

This chapter is a compilation of tasks needed to implement the goals of this POCD. The tasks are presented in a series of tables organized by topics. The tables refer to the page on which the topic was discussed, identifies “who” is responsible and the time frame (“when”) during which the task is intended to be completed.

Implementation Legend

BOS	Board of Selectmen
CAC	Conservation and Agriculture Commission
CONA	Commission on Aging
CRC	Columbia Recreation Commission
DPW	Department of Public Works
EDC	Economic Development Commission
IWWC	Inland Wetland and Watercourses Commission
LMAC	Lake Management Advisory Commission
LU-S	Land Use Department staff
OSC	Open Space Committee
PZC	Planning and Zoning Commission
SFMC	Szedga Farm Management Committee
TH	Town Historian
S-T	Short-term; up to two years
M-T	Mid-term; two to five years
L-T	Long-term; five to 10 years
Ongoing	A continuing task

**CHAPTER 16
IMPLEMENTATION PLAN**



PROTECT COMMUNITY & CULTURAL RESOURCES

TASKS	Page(s)	Who	When
1. Protect scenic roads and priority scenic public views.			
• Identify town scenic roads and priority scenic road-sides.	18	CAC	S-T
• Enact local scenic road ordinance.	18	BOS	S-T
• Apply to CONN-DOT for state scenic roads.	18	BOS	L-T
• Protect priority scenic road sides by purchase or easement.	18,37	CAC/PZC	Ongoing
2. Develop town-wide inventories of historic buildings, cemeteries and other sites. Incorporate into GIS data base for planning and application review.			
• Budget for town-wide inventory of historic sites.	16-17	BOS	S-T
• Conduct inventory of historic sites.	16-17	TH	S-T
• Assist homeowners with application to the National Register.	16-17	TH	Ongoing
• Digitize historic site data into GIS maps.	16-17	LU-S	S-T
• Enact demolition delay ordinance.	16-17	BOS	S-T
• Include scenic vistas and visual features in open space priority plans.	18	OSC	S-T
• Share history through website and at events.	16-17	TH	Ongoing
• Establish location for artifacts, historian and historic society.	16-17,77	BOS	S-T
3. Review Land Use Regulations.			
• Revise zoning and subdivision regulations to include preservation of road-side fields, stone walls and mature native trees.		PZC	M-T
• Revise regulations for commercial development to require compatibility with rural character and landscaped areas, residential subdivisions to include road-side trees.		PZC	M-T
• Review and revise zoning and subdivision regulations to include preservation of historic and archeological sites and encourage adaptive reuse of historic buildings.		PZC	S-T



PROTECT NATURAL RESOURCES

TASKS	Page(s)	Who	When
1. Maintain a current natural resources inventory for land use decision making and increase public awareness of its value.			
<ul style="list-style-type: none"> • Create a natural resource planning map that shows lands that are of the highest priority for preservation and highlight areas for greenways, trails, wildlife corridors and agriculture. 	22-24	CAC/LU-S	S-T
<ul style="list-style-type: none"> • Use an objectively based co-occurring resource analysis to determine preservation and acquisition priorities. 	22-24	CAC/OSC	M-T
<ul style="list-style-type: none"> • Ensure that the natural resource planning map is used when considering any land use changes. 	22-29	PZC	Ongoing
<ul style="list-style-type: none"> • Involve the CAC and OSC in any preliminary discussion for subdivisions or other projects involving land development or significant re-development greater than 10 acres. 	22-29	PZC	Ongoing
<ul style="list-style-type: none"> • CAC, OSC and Joshua Trust should work together to increase public awareness and understanding of natural resource values and to promote natural resource protection. 	22-29	CAC/OSC	Ongoing
<ul style="list-style-type: none"> • Map vernal pools, include in natural resource planning map. 	23	CAC/LU-S	M-T
2. Protect Columbia Lake.			
<ul style="list-style-type: none"> • Place a high priority on preserving any large watershed parcels that become available in order to minimize impacts to Columbia Lake. 	22, 37	OSC/BOS	Ongoing
<ul style="list-style-type: none"> • Consider subdivision watershed mitigation development standards. 	22	PZC	Ongoing
<ul style="list-style-type: none"> • Develop systems for inspections of all watercraft entering Columbia Lake to control the introduction or spread of invasive plants and animals. 	23-24	BOS/ LMAC	S-T
<ul style="list-style-type: none"> • Ensure that semi-annual water testing is conducted on Columbia Lake and monitored to continually assess water quality. 	23-24	BOS	Ongoing
<ul style="list-style-type: none"> • Update nutrient allocation requirements and spreadsheet to be user-friendly and to allow for standard mitigation for certain specific activities. 	23-24	PZC / LMAC	S-T
3. Use stormwater best management practices.			
<ul style="list-style-type: none"> • Ensure that all regulations require projects be designed according to the standards of 2002 CT Guidelines for Soil Erosion and Sediment Control, as revised, and the Stormwater Quality Manual with 2011 Low Impact Development Appendix. 	23-24	PZC	Ongoing
<ul style="list-style-type: none"> • Review road design standards and consider allowing narrower roads to reduce stormwater runoff and other developmental impacts. 	23-24	PZC	M-T
<ul style="list-style-type: none"> • Ensure proper management of sand and gravel operations to protect water quality. 	23	PZC	Ongoing
<ul style="list-style-type: none"> • Clean out storm drain sumps frequently. 	23-24	DPW	Ongoing

**CHAPTER 16
IMPLEMENTATION PLAN**



PROTECT NATURAL RESOURCES, continued

TASKS	Page(s)	Who	When
4. Protect soils, ground water, wetlands, plants and wildlife habitats.			
• Require that any parcel dedicated to open space via subdivision be permanently protected as such.	31-39	CAC/PZC	Ongoing
• Research and develop guidelines for any land use changes on slopes in excess of 25% slope.	25-26	CAC	M-T
• Develop policy for regular pump out of all septic systems; provide public information on maintaining septic system function.	21-26	BOS	S-T
• Provide public information on the safe application of pesticides and fertilizers; consider adopting an ordinance as an enforcement tool.	21-27	BOS/CAC	Ongoing
• Prioritize open space protection for farmland soils.	31-39	CAC	Ongoing
• Develop mapping of natural resources, including wildlife corridors, within 1 mile of Columbia's borders; work with abutting towns to coordinate acquisition priorities.	23,28	CAC/OSC	M-T
• Protect riparian wildlife corridors with a natural vegetated buffer along streams and wetlands.	28	CAC/ IWWC	Ongoing
• Promote understanding and protection of our biodiversity including pollinators.	27	CAC	Ongoing
• Promote understanding, identification, and control/removal of invasive species (plants, animals, insects) according to the standards developed by Connecticut Invasive Plan Working Group, DEEP and others.	27,29	CAC	Ongoing
• Encourage preservation of native vegetation by promoting use of native plants.	27	CAC	Ongoing
• Require use of native plants in all municipal landscaping projects; require DPW adherence to best management practices for any land disturbance within designated watershed areas.	27	BOS/DPW	S-T



PROTECT NATURAL RESOURCES, continued

TASKS	Who	When
5. Review Land Use Regulations.		
<ul style="list-style-type: none"> • Revise subdivision regulation to include land abutting existing open space, wildlife corridors and lands on Natural Resource Planning Map as "priority open space." 	PZC	S-T
<ul style="list-style-type: none"> • Consider subdivision watershed mitigation development standards. 	PZC	M-T
<ul style="list-style-type: none"> • Update nutrient allocation requirements and spreadsheet to be user-friendly and to allow for standard mitigation for certain specific activities. 	PZC / LMAC	S-T
<ul style="list-style-type: none"> • Ensure that all regulations require projects be designed according to the standards of 2002 CT Guidelines for Soil Erosion and Sediment Control, as revised, and the Stormwater Quality Manual with 2011 Low Impact Development Appendix. 	PZC	Ongoing
<ul style="list-style-type: none"> • Require adequate riparian buffers be preserved or established alongside wetlands and watercourses to the extent possible. Base regulations on the standards in USDA Conservation Buffers Design Guidelines. 	IWWC	S-T
<ul style="list-style-type: none"> • Develop regulatory protection measures for priority wetlands. 	IWWC	S-T
<ul style="list-style-type: none"> • Review road design standards and consider allowing narrower roads to reduce stormwater runoff and other developmental impacts. 	PZC	M-T
<ul style="list-style-type: none"> • Revise Inland Wetlands and Watercourses Regulations to add protection of vernal pools and their surrounding uplands. 	IWWC	S-T
<ul style="list-style-type: none"> • Ensure proper management of sand and gravel operations in order to protect water quality. 	PZC / IWWC	Ongoing
<ul style="list-style-type: none"> • Develop and implement regulation tools to keep steep slopes intact. 	PZC	M-T
<ul style="list-style-type: none"> • Research and develop guidelines for any land use changes on slopes in excess of 25% slope. 	PZC	M-T
<ul style="list-style-type: none"> • Restrict land use activity in soil areas that are poorly drained, steep slopes or with bedrock close to the surface. 	PZC	M-T
<ul style="list-style-type: none"> • Consider the effect the project may have on wildlife habitats when reviewing applications; seek ways to mitigate or negate the effects. 	CAC	Ongoing
<ul style="list-style-type: none"> • Use conservations subdivisions to preserve wildlife habitat and corridors. 	PZC	M-T
<ul style="list-style-type: none"> • Require all development to minimize habitat fragmentation. 	PZC	M-T
<ul style="list-style-type: none"> • Encourage preservation of native vegetation by developers and promote use of native plants. 	PZC	M-T

**CHAPTER 16
IMPLEMENTATION PLAN**



OPEN SPACE ACQUISITION AND PROTECTION

TASKS	Page(s)	Who	When
1. Continue to protect priority properties based on a strict standard of criteria.			
• Recommend revisions to zoning and subdivision regulations.	31-39	OSC	Ongoing
• Work with landowners who are considering permanently protecting some or all of their land for future generations.	31-39	OSC	Ongoing
• Analyze available priority property for possible acquisition.	31-39	OSC	Ongoing
• Coordinate with other governmental agencies and land trusts to support open space goals.	31-39	OSC	Ongoing
• Continue to monitor conservation easements and protected areas; manage town-owned open space.	31-39	OSC	Ongoing
• Facilitate donations of lands or funds for open space protection.	31-39	OSC	Ongoing
• Review use of town-owned property to determine additional properties that should have easements in place.	31-39	OSC	S-T
• Budget for minimum allocation to open space to maintain sufficient balance.	31-39	BOS	Ongoing
• Utilize PA 490 assessment as a tool to temporarily protect open space and forest land.	31-39	BOS	Ongoing
• Seek grant opportunities for land acquisitions to augment the town's budgeted open space funds.	31-39	BOS	Ongoing
• Assist Columbia farmland owners with their application to the Connecticut Farmland Protection Grant Program.	31-39	OSC	Ongoing
• Work with Joshua's Trust to facilitate gifts to the Trust, communicate the town's goals to the Trust, and help monitor Trust lands within Columbia.	31-39	OSC	Ongoing
• Identify roads and rights of way which are no longer used by motor vehicles and take steps to make these available for pedestrian and equestrian use.	31-39	OSC	M-T
• Pursue opportunities to extend or improve open space greenways with walking trails.	31-39	OSC	Ongoing
• Implement the vision for open space and greenway corridors through the subdivision set-aside process and for future open space acquisitions by the Town or other conservation organization.	31-39	OSC	Ongoing
• Promote public access to open space and trails as appropriate by linking open spaces and conservation areas.	31-39	OSC	Ongoing
• Maintain communication and cooperation among town land use commissions, conservation organizations, abutting towns and others involved in protecting open space.	31-39	OSC/BOS	Ongoing



OPEN SPACE ACQUISITION AND PROTECTION, continued

TASKS	Who	When
2. Review Land Use Regulations.		
<ul style="list-style-type: none"> ● Revise subdivision regulations to include the consideration of new open space abutting any existing open space; include lands designated on the natural resource planning map as "priority open space." 	PZC	M-T
<ul style="list-style-type: none"> ● Implement the vision for open space and greenway corridors through the subdivision set-aside process to augment any future open space acquisitions by the Town or other conservation organization. 	PZC	M-T
<ul style="list-style-type: none"> ● Revise subdivision regulations to allow an alternative parcel to be used for open space set aside if recommended by CAC and OSC. 	PZC	M-T
<ul style="list-style-type: none"> ● Revise subdivision regulations to require additional environmental review for proposals within priority wetland or habitat areas. 	PZC	M-T

**CHAPTER 16
IMPLEMENTATION PLAN**



GUIDE HOUSING DEVELOPMENT

TASKS	Page(s)	Who	When
1. Provide housing that meets the needs of Columbia residents.			
<ul style="list-style-type: none"> • Seek to provide a variety of housing types to meet the diverse housing needs of Columbia residents. 	51-55	PZC/BOS	Ongoing
<ul style="list-style-type: none"> • Consider adopting an Incentive Housing Overlay Zone. 	51-55	PZC/BOS	M-T
<ul style="list-style-type: none"> • Encourage the development of congregate and assisted living facilities for seniors and the disabled. 	51-55	PZC/BOS	Ongoing
<ul style="list-style-type: none"> • Maintain programs that allow elderly and disabled persons to remain in their own homes as long as possible. 	51-55	PZC/BOS	Ongoing
<ul style="list-style-type: none"> • Develop more rental options. 	51-55	PZC	L-T
<ul style="list-style-type: none"> • Continue requirement of staff review for all first divisions of land (also called "free-split" or "first-cut"), and all lot line adjustments. 	51-55	PZC/BOS	Ongoing
2. Review Land Use Regulations.			
<ul style="list-style-type: none"> • Study areas of existing residential uses for opportunities to create, or enhance, a neighborhood. 		PZC	M-T
<ul style="list-style-type: none"> • Plan for future subdivision road locations; require new subdivisions be in a pattern to facilitate road and trail linkages. 		PZC	S-T
<ul style="list-style-type: none"> • Revise subdivision regulations to include conservation subdivisions; consider requiring for all parcels in excess of 10 acres providing the same number of homes could be built as traditional subdivision. 		PZC	M-T
<ul style="list-style-type: none"> • Review subdivision regulations, and revise where necessary, to allow for appropriate width of new streets and maximum cul-de-sac length. 		PZC	M-T
<ul style="list-style-type: none"> • Require buffers for new residential development abutting existing agricultural uses. 		PZC	S-T



GUIDE BUSINESS AND ECONOMIC DEVELOPMENT

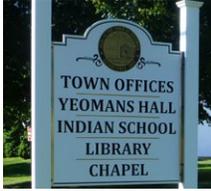
TASKS	Page(s)	Who	When
1. Promote economic development.			
<ul style="list-style-type: none"> Continue to support the efforts of the Route 6 Hop River Corridor towns in developing a zoning template; revise regulations appropriate for Columbia. 	60-65	BOS/PZC	Ongoing
<ul style="list-style-type: none"> Continue to support the work of the Economic Development Commission. 	60-65	BOS	Ongoing
<ul style="list-style-type: none"> Ensure town land use staff are highly qualified professionals who can effectively review proposals and implement design guidelines. 	60-65	BOS/PZC	Ongoing
<ul style="list-style-type: none"> Develop flow charts to guide commercial developers through the approval and permitting process. 	60-65	PZC	S-T
<ul style="list-style-type: none"> Consider relocating the public works garage to a more suitable location, or landscape the frontage. 	81-82	BOS	M-T
<ul style="list-style-type: none"> Include agricultural business support in the town's economic development strategies; support agricultural events and farmers markets. 	67-71	BOS	Ongoing
2. Review Land Use Regulations.			
<ul style="list-style-type: none"> Revise the existing commercial and manufacturing zone boundaries to increase the area available for economic development without impacting residential areas. 		PZC	S-T
<ul style="list-style-type: none"> Revise zoning regulations to permit mixed-uses along Route 66 in the town center to allow existing businesses to be conforming and to encourage other small scale businesses along with residential uses. 		PZC	M-T
<ul style="list-style-type: none"> Streamline the approval process for commercial development; revise use table to distinguish approval levels by intensity. 		PZC	S-T
<ul style="list-style-type: none"> Modify use tables to allow the types of businesses sought with appropriate requirements. Revise dimensional standards to encourage additional usage of parcels. 		PZC	S-T
<ul style="list-style-type: none"> Implement design guidelines to assure commercial development fits with desired rural character. 		PZC	M-T
<ul style="list-style-type: none"> Revise regulations to better allow new businesses to use existing lots and protect the environment. 		PZC	S-T
<ul style="list-style-type: none"> Utilize "access management" strategies in commercial areas to minimize curb cuts and maximize interconnections between properties. 		PZC	S-T
<ul style="list-style-type: none"> Implement appropriate regulations from the Route 6 Hop River Corridor Master Plan including transit oriented development. 		PZC	M-T
<ul style="list-style-type: none"> Adopt farm friendly regulations that permit compatible business activities ancillary to an existing agricultural operation with staff approval if a low impact activity, site plan review if a higher impact activity, and special permit if activity that could impact abutting properties. 		PZC	S-T

**CHAPTER 16
IMPLEMENTATION PLAN**



ENHANCE TOWN CENTER

TASKS	Page(s)	Who	When
1. Enhance the Town Center and Town Hall Campus.			
<ul style="list-style-type: none"> Develop a master plan for the town center and Town Hall campus that enhances the historic character with interconnections of the town and adjacent buildings and other areas of the Campus. <p>Considerations:</p> <ul style="list-style-type: none"> Physical and visual connections between buildings Improved parking pattern Walkways and sidewalks Streetscape improvements along Routes 66 and 87 Visual enlargement of Town Green 	74-76	BOS	S-T
<ul style="list-style-type: none"> Budget for implementation of the town center master plan. 	74-76	BOS	M-T
<ul style="list-style-type: none"> Consider parking options for the Meeting Place. 	77	BOS	S-T
2. Review Land Use Regulations.			
<ul style="list-style-type: none"> Explore revising zoning regulations to permit mixed-uses along Route 66 in the town center to allow existing businesses to be conforming and to encourage other small scale businesses along with residential uses. 		PZC	M-T



PROVIDE FACILITIES AND SERVICES

TASKS	Page(s)	Who	When
1. Provide office and meeting space.			
<ul style="list-style-type: none"> Plan for long-term office space needs; adapt space within existing buildings or determine additional square footage needed. 	75-76	BOS	M-T
<ul style="list-style-type: none"> Continue to maintain Moor's Charity School, the Meeting Place and the Chapel. 	77-78	BOS	Ongoing
<ul style="list-style-type: none"> Budget for any capital projects needed to meet building requirements. 	75-78	BOS	Ongoing
2. Provide needed space and services for education, library, seniors and public safety.			
<ul style="list-style-type: none"> Continue to support and maintain the facilities and services of the Saxton B. Little Library, Porter School and Senior Center. 	78-80	BOS	Ongoing
<ul style="list-style-type: none"> Seek ways to provide all Columbia seniors with the services they need. 	80	BOS / CONA	Ongoing
<ul style="list-style-type: none"> Budget operating expenses for repairs and to meet service needs. 	78-80	BOS	Ongoing
<ul style="list-style-type: none"> Budget for capital projects for equipment and facilities. 	78-80	BOS	Ongoing
<ul style="list-style-type: none"> Continue to monitor future police protection needs, and address those needs as they arise. 	81	BOS	Ongoing
<ul style="list-style-type: none"> Continue to support Columbia Volunteer Fire Department, and seek their recommendations regarding future needs. 	79	BOS	Ongoing
3. Provide needed space and equipment for Columbia public works.			
<ul style="list-style-type: none"> Plan for the needed expansion of the public works garage to house all equipment; consider long-term relocation of the garage and bus parking. 	81-82	BOS	S-T
<ul style="list-style-type: none"> Determine future use of old firehouse once DPW equipment relocated. 	80	BOS	M-T
<ul style="list-style-type: none"> Plan and budget for needed equipment, and salt storage. 	81-82	BOS	S-T
<ul style="list-style-type: none"> Incorporate Route 6 Hop River Corridor Study suggestions to enhance the appearance of the Town property. 	81-82	BOS	S-T
4. Address Natural Hazards Mitigation.			
<ul style="list-style-type: none"> Work with CRCOG to incorporate WINCOG regional Natural Hazards Mitigation Plan into their plan. 	79,125	BOS	S-T
<ul style="list-style-type: none"> Continue to improve procedures for emergency responses. 	79	BOS	Ongoing
<ul style="list-style-type: none"> Continue to improve drainage, culverts, roads and bridges; strengthen/protect critical town facilities. 	102	BOS/DPW	Ongoing
<ul style="list-style-type: none"> Consider natural hazards mitigation as zoning regulations are revised. 		PZC	Ongoing

**CHAPTER 16
IMPLEMENTATION PLAN**



PROVIDE RECREATION OPPORTUNITIES

TASKS	Page(s)	Who	When
1. Provide recreational opportunities for residents of all ages and abilities to enjoy Columbia Lake.			
<ul style="list-style-type: none"> ● Provide ADA compliant access to the beach and parking. 	82-83,92	BOS/DPW	S-T
<ul style="list-style-type: none"> ● Implement a solution to expand the sandy area of the beach that also offers areas of both sun and shade. 	82-83,92	BOS	S-T
<ul style="list-style-type: none"> ● Continue to provide supervised swimming and lessons while also reaching out to those with special needs. 	82-83,92	BOS/CRC	Ongoing
<ul style="list-style-type: none"> ● Continue to steward the lake through water testing and enforcement of ordinances and regulations. 	23, 82-83,92	BOS /LMAC	Ongoing
<ul style="list-style-type: none"> ● Consider using the Murphy House second floor for year round meeting space. 	82-83,92	BOS	L-T
2. Provide active outdoor recreational opportunities for residents of all ages and abilities.			
<ul style="list-style-type: none"> ● Develop a master plan for Recreation Park that includes trails and internal roadways connecting active and passive recreation areas. 	84-85, 90-91	BOS/CRC/ CAC	S-T
<ul style="list-style-type: none"> ● Budget for current and future capital improvement as outlined in the Recreation Park master plan implementation phases. 	90-91	BOS	S-T
<ul style="list-style-type: none"> ● Implement Phase 1 of the master plan for Recreation Park 	90-91	BOS	S-T
<ul style="list-style-type: none"> ● Implement Phase 2 of the master plan for Recreation Park 	90-91	BOS	M-T
<ul style="list-style-type: none"> ● Offer a more diversified group of active recreation programs to meet the needs of additional residents not currently being served. 	90-91	BOS/CRC	S-T
<ul style="list-style-type: none"> ● Continue to steward town-owned trails; increase public awareness of passive opportunities available in Columbia. 	94-95	OSC/CRC/ SFMC	Ongoing
<ul style="list-style-type: none"> ● Work toward an inter-connected trail system. 	36	BOS/CRC	Ongoing
3. Provide a variety of indoor recreational and social opportunities for residents of all ages and abilities.			
<ul style="list-style-type: none"> ● Plan for the long-term need for indoor recreational activities including basketball, volleyball, exercise, yoga and social events and activities. 	93,96-97	BOS/CRC	M-T
<ul style="list-style-type: none"> ● Continue to partner with the Board of Education for use of the indoor facilities. 	93	BOS/CRC	Ongoing
<ul style="list-style-type: none"> ● Offer a more diversified group of indoor programs to meet the needs of additional residents not currently being served. 	93,96-97	BOS/CRC	Ongoing
<ul style="list-style-type: none"> ● Address needs to increase the type and frequency of social activities. 	96-97	BOS/CRC	Ongoing



MEET TRANSPORTATION AND UTILITY NEEDS

TASKS	Page(s)	Who	When
1. Provide needed infrastructure to support development.			
<ul style="list-style-type: none"> • Provide new roads and improvements that support planning goals. 	99-102	BOS	Ongoing
<ul style="list-style-type: none"> • Plan for safe and accessible pedestrian and bicycle pathways for in-town travel, and needed transit services to other communities. 	103-104	BOS	Ongoing
<ul style="list-style-type: none"> • Plan for Columbia’s State and Town roads to meet the future needs of residents and other travelers. 	99-102	BOS	Ongoing
<ul style="list-style-type: none"> • Plan for the utility infrastructure to meet the needs of the town’s residents and businesses now and in the future. 	107-109	BOS	Ongoing
<ul style="list-style-type: none"> • Pursue cost effective and environmentally friendly solid waste disposal policies. 	107-109	BOS	M-T