Colebrook Town Plan of Conservation and Development

2014



As approved by the Planning and Zoning Commission October 14, 2014 Effective date March 1, 2015

<u>The Colebrook Town Plan</u> of Conservation and Development Committee

The Colebrook Town Plan of Conservation and Development Committee is an ad hoc subcommittee of the Colebrook Planning and Zoning Commission and was created specifically to create the Town Plan. Our membership includes:

Linda Raciborski, Chair Bernard Adams Chris Johnstone Matt Klimkosky James Millar Jerome Rathbun Michael Halloran

The Natural Resources Inventory was prepared by the Farmington River Watershed Association with funding provided by the Farmington River Coordinating Committee.

The Town Plan of Conservation and Development: Definition and Purpose

The Town Plan of Conservation and Development is a state-mandated document (CGS 8-23) that is to be used to guide the conservation, growth, land use policies, and development of a community. It is an advisory tool that identifies the community's goals and provides a framework of needs, actions, and priorities. Town boards should use the Plan as a guideline for the creation of policies and regulations that protect community values while balancing growth and preservation.

Consistency With State and Regional Plans

In accordance with Section 8-23 of the Connecticut General Statutes, the Colebrook Town Plan of Conservation and Development has been evaluated for consistency with the State Conservation and Development Policies Plan and the Regional Plan of Conservation and Development. As part of this review, the Colebrook Town Plan of Conservation and Development was found to be consistent with both the State Conservation and Development Policies Plan and the Regional Plan of Conservation and the Regional Plan of Conservation and the Regional Plan of Conservation and Development.

Colebrook Town Plan of Conservation and Development, 2014



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Photos supplied by Harry White and Robert Grigg

Part I Natural Resources

Overview

Colebrook is one of the most rural communities in the Northwest Highlands. Our landscape is one of forest, brook, field, and pond, one where the black bear roams and the sharp shinned hawk soars. From the pristine wetlands of the Loon Brook Basin and the thundering waters of the Still River Gorge, to the delicate meadows of Eno Hill and the forested expanse of the Algonquin State Forest, Colebrook remains a place of stunning beauty and robust ecosystems. The town's natural resources are one of its most attractive qualities.

Colebrook Land Statistics

Size: 33 square miles or 21,050 acres Open Space in acres: (as listed by the Colebrook Assessor's Office and Colebrook Land Conservancy records, December 2013)

- 1. MDC = 3,941
- 2. State of Connecticut = 2,410
- 3. Owned by conservation organizations = 762
- 4. Conservation easements held by conservation organizations = 742
- 5. Private associations and sportsman's clubs = 1,171
- 6. YMCA Camp Jewell = 527
- 7. Town lands = 178
- 8. Northeast Utilities = 75
- 9. Army Corps of Engineers = 180
- 10. Cemeteries = 12
- 11. Known deed restrictions = 97

Total Open Space = 10,095 (48%)

Total Committed Open Space (considered permanently protected = 8,218 (39%) Total Uncommitted Open Space = 1,877 (9%)



Open Space

The term "open space" is subject to many interpretations. Some believe that open space means wildlands; others see it as recreation areas, working lands, or even as "the nothings between somethings." The latter concept considers open space as nonproductive because it does not contain development or produce tax revenue. The clear implication is that only developed lands have value. However, open space is important for the following reasons:

- 1. Open space conservation protects our privacy, drinking water, recreation opportunities, wildlife, views and our legacy for the future.
- 2. Colebrook's vast amount of open space is what differentiates us from the suburban sprawl that is slowly creeping towards us from the South and East. Colebrook's rural characteristic is a magnet for both our resident and nonresident populations.

- 3. Open space requires little or no infrastructural services and hence costs the Town very little. In contrast, single-family homes often do not pay enough taxes to cover the costs of the public services they require, particularly in the education realm. Studies have highlighted that unrestrained single family home construction, such as experienced in neighboring New Hartford and Barkhamsted, will cost well over a dollar for every one dollar of tax income gained from tax payers. In contrast, open space costs around thirty cents per dollar of income gained.
- 4. Another misconception is that all permanently protected lands are not taxed. While the land owned by our community land trust and other non-profits are not taxed, many permanently protected parcels are in private ownership by the use of conservation easements and by the sale or donation of development rights and remain on the tax rolls. The town should encourage landowners to take advantage of these instruments as both the conservation of the landscape and of the tax base is preserved.
- 5. There are other benefits of open space, no less important than a secure, affordable tax base. Ownerships adjacent to protected areas have increased property values and correspondingly produce more tax revenue. Our beautiful countryside attracts a vibrant weekender and summer colony that contributes to the local economy and culture while requiring few town services. Protecting and adding to open space should be a top priority.



Areas of Concern

1. Wetlands

Colebrook's wetlands are important because they filter our drinking water, provide habitat for plant and animal life, purify surface water, control flooding, recharge our aquifers, and allow for education and recreation opportunities.

The Sandy Brook watershed is the major hydrologic feature of the town. It includes the Loon Brook and Center Brook subbasins and their associated springs and feeder brooks. Sandy Brook is an outstanding mountain stream that offers technical fishing and kayaking opportunities in a dramatic setting. There are numerous swimming holes as well. The three mile-section of the Algonquin State Forest along Sandy Brook

Road has been designated a State Natural Area Preserve, which provides permanent protection. With its steep slopes, cascading feeder streams, spectacular wildlife, and location within one of the largest state forests, Sandy Brook merits the town's attention and careful stewardship.

Loon Brook is another defining wetland ecosystem. Its terminal basin near Colebrook Center supports songbirds, wading birds and other wildlife over a series of old and new beaver dams. From the shrub swamp on Rockwell Road to the crossing at Little Kingdom on Phelps Road, to the dramatic headwaters marsh on Shantry Road, the Loon Brook watershed is a robust aquatic ecosystem that is largely intact and deserving of protection.

In addition to large watersheds, there are many riparian buffers of significance throughout our town that are worthy of protection. Riparian buffers are undisturbed areas of vegetation that provide protection for streams and brooks. Riparian buffers help diminish the effects of disturbances to land due to development and road system management. In doing so, they protect the quality of our wetlands and well water and therefore the health of our rural community.

Vernal pools are another important wetland resource in Colebrook. Also known as spring ponds or ephemeral wetlands, vernal pools are temporary wetlands that fill with water between fall and spring and are usually dry by late summer. Vernal pools are essential for the life cycle of many invertebrates and amphibians.

2. Woodlands

Colebrook's woodlands are perhaps its defining landscape trait. Our forests provide us with environmental, ecological and economic values. Undisturbed forestlands deliver clean water. wildlife, rural aesthetics as well as forest products. We should protect our forests by a combination of land use office diligence, landowner education, encouraging the placement of conservation easements, and by the acquisition of additional open space.

3. Aquifer Recharge Zones

All Colebrook residents obtain their drinking water from underground sources. It is

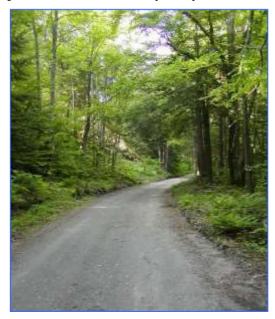
therefore vital to protect the groundwater resourcefor our community and for those using the same aquifer in surrounding towns. The most important aquifer recharge sites include the Algonquin /Sandy Brook aquifer in the vicinity of Algonquin State Forest, the Robertsville aquifer near the confluence of Sandy Brook and the Still River, the Phelps Corner aquifer, and the Millbrook aquifer. Development in these areas should be limited, and should not result in

4. Scenic Roads and Roadside Elements

Colebrook's roadways are both a source of pride and concern. They carry us on our

the pollution of ground or surface waters, or cause a reduction in water supply.

daily travels, bring us into spectacular places, and make our town a destination for leaf peepers during the fall foliage season. Development proposals should not degrade the scenic quality of our roads and roadsides. Stonewalls are important historical artifacts and a visual reminder of our agricultural past. The town should protect all stonewalls in the public right-of-way, especially as they become an economic commodity. Revisions to the town's land use regulations can take the form of including stone walls in the list of planning elements that must be considered in the routine zoning and environmental assessments conducted prior to development.





5. Farms and Meadows

Farms and meadows are an important part of Colebrook's history and landscape mosaic. They provide unique early succession wildlife habitat, have a local economic contribution, and harbor most of our most productive agricultural soils. Proposed development should minimize disruption to the scenic quality of the site, and retain the maximum possible meadowland for future use.

6. Special Natural and Agricultural Areas

The following areas are important and unique. They are some of Colebrook's most defining natural and man made ecosystems:

- a. Sandy Brook and environ
- b. Loon Brook Basin (from Center to the Norfolk line, especially headwaters)
- c. Center Brook and environs
- d. Beech Hill Brook and woodland environs (MDC and private landowners)
- e. Hale Farm
- f. Phelps Farm
- g. Smith Hill and Stillman Hill Farms
- h. Jasmin and Gray Farms
- i. Lake Triangle (Camp Jewell)
- j. Eno Hill Meadow
- k. Colebrook River Lake
- 1. Algonquin Forest
- m. Kitchel Wilderness
- n. State Line Farm
- o. Panorama Hill
- p. Phelps Pond
- q. Aton Forest
- r. Doolittle Lake Brook watershed
- s. Others



Effort should be made to protect and preserve these areas in regards to current/future land use and development.

7. Invasive Species

Non-native invasive species are a threat to the biodiversity of our forests, fields and wetlands. They are defined as any plant or animal introduced to an area where its density or dispersal threatens ecosystem stability or economics. Invasives displace native species and degrade biodiversity.

8. Wind Turbines

Notwithstanding the many positive steps that have been taken to implement the 2004 Plan, we are deeply concerned by the Connecticut Siting Council's recent approval to erect up to six industrial wind turbines in Colebrook. The turbines would be erected in an R-2 residential zone, a clear violation of the town's zoning regulations. Moreover, the Council's action is contrary to the objectives of this plan and is probably inconsistent with principles

four and six of the State Conservation & Development Policies. Proposed recommendations as to Wind Turbines:

- a. The Connecticut Siting Council, and all other State agencies, should be required to consider both regional and local plans of conservation and development as a factor in their decision-making.
- b. The Connecticut Siting Council should reconsider its approval to erect industrial wind turbines in Colebrook.

9. Low Impact Development

The Town of Colebrook has implemented Low Impact Development (LID) standards and regulations. The objective of this process was to revise existing land use regulations and municipal ordinances to not only encourage and promote LID practices and techniques but to require said practices and techniques resulting not only in maintenance of but improvement to the overall health of the Farmington River Watershed. These include:

- a. Revised inland wetlands regulations incorporating language for LID practices consistent with the model regulations recommended by the Department of Energy and Environmental Protection.
- b. Revisions to this 2014 Town Plan of Conservation and Development to show consistency with the approved changes to all of the land use regulations and municipal ordinances.

Recommendations

For many of Colebrook's residents, the Town's natural resources are one of their highest community values. They are what make Colebrook different from surrounding areas, what draws us to live here. Implementing policy to protect our unique and extensive natural resources without impeding on private property rights and imposing an excessive public tax burden will be very difficult. It is the recommendation of this plan to consider the following:

1. Planning and Zoning regulations should continue to consider the preservation and protection of Colebrook's ecosystems and natural resources, such as, street trees, scenic roads, view sheds, ridgelines, brooks, streams, water bodies, vernal pools, rock outcrops, farms, farmlands, forests, forest resources, agricultural soils, realized and potential aquifers, public water supply lands, wetland soils, open meadows, riparian buffers, and stone walls. Regulations should also promote types of development that do not degrade the defining characteristic of our unique natural resources.

2. Because wetlands embody a multitude of ecological values, afford wetlands the maximum practical protection. Also, wetland crossings and their consequent hydrological shifts should be minimized. Use elevated spans is encouraged when possible.

3. Consider permanent protection status for Town-owned open space, such as the Cooper property.

4. Add the establishment of a street tree replacement program to the existing responsibilities of the Town Tree Warden to manage our roadside tree population.

5. Encourage landowners to place conservation easements on their lands to gain permanent protection of natural resources.

6. The Conservation Commission should develop an Open Space Plan to map existing open space, important resource features, and future preservation objectives. The Selectman, Board of Finance, and Conservation Commission should collaborate to develop specific projects, partnerships and funding sources required to execute the Open Space Plan.

7. The Conservation Commission should develop a landscape scale plan to control the spread of invasive trees, shrubs, herbaceous plants, and vines. Town road crews and contractors should target these species while conducting roadside brushwork. The use of chemical control in conjunction with traditional mechanical techniques should be considered.

8. Discourage development on USDA Prime and Additional Important Farmlands Soils.

9. Consider the creation of a Town Open Space Fund with annual municipal contributions to allow for future open space acquisitions by the Town and partners.



Part II

Economic Development

Overview

In spite of its prominent role in the early stages of the metalworking industry in the 18th and early 19th Centuries, modern Colebrook is one of the most rural communities in the state. It has virtually no manufacturing or industrial operations, a very limited retail presence and an



overwhelming proportion of its year-round residents pursue occupations beyond the borders of the town. U.S. census data for 2010 show a labor force of 769, down 3.0% from 793 in 2000. The unemployment rate is 5.0%, which is well below the state average of 8.8%, and there are no families who receive TANF at present versus the state average of 1.1%. Only 7.5% of Colebrook's labor force works at home, according to census data; however, anecdotal evidence, including that related to home businesses, suggests that the self-employed segment is

substantially higher. Farming, which at one time dominated the local economy, is much diminished. Few commercial farming operations remain, although they are still a part of the economy, and farmland persists as an integral element in the Colebrook landscape.

Census data for 2010 show that Colebrook has a median household income of \$71,125, which is slightly below the average of \$71,497 for Litchfield County, and 2.7% above the average of \$69,243 for the state. That said, inflation-adjusted income has declined by 6.7% since the last census in 2000. The greater part of commercial activity is confined in the two business zones currently designated within the town, along Routes 8 and 44. For the most part, businesses located in these zones are limited to small, individually owned service and retail establishments. The business zones lack, in large measure, the infrastructure factors to support substantial industrial and retail development. These factors include a central location, high traffic flow, a large and diversified population base and, most importantly, public utilities – water and sewer – to support their physical operation. Moreover, these same factors, together with an inventory of unused industrial space, are abundantly available in Winsted and other nearby communities. Any consideration of economic development must recognize these salient limitations.

Economic Development Goals

The keynote of the overall town plan is to maintain and foster the rural character of Colebrook. We broadly define economic development as the fostering of activities that bring, directly or indirectly, more tax revenues to the town than they require in municipal services through the creation of job opportunities, the encouragement of commercial development, and a general improvement in the local economy. The ultimate goals are to relieve the undue dependence upon residential tax revenues, to ensure the provision of necessary services and to enhance the economic livelihood of the residents of the town. Accordingly, any initiatives should be consistent with the preservation and nurturing of its rural character. They should also reflect the limitations of its infrastructure capacity, its water resources, and road and utility systems.

Issues and Challenges

1. General Business Zones

The designated business zones within Colebrook consist of 500' wide strips, measured from the road centerline, along two state highways, Routes 8 and 44. The nature and designation of each of these zones is problematical. Both lack any public utility service for water and sewer. Past initiatives, focused on the southeast corner of Route 8, to explore the feasibility of extending utility lines from Winsted, have determined that such an effort would not be cost effective in the absence of any likely substantial commercial tenant and in view of the availability of feasible alternative sites in Winsted. We see no cause to take issue with these findings.

Soil conditions also pose a challenge. An analysis of soil types within both zones has determined substantial limitations for extensive commercial development. Route 8 abuts the Metropolitan Water District, containing the Goodwin and Colebrook Reservoirs that provide current use and reserve water to the metropolitan Hartford area. U.S. Soil Conservation Service data classifies large segments of this zone as unsuitable for septic waste disposal and vulnerable to ground water pollution. The Route 44 commercial corridor is somewhat better suited for development, but here, as well, large segments are rated low for septic disposal. Further, the southerly side of Route 44 is bordered by a large inland wetland and in some areas rises so steeply from the highway as to be unfeasible for new construction. These factors combine to severely limit the available land for new commercial development in either zone.

The narrow boundaries of each of the General Business Zones, further diminished by highway rights of way, encourage a continuation of the "strip development" that already characterizes much of the Route 8 zone, and under present regulations virtually ensure that future development further detracts from the rural nature of the town.

2. Home Businesses

The "home business," broadly defined to include home office activities and other larger enterprises that include outside employees, may present the most promising and compatible source of economic activity within the Colebrook community. Reliable statistics are not available, owing to the largely unrecorded nature of many such operations, but they abound including financial and other professional consultancies, personal services, agricultural production and retail sales, food processing, handicrafts, woodworking and small-scale construction. Spurred in part by advances in technology - the continuing improvement and proliferation of electronic communication and computer applications – and the resultant ability to locate away from large population centers, the climate for expansion of these activities is extremely favorable. However, regulation of these activities is complex. The business may be wholly unobtrusive, invisibly housed within a residential dwelling and attracting a minimum of vehicular traffic. It can also, by its nature, produce noise and other forms of pollution, cause heavy traffic flow, create visual unsightliness, or violate regulatory zoning footprints. Where the business is located in a residential zone, the manifest challenge is to balance the needs of the home business operator with the rights of the residential homeowner. Regulation of these activities is governed by section 8.12 of Colebrook's zoning regulations, which approve home businesses as a special exception, based upon the impact they will have on the residential character of the neighborhood.

3. The Town Center

The Town Center is Colebrook's "jewel" and has been maintained in its present state through a combination of strict zoning regulations and oversight by the Historic District Commission. Within the historic district itself, the old town hall, also known as the Seymour Inn, continues to be maintained by the Town, and the Colebrook store which has undergone many important repairs has been recently acquired by a local not-for-profit.

Each building is of historic and aesthetic value, and each contributes to the unique composition of the town center historic district in which, apart from the long established non-conforming usage of the Colebrook store, all commercial activities are strictly prohibited by



both regulation and custom. As recommended in the prior Town Plan, the Town has established a Village District pursuant to Section 8-2j of the Connecticut General Statutes, thereby providing the Planning & Zoning Commission with additional tools to protect the existing distinctive character, landscape and historic structures within the Town Center and regulating new construction, substantial reconstruction and rehabilitation of properties within the Town Center in the future.

The pros and cons of consolidating Colebrook Consolidated School with Norfolk's Botelle School due to declining enrollment are currently under study. This consolidation may create an opportunity to convert the current Colebrook school building into senior housing or a similar compatible use.

4. Tourism

Colebrook's physical assets, including its historic town center and colonial architecture, its rural character, and its abundance of natural resources, parklands, forests, hills, hiking trails, and waterways, are of special value but in economic terms largely unexploited. Aside from one bed and breakfast, overnight accommodations are minimal. The present economic benefits derived from tourism, including retail sales and full-time or part-time employment opportunities, are very modest.

Recommendations

Economic development in the town should continue to be implemented within the framework of respecting and enhancing the town's unique rural character. This can be accomplished through regulation of the visual aspects of such development – signage, setback requirements, exterior lighting, landscaping, scale, etc., – and sensitivity for the quality of residential neighborhoods, as well as for key environmental factors, in particular the preservation of ground water supplies. Successful fostering of development will require a certain flexibility in zoning regulations, a willingness to revise standards, and extensive use of the special use and public hearing processes to evaluate and approve applications and requests which offer opportunities for intelligent growth.

1. General Business Zones

Consideration should be given to reconfiguring, with professional planning assistance, each of the two existing business zones, and revising the standards that dictate development therein. In each instance, wetlands and ground water resources for the town may be imperiled by further development. Adherence to current regulations, given the narrow dimensions of the zones, almost force strip development, effectively preventing visually preferable setbacks more appropriate for the town's rural character. It may in fact be possible and



desirable, where water supply and other environmental factors permit, to deepen zone boundaries. Such a change would permit increased setbacks, landscaped buffers, and other improved site design elements, and could result in a modest expansion of potential business sites where ground water issues have already posed a limiting factor.

2. Home Businesses

Home businesses are a very significant and growing element in the town's economy, generating not only economic benefits to their owners but offering employment and local service income opportunities. We suggest that, in view of widely differing characteristics, and the need to protect the rights and benefits of residential owners, zoning approval procedures should be designed to be as flexible as possible, making use of special exception and public hearing procedures to enable compatible additions to the town's economic life.

3. Tourism

While there are potential hazards and challenges, we suggest that by working with regional organizations, such as the Litchfield Hills Tourism Council, and by promoting local attractions, such as the Colebrook Store, The Colebrook Historical Society (Seymour Inn) and Rock Hall, preservation of the town's rural character and increasing the town's economic base will be possible.

4. Agricultural Activity

In keeping with the important role of agriculture in the history of Colebrook, the current zoning regulations and the state and local tax provisions for open land are supportive of all forms of agricultural activity. This support should continue and "locally grown" markets should be encouraged.



Part III

Housing

Overview

Colebrook is a classic Connecticut small town, ranking 164th in population with 1485 residents as of the 2010 federal census. We are a residential community of primarily middle-class people who have chosen to live somewhat off the beaten path, at least in comparison to most of the citizens of our state. Clean air, cool forests, and scenic vistas define our homeland, instead of the seas of subdivisions, strip malls, and big-box retail outlets that have come to define the towns to the south and east of us. We are a town of independent, self-reliant people who care about each other and serve the community well.

The community grew by just 14 people (1.0%) during the 2000s, down from 7.8% in the 1990s. About 1172 of us are over 18 (78.9%) and we are blessed with the fellowship and wisdom of about 225 elders. Over 90% of Colebrook residents, 25 years and older, are high school graduates, while 30% have bachelors or graduate degrees. Close to 70% (67.5%) of the population, 16 years of age and older, are in the workforce, with a median household income of \$71,125. The poverty rate is 4.3%. One hundred-forty of our residents are recipients of social security benefits with an average monthly benefit of \$1,414. The Colebrook Senior Center provides many services to increase the quality of life for our wisest citizens and we are all well-served by supporting it. The Colebrook Associates and the Lions Club provide valuable charitable assistance to the community.

There are 662 housing units in town according to the American Community Survey. Over 500 of the housing units are owner occupied while 66 units are renter occupied. There are 72 additional homes that are dedicated to seasonal, recreational or occasional use. Ninety seven percent of the housing units are single family homes with a median value of \$281,900, up 54% from 2000. Home and rental vacancy rates are very low and there is no public housing in town. Many of us use sustainable energy in the form of cordwood to heat our homes in winter. There are more than a few homes with alternative energy systems in operation.

The Challenge

Many New England towns have experienced rapid development over the last 40 years. Most of these towns have lost their unique character and now bear little resemblance to their historical and cultural past. Colebrook has not yet fallen to the forces of homogenization that make every place like every other place. We live in a unique town and our connection to the past strong. For instance, our town center is almost unchanged after more than 200 years!



The reasons for this historic and cultural stability are many. Our geographic location is beyond the tolerance of many commuters; state forests and public water supply lands occupy a large proportion of the town's area; large property owners are not uncommon; the interstate highway system does not run through town; and the state roads with the highest traffic density are located outside of the heart of Colebrook. The absence of a rail line and the 'disappearance' of Colebrook River were certainly important historical influences. Housing and the patterns of residential development are among the elements that define a community. We want safe and affordable housing for present and future residents at a density and distribution that maintains the historic, cultural, rural and environmental qualities that make Colebrook a most special place. No one wants unconstrained, unregulated growth, especially in their own neighborhood; thus, we have created and empowered land use boards to protect our collective vision and community values.

The growth of the town's housing stock is a private-sector enterprise that has the potential to impact us all. More often than not, new home construction leads to increased tax burden for existing residents due to increased demands for town services. As certain thresholds are reached, large capital projects become necessary to meet demand and result in large increases in taxes. The economic implications for working families and especially the elders are profound.

There are other reasons to be concerned about sprawl. Without proper controls, development fragments or destroys intact habitats, degrades viewsheds, pollutes water supplies, increases traffic loads, and erodes the social environment of towns. The challenge lies in balancing community needs with private property rights.



Our town is almost wholly dependent on residential taxes. There are few available options to increase the revenue stream because there are few businesses and little land to accommodate new businesses. We cannot expand the tax base via new development because it carries the threat of increased taxes. We should not undertake expensive projects with limited return such as bridge replacements that are out of scale with the surrounding environment. We should not engage in tradeoffs that diminish or destroy the character of the town. Our challenge is to provide needed services within the limits of the our tax revenue base.

Affordable & Low-Income Housing

Housing affordability appears to be less of an issue in Colebrook than elsewhere in the state. Census data and analysis show that Colebrook has 516 owner-occupied housing units – 323 with a mortgage and 193 without. The median monthly ownership cost of homes with a mortgage is \$1,946, and 77 of those homes have a monthly cost below \$1,500. The median monthly cost of the 193 homes without a mortgage is \$728. Taking the definition of "affordable" to mean housing that does not cost more than 30% of the monthly income of a family whose income is 80% of the median, the "affordable" monthly cost for Colebrook (with a median household income of \$70,806) is \$1,418. Thus, nearly half of Colebrook's housing qualifies as affordable.

The prospects for additional low-income housing in Colebrook are tempered by several facts. Farm families have virtually disappeared. Rural living has evolved to demand two cars and the ability to travel for work and provision. Over 80% of Colebrook's workforce is employed outside of town. Of those employed in town, most are self-employed, home-office professionals, government workers, or Camp Jewell staff. The average Colebrook resident drives over 30 minutes to work. Also, Colebrook's lack of public transportation, water and sewer services make it less attractive as a location for the higher density projects characteristic of affordable housing.

Perhaps the most significant affordability issue in Colebrook is property taxes. Colebrook relies heavily on property taxes to pay for education and other services: 81.4% of the town's revenue comes from this source, significantly above the state average of 71.9%. The Grand List peaked four years ago, so higher costs have forced the mill rate to increase in each of the last six years. The per capital tax burden in Colebrook is now \$3,168 compared to the state average of \$2,511. The net effect is to squeeze lower income households who may be able to afford their homes, but struggle to pay taxes and are at risk of being forced to move out of state. Many such households are longtime residents of Colebrook.

Goals and Recommendations

The following housing goals, framed within the realms of serving the residents and protecting the rural way of life, are suggested to guide Colebrook's residential development:

1. To encourage safe, decent, affordable, and suitable housing for all of Colebrook's residents.

2. To conserve and protect the quality of existing residential neighborhoods.

3. To renew or rehabilitate obsolete and deteriorating dwelling units.

4. To encourage new dwelling designs that are compatible with existing neighborhoods.

5. To modify the current zoning regulations so as to accommodate the special housing needs of multi-generational families.

6. To encourage energy conservation and the use of sustainable energy sources in residences.

7. To discourage large-scale housing developments in outlying areas.

8. To consider allowing conversion of large houses to apartments or condominiums when adequate water and sewage disposal capacity are available on site and when other zoning requirements can be satisfied.



9. In an effort to preserve the maximum amount of open space possible, to direct large-scale residential growth away from prime agricultural and open space areas and encourage it to cluster in only one portion of the total developable area.

10. To give protection to the native dark sky conditions that are an important part of the rural aesthetic in Northwestern Connecticut. The practical elements of dark-sky protections include shade design considerations, bright-light curfews, and street light restrictions. Such protection would maintain our privacy, conserve energy, benefit nature, and preserve our view of the heavens. One testimony to the excellence of our night sky is the fact that Colebrook has long been the site of the annual Connecticut Star Party that draws hundreds of attendees every September.

Part IV

Transportation and Roads

Overview

The character of a town is linked to its roads. Colebrook's highways and byways thread across a unique New England landscape and are strongly influenced by features such as the Loon Brook basin, Stillman Hill and Smith Hill, the Algonquin and Sandy Brook, and the West Branch of the Farmington River. Their location and characteristics are rooted in the history and prehistory of our town and thus they remain a daily and visible link to the past. Our sense of place – our perception of Colebrook's rural character – is strongly influenced by the roads that carry us across the landscape. As such, our roadways should be maintained, enhanced or constructed in a manner that protects their rural, aesthetic and environmental qualities while still being cost effective and supporting safe traffic circulation and access for emergency vehicles.

Road Network

This network of state and town-owned roads has proven to meet the current circulation needs of our residents who reside in Colebrook and tourists who frequent the area. Due to the small population of the town of Colebrook, the financial cost to maitain town-owned roads places a financial strain on the town budget. The Capital Improvement Plan and the Selectman's budget allocate funds for road maintenance and repair; however, the rising costs for maintenance easily outstrips these budget allocations. To ensure cost-effective and efficient maintenance, the town must continue to implement long range road improvement, maintenance and planning to ensure that an effective program remains in place. The town may want to consider a bond for future road repairs.

Colebrook has about 41 miles of roads comprised of approximately 34.5 miles of paved roads and 6.4 miles of unpaved roads in the following categories:

- a. Arterial Roads between towns such as Routes 8, 44, 182, 182A and 183.
- b. Collector Roads major roads such as Riverton Road.
- c. Local Roads Town roads such as Deer Hill, Smith Hill and Cobb City roads.
- d. Unimproved Roads dirt roads such as Pisgah Mountain Road and Losaw Road.



Pedestrian Walkways / Bicycle Trails

At this time there are no pedestrian walkways or dedicated bicycle trails in town. Due to the nature and location of the Colebrook store, Town Hall, Colebrook Senior Center and Post Office, it appears as though sidewalks are not necessary as these_locations are all served by parking lots and individual entrance walkways. However, the town may want to consider and designate several roads where a dedicated bicycle lane could be marked on the roadway. Examples of roads that could be marked with a designated bicycle lane are Deer Hill, Sandy Brook and portions of Smith Hill.

Senior Transit

Colebrook has a "dial a ride" service for our senior citizens that is operated in cooperation with the Northwestern Connecticut Transit District. Since the current bus is old and in need of replacement, the Selectmen are in the process of replacing it with a new model. The Selectmen have received a grant from the Draper Fund to apply towards the purchase of a new vehicle.

Long-Range Planning for Road Maintenance and Improvements

The Town Plan committee recommends the creation of an evolving Long-Range Comprehensive Road-Improvement Plan by the Selectmen that is released annually to the public. The plan would identify the location, type, and cost of all major road improvements. It would also

State of the Art means Saving Money

Most rural New England towns dedicate a significant amount of highway crew time and expense to cleaning storm ditches and drainage systems. A number of Northern *Vermont communities upgraded their storm* runoff ditches by restoring profiles that minimize erosion via the more efficient removal of water and by seeding the ditch bed to filter sediments; little annual maintenance was thereafter required and the environmental quality of brooks, rivers, and ponds improved. Individual towns realized savings that averaged \$10,000 per mile over twenty years; another \$5000 per mile over twenty years was saved if the ditches were constructed with a rubbertired excavator with an articulated bucket (because this device conforms to the improved ditch profile). Source: Reichert. M.M. 1995. Vermont Better Backroads Manual. Windham Regional Commission, Brattleboro. 62pp.

rank and schedule the improvements according to need and cost effectiveness.

Utilization of State-of-the-Art Road Management and Construction Techniques

Roadway maintenance technology has undergone a significant evolution in the past few years, especially within the realms of stormwater control, dirt road management, river crossings, and other challenges. The incorporation of stateof-the-art techniques in roadway management into our highway crew's process and procedural milieu can yield costeffective outcomes while preserving aesthetic and environmental values that have long been sacrificed on a nationwide scale.

Education

Colebrook is fortunate to have a competent and resourceful highway department. Because of their interest in

evolving road management techniques, the town should foster continuing education via seminars, regional roundtables, formal coursework, and the creation of a reference library. Programs are offered by the Connecticut Department of Transportation, the Connecticut Department of Energy and Environmental Protection, the Northwest Conservation District, and the various regional planning agencies and councils of elected officials. The committee recommends that the town support continuing education for the highway crew because of the simultaneous benefits of improved infrastructural durability, financial efficiency, and environmental quality.

Bridge Improvements, Replacement, and Construction

Bridges are an important part of Colebrook's rural landscape. They span the rivers that traverse the town and provide scenic lookouts and fishing spots. In order to retain the rural character of the town, replacement bridges should be designed with their ultimate location in mind: they should complement the visual landscape.

The Capital Improvement Program Committee outlines projected bridge and road improvements over 5- and 10-year periods and the one-year plan that is updated annually by the

Board of Selectmen. This program can be a subset of the Long-Range Comprehensive Road Improvement Plan so as to foster an integrative road network program.

Scenic Roads and Gravel Roads

Colebrook has two Scenic Roads. One is Pisgah Mountain Road, a one-mile-long unpaved road that runs along Center Brook; it is protected by an ordinance that applies to it alone. The other is approximately three miles of Route 183, from Hale's Corner to North Colebrook classified as a State Scenic Road. These designations have protected both roads from the forces of change. The committee, in recognition of the community's desire to maintain Colebrook's rural and natural



landscape, has identified the state scenic road statutes as an initial legal mechanism to perpetuate this legacy.

Unpaved gravel roads are a unique attribute of rural New England towns. Residents are often passionate about such roads, even though they are narrow, often winding, and subject to surface irregularities such as washboarding. Since they are valued by the community, all of the gravel roads in town should be considered for scenic road designation because they are vulnerable to permanent change in the form of widening and paving without public input.

We recommend that the following roads be considered for town or state scenic road designation through the town meeting process:

1. State Roads

a. Route 182A from Route 183 to Route 182 (Rockwell Road through the Loon Brook Basin)

b. Route 182 from Route 183 to Route 182A (Stillman Hill viewshed)

c. Route 8 from Sandy Brook Road to the Massachusetts line (Colebrook River Road along the West Branch)

- 2. Town Roads
 - a. Unpaved:

1. Phelps Flat Road (Sandy Brook Road to Route 183 though mature pine stands and along forested wetlands)

2. Beech Hill Road (Chapin Road to Route 8 with historic and viewshed elements)

3. Campbell Road (Sandy Brook Road to Beech Hill with historic and aesthetic characteristics)

4. Wheeler Road (Old Colebrook Road to Rt. 183 with an expansive view of Hale's Corner and Stillman Hill)

5. Bricklemeier Road (from Smith Hill to Old North Road under a forest canopy)

6. McClave Road (Silhouette Drive to the Massachusetts line with historic and natural elements)

7. Losaw Road (from Old North Road to the Winsted line under forest canopy)

b. Paved:

- 1. Sandy Brook Road (Route 8 to Pisgah Mountain Road including the DEEP Natural Area)
- 2. Phelps Road (Route 182 to Bunnell Street through historic/pastoral areas and Little Kingdom)
- 3. Smith Hill Road (Route 183 to Old North Road including the Green and hilltop vistas to the east)

Old Roads

Old roads are road segments that do not appear on the State Road Aid List and are not maintained by the town. These town-owned roads and right-of-ways are unsuitable for passenger vehicles although they may have non-motorized recreational uses such as walking, skiing, or possibly horseback riding.

The committee has learned that the old roads have no special planning value for future roadway connections or to improve circulation of traffic and emergency vehicles. These old roads do, however, represent a potential financial liability. The town stopped maintaining these roads because they were laid out over difficult terrain with numerous stream crossings, steep slopes, and rocky areas. The cost to construct a modern roadbed over this type of substrate is very high. Yet a property owner with land adjacent to such roads can ask the town to open and improve the road for public travel. By formally abandoning the old roads (which is accomplished by a majority vote at a town meeting), the town avoids significant future liability for construction and maintenance.

We recommend the following old roads for abandonment:

- 1. Northern unpaved segment of Simons Pond Road from Cobb City Road to MA line.
- 2. Chapin Road beyond the current paved terminus (January, 2002).
- 3. Moses Road beyond the current paved terminus (January, 2002).

Low Impact Development

As part of the Low Impact Development process, previously noted, additional revisions were made to municipal land use regulations and municipal ordinances. Those that impact roads include:

- 1. A revised and properly adopted municipal ordinance entitled "Ordinance concerning the construction and acceptance of streets in the Town of Colebrook" incorporating language for LID techniques in all new road construction.
- 2. Revised and properly adopted planning/subdivision regulations incorporating language for LID techniques as part of approval of all new subdivision roads and individual residential site development.
- 3. Revised and properly adopted amendments to the zoning regulations incorporating language for LID practices as part of any residential and commercial land development.

Riparian Buffers

Colebrook has several roads that parallel or cross streams, rivers, and wetlands. Numerous research studies have shown that roads in riparian areas can be major agents of environmental degradation. To counter these impacts, road management must be conducted in a manner that preserves both the wetland/watercourse and its associated riparian buffer.

1. Protecting Riparian Buffers

Roadway management can have a significant impact on the health of Colebrook's surface and ground waters. Construction activity, stormwater management, and longstanding infrastructural problems all contribute to resource damage. Road construction projects should always include a restoration plan that serves to restabilize the site in the most ecologically sound and cost-effective manner.

2. Protecting Vegetation

Every effort should be made to avoid vegetation removals along roads in the buffer areas, subject to the priority given to public safety. Maintaining an intact turf or shrub layer prevents erosion and inhibits the recruitment of tree species in places where they are not desired. Roadside vegetation management should never degrade the roadsides and riparian buffers; it should always seek to enhance their quality.



The Eternal Braid of Life and Water

Colebrook Town Plan of Conservation and Development

Appendices

- I. Two Vignettes by Robert Grigg
- II. CT DEEP Sandy Brook Natural Area Preserve Information
- III. Colebrook Natural Resources Inventory



Volunteerism is a defining feature of our town.

Colebrook's two fire companies contribute thousands of hours every year and provide a variety of services.

Colebrook History at a Glance

Today we find ourselves over a decade into a new century. What is it that makes this town "special"; why did you come here to live, either full or part time? This question can be asked equally of a new resident from an adjacent town or someone from New York City, and in all likelihood, the replies would be similar.

We have been blessed with what amounts to a virtual wall-to-wall carpet of mature forest growing on the southern reaches of a range of hills known as The Foothills of the Berkshires. In Colebrook, the highest elevation, 1552 feet, is reached by Pond Mountain; the lowest, 510 feet, occurs on the surface of Still River as it exits town into Barkhamsted. The Berkshires in western Massachusetts are the southern extension of two mountain systems, the Taconics and the Green Mountains. All are part of the Northern Appalachians.

At the heart of our highway system are two state roads; Conn. Route 8 running north-south on the eastern side of town and Conn. Route 183, running northwest-southeast from the Winchester town line to the extreme northwest corner almost at the Massachusetts state line. The topography is such that with few exceptions, it is not possible to have a straight road going very far in any direction. Scattered about town there are several locations that lend themselves to a neighborhood environment. Initially, these were agricultural sites; flat land alongside rivers or the bottoms of what had long before had been glacial lakebeds, now covered with rich, dark loam. District names such as North Colebrook, Colebrook Center, Robertsville, Colebrook River and Millbrook mark these locations. The road network connecting these neighborhoods looks like a tortured spider web as it negotiates our geological obstacles.

The work parties sent into the virgin forest in the mid eighteenth century to create roads and begin initial land clearing in what was to be Colebrook found not one lake or other body of standing water. There was an adequate supply of waterpower however in Sandy Brook, running diagonally across town from northwest to southeast, the West Branch of the Farmington River, Center Brook/Loon Brook (originally named Mill Brook throughout its entire length), and Still River tucked into the southeast corner of the township. Of all the rivers having potential to power waterwheels, none exceeded Still River. The original owners of Colebrook were a group from Windsor, Connecticut, known as The Proprietors. These men were charged by the General Assembly of the Colony of Connecticut with preparing the area for colonization. The first task was to create roads, and the men who made them had to be paid; therefore the real estate considered the most valuable was set aside to be sold to the highest bidder for this purpose. Still River, beginning with the falls eventually known as Tunxis, containing three other major mill sites in just over a quarter mile, was chosen for this purpose.

The first industrial use at this site was a complex consisting of 11 buildings centered on an iron forge in 1770. All throughout the War of Independence, this facility turned out not only iron products, but also high quality steel. Chief among the steel products were bits with which the cannon manufactured in Salisbury, Conn, were bored. The steel products produced in Robertsville were truly of inestimable value to Washington's military campaigns.

Contemporary to this were two other sites in Colebrook with major forges; the industrial site on Center Brook owned by the Rockwell family, and another on the Colebrook-Norfolk town line

owned in part by the Phelps family. These two families, the Rockwells and the Phelps, remained the dominant political and commercial powers throughout the 18th and 19th centuries, and indeed remain town benefactors to this day.

After the War of 1812, iron never regained its former importance and was replaced by lumbering and animal husbandry such as Merino sheep and cattle for beef and cheese. One major exception to this was a cotton mill that operated in Colebrook River from 1840 - 1890. It averaged 100 employees, and was thus the largest employer the town has ever had.

A railroad came to Winsted in 1841, effectively curtailing further industrial development in Colebrook, as well as eventually forcing existing businesses such as the cotton mill to close down.

In 1871 a railroad was created reaching from Hartford to the Hudson River Valley, which passed through Winsted and Norfolk. This route, while never being very lucrative, never-the-less allowed business men with offices in New York City to come here for summers or even relaxing weekends. Land prices were depressed around here following the Civil War, and former farm land, for the most part denuded of trees, much of it used for charcoal making, but as a consequence affording spectacular views, could be picked up for a song. Thus the role of the "summer people" was established, one which is more prevalent now than at any previous period.

The most dramatic event that has ever taken place in Colebrook was the creation of two dams and reservoirs on the West Branch of the Farmington River by the Metropolitan District Commission. This took place over a period of years beginning in the 1930's and culminating with the completion of the Colebrook River Dam in 1964. Below the waters of Colebrook River Lake lie the foundation stones of nearly 100 dwellings, shops and mills.

Today urban sprawl, industrialization and the general rigors of late 20th and early 21st century living have left vast areas of the northeast, in particular the New York Metropolitan Area and the so-called Northeast Corridor, devoid of clean, verdant quietude. Something in the human soul yearns for open space, whether it is on the prairies, in the mountains, or just a piece of land where he and his neighbor need not live in each other's hip pocket. All the many years that Colebrook languished in the backwaters, consisting of land considered all but useless, and which could be picked up for \$1.00 an acre, has, in the 21st century, found herself in the most admirable of positions. We have something that cannot be manufactured by man; we have unspoiled natural beauty, and we have it in easy commuting distance from centers of high-tech employment such as New York and the Connecticut River Valley. Having recognized that, it should be obvious that all of us have an obligation to retain and protect those attributes that make this the wonderful place to live that it is.

Sandy Brook

Sandy Brook arises at York Lake, at an elevation of 1550 feet, in the township of Sandisfield, Massachusetts. It flows 5 miles southeastward through Massachusetts, traverses ½ mile of the northeastern corner of the township of Norfolk, Connecticut and merges 7 ½ miles later into Still River in southeastern Colebrook. During this short 13 mile stretch, it drops some 1,015 feet, 662 of them in Colebrook.

There are three principal watercourses within Colebrook that divide the landscape into separate watersheds. The greatest volume belongs to the West Branch of the Farmington River as it flows southward from Massachusetts through the northeastern section of Colebrook enroute to its ultimate conjunction with the Connecticut River at Windsor. The largest geographical watershed in town belongs to Sandy Brook, which, while carrying less water than the West Branch of the Farmington, drains a larger area due in part to its northwest-southeast orientation through the center of the township.

The third, and smallest watershed is that of Mill Brook, which rises in Norfolk, courses through southwest Colebrook and eventually joins Mad River in Winchester. All three of these systems eventually merge into the Farmington River, which then, as previously stated, joins the Connecticut River and flows into Long Island Sound.

The uplands that give birth to Sandy Brook are near the southern end of Massachusetts's Berkshire Mountains. These highlands are considered to be Connecticut's most rugged and picturesque region.

The most recognizable characteristic feature of this region are high, steep-sided plateaus, topped by streamlined hills and bedrock knobs, a gift of the Wisconsin Glaciation. This event began in what is now New England some 85,000 years ago, peaked 20-25,000 years ago and began receding some 16,000 years ago. Reforestation followed closely on the heels of the retreating ice, and by 9,000 to 6,000 years ago, paleo-Indians were hunting in what is now Colebrook.

Although the world is today believed to be approximately 4.6 billion years old, realistically for us in Colebrook at least, it need not go back further than 500 million, or 179th of the total. The world at that time consisted of several continent-sized land masses with many smaller groups of islands scattered over its surface. Slowly geologic forces within the planet moved these landmasses about, until eventually they coalesced into one huge supercontinent. What was to become Connecticut was somewhere in its interior, subjected to intense pressure by the colliding continents which caused our pre-existing stone to become squeezed, subjected to intense heat and elevated.

200 million years ago, the continuing geologic engines within the Earth began breaking up this supercontinent. Future Connecticut found herself on the edge of what would become North America. Our corner of northwestern Connecticut is the only part within the state that consists of the original, or Proto-North America geologic formations. Because of the cataclysmic events it had been subjected to, our basic stone became what is today defined as metamorphic, or altered, with some consisting of minerals which are harder than others and more resistant to erosion, while other, softer areas erode more rapidly.

In all the Earth's history, the one constant is the force called erosion; it is never ceasing, constantly wearing down anything that gained elevation over the surrounding terrain. Because of this, we can today state that the surface which we call home, and which seems to us to be forever unchanged, has in reality had 5 to 7 miles of material removed over the past 250 million years. In light of this, we must conclude that there is today no correlation between the present courses of rivers and those from which they are descended.

Colebrook does not contain any sedimentary rock, such as bracket us to the west by the marbles of the Housatonic River Valley, or easterly by the sandstones of the Connecticut River Valley. Because of the soft nature of these rocks, water action rapidly wears them downward. Rivers such as the Farmington and Sandy Brook have established courses dictated by the differences in hardness of various rock masses.

There was good reason why Colebrook and Barkhamsted comprise the last land in the state previously uninhabited. The original owners, called Proprietors, were from Windsor, and for the most part considered themselves to be farmers, or tradesmen supporting the farming industry.

Because of the inherent difficulties imposed by the north-south ridges with then-steep, rocky sides, our land surface was not pioneered until all other acreage was utilized. Once the virgin forest, or some of it at least, had been removed and a rudimentary road system established, streams with the potential of producing water power could be harnessed. Sandy Brook, with 7 ¹/₂ miles lying within the boundaries of Colebrook, and with a drop of some 662 feet, provided some 10 mill sites, with several others on tributaries.

Historically, man's association with Sandy Brook can be traced to early Colonial times. A Boston merchant by the name of Sandie, or Sandy, had a contract with the British army to supply hay to their cavalry. He decided to utilize a large open area within the virgin forest in what is now western Massachusetts. This so-called intervail land had been created by the Native Americans as an area which would encourage animals and birds in their food chain, thus making hunting a much more manageable task. This particular open land had been created around a series of quite powerful and unfluctuating springs, thus Sandie, the first European to utilize the hay produced by the native grasses, had his name applied to the map in the form of "Sandie's Field" and "Sandie's Brook", which have since acquired modern spellings.

In the waning years of the 20th century, evidence was uncovered near the banks of Sandy Brook indicating that a Paleo-Indian ceremonial site existed perhaps as early as 6,000 years before the present. This site, seen by, but not as yet investigated by the state archeologist, holds promise to be the largest pristine site within the state. In order to prevent contamination, its exact location must not be revealed until after a scientific investigation has been conducted.

As we embark upon the 21st century, Sandy Brook remains as she always has - providing a flow of unpolluted water for fishing, white water kayaking and other forms of recreation, as well as providing esthetically one of the premier streams within the entire region.

Robert Grigg Municipal Historian Town of Colebrook, Conn.



STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION

SANDY BROOK NATURAL AREA PRESERVE

PRESERVE DESCRIPTION

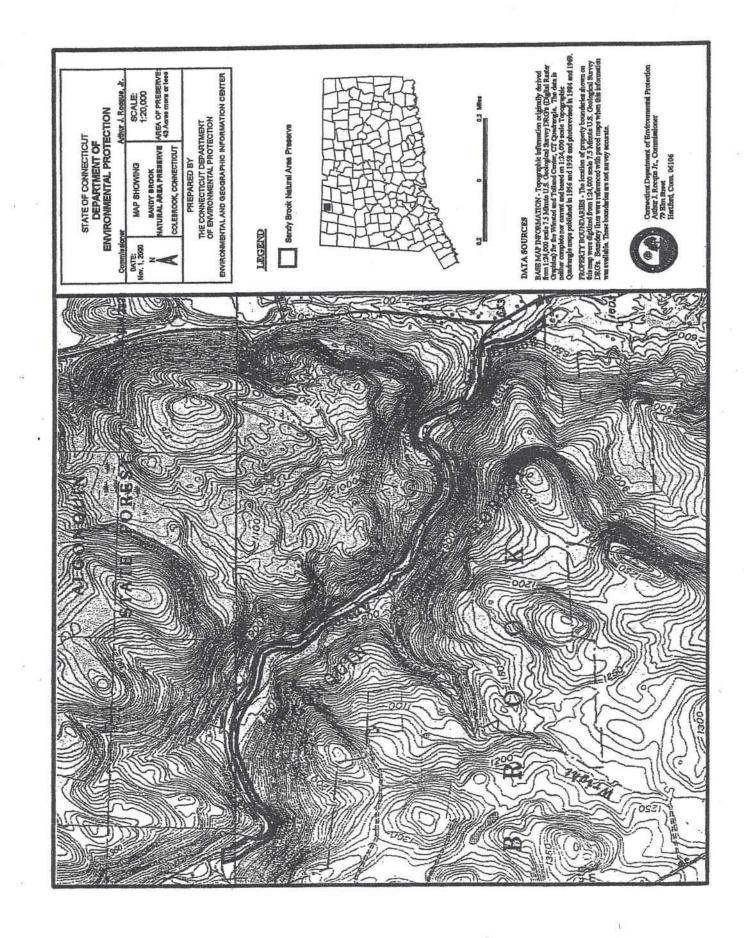
The Preserve, lying astride the Northwest Highlands and the Northwest Uplands Ecoregions, consists of those portions of Sandy Brook and the adjacent uplands of the Algonquin State Forest lying with 100 feet of Sandy Brook in the town of Colebrook. The uplands, encompassing 43 acres, protect the adjacent salmon and native Brook trout fishery, create a scenic corridor and provide habitat and a migration corridor for upland wildlife. Sandy Brook is considered the highest-ranking Atlantic salmon restoration stream in the Farmington River Basin. The excellent aquatic habitat within the watercourse supports a diverse and abundant benthic macroinvertebrate community and a diverse number of native fish including:

<u>Scientific Name</u>	<u>Common Name</u>	
Scientific NameAnguilla rostrataCatostamus commersoniEtherostoma olmstediLepomis gibbosusMicropterus salmoidesNotropis bifrenatusRhinichthys atratulaRhinichthys cataractaeSalmo salar Salmo trutta	Common Name American eel White sucker Tesselated darter Pumpkinseed Largemouth bass Bridled shiner Blacknose dace Longnose dace Atlantic salmon Brown trout	
Salvelinus fontinalis	Brook trout	

In addition to its value as an aquatic habitat, this is also a very scenic watercourse, featuring cascades and pools interspersed among large boulders and bedrock outcrops, stepping down along an extensive rocky streamcourse. The adjacent steep slopes are heavily forested, serving to shade the stream and provide habitat for upland wildlife. Major portions of Sandy Brook lie within the Kitchel Wilderness Preserve; the preserve designation complements the state's efforts to provide more protection to this outstanding natural watercourse.

Protected Resources within the proposed Preserve include the following state-listed species and significant natural communities and features:

Scientific Name	Common Name	<u>1998 State</u> Status	Last Date of Observation		
<u>Plants</u> Corallorhiza trifida Ribes glandulosum	Early coralroot Skunk currant	Threatened Endangered	1995 1995		
<u>Animals</u> Ambystoma jeffersonianum	Jefferson salamander	Special Concern	1982		
<u>Natural Communities and Features</u> Forested Ravine Habitat Diverse Aquatic Habitats Diverse Aquatic Animal Community					



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Appendix III – Colebrook Natural Resources Inventory

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Appendix #3 - Dams in Colebrook

I. Introduction

The Farmington River Watershed Association (FRWA) worked with the 2004 Plan of Conservation and Development Committee of the Town of Colebrook to develop a Natural Resources Inventory (NRI). The goal of the NRI is to create a baseline inventory of the town's natural resources to be used as a tool in land use and open space planning activities.

The 2014 Colebrook Town Plan of Conservation and Development Committee again worked with the FRWA to update the original data and present new information about critical habitats and potential vernal pools that was originally prepared for the Farmington River Coordinating Committee Management Plan. A wealth of additional information is available at many websites, including www.cteco.uconn.edu/, www.frwa.org, and www.litchfieldgreenprint.org.

More than 20 years ago, the first Plan of Conservation and Development for the Town of Colebrook noted that the town is "fortunate to enjoy extensive natural resource areas in an unspoiled and protected condition." The 1991 Town Plan encouraged the improvement of the local economy, job opportunities, and tax base "in a form that is compatible with the Town's rural character, its water resources and the limitations of its road and utility systems." The 2004 Town Plan surveyed local residents and found that they "ranked the quality of the town's natural environment as one of their highest community values." The Plan recommended: "Economic development in the town should continue to be implemented within the framework of respecting and enhancing the town's unique rural character."

Colebrook remains one of the state's most rural communities, with a 2010 census population of 1,485, a 1% increase from 2000. Though much of the region west of Hartford has experienced intense growth over the past few decades, Colebrook still enjoys much of the same rural character it had in 1950. The NRI is designed to be a tool for use in support of the town's goals of natural resource conservation and economic development.

The FRWA is a community-based organization devoted to protecting the 81-mile Farmington River and its 609 square-mile watershed. As the leading advocate for the Farmington River since 1953, the FRWA exercises leadership in issues including water quality, wetland and floodplain protection, river diversions, land protection, and recreational access and usage.

II. Colebrook Natural Resource Inventory - Project Overview

A very difficult question facing local communities today is how best to direct growth and development in a way that is compatible with protecting a community's natural resources. The first step in any effort to address such an issue is to understand the current status of natural resources and land use in an area.

This Natural Resources Inventory¹ is a summarization, in map form, of Colebrook's natural resources and the current natural resource management structure. The maps express the existing

¹ Methodology for the Natural Resources Inventory adapted from *Manual of Mapping Techniques* by C. James Gibbons of the College of Agriculture and Natural Resources, University of Connecticut, Storrs.

state of a community's natural resource base, and help identify areas that are of critical concern for natural resource conservation, as well as areas that are most appropriate for development. The resource inventory is completed in a Geographic Information Systems (GIS) environment. GIS assembles, stores, and manipulates geographic (spatial) data and can analyze the data for conservation and planning purposes. Municipalities and natural resource conservation groups are increasingly turning to GIS as the tool for developing resource studies because of its flexibility and power in adding, manipulating and analyzing data.

It is important to reiterate the NRI can be used not only to identify appropriate areas for protection in a community, but also appropriate areas for development based on their natural resource features. The purpose of the process is to establish an information baseline that can empower local decision makers with the data they need to make informed decisions regarding development and natural resource management issues.

Note:

Data Accuracy: The GIS data used in this report comes from many different sources and therefore has different levels of accuracy. It should be considered appropriate for town level planning exercises, but may not be adequate for parcel level analysis. Some of the data is general in nature, and some provides significant detail. It will be important to field verify any information used in an actual decision making process. As the availability of GIS data grows and improves it will be a relatively simple process to update and improve this document.

III. Map Descriptions

1) Farmington River Watershed & Colebrook Locator

This map shows the extent of the Farmington River and its watershed, the route of the Farmington River through Massachusetts and Connecticut, and the location of the Town of Colebrook. The watershed is 609 square miles total, and Colebrook is 33 square miles of that. Sandy Brook and the Still River are the two most significant tributaries of the Farmington River.

2) Topography

Colebrook lies in the western highlands of Connecticut, an area that has the highest elevations in the state (the highest point being roughly 2,100ft at Bear Mtn in Salisbury). The highest point in Colebrook is 1552ft at an unnamed peak near McClaveville. Residents of the area can attest to the fact this area of the Litchfield hills is called the "icebox of Connecticut" for good reason. The microclimate caused by elevation and atmospheric moisture produces hot, humid summers with sometimes very violent thunderstorms (even tornadoes), and long cold winters with heavy snowfall. The topography also makes this part of the state very beautiful, and holds an interesting array of plant and animal life. Source: U.S. Geological Survey.

3) Zoning & Parcels

Colebrook's base parcel map was originally digitized by the FRWA from a 1990 assessor's map and updated through research and assistance from the Assessor's

Office. Colebrook's zones were calculated and digitized from the 1990 Town's zoning regulations. The zones were amended in 2008 to provide for soil-based zoning. The Residential (R-2) zone currently requires a two-acre minimum lot size, including 65,000 continguous square feet of "buildable" land. "Buildable" land is defined as the area of a parcel excluding wetland soils, watercourses, floodplains, areas with pre-development slope in excess of 25%, continguous exposed rock or ledge in excess of 200 square feet or land limited by a conservation easement. The General Business (GB) zone, along State Highways 44 and Route 8, is a strip extending 500 feet in both directions from the centerline of the state highway(s) and currently requires a one-acre minimum lot size. Source: Town of Colebrook.

4) Basins

There are five sub-watershed basins in Colebrook: Farmington River, Mad River, Sandy Brook, Slocum Brook, and Still River. Within each of these five sub-watersheds are sub-basins, shown by their boundaries to be of various size and shape. Based on topography, the water from these sub-basins drains from springs, creeks, ponds, and wetlands into the larger tributaries. Source: CT Department of Energy and Environmental Protection (DEEP).

5) Wetlands

In Connecticut, wetlands are officially designated by soil type. The wetlands map shows wetland locations as established through the U.S. Dept. of Agriculture's Natural Resource Conservation Service (NRCS) soils information. The NRCS notes, "The soil data set is not designed for use as a primary regulatory tool in permitting or citing decisions, but may be used as a reference source. This is public information and may be interpreted by organizations, agencies, units of government, or others based on needs; however, they are responsible for the appropriate application." In addition, it is noted: "The depicted soil boundaries, interpretations, and analysis derived from them do not eliminate the need for onsite sampling, testing, and detailed study of specific sites for intensive uses. Thus, these data and their interpretations are intended for planning purposes only." This data reflects 2,610 acres, 12% of town has wetland soils as defined by the town's wetland definition. Source: U.S. Dept. of Agriculture, Natural Resource Conservation Service Soils data 1995.

6) Water Conditions

This map reflects a host of information related to the quality of Colebrook's surface and groundwater features. Data includes:

- a. Water Quality Classification Section 303 of the Federal Clean Water Act requires states to adopt water quality standards and classifications for both surface and groundwater. Each classification is based on certain standards and the water bodies' ability to support certain uses such as drinking, boating and swimming. Water Quality Standards set an overall policy for the Department of Environmental Protection in accordance with Section 22a-426 of the General Statutes. The pertinent parts of the water quality standards and criteria can be found in Appendix 2. Source: CT DEEP.
- b. **Dams** While dams can be beneficial for flood control and hydropower production they also can limit fish and energy passage up and down river and

stream systems. The CT DEEP lists 18 dams present in the town of Colebrook. Further study should be done to assess the impacts and utility of the dams to determine if opportunities exist to improve aquatic habitat. Appendix #3 provides a list of the dams. Source: CT DEEP.

c. US Geological Survey (USGS) Stream Gage - Colebrook has one USGS stream gage on the Still River in the Robertsville section of town. Since 1951 the gage has provided ongoing data regarding stream flow in the Still River. This information is extremely important for many reasons, including flood warnings, diversion and discharge permitting and establishing baseline data for comparison use with other streams of similar characteristics. The latest information on the gage can be found at hydrograph and station description for 01186500 on the USGS website <u>http://waterdata.usgs.gov/usa/nwis/uv?01186500_</u>Source: U.S. Geological Survey.

7) Potential Groundwater

Potential groundwater supply refers to areas of surficial materials that show characteristics of supplying groundwater. These areas are deposits of stratified drift left by the last glacial period, which ended roughly 12,000 years ago. These deposits are of various sized clay, silt, sand and gravel, which allows for groundwater recharge through the increased pore space in the materials. They also can play an important role in providing surface water flow. In general, the coarser the material, the greater ability the material has to store groundwater. As the map depicts, the lowest yield areas are sand, while the highest yield areas are the much coarser grained gravel, which has larger pore space and can hold and transmit water at higher volumes. Colebrook possesses several areas of surficial materials that have an established groundwater source potential, or a possible future groundwater source potential for public water supply needs. Such availability of ground water for drinking water supply must be assessed in the context of the impacts to hydrologically connected and surface water areas. Any such proposed withdrawals are regulated under Connecticut General Statute Diversion Law. Source: CT DEEP 1992.

8) Areas of Special Flood Hazard

The areas of special flood hazard are identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the Town of Colebrook, Connecticut," effective June 3, 1986, with accompanying maps. These areas of town are those that would be inundated by a l00yr flood, or a large flood with the probability of occurring once every one hundred years. This study is referenced by the Town's zoning regulations² with the purpose of "promoting the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

d. To protect human life and health;

e. To minimize expenditure of public money for costly flood control projects;

f. To minimize the need for rescue and relief efforts associated with

² Article VI, Section 3, Town of Colebrook Zoning Regulations.

flooding and generally undertaken at the expense of the general public;

g. To minimize prolonged business interruption;

h. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;

f. To help maintain a stable tax base by providing for the special use and development of areas of special flood hazard so as to minimize future flood blight areas;

g.To insure that potential buyers are notified that property is in an area of special flood hazard; and

h.To insure that those who occupy the areas of special flood hazard assume responsibility for their actions."

The Flood Insurance Study is on file at the Office of the Town Clerk, Town of Colebrook. Source: Flood Insurance Study for the Town of Colebrook, 1986.

9) Open Space

Open space lands make up approximately 46% of Colebrook. The two primary owners of Colebrook open space are the Metropolitan District Commission and the Connecticut Department of Energy and Environmental Protection (DEEP), totaling almost two-thirds of the 9,941 acres of open space. Other owners of open space include the Town of Colebrook, the YMCA, non-profit land conservation groups, private sportsman's clubs, and private associations. Colebrook's open space is also categorized as "committed" and "uncommitted." "Committed" open space is described as land that is permanently protected, such as MDC Class I & II land, land owned by the CT DEEP, and lands of The Colebrook Land Conservancy. "Uncommitted" open space is land that historically has been open, but is not guaranteed to remain so, such as sportsman's clubs. Source: Town of Colebrook 2013 Assessor's Grand List.

10) Land Use

The land use information used for this map is from the most recent valuation of properties on Colebrook by the Assessor's office. Each parcel was identified by location and unique identifying number, and then tagged with its current land use. Colebrook land use is broken down into the broad categories of: residential; commercial; YMCA Camp Jewell; P.A. 490 farm, forest, and open space; state, town, and land trust open space; water/utility; and timber. Parcels with mixed uses (such as a house and farm on one lot) reflect how the majority of the acres are classified. Source: Town of Colebrook 2013 Assessor's Grand List.

11) Development Constraints

Development constraints depict areas in town that are limited from further development due to the fact that they are either Class I or II water utility land, state forest land, other committed open space, wetlands, or water bodies. Most of the constraints are due to the large MDC and state forest holdings. This data set provides an indication of where in town future development is limited, and where it may be possible.

12) Natural Diversity Data Base Areas

The Natural Diversity Data Base Areas represent approximate locations of endangered, threatened and special concern species and significant natural communities in Connecticut. The locations of species and natural communities depicted on the map are based on data collected over the years by DEEP staff, scientists, conservation groups, and landowners. In some cases an occurrence represents a location derived from literature, museum records and specimens. These data are compiled and maintained by the Natural Diversity Data Base. The map is intended to be a pre-screening tool to identify potential impacts to state-listed species. These data are also used by groups wishing to identify areas of potential conservation concern. The maps are updated periodically, and it is important to always use the most current version for your planning needs. Source: CT DEEP.

13) Critical Habitats and Potential Vernal Pools

This map depicts the CT DEEP's habitat-related vegetation associations that were designated as key habitats for species of Greatest Conservation Need in the CT DEEP's Comprehensive Wildlife Conservation Strategy. These habitats are known to host a number of rare species including highly specialized invertebrates with very specific habitat associations. The potential vernal pools were derived from aerial photo interpretation through a project funded by FRCC. Appendix #1

Watershed Land Classifications

Class I Land: A legal definition of those lands owned by a water company that are within 250 feet of a reservoir used for public drinking water supply, within 100 feet of its tributary, or within 200 feet of a public water supply well.

Class II Land: A legal definition of lands that are within the public drinking water supply watershed but not included in Class I, or completely off the drinking water supply watershed but within 150 feet of a storage reservoir and the tributaries which directly enter it.

Class III Land: A legal definition of lands that are off the water supply watershed and beyond 150 feet of a storage reservoir and the tributaries which directly enter it.

An Ounce of Prevention: Land Conservation and the Protection of Connecticut's Water Quality. *1998. The Trust For Public Land.* For full definitions of the land classifications, see Conn. Gen. Stat. 25-37c.

Appendix #2

Water Quality Standards and Classifications Fact Sheet

The Connecticut Water Quality Standards and Classifications (WQS) and Accompanying Classification Maps are an important element in Connecticut's clean water program. The WQS set an overall policy for management of Connecticut's surface and ground waters in accordance with the directives provided by Section 22a-426 of the Connecticut General Statutes and Section 303 of the Federal Clean Water Act.

The WQS have several purposes:

- provide guidance and policy about water quality in the state and DEEP's goals for maintaining or improving that quality;
- establish designated uses of surface and ground water;
- indicate the general types of discharges allowed;
- ensure the segregation of drinking water supplies from waters used for waste assimilation;
- provide the standards to protect aquatic life and human use;
- provide a framework for the establishment of priorities for pollution abatement, dispensation of State funding, remediation goals; and
- provide guidance for location decisions for business and industry as well as other economic developments.

The WQS do not stand alone as a regulatory means of protecting public health and the environment. These standards are integrally related to, and applied by DEEP simultaneously with, other statutory and regulatory requirements governing water and waste management. As an example of how these pieces fit together, the following may be of assistance.

- The WQS set forth the types of wastewater that can be discharged in various classifications in order to meet statutory goals. In addition, the WQS provide the guiding principles concerning waste assimilation, aquatic toxicity and the goals for receiving waters.
- Section 22a-430 of the General Statutes allows and sets procedures for the permitting of discharges of treated wastewaters to the waters of the State.
- If the type of discharge is allowed, then the details of application procedures and requirements for treatment, monitoring and reporting of the specific discharge are provided by Sections 22a-430-1 through 4 of the Regulations of Connecticut State Agencies.

Three Fundamental Elements

Element One. First, the water quality standards describe DEEP's general policies and goals for maintaining or restoring specified levels of quality for each use classification. The Standards describe discharges to ground and surface water consistent with DEEP's goals for each classification. The Standards also define the concept of a zone of influence for such discharges. Other key provisions of the standards include policies for protecting ground and surface water whose actual quality exceeds that quality associated with its classification. These policies are known as the anti-degradation principles. There are also policies and procedures that define the

methods by which DEEP may alter an assigned classification. The Standards also include definitions, lake trophic classifications, bathing water standards and numerical criteria for aquatic toxicity.

Element Two. The second element is the water quality criteria which: (i) describe the uses DEEP has designated as appropriate for each water quality classification; and (ii) establish narrative and numerical factors used by DEEP to determine whether goals established in the standards are being met.

Element Three. The water quality classification maps are the third element of Connecticut's Water Quality Standards and show the class assigned to each surface water and ground water resource throughout the state. The Water Quality Classification Maps have been adopted and are amended from time to time pursuant to the statutory process described in section 22a-426 of the Connecticut General Statutes. The maps are used to relate designated uses and the applicable Standards and Criteria for each class of surface and ground water resource to a specific location.

Water Quality Classifications

The water quality classifications established by Connecticut's Water Quality Standards are summarized below with a brief listing of the designated uses and allowable discharges for each classification.

Inland Surface Water Classifications

Class AA

Designated uses: existing or proposed drinking water supply, fish and wildlife habitat, recreational use (may be restricted,) agricultural and industrial supply.

Discharges restricted to: discharges from public or private drinking water treatment systems, dredging and dewatering, emergency and clean water discharges.

Class A

Designated uses: potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation.

Discharges restricted to: same as allowed in AA.

Class B

Designated uses: recreational use: fish and wildlife habitat; agricultural and industrial supply and other legitimate uses including navigation.

Discharges restricted to: same as allowed in A and cooling waters, discharges from industrial and municipal wastewater treatment facilities (providing Best Available Treatment and Best Management Practices are applied), and other discharges subject to the provisions of section 22a-430 CGS.

Coastal and Marine Surface Waters

Class SA

Designated uses: marine fish, shellfish and wildlife habitat, shellfish harvesting for direct human consumption, recreation and all other legitimate uses including navigation.

Discharges restricted to: same as for AA or A surface waters.

Class SB

Designated uses: marine fish, shellfish and wildlife habitat, shellfish harvesting for transfer to approved areas for purification prior to human consumption, recreation, industrial and other legitimate uses including navigation.

Discharges restricted to: same as for B surface waters.

Groundwater Classifications

Class GAA

Designated uses: existing or potential public supply of water suitable for drinking without treatment; baseflow for hydraulically connected surface water bodies.

Discharges limited to: treated domestic sewage, certain agricultural wastes, certain water treatment wastewaters.

Class GA

Designated uses: existing private and potential public or private supplies of water suitable for drinking without treatment; baseflow for hydraulically connected surface water bodies.

Discharges restricted to: as for GAA and discharge from septage treatment facilities subject to stringent treatment and discharge requirements, and other wastes of natural origin that easily biodegrade and present no threat to groundwater.

Class GB

Designated uses: industrial process water and cooling waters; baseflow for hydraulically connected surface water bodies; presumed not suitable for human consumption without treatment.

Discharges restricted to: same as for A (Note: same treatment standards apply), certain other biodegradable wastewaters subject to soil attenuation.

Class GC

Designated uses: assimilation of discharge authorized by the Commissioner pursuant to Section 22a-430 of the General Statutes. As an example a lined landfill for disposal of ash residue from a resource recovery facility. The GC hydrogeology and hydrologic setting provides the best safeguard to adjacent resources.

Discharges restricted to: potential discharges from certain waste facilities subject to specific permitting requirements.

Standards Adoption and Public Participation

Section 22a-426 of the General Statutes provides specific procedures for the adoption of all portions of the WQS. The Statute provides that any revision of the standards or classification map be subject to public notice requirements and a public hearing. Notice is printed in the Connecticut Law Journal and in newspapers of general circulation in the affected areas.

Classification maps are reproduced through the DEEP's Geographic Information System (GIS) and are available to the public in the DEEP store.

GIS Shapefiles of the Water Quality Classifications (Ground Water Quality Classifications Polygon, Surface Water Quality Classification Line or Surface Water Quality Classification Polygon) are available for download on GIS Data web page.

Additional Information: Federal EPA Water Quality Standards For further information, contact staff at the DEEP Bureau of Water Protection and Land Reuse: (860) 424-3020. Content last updated on April 29, 2013.

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Source: CT DEEP website.

Appendix #3

Dams in Colebrook

Opatrny Dam

- Lemanquais Dam
- Lake Triangle Dam
- Colebrook River Dam

Oneglia Pond Dam

Metro Dam

Klahre Dam

Thompson Pond Dam

Hale Pond Dam

Blake Pond Dam

Bunnell Pond Dam

Brookside Pond Dam

Deer Hill Pond Dam

Currier Pond Dam

Schwartz Pond Dam

Gaylord Pond Dam

Robertsville Dam

Terry Pond Dam

Source: CT DEEP