Town of Berlin

Department of Development Services

April 16, 2013

CERTIFIED MAIL # 7012221033657401

Mr. Carl Stephani, Executive Director
CCRPA
225 North Main Street, Suite 304
Bristol, CT 06010-4993

Dear Mr. Stephani,

In accordance with Connecticut State Statute §8-23 g(4), enclosed please find the 2013 DRAFT Plan of Conservation and Development as prepared by the Berlin Plan of Conservation and Development 2013 Advisory Committee.

We request that within 65 days of this notice that you submit your advisory report along with your comments to the commission. Please address your comments to:

Bruce A. Moore, Chairman
Planning and Zoning Commission
c/o Hellyn Riggins, Director of Development Services
Berlin Town Hall
240 Kensington Road, Berlin, CT 06037

The Planning and Zoning Commission Public Hearing on this matter is expected to be scheduled for the end of June 2013, after the 65 day review period has elapsed.

Bruce A. Moore, Chairman
Berlin Planning and Zoning Commission

Town of Berlin

Department of Development Services

2013

DRAFT

Plan of Conservation and Development

For review by:

Berlin Town Council

Central Connecticut Regional Planning Agency

April 15, 2013

Visit our Web Site: http://www.town.berlin.ct.us

Town of Berlin, Connecticut • Planning and Zoning Commission
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2013 DRAFT Plan of Conservation and Development

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2013 DRAFT Plan of Conservation and Development

8-1/2" x 11" Map Index

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Chapter 1: Maintaining Berlin's Heritage

Placemaking is the nexus between sustainability and livability. By making our communities more livable and more about places, we are also doing the right thing for the planet. – *Project for Public Places*

> **In the year 2030 the Central Connecticut Region will be a vibrant industrial, commercial and technological region that supports a thriving educational community, successfully embraces diversity, and recognizes the value of its rich spectrum of popular, cultural and natural environments. It will be the home of an energized technological cluster of industries, and will have a fully employed, multi-skilled, effectively educated work force upon which the region's strong public institutions and its participatory democracy will be built.** –*Central Connecticut Comprehensive Economic Development Strategy, December 31, 2012*

The town needs eloquence ... – *Anonymous survey response, 2012*

> **There is no power for change greater than a community discovering what it cares about.** – *Margaret J. Wheatley*[1]

Ten years ago, Berlin worked very hard to identify what it cared about, through a community-wide strategic analysis culminating in the Plan of Conservation and Development process. The unequivocal answer, received by community leaders just as the new millennium was dawning, was that its citizenry cared deeply about shared open space, the community-creating visuals of the town, the struggling heart of the community on Farmington Avenue. Buoyed by incredibly opinionated results of that community-wide strategic planning process that often showed 80-95% agreement amongst respondents, the 2003 Plan of Conservation and Development emphasized the natural resources of the town and created a thoughtful process that targeted economic sites towards those ripe for development with adequate infrastructure, rather than encourage unwarranted greenfield development. Conservation amidst economic opportunity became the watchwords which define the essence of the past ten years of work towards the POCD goals.

1.1 Conservation Successes

In 2003, the plan added a brand new section devoted to Conservation to what had heretofore been known as Plans of Development in 1959, 1974 and 1992, a change required by state law but

[1] Community Leadership management consultant and Harvard-educated Ph.D. deemed one of five living legends by American Society for Training and Development, currently president of The Berkana Institute, a global charitable leadership foundation.

also demanded in no small part by Berlin's citizenry, who had watched the erosion of farms, forests and fields as the population increased almost ten percent each decade. Within a community replete with natural resources, especially abundant and clean water supplies that had long ago been tapped by surrounding communities for reservoirs, the new POCD embraced stewardship of the town's natural assets, the meadows and the ridges, the streams and the woodlands, the scenic vistas and stone walls that reflected an earlier time. It validated the ecosystem and environmental benefits of the landscape of beauty which covered nearly all the Mattabesset watershed, a resource that is critical to the town and the region. In essence, the 2003 POCD defined a new town asset in the stream corridors, fertile soils and forests, terming it the Berlin Heritage Lands.

Whilst this title wasn't accepted wholeheartedly in the first few years, by the time the decade was over, Berlin Heritage Lands proved prescient. Indeed, the more than 800 acres of open space that were given to and purchased by the town since 2002 represented the heritage of the past, including several pieces of old farms and orchards that were the agricultural counterpoint to the mills that also defined the town. The pond-side pocket park created at Railroad Pond celebrated the mill history within the community, and showed how small pieces of green (and blue) create oases that can define and stimulate any neighborhood – witness the 84 condominium units called Lofts at Sherwood Falls currently being built adjacent in the former Sherwood Tool factory. Conservation and open space has been proven to enhance the quality of life, the image, and ultimately the desirability of communities, attracting more economic development; studies validate the importance in a more mobile workforce and business community. As expressed in the 2012 Central Connecticut Regional Planning Agency (CCRPA) Comprehensive Economic Development Strategy:

> "...development puts enormous pressures on the region's open space, including natural, recreational, and farm lands, as well as lakes, rivers, and streams. Continuing impairment to and loss of these places will undermine the region's quality of life, a key asset in an economy where workers are mobile and frequently move for outdoors amenities. The total effect will be to make the region a less desirable place to live and thus make it harder for companies to attract and retain high quality employees."[2]

Conservation is economic development, according to CCRPA![3]

The piecing together of five properties in the center of the town north of Orchard Road and east of the Chamberlain Highway, with a sixth and

[2] Central Connecticut Regional Planning Agency, "Central Connecticut Comprehensive Economic Development Strategy: A plan for sustainable economic development," December 31, 2012, page 27.

[3] As a case in point, note that the marketing materials on the website for the new Westview Highland condominium complex on the Berlin Turnpike state in the town information section: "Scores of manufacturing enterprises exist alongside over 1,000 acres of publicly owned open space and park land and residential neighborhoods which provide a quality of life difficult to equal."

seventh under contract as of early 2013, created an extraordinarily large oasis of forest and field in the center of town, the 174 acre [and growing] Hatchery Brook Conservation Area. This 'green heart' shares boundary and trail links to three other open lands: to the 1976-created Bicentennial Park (the town's first major open space), to Timberlin Park across the Chamberlain Highway that links into Short Mountain's traprock ridges and the Metacomet Trail to the west (that trail link being possible due to the 2002 open space purchase abutting the Chamberlain Highway), and to the 520 acres to the south of Orchard Road donated by the NRG in Meriden as part of an easement negotiation that became the Blue Hills Conservation Area, also including sections of the Metacomet Trail. This is the outcome of the 2003 POCD conservation strategy to create linkages among conservation areas. Such linkages are now the centerpiece of several State of Connecticut policies that give particularly high value to contiguous conservation parcels since satellite land cover studies bear witness to the fractured and fragmented forests that have occurred with patchwork preservation and development throughout the state.

These and other open space lands have added greatly to passive recreation opportunities such as hiking; yet, consider also how one became home to Berlin's first ever community gardens, a new use for old farm lands, celebrating the heritage of what came before. Those acres and the others acquired over the last ten years guarantee a future heritage, and residents in the decades to come will enjoy a bounty of unique lands unmarred by inappropriate development for future generations. And, besides the simple visual and recreational benefits of preserving land, in an era when climatic forces and possible implications of carbon footprints may be ever more important, it is reassuring to realize that each tree saved from destruction for development can remove 26 pounds of carbon dioxide from the atmosphere annually, the equivalent of 11,000 miles of car emissions.[4]

Carefully managed acquisitions, some in partnership with the Berlin Land Trust, were assisted by the economic downturn that reduced prices and removed suitors for some of the town's vacant lands, allowing key pieces to be added to the Heritage Lands. And, to help property owners choose to keep smaller scale open space undeveloped, Berlin also added open space to uses of properties eligible for PA-490 reduced tax liability, formalizing a process assisting privately held open space, and proving that all open lands needn't be owned by public entities. As the years have passed and residents saw several farms and open spaces disappear to development, along with farm stands being boarded up or abandoned, a focus on conservation has become more understandable to preserve the heritage not only of the 'hardscape' or cultural landscape of historic districts and cemeteries and buildings in town, but also the landscape of green trees and the brown, newly plowed fields that speaks to the town's agricultural past.

[4] See www.milliontreesNYC.org, a program of the PlaNYC public-private initiative to plant and save a million trees in the urban area. Also see National Wildlife Federation at http://www.nwf.org/News-and-Magazines/National-Wildlife/Animals/Archives/2013/Value-of-Nature.aspx describing how the 2.8 million trees in Baltimore store 527 tons of carbon every year and remove 269 tons of ground-level ozone, in a story about the need to quantify the monetary value of 'natural capital' that is part of communities' natural resource base.

Finally, in a major affirming development in the past decade, the title of Heritage Lands is also pertinent since pieces of Berlin's lands are now part of a shared heritage for the nation. In 2009, the federal government validated the importance of the Mattabesset and Metacomet trails that traverse Berlin with their designation as part of the National Trail System's New England National Scenic Trail. Berlin has several linkages crucial to that 215-mile trail that rises from the uplands of Long Island Sound to the southern border of New Hampshire. Leveraging more than $1.1 million of open space acquisition grants received from the state over the decade (for four properties), along with other strategic purchases to create linkages, Berlin's acquisition of lands for conservation since the 2003 POCD can only be looked upon as a true policy success, not simply for its recreational and environmental benefits, but also for the net positive fiscal benefit to the community. That benefit accrues from the prospective services demanded of the town for other types of development on the same acreage, primarily residential, leading to a net decrease in town revenue despite adding to the grand list, a reality proven again and again across the property-tax dependent cities and towns of New England.[5]

1.2 Industrial and Commercial Development Successes

Ten years ago, the POCD also created a Targeted Economic Development Site-based plan for certain parcels, to put the power of the town's zoning at work to encourage development in places that best serve public interest, whilst protecting health and safety. By supporting development where infrastructure and systems are already in place, rather than greenfields development, especially in Berlin's many areas with environmental constraints such as wetlands, floodplain and excessive slope, the Town was consistent with the decade's exploration of "Responsible Growth" and "Sustainable Communities."

Before continuing to document successes, it is important to divert for a moment to note that by the middle of the decade, these same terms were defining strategies embraced by the 2005 Connecticut Plan of Conservation and Development and also in the 2013-2018 draft state POCD plan (expected to be adopted in the 2013 legislative session), the 2007 Central Connecticut RPA Regional Plan, and the 2009 Connecticut Economic Strategic Plan. It could be said that back in 2003, Berlin was a bit "cutting edge" on policies that have become the mantra for Connecticut. For instance, the Six Growth Management Principles in the current draft Connecticut POCD include:

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[5] The original study that illustrated this value of open space was the ***Cost of Community Services in Southern New England,*** completed by the American Farmland Trust in 1995. Four Connecticut communities were studied: Durham, Farmington, Litchfield and Pomfret. Since then, many university and think-tank researchers have repeated this with similar results, the one cited in Berlin's PowerPoint presentation on open space on the town website uses results from the Trust for Public Land's 2007 report, ***The Economic Benefits of Land Conservation*** that aggregated results from 100 separate studies to the same conclusion. The website uses a chart from the National Recreation and Park Association study examining the impact on property tax showing that the median cost to provide services for every dollar of tax raised is $1.16 for residential, $0.35 for farm, forest and open space, and $0.27 for commercial/industrial use.

#1 Redevelop and Revitalize Regional Centers and Areas with Existing or Currently Planned Physical Infrastructure

#2 Expand Housing Opportunities and Design Choices to Accommodate a Variety of Housing Opportunities and Needs

#3 Concentrate Development Around Transportation Nodes and Along Major Transportation Corridors to Support the Viability of Transportation Options

#4 Conserve and Restore the Natural Environment, Cultural and Historical Resources, and Traditional Rural Lands

#5 Protect and Ensure the Integrity of Environmental Assets Critical to Public Health and Safety

#6 Promote Integrated Planning across all Levels of Government to Address Issues on a Statewide, Regional and Local Basis

Berlin's 2003 development strategy embraced and already achieved elements of Connecticut's principles #1, #2, #4 and #5, and with the transportation enhancements and commuter rail potential described below, the community is well on the way towards principle #3.

The Development portion of the 2003 plan demanded significant changes to the commercial and industrial zoning regulations with an ultimate goal to bolster the tax base and create local job opportunities, while building on existing infrastructure, a more sustainable economic development and change. While the TEDS strategy addressed 'greenfield' and 'brownfield' development on vacant or nearly vacant lands, a major element of the economic strategy to bolster the tax base and create local jobs included zoning amendments to benefit the commercial and industrial zones. By expanding some of the commercial and industrial zones at the margins in certain areas and creating allowable uses in zones that better fit the locations and the market, Berlin was able to keep its vacancy rate low and its businesses humming in a tough time.

Strategic changes like that were ongoing in the decade and led to the town being better prepared for the economic downtown of 2008 than most, with high commercial/industrial occupancy rates along with ongoing commercial development projects that did not stop, although the pace of development slowed. There were a few business closings, but as of 2013, many of these properties have already been sold or leased to new Berlin businesses. With a new commercial/industrial park successfully located on lands abutting the railway, expansions within several other business parks, and the almost seamless transitions of new or expanding industries into vacated space, Berlin enjoyed a much lower vacancy rate and lower unemployment rate than many of its neighbors in the "Great Recession." Berlin boasted a 5% job growth rate during the period from 2000 to 2009, contrasting with the 3.5% job losses statewide.

The decade just past was extremely difficult to predict. The early shocks of the attacks of 9/11 and the fears that followed segued into major wars that drained public resources. The economic meltdown of 2008 and its relationship to the housing boom of the previous decade, when coupled with the dramatic government rescue of financial entities, including some of the local banks, drastically affected economic development capital availability. While one would think that the continuing globalization of the economy shouldn't have affected a small town like Berlin, in truth it did, given that this small town actually contains over 100 industrial firms, many with global parent companies, including major utility corporations that themselves were in 'merger mode' by the decade's end. Berlin weathered the economic storms very well, although the pace of development slowed and some businesses closed, but less than four years later, many of the properties then vacated are sold or leased to new economic generators.

The list of major taxpayers on the grand list include Northeast Utilities and its subsidiaries (Connecticut Light and Power Company and Yankee Gas), Corbin Russwin, Comcast Cable and Parker Hannifin. Berlin continued to assist and seek opportunities for business park development, with existing entities such as the Berlin Commerce Park adding a building in 2001, and the River Bend Business Park adding 50,000 square feet of new space to its six buildings in the last decade. Christian Lane Industrial Park East and West continued to expand in the decade with the ability to add more space in coming years, and Precision Punch built a 40,000 square foot building on a former Christian Lane cornfield in 2003, with two other 10,000 square foot buildings being added elsewhere on Christian Lane, which has attracted a mixture of industry and other uses, including residential, for decades. Several of the existing facilities there completed significant upgrades, further enhancing its appearance as a gateway to several key town business areas. Having sought a location for another business park throughout the 1990s, the town benefited from the expansion of the Cornerstone Business Park on Four Rod Road (mentioned before as newly developed by the railway), with the second building being completed in 2002 and expanded to 28,000 square feet in 2008. The last lot is being developed now for an eight-building, 41,000 square foot industrial condominium complex. Seven buildings are complete in that business park, adding tax dollars and job opportunities.

In addition to new development, Berlin has a strong tradition of being responsive to and assisting existing companies that choose to expand in town. This achievement has seen changes to eight buildings recently, adding another 100,000 square feet of industrial space. Upgrades to property and expansions point to the benefits of a business-enriching environment, an environment which also offers enticements like ease of access with road systems, the rail for those that use it, and a comfortable sense of community and town spirit, unquantifiable elements of community-building that are becoming more important to businesses. While the TEDS strategy did not result in significant new construction on those sites, it did signal to prospective developers that the town wanted to see creative thinking and flexibility to address some of the more difficult development challenges.

Notable new businesses in the recent past include Fosdick Fulfillment (replacing Hartford Direct), Okay Industries (replacing Bayer-Sheffield Plastics), the Fletcher Terry Company (replacing Reliance Automotive), and, announced in early 2012, a 90,000 square foot development with Kohl's Department Store which was a significant accomplishment for the image of the Berlin Turnpike, building new on the former Sam's Club site at the northern border just south of Newington. Comcast's facility on New Park Drive has undergone several renovations and is now the Western New England Regional headquarters with about 500 employees. While Northeast Utilities moved their corporate offices to Hartford, their space was quickly backfilled with the two other NU subsidiaries' administrative offices which remained headquartered in Berlin. Northeast Utilities also expanded its holdings with a warehouse acquisition and office addition. Hence, the utility company's towering presence crowning the hill off the turnpike on the northern edge of Berlin remains, and with the NStar merger, it is now the largest utility company in all of New England.

As was predicted in 2003 as the town looked ahead at the big picture of development, the easiest parcels to develop were gone. There is currently no industrially zoned land that could support a large business park, although two of the TEDS may support some rezoning to enable an innovative job-creating use. It is important also to step back and recall the origins of the TEDS concept, which was a carefully studied evaluation of how best to achieve development on the limited lands available, most of which contained significant potential due to location but that may have obstacles to development due to environmental factors such as wetlands and floodplains and due to topography. Also, the TEDS designation did not mean that the properties are on the market for sale and even if they are for sale it could not assure that offering price reflected fair market value. In addition, significant development in most of the TEDS area would require assemblage of properties further complicating the challenge of putting together land for a major development. On the other hand, the 2003 POCD did help improve development potential by triggering the conversation amongst the owners and offering support in terms of zoning. A decade later, the TEDS remain difficult sites, and this POCD offers some changes, most geared toward the concept of design districts where development proposals can come before the Planning and Zoning Commission for consideration in their entirety and selective zoning amendments to reflect the Town's updated land use planning vision that may enhance development potential in some areas.

Technological changes during the decade are generally transforming business operations of all sorts. This suggests that in the future, what happens outside the building – the exterior finish, the landscaping, the screening – may become an equally important contextual concern within the community. And, this evolutionary change may open up opportunity … while industrial uses were segregated before, the lack of noise and waste, among similar concerns of adjacent property owners, means that some of the new industries can fit into other zones, opening up new 'imaginings' for the TEDS.

With such a transformational era, there are major policy implications that may allow even more ability to very carefully direct new development towards redeveloping parcels that are underutilized, even when nearby uses would, under old definitions, be incompatible. Flexibility could allow much more rapid absorption of vacant and underutilized space. Berlin has generally excelled at using "brownfields tools" to clean and transform contaminated parcels, which prove to be common to redevelopment on used parcels. The advantage to the community is to have property cleaned up of contaminants along with 21st century development.

An easy target for a similar change of uses was the Berlin Turnpike, the multi-lane divided roadway that began as an icon of the automobile age in times past, home to drive-ins, diners, and amusements like miniature golf, bowling, go-carts and the Jolly Fisherman, all emblems of automobile age recreation. While developers were starting to examine the potential to use turnpike-adjacent lands for multi-family, age-restricted housing developments (newly allowed by zoning changes stemming from the 2003 Plan), town staff recognized the need to amend the visual environment. Acting on the 2003 POCD recommendations, they commissioned a set of comprehensive Berlin Turnpike design guidelines to significantly improve the appearance not only from the cars speeding past, but for those who chose to take a slower look. Given the Turnpike's former tawdry reputation, the results below speak for themselves.

Jolly Fisherman was at 2590 Berlin Turnpike
1965 image courtesy of Peck Library History Room

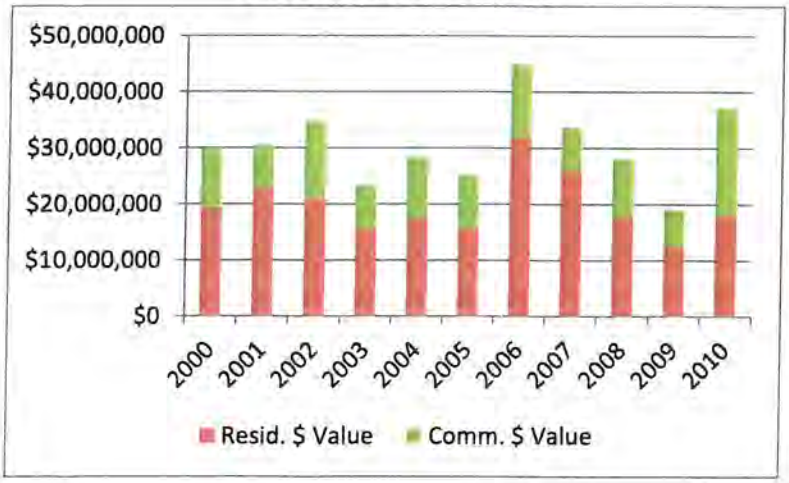
In the decade past, age-restricted apartment complexes completed on or near the Berlin Turnpike include Orchard Ridge (120 units) on Webster Street northeast of Northeast Utilities, Stonebridge (194 units) on Deming Road to the east of Northeast Utilities, and Sage Pond Place (84 units) right on the east side of the Berlin Turnpike. Toll Brothers finished The Regency at Berlin, a 50 and above age-restricted community of 94 condominiums, while construction is virtually completed on the 70-unit Westview Highlands condominium project. A 53-room Best Western Motel was completed in 2003 on a site on the turnpike south of New Park Drive, adjacent to The Regency development, across from the landmark miniature golf business featuring African plains animals! Silver Lake of Berlin, an 18-unit townhouse condominium community located abutting the turnpike by Silver Lake was completed in 2005, while pioneer development Silver Ridge placed 130 condominium units on 88 acres tucked under Lamentation Mountain on the Turnpike's east side. The 24-unit Silver Island project is just to the west of the turnpike on the southern border of town. While residential in nature, due to their location on the turnpike, this was solid economic progress.

Completed retail projects on the corridor included: Top Kat Plaza, a 10,000-square-foot building on Deming Road; Spruce Brook Plaza, a 17,500-square-foot development south of Spruce Brook; Camden Way, a 12,000-square-foot development south of Route 9; and, a 7,500-square-foot plaza at the south end of the turnpike. Also, an Irving gas station, car wash, and convenience store combination was redeveloped on a formerly underutilized site, while a new 6,000-plus-square-foot office building was developed on the turnpike near Worthington Ridge. Certainly some of the building has been driven by a new, proximate, residential clientele needing adjacent services. Bolstered by the design guidelines, attractive site lighting, signage consistency, sensible curb cuts and parking improvements are setting a new standard, with new and existing properties.

Although great progress was made, and the visuals of the area improved with a deliberate and well-articulated set of design guidelines, there is more to be done. In terms of commercial development, there is a profound need for a few big projects to reach a 'tipping point' so that progress will be expansive and visual instead of incremental as in the last decade. Many of the residential projects are, understandably, set well back from the traffic lanes. Creating more of a visible critical mass will help not only to alter the perception and image of the Turnpike, it will create a sense of place that will help to redefine the image of Berlin itself. Many outside the community still consider Berlin to be synonymous with tiny motels and seedy bars, which is a rapidly vanishing past. To that end, the plan will include some image enhancement recommendations for those who travel along the Turnpike.

As graphic witness to the general economic progress since 2003, these two charts illustrate the increasing development over the last decade. While the building permit data is not always a perfectly reliable indicator of the actual value of development, the steady progress – excepting the Great Recession – illustrates the town's ability to keep stimulating some robust economic activity. As said above, opportunity was a watchword over the decade. Creative use of state programs to leverage business improvements and expansion, along with the ability to be flexible when addressing the different needs of transforming businesses, allowed Berlin to help them thrive.

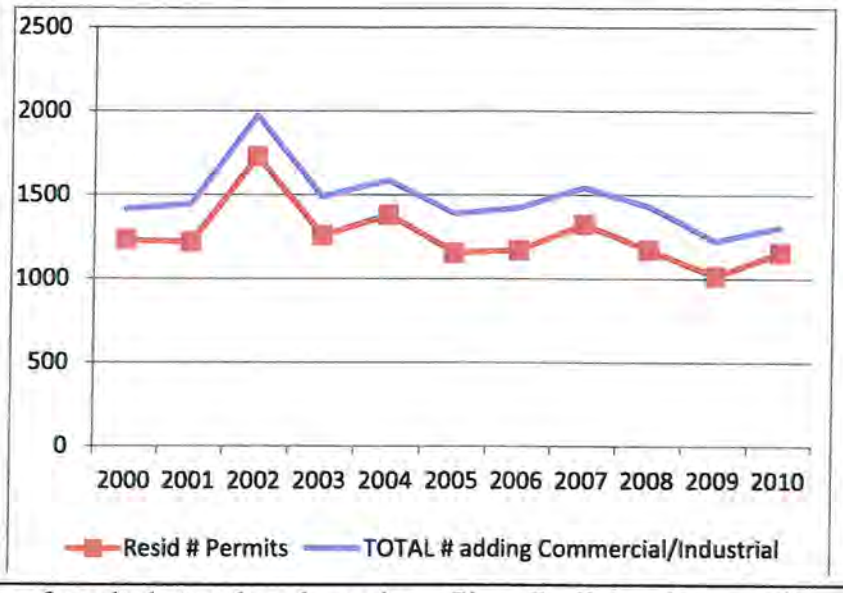
Value of Berlin Commercial and Industrial and Housing Building Permits
Fiscal Years 2000-2010



But instead, and positively, Berlin's continued strength and growth have been in the small

to medium manufacturing businesses looking for between 5000 and 25,000 square feet. This opportunity improves as they morph from standard (and sometimes messy) industrial sites to businesses with less outward impacts denoting manufacturing. The expansion of these opportunities should underlie many of the TEDS and related POCD thinking that emphasizes flexibility and mixed use.

Comparison of Numbers of Berlin Housing Building Permits with Commercial and Industrial Permits, *Fiscal Years 2000-2010*



During this period, the Central Connecticut region, as documented in the 2012 CEDS, had a 2.9% increase in employers (during the same period, the state added 2.5% more employers and the nation 7.1%.) Retail took a big hit, and both the number of establishments and the sales figures declined, yet, according to the CEDS, Berlin actually had an increase of 3.7% in the sales and use tax due to the state, highest in the region, an indication of results better than the region. Given Berlin's robust results in a tough economy during the last decade, positioning the community for appropriate growth in the coming decade will continue to be priority of this plan.

1.3 The Heart of Development

The 2003 plan devoted an entire chapter to discussing "The Heart of Berlin" – the Farmington Avenue's linear corridor that seemed a jumble of non-walkable, unrelated uses. The plan looked at two nodes for development – the area along Massirio Drive, and the area by Kensington Center and the train station. Fast forward only a few years, and, the vision for the first node is already well-realized, with a defining opportunity for the second on the horizon as the town is poised to be a major stop on the new Springfield to New Haven commuter rail line commencing operations in 2016. Since 2003, town officials kept their eyes on the prize, so to speak, and put the elements in place for a new type of town center. Now, not only station renovation and parking improvements by the landmark train station, but an opportunity to shape and encourage development around the station (including the move of some critical town facilities along Farmington Avenue), puts the town in a prime position to exploit this opportunity and create more contextual elements for a new type of town center.

Phase I of the town's center streetscape improvement program [funded by $550,000 in STEAP funds and $38,000 of LOCIP and Road and Bridge Funds] included street trees, decorative old-

style street lamps, a town clock enhancing a vest-pocket 'gateway' park with gazebo and planting, sidewalk improvements, crosswalk painting, and vintage street signs. Adding in water features like fountains in the midst of a key Farmington Avenue pond, and creating parks both big and small, Berlin was active in "placemaking." New public venues like the Veterans' Park gazebo and its waterside concert grounds that abut the new 74,000 square foot plaza anchored by Stop and Shop, constructed in 2005, have struck a positive chord with residents and offer nothing but potential for the future.

Adjacent and across the street, and aided in no small part by the very detailed Farmington Avenue design guidelines (March 2008) which were a key recommendation from the 2003 plan, developers constructed another new retail plaza and an 8000 square foot eye care center. Along with at least six new major retail and banking businesses in new or significantly transformed structures, these harmonious additions have worked to create a visual rhythm and continuity of form, creating an atmosphere of rising expectations amongst the corridor. While most of the occupants of the properties are the convenience services and goods that meet a community's needs, they and their structures provide context and clues for defining and creating a center. And, in truth, such uses are often the backbone of a small town center rather than comparison goods that attract shoppers from a wide radius. A healthy center, particularly if aided by the spinoff from a major transportation node attracting commuters, will, hopefully, ultimately, blend both.

The noticeable transformation of this stretch of the Avenue and the center-creation work points out the need to extend the design scenario west along Farmington, since at present the areas around Kensington Center and the train station lack continuity. This perceived isolation of certain areas, along with dated buildings that do not quite have the architectural charm to unify the area, stems also from the chopping up of the streetscape with several little plazas, areas that would benefit from redefinition and connection. Projects already proposed and funded will dramatically improve this. This area's renaissance is a centerpiece of this 2013 plan for the next ten years, and funds are being sought to initiate the streetscape work. The train station upgrade to meet the 2016 opening of the commuter rail service from Springfield to New Haven is nearing the startup stage. Berlin has the potential to not be just a waystation for travelers along this route, but a destination for travelers or new residents attracted to the ease of transport.

Already significant state funds have been used to lay the groundwork for this rail transformation. The first step was the $17.6 million project to raise and reconstruct the Farmington Avenue underpass just south of the railroad station. The state initiated the investment of hundreds of millions of dollars, a significant portion being federal funds, to upgrade rail service on the New Haven/Hartford/Springfield line to offer commuter and high speed rail service, drastically upping the current seven northbound and seven southbound Amtrak trains that stop at Berlin each day. As the first stop

south of Hartford, the station is perceived as key to the revitalization plan and the parking lot will be expanded to accommodate commuters from a relatively large radius.

This transportation link puts Berlin at the heart of the changes the state has sought in linking the central Connecticut area to both the New York and the Boston metropolitan markets, but, even more important, as expressed in the Connecticut draft POCD (to be finalized in the 2013 legislative session), "it is even more essential that the points in between – Connecticut's cities and towns – are integrated into the economic fabric of the greater region and its labor market. Experiences in other states have shown that transit hubs can be effective drivers of new office, commercial, and residential development."

With the train station surrounded by opportunities for 'upcycling' buildings and, on parts of the Berlin Steel lands adjacent, for the possibilities of new construction, this will be a key element of the next ten years of development planning. To help the 'center creation', the Town has already acquired two empty structures at 903 and 913 Farmington Avenue from the former Kensington Furniture to make way for the new Police Station, using a $2 million local bond, and in cooperation with the state through their brownfields program, will demolish the structure and remediate the soils at 889 Farmington Avenue. Along with a few select properties abutting the station area, this will allow new development adjacent to the train station and room for parking expansion. To bolster the expected development, Berlin applied for and received in early 2013 the Berlin Façade and Landscape Improvement Grant of $500,000. Berlin is on the brink of an unprecedented transformation opportunity. As was begun in 2003, this 2013 plan sets a whole host of strategies in motion to continue to support the heart of the community.

1.4 Planning Highlights

So, for the decade that will follow, the town's plan, in truth, is almost welded onto the 2003 plan, which so carefully crafted a new way of looking at Berlin. Many of the strategies approved ten years ago hold true and will be continued; many of the hoped-for changes were sidetracked when the country hovered on the economic precipice that transformed millions of lives and expectations. With hope that the economy will stabilize and public funds will once again be available for community good, this plan continues some of the many policies and prescriptions for change.

As was done a decade ago, in 2011 the Town of Berlin brought together citizen representatives of many of the town's governing bodies to spend over two years meeting to consider and reconsider possible futures of the Town, and how best to plan for Conservation and Development to shape the desired future. Working with town staff and three outside consultants, they explored the many changes that took place in the decade from 2003 to 2013 – some controllable and many not – and evaluated the many achievements fueled by the 2003 Plan of Conservation and Development. They postulated how and if the strategic goals should be changed, and considered how social, economic and environmental change could override their best efforts to shape the

town's future, as had happened in the last decade. They asked the town in a community survey to comment on strengths and weaknesses and town goals. They then planned for that new future.

Among the assets the various participants brought to the table were technical, legal and political savvy, a sense of history and continuity within the community of Berlin, and a passion for all the things that make a town, warts and all. From a rollicking discussion of the Berlin Turnpike as icon of an era now [thankfully?] gone, to a somber realization post-Hurricane Sandy that the state's insistence that communities now factor climate change and emergency services into planning and zoning had merit, to a discussion of exactly what boutique farm crops raised per acre could make a young idealist a living, to an exploration of why graveyards are cultural and structural elements that help define the town that was, the Committee did not hesitate to explore the essence of Berlin. Why? They wanted to be sure that the plan that would govern land use decisions in the next decade would be complete and true to the heart of Berlin. Their goal was to put to paper the carefully crafted, sometimes surprising, thoughts on a community plan.

Part of that process included an analysis of the demographic and economic changes that occurred in the decade, along with an evaluation of the commercial, industrial and residential development that did occur. While much of the latter has already been detailed here, below are some highlights of the demographic and economic studies that were completed as part of this work, setting more of the context for their recommendations to the Town Council and ultimately to the residents of Berlin. Detailed studies are in the appendix.

1.5 Demographics, Housing and Economic Indicators

As carefully shown by the Central Connecticut Regional Planning Agency in their December 2012 *Central Connecticut Comprehensive Economic Development Strategy* [subtitled "*A Plan for Sustainable Economic Development*"], which is the source for many of these figures, Berlin's population growth rate tops all seven communities in the planning region save Burlington. From 1990 to 2000, the town grew 8.5%, to 18,215, and in the decade since, the community added another 1651 people to 19,866, a 9.1% increase leading to a twenty year growth rate of 18.3%, exceeding third ranked Southington by seven percentage points. Berlin's population density in 2010 is 736 people per square mile, ranking fifth lowest in the region but still well above Burlington's 306 and Plymouth's 549.

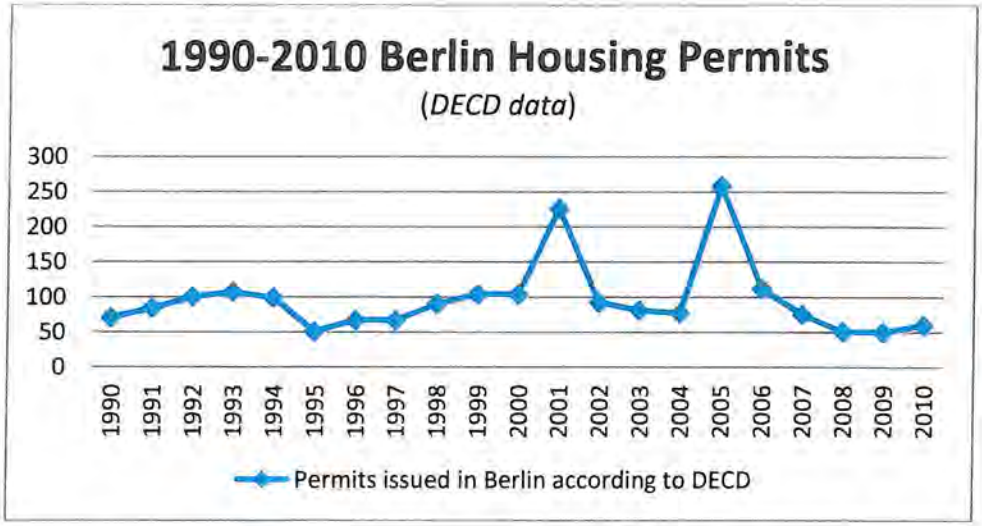
When looking at adjacent communities that are similar to Berlin that fall under the purview of the Capitol Region Council of Governments planning area, most notably Cromwell, Newington and Rocky Hill, Berlin's 9.1% growth rate is only topped by Rocky Hill, which had a 9.7% increase to 19,709 residents; Cromwell's growth rate was 8.8% with a 2010 population of 14,005 and Newington, an inner ring suburb of Hartford essentially, grew at 4.3% to 30,562.

These numbers are especially interesting upon recognizing that the very first Plan of Development for Berlin, in 1959, included the results of a buildout analysis assuming that all vacant land could be developed, regardless of constraints, and estimated that ordinances would

allow a population of 85,000 – that plan concluded, however, that the most likely population by 1980 was 19,000! Those long ago planners fifty years back might have looked upon this slower growth as a failure, while in fact they lacked the planning tools of today to realize how unbuildable Berlin's delicate lands actually were!

In the *2007 Plan of Conservation and Development* completed by the Central Connecticut Regional Planning Agency, Berlin was one of three communities (Burlington and Southington were the others) that showed a much higher rate of land consumption than population growth at that time, which CCRPA surmised was "symptomatic of sprawl conditions." Using an analysis of land cover by the University of Connecticut CLEAR program, the conclusion showed Berlin to have "used" 261 acres for a population increase of 1,428 people, showing 5.5 residents added per acre used. Burlington's number was 7.5 residents per acre and Southington's was 2.6 residents per acres used. Why is that important and why would those numbers look different today?

From 2000 to 2009, Berlin's number of housing units grew by 11.3%, the largest growth rate in the region by several percentage points. During the years from 2004 to 2009, CCRPA shows that Berlin alone of the seven communities had a net increase in housing permits issued. The chart below illustrates the ebb and flow of permits with the vagaries of the economic forces at work over two decades that coincide with the 18.3% growth rate:



While quantitatively that looks like a large increase, a qualitative assessment that examines what exactly was built – predominantly multi-family age restricted housing – is critical to understanding the actual change.

Since the last POCD, Berlin made a remarkable transformation of housing types and diversity. In the ten years ending in 2012, 987 new multi-family units and condominiums and 292 single-family houses were built, those categories being in sharp contrast to any previous period. And, 65% of the decade's new condominium or multi-family projects concentrated on age-restricted

units for the 50-55+ population cohort. Without question, that group evidenced an eagerness to move into the several projects that were created, most along or adjacent to the Berlin Turnpike, as noted earlier in this chapter. Capitalizing on attractive views of ridges and woods and Silver Lake, along with the existing infrastructure along most of the Berlin Turnpike, this housing segment took off.

At decade's end, it was clear that not only did these projects find a market and increase the cachet of the Berlin Turnpike, but initial fiscal analysis showed significant net positive gain in taxes over services. For instance, three completed age-restricted projects alone, totaling 398 units, generated $463,931 in annual taxes, with the largest project, Stonebridge, becoming the fourth highest taxpayer in town despite the recent recession. While this type of development appears to be at capacity, this did help the community on some fronts.

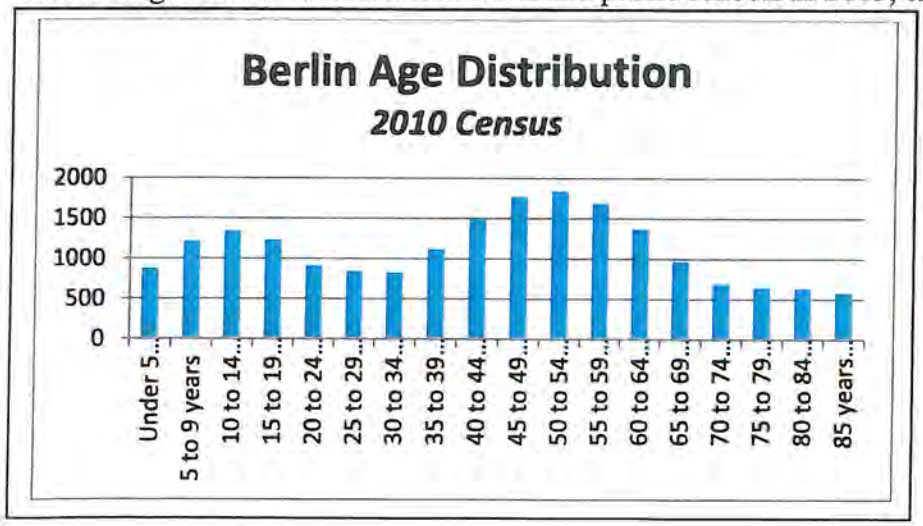
Berlin Multi-Family Project Type	# Units	# units post 2001	% Post 2001
Affordable Apartments Age Restricted	468	398	85%
Age Restricted Condos Market Rate	327	327	100%
Subtotal Age Restricted	795	725	91%
Affordable Apartments Not Age Restricted	88	88	100%
Condos Market Rate	573	174	30%
Planned Unit Developments	57		0%
Subtotal Not Age Restricted	718	262	36%
Total Units	**1513**	**987**	**65%**

Berlin also added late in the decade (and after the 2007 CCRPA 'snapshot' showing such a high land consumption per housing unit/population created that is described within the CCRPA POCD) two distinct projects of "workforce housing" especially targeted to young adults [ages 20-39] that work in Berlin and could not otherwise afford to live in the community. Each was located off of Deming Road near its intersection with the Berlin Turnpike, the 72-unit Fieldstone Crossing to the west and the 16-unit River's Edge to the east. These projects were designed to meet a very specific need for affordable housing for both hourly wage and salaried persons working in Berlin.

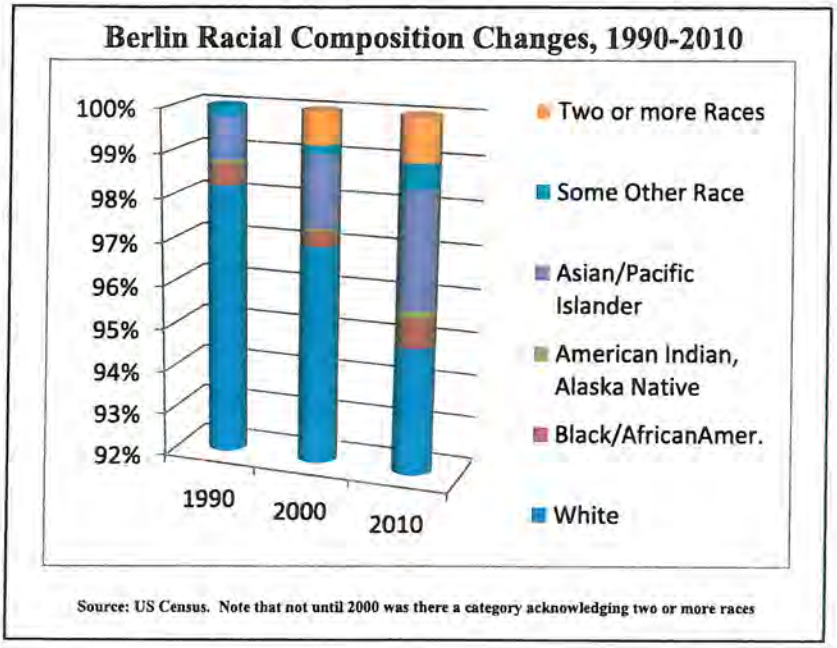
As evidenced by CCRPA in their CEDS report, Berlin's cost of living (*housing, food, transportation, utilities, healthcare, and miscellaneous expenses without state or local taxes*) is second highest in their region, and is 28.9% higher than the U.S (*although it is important to note that this region fares much better than many parts of Connecticut, and of course Connecticut has a cost of living index of 125.7 according to CERC, based on the US at 100.*) While an analysis of cost-burdened households completed by CCRPA in 2009 and documented in the CEDS showed that all seven of the region's municipalities had median home prices that were affordable to people earning the median income for that municipality, affordability is 'more complex' and mandates that no more than 30% of income be used for housing. That alone validated the need for workforce housing projects, and Berlin made great strides in a short amount of time to help.

While certain types of manufacturing jobs have been lost in Berlin and elsewhere, there is ample evidence amongst the 100+ businesses in Berlin that the jobs that remain and the jobs that sometimes remain unfilled, require a very different skill set. Often these skills are now held by younger members of the labor force who have been trained on the 21st century equipment. The state's increasingly aggressive approach to workforce training in the industry clusters that exhibit the most potential for future growth focuses on the young. These young and still flexible backbones of the community workforce are among the cohort that Berlin hoped would be attracted to these innovative projects.

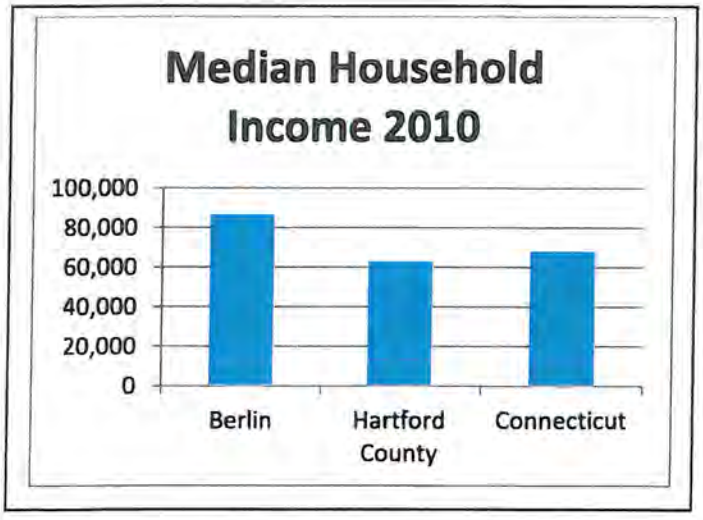
What else do the demographic changes tell us about Berlin? The median age of Berlin's residents has increased from 37.5 in 1990 to 41 in 2000 to 45.5 in 2010. As seen by the age distribution chart, the community dynamics, like much of the regional population, is changing. After a high of 3357 students enrolled in the public schools in 2005, enrollment dropped by 9.8% from 2005 to 2011 when enrollment was 3,026. While some changes were attributed to the expansion of magnet school programs, and concerns regarding the high school accreditation and construction, this trend is actually consistent with many localities.



While the community remains extremely homogeneous, with 94% of the community choosing to identify as white, there have been changes to racial composition, with an effective doubling of most non-white racial groups over the past two decades. In the meantime, over the last decade, Berlin's educational attainment has risen, with the US Census bureau placing Berlin's population second only to Burlington in the CCRPA region for the number of people holding a bachelor's degree or higher, approximately 40.0% of the population (Connecticut's figure is 35%), with 14.9% of those holding a graduate degree. That was a significant increase from a decade earlier, although, according to CCRPA, during the last decade the entire region showed "dramatic improvements in educational attainment" while still lagging the nation, the state and the MSA.



Source: US Census. Note that not until 2000 was there a category acknowledging two or more races



The CEDS notes that the region has a high number of 'middle skill' workers, those who can also be part of the 'backbone' of the workforce. Those workers have been a strength in town that adds to its desirability as a site for new businesses.

During the decade, the community demographic and economic profile has changed in ways that may affect the outlook for the region, the town and the planning herein. Change is the watchword not only in demographics but also in economics. Businesses are being forced to transform as quickly as they start as real-time processes, aided by computers and robotics, have increased productivity without increasing jobs, and, in many cases, reduced the square foot requirements. This analysis has led the POCD Committee to conclude that POCD flexibility will be critical to helping enable market opportunities that grow new businesses. And, with definitions of "industrial" and "commercial" under siege at present, and businesses being transformed by technological processes that remove the noise and external noise, waste and in

many cases, the transport of goods in and out of a facility, the TEDS strategy will need to reinvent an earlier community vision of neighboring and compatible uses, which further supports a design district strategy for select sites in the decade to come.

The POCD should not preclude opportunity by rigidity. A new POCD policy that anticipates opportunities and expands business-friendly zoning not by right but by plan through a flexible process such as performance zoning or design district enables the community to react to economic change while preserving neighborhood integrity. Flexibility needs to be built into this POCD language to avoid challenges in a fast-changing real estate world.

1.6 Lessons for the Future: Housing, Infrastructure and Processes for Planning

Looking ahead, the mantra for the next decade for many of the initiatives is to 'stay the course,' and so the document reflects and refines most of the policies initiated in 2003.

As documented, in the area of conservation, the town has had great success preserving open space. While some of the strategies for conservation have yet to be achieved – protection of all the stream corridors, for instance, and agricultural assistance – there was significant progress towards the linkage of lands, creating green corridors that ultimately do more to protect water supplies and forests than piecemeal acquisitions. Notwithstanding the well-proven contention that, particularly in New England, open space and conservation lands that are not available for additional service- demanding residential development will actually be of net economic benefit, these lands have added a quality of life and image upgrade for residents and nonresidents alike that pays off in ways non-quantifiable but nonetheless important.

The downturn in the economy, in particular, opened up opportunities to acquire more parcels meeting critical environmental purposes. The lessons going forward are that refining and focusing linkage strategies in the future may better achieve goals in the next decade; for instance, this plan includes recommendations that the town amend its open space subdivision regulations to accept only lands that meet specifically stated conservation goals of linkage and stream protection. The experience this past decade with increased amounts of town-owned open space has opened up new issues from maintenance to management, and marginal parcels that do not help the overall conservation goals add unnecessary work for little community gain. Other lessons from the expansion of open space are reflected in new themes in this POCD, such as the discussion of forest management and more proactive conservation management policies, especially to deal with some of the unachieved strategies, such as farm preservation and assistance.

Details on housing will be addressed in Chapter IV of this document, but the remarkable achievements in diversification in the decade have clearly granted Berlin the flexibility to appeal

to a broader range of people, while remaining primarily single family occupied. While several of the residential projects were specifically targeted to older population groups – both 'active' and 'less active' seniors – it seems that condominiums and apartment living are becoming the preference for younger members of the workforce. The Great Recession particularly taught a generation lessons on home ownership not being an assured 'investment,' on the economic reality of numerous job changes early in careers, and on the need for flexibility to move to jobs. All over the nation, apartment occupancy rates are up in the younger cohort that needs flexibility as they establish their careers.

Yet the census shows that in every age cohort 20-39, Berlin's population has been lower than the state which is already quite lower than the nation, by a significant factor (for instance, 4.2% of the town is age 25-29, while the state value is 6%, 4.1% in the 30-34 age bracket versus 5.8% for the state.) While it seems there is heightened interest among the youthful generation in living in cities for the versatility of housing, of experiences, and of transport options, Berlin could have an opportunity to use the new train services and commuting factors to attract younger residents, who are already known to also be attracted to communities that offer amenities such as outdoor recreation. This POCD examines this potential as well.

At the time of the last POCD, Berlin was at the extremely low end of the 10% affordability requirement to keep a community immune from CGS §8-30g suits. The zoning changes ten years ago opened up the town to residential growth in appropriate locations, specifying the type and density of growth, and the zoning changes mid-decade to allow the workforce housing further enhanced Berlin's ability to meet necessary housing needs by all members of its community. Successfully achieving a moratorium while the building of the affordable age-restricted rental units was underway, Berlin was then able to work to target zoning changes to reflect actual needs. A second moratorium has been applied for in early 2013 to give Berlin the chance to see the late-decade's planning and completion of workforce housing come to fruition. At present, Berlin needs only approximately 150 new units until reaching the ten percent affordable goal. However, since this is a constantly moving target, the POCD suggests the continuation of efforts to diversify housing, year by year, adding new units as new developments come online, so that the town keeps up with a healthy mixture of housing for all residents. An additional suggestion is to make the units affordable in perpetuity, rather than for 30- 40 years.

Another strongly articulated housing goal in 2013 is to prevent housing from being built on the last, less easily developed lands that have extreme site constraints through wetlands, floodplain, slope, and other fragility. During the last decade, some of these lands were already used to some degree, to the chagrin of homeowners who confront regular flooding, water issues, or other environmentally originated problems, and learn that they cannot do anything they want on their land. While sometimes people choose a pristine, unique setting deliberately, there is growing evidence of stability and expansion problems that crop up later due to the fragility. In particular, first time homeowners, or those who buy from the original homeowner, are not duly informed of how the land's possibilities are restricted or pose potential problems by conservation issues.

Even more to the point in terms of public safety, as described in more detail in the Conservation chapter, the state of Connecticut has asked all municipalities to take steps now to stop homes from being built in areas that may experience catastrophic problems if our climatic events continue to offer the surprises for Connecticut that have occurred over the last five years.[6] Consequently, this POCD will also put a priority on using planning to make sound decisions in these fragile, and possibly unstable areas near wetlands, floodplains, and ridges. Additionally, the Central Connecticut Regional Planning Agency has completed a Hazard Mitigation report for all the towns that identifies critical infrastructure changes and issues, which include roads, flooding events and locations, and dams. Elements of this report will be extremely important to address and evaluate over the decade as planning decisions are underway.[7]

As a reminder, the Connecticut General Statutes §8-2 clearly articulates the responsibility of a community's zoning commission, including the making of regulations

> *"... in accordance with a comprehensive plan and in adopting such regulations the commission shall consider the plan of conservation and development prepared under section 8-23. Such regulations shall be designed to lessen congestion in the streets, to secure safety from fire, panic, flood and other dangers; to promote health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population and to facilitate the adequate provision for transportation, water, sewerage, schools, parks and other public requirements."*

It is on this basis that the State of Connecticut has added a sense of urgency to municipal planning for climate change, affecting development of all sorts, including the infrastructure of the town. And, the statute clearly states that "such regulations shall also encourage the development of housing opportunities, including opportunities for multifamily dwellings, consistent with soil types, terrain and infrastructure capacity ..." §8-2, CGS. Considering site and utility constraints is clearly within the purview of the Planning and Zoning Commission.

Consequently, there are several new thoughts on the issues of infrastructure for the town of Berlin. Infrastructure is critical to determine a community's growth pattern and its ability to support additional growth. In the interest of securing public health and wellbeing, Berlin has undergone several examinations of future water supply possibilities, particularly the possibility of developing a new supply within its lands. After lengthy analysis, the community has determined that it will not seek self-sufficiency, despite that being a goal in the 2003 plan.

Likewise, an analysis of separating from the Mattabesset District's sewer system, conducted in hopes of saving town funds, determined that separation and the construction of a new treatment

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[6] Connecticut Department of Energy and Environmental Policy, Facing Our Future, and Draft Connecticut Climate Change Preparedness Plan. Also see http://ctclimatechange.com where in early 2013 the DEEP released a municipal planning toolkit.

[7] Natural Hazard Mitigation Plan for the *Central Connecticut Region* adopted by FEMA 6/15/2011.

facility was not economically or environmentally feasible. By instead addressing infiltration and inflow problems, the possible additional sewer needs from development would be more than offset. Therefore, the priority is to undertake that project with partial funding from the State.

Flooding issues within the community represent a more thorny item, and this plan's goal is to seek more permanent solutions, particularly along Farmington Avenue which is the focus of the Town Center initiative.

While the opportunity to undertake a planning process for ten years and beyond is a "macro" look at the "big picture" of a community, it should be noted that in the last decade significant progress also occurred on the little administrative things that make it easier to actually administer planning, zoning and subdivision regulations, small but crucial details that expedite the process. The completion of GIS capability is one such achievement. A long-term contract with an outside vendor has allowed Berlin the flexibility to have constantly up to date software and input in this ever-changing field, and, as technology has made all parts of the town administration easier – from assessors records to tax collection – it allows data to be integrated and mapped across departments. At the same time, it should be mentioned that the State of Connecticut through the University of Connecticut programs such as CLEAR and NEMO, has made more and more GIS-based data available on towns, including online abilities to create a variety of map layers. Not only does that allow much more seamless integration than a decade ago, it also allows laymen users to look at the maps once requiring engineering assistance.

The assessor database, which ten years ago required cards to be updated by hand, is now online and searchable, able to be updated quickly with land sales and building changes. Additionally, while the town used to have all the municipal governing documents – from the charter to ordinances – handled by an outside vendor, creating a significant time gap to incorporate changes, those have been brought back into the town hall. The change has allowed the zoning regulations and subdivision regulations, which a decade ago always had a lag regarding recent amendments, to be redone under full control of the town staff with all amendments incorporated. This process is just being completed and will guarantee more timely changes and far more accuracy in the decade to follow. These administrative changes allow the "big picture" to happen easier.

In conclusion, the community process for this plan has revealed no major adjustments to the goals of 2003, with the exception of the updating of the last goal concerning the Town Center. Hence, as detailed in the document to follow, the POCD Committee embraces these as the underlying values for the plan that follows:

> **Goal#1: The Town of Berlin shall continue to be an extremely desirable place to live, work, own a business, educate the youth, and raise a family.**

Goal #2: The Town and its people shall take responsibility for stewardship of the exceptional physical and cultural landscape that characterizes Berlin and gives it its sense of place.

Goal #3: The Town shall encourage economic development in those areas best suited to sustain growth given current environmental, infrastructure and transportation conditions.

Goal #4: The Town shall work to preserve the current balance of housing stock while infusing any new growth with a sense of traditional neighborhood design, compatibility with adjacent uses, and ownership options that support housing choice for people of diverse ages and means.

Goal #5: The Town shall provide for the level of public services necessary to best serve citizens' needs and expectations, including the coordination and location of those services that are necessary to the education, health and well-being of its residents.

Goal #6: The Town shall work to maintain a strong sense of community, part of which includes support for a concentrated and improved Town Center that utilizes Town-generated physical improvements and investments, as well as state and federal transit improvements to reinvigorate the Berlin train station, to support the citizens' desires for a focused Town Center as so clearly expressed during the 2000 Strategic Plan Process and reconfirmed within the 2012 Community Survey … a Town Center with a sense of place that helps to give eloquence to the essence of Berlin.

Chapter 2: Goals and Policies Governing the 2013 Plan

The soul of a Plan of Conservation and Development is its philosophy, the master plan from which all the regulatory elements should flow. That philosophy of development – and conservation – will determine how actions are taken and elements are interpreted over the near future, governing how the community grows. Land use planning allows Berlin to be proactive rather than reactive, and gives landowners, prospective developers, and the community a sense of certainty. Berlin has now had a decade of experience operating with its different type of master plan adopted in 2003, one generally based on Natural Resource based planning principles as espoused by the State of Connecticut in the 2013 POCD, CCRPA in their 2007 POCD, and the University of Connecticut through the CLEAR and NEMO programs, along with the sustainable growth recommendations adopted and fine-tuned throughout the last decade, honed with common sense. All of these concepts have been integrated into this plan, reinforcing the community's philosophy expressed by words and actions in 2003.

Three years before the 2003 plan was approved, the committee began by inventorying vacant lands in the community, and engaging stakeholders in determining which lands should be unavailable for development under any conditions (i.e., protected open space and conservation lands, regulated wetlands), which lands already developed could be appropriate for infill or reuse, which vacant or underutilized lands could be available for development with limitations, and which lands could be suitable for new development of a variety of types, subject to zoning conditions to protect the community through the usual density and use requirements. That process led to some significant development in certain land use categories and areas, and some stalled ideas, through the economic slowdown as well as change and circumstance. The community learned that 'keeping the eye on the prize' – such as the goal to create a center that can be the heart of Berlin – can pay off with perseverance and flexibility to adapt to opportunity.

Ten years on, the POCD committee has evaluated the process and progress to date and determined that the six goals were appropriate. Many of the lands and elements of Berlin that needed to be protected, did get protected. Some of the possibilities almost unimaginable in 2000 as the last process began, did happen, and the thoughtful and careful planning with policies and strategies focuses on the 'big picture' goals can and should be credited.

Hence, with only a few updated phrases, these goals will remain for the next decade. But the policies created in support of those goals, while mostly on target at the time, need revising to reflect changed conditions in Berlin and the state, enhanced by lessons learned from the last decade along with new knowledge and ideas in the planning field. Some elements of the previous policies are tweaked a bit, some are gone, some are brand new.

While the previous plan included an extensive and detailed list in this chapter of the many ideas – termed strategies – to actually implement the policies and the goals, these will instead be

addressed in detail in the implementation plan and, to a lesser extent, in the appendix. Those "strategies" and implementation details will be added to this draft plan as it advances through the adoption process. Instead this chapter lists the policies (described in detail in subsequent chapters) that have been recommended to meet the goals while addressing the concept that the next decade of change – for there will be change – should be looked upon as a time for the Town to act in several different ways to achieve these strategic ideas put forward in 2013.

Policies to Achieve Goal #1: The Town of Berlin Shall Continue to Be an Extremely Desirable Place to Live, Work, Own a Business, Educate the Youth, Raise a Family and Age in Place

Policy		New Since 2003?
A	This POCD shall be the policy framework to guide growth and conservation which will determine the future of the town, as well as to guide local leaders as they determine the zoning, tax, and capital investment decisions that will be made over the next decade. The other five Goals numbered 2 through 6 include by reference not only the policies within this summary chapter but the detailed strategic implementation elements within each chapter and will be elaborated in the Appendix. The strategies to undertake this include: Coordinate regulatory structure and implementation of plan; Fully employ information technology to educate the public as well as board and commission members, to communicate and to achieve plan goals; Consider carefully the Town's financial resources in the planning for future improvements and services	no
B	Recognize that Land Use planning is the Best Tool to Allow Berlin to: Set short and long term growth policies, Prioritize capital investment requests for infrastructure and municipal services, Align current zoning laws and subdivision regulations with the land use plan, Maintain control over physical aspects of quality of life affecting public health and safety, Protect lands with irreplaceable qualities and characteristics, Link conservation lands, parks and open spaces into an interconnected system, Stimulate high quality economic development	no
C	Ensure that the growth that occurs in Berlin is: Consistent with the characteristics of the Town, Does not have a detrimental impact on the Town's ability to pay for and provide for necessary services, Supportive of the goals and policies of this Plan, Carefully planned and consistent with the Capacity of Municipal Facilities and Infrastructure, and of a quality that enhances the desirability of the Town as a place to live and work.	no
D	Recognize that Berlin is part of a greater regional community that has the ability to effect change on its citizens, residents, and businesses; therefore, planning for Berlin's future as expressed in this Plan must take into account not only the advantages and impacts of this inevitable relationship, but also the need for flexibility to adapt to changes caused by forces beyond local control.	no

Policies to Achieve Goal #2: The Town and its People Shall Take Responsibility for Stewardship of the Exceptional Physical and Cultural Landscape the Characterizes Berlin and Gives it Its Sense of Place.

POLICIES TOWARDS GOAL #2 REGARDING CONSERVATION	STRATEGIC IMPLEMENTATION ELEMENTS ADDRESSING POLICY (from next table)
A. Preserve and protect the natural resources, unique topographic features and scenic beauty intrinsic to Berlin. These include: the traprock ridgelines; open meadows and fields; woodlands and forests; wildlife habitat, refuges and corridors, including that of rare and endangered species of flora and fauna; wetlands [including vernal pools] and watercourses; and the scenic vistas within several parts of the town.	1,2,3,4,5,6,7,8,9,10,11
B. Protect lands identified as intrinsic to public health and safety, including surface and subsurface water resources used by Berlin and adjacent towns. These include areas upland of wetlands and water courses, aquifer recharge areas, drainage areas for current and proposed wellfields, water company lands, and, implicitly, critical parts of the Mattabesset watershed area. Most important given the severity and frequency of storms in the past decade, these must require that flood hazard areas including the floodways and floodplain areas as designated for 100 and 500 year storms and updated recently should be protected in some way whenever possible, whether or not the sites coincide with other open space values.	2,4,5,6,7
C. Preserve and protect key features of Berlin's cultural landscape. Examples of features with cultural importance include: the historic district of Worthington Ridge; Clark's Grove in East Berlin; historic industrial structures such as the Main Street complex by Paper Goods Pond being made into condominiums; the train depot; the Berlin Fairgrounds; remaining agricultural lands even if not actively farmed; and, the unique features of historic church and parish life in old Berlin, including cemeteries and greens.	2,8,9,10,11

D. Complete a town-wide natural-resource inventory so that the town can integrate Sustainable Development principles with the information on Berlin's natural and irreplaceable features to determine how best to channel development towards other lands within the community, and which lands should be protected in perpetuity. By identifying the lands that would be a priority for protection and by encouraging development in areas with existing infrastructure, this process supports concentrating resources on those lands that will be most appropriate to develop/redevelop.	1,2,3,4,7,9
E. Emphasize the natural beauty of Berlin's historic, geologic and topographic features by linking them with a series of green corridors and contiguous greenbelts. Corridors sought to be created or reinforced include: • *The Western Ridge-North Area [the Metacomet Trail north of Southington Road including Timberlin Park and Ragged Mountain Conservation Area]* • *South Kensington Agricultural Area [both sides of the Chamberlain Highway south of High Road including Bicentennial Park and Hatchery Brook Conservation Area]* • *The Western Ridge-South Area [particularly along Edgewood Road south of Southington Road including lands of the Meriden Water Company]* • *The South Ridge/Silver Lake Area [including the Blue Hills Conservation Area]* • *Lamentation Mountain* • *The East Mattabesset Corridor [including Webster Park, the Fairgrounds and Beckley Quarry Conservation Area]* • *The Brickyard Ponds Area north of Town Center with ponds, which is related to the Mattabesset and its tributaries to the south* • *Stream Corridor #1: Main branch of Sebethe and Mattabesset River from Hart Ponds to the Cromwell town line* • *Stream Corridor #2: Stockings Brook and John Hall Brook up to the confluence with the Sebethe/ Mattabesset River.* • *Stream Corridor #3: Hatchery Brook from South Kensington Agricultural Area to Town Center* • *Stream Corridor #4: Crooked Brook-Swede Pond streams and tributaries* • *Stream Corridor #5: Silver Lake-Belcher Brook and tributaries* • *Stream Corridor #6: Spruce Brook toMattabesset River East* • *Linkages from Timberlin Park to Ragged Mountain, further connecting to the Metacomet Trail/NET* • *Linkages from Downtown to Bicentennial using Town Hall/Railroad Pond*	1,2,3,4,5,6,8,10
F. Place a high priority on agricultural assistance, farm acquisition by purchase of land or development rights for open space expansion, and stimulating interest in smaller scale agricultural-based operations of direct farming and related value-added products.	1,2,5,8,9,10,11

The strategies being suggested in 2013 to undertake this goal are considerably refined, reflecting the experience of the last ten years, along with the increase in tools to assist communities with the delicate balance of development and conservation. While detailed lists of specific action items and ideas are within Chapter 3, this table of the major strategic recommendations updates the concepts being advocated as resources diminish and become more fragile. It is important to note that there has also been a leap in some of the scientific background to elements of conservation and land protection, which further elaborates future options and strategies.

Table 3: Underlying strategies to achieve Goal #2 and Its Policies

	STRATEGY NUMBER	STRATEGIC IMPLEMENTATION STRUCTURE ELEMENTS	NEW SINCE 2003?	
	1	Coordinate the administrative Structure and Funding to support the plan	*No although more innovations re funding*	
	2	Continue to use and adapt a variety of planning tools and innovative strategies to protect open space and the environment	*No, this is a toolbox of varied potential*	
	3	Evaluate the potential for the disruption of important ridgelines in the Town, and quickly adopt amendments to the zoning regulations as appropriate.	*Somewhat altered re urgency*	
	4	Update and refine the town's relationship to the recommendations of the Mattabesset River Watershed Plan incorporated as part of the 2003 POCD and further incorporate pertinent recommendations addressing riparian corridors and inland water resources of the Connecticut Climate Change Preparedness Plan and its supporting documents, as finalized in 2013.	*Added the DEEP and OPM mandated adaptive planning elements underway*	
	5	Use open space lands for recreation in accordance with their fragility. AND	*no*	

	6	Continue to link open space land within Berlin and on its borders.	*no*	
	7	Adopt appropriate regulations to protect the groundwater resources of the Town that are being used or could be used for drinking water.	*No except recognizing current thinking re local supply*	
	8	Commit the Town and encourage private landowners to keeping "Forests as Forests" to protect critical upland forest habitat, genetic diversity, and opportunities for species movement.	*Yes, new initiative reflecting community benefits*	
	9	Create a Sustainable Community, across all topics from energy to transportation to housing.	*Yes, broader sustainable measures suggested*	
	10	Actively pursue ways in which to strengthen the agricultural product industry and working farms within the community, including the retention of existing farming operations, the encouragement of new farming operations including those on a small scale, and the encouragement of new, smaller operations in agricultural products.	*Yes, since over last decade, economic potential of agriculture and value added products not realized*	
	11	Retain and improve the cultural landscape of the community including the historic fabric, scenic views, stonewalls and scenic vistas along roadways	*More refinement of elements of cultural landscape*	

Of course the ultimate goal of a Plan of Conservation and Development is to identify how best to allow a community to safely develop. To that end, and as described in the first chapter, this Plan continues to put a high priority on the TEDS, along with some elements related to development of infrastructure and housing, all of which, as shown in both Chapters 4 and 5, are related in no

small part to the outcome of projections from buildout analyses that forecast the effect of certain kinds of growth on a community.

Continuing with the focus on creating a viable Town Center (which is actually addressed both in Goal 3 and Goal 6), this plan contains a number of policies that not only support the TEDS, but also that target two prime nodes of potential redevelopment – the Town Center with its added Transit Oriented Development possibilities from the Springfield to New Haven commuter rail service to be initiated in 2-3 years, along with the possibilities of building on the successful changes to the Berlin Turnpike as a corridor for residential as well as commercial and industrial development.

The work of 2003 lay the groundwork for a variety of development initiatives, geared towards the best ways to use the town's regulatory structure of zoning and subdivision regulations, along with opportunities to use catalysts such as state and federal funding programs, to achieve high quality, job-generating or job-retaining development. As described in the previous chapter, the next decade poses even more opportunities, geared towards carefully directing development to those areas most able to sustain it, such as 'brownfield' and 'greyfield' sites with infrastructure mostly in place, including the high-profile addition of commuter rail service to the Berlin train station with its Transit-Oriented Development potential. This Plan's Development sections echo policies and strategies from the decade past, but it is important to reiterate how strongly these correlate with the regional and state policies that have undergone considerable change this past decade.

To that end, taking into account not only the development needs of the community but also the significant changes that have happened in the state and national economy, these are the defining policies of the Development Section of the Plan.

Table 4: Policies to Achieve Goal #3: The Town shall encourage Economic Development in those areas best suited to sustain growth given current environmental, infrastructure and transportation conditions

Policy		New Since 2003?
A	Continue an innovative, town-driven process to proactively stimulate economic development on the locations deemed appropriate that would conform to town land use goals and focus town resources on making development happen in those areas – named as Targeted Economic Development Sites [TEDS]	no
B	Find ways to utilize areas that have already been subject to development in the past to limit incursions into 'greenfield' areas while using existing infrastructure that can support infill development, encouraging infill development, brownfield, and greyfield sites.	Only the recognition of greyfield sites (commercial structures such as malls)
C	Improve the aesthetic character of development through design expectations that consider issues related to visual character, as well as the use of appropriate land use analysis and review. To this end, design districts will be emphasized not only for the TEDS, but for town center/TOD development.	No, but emphasizes design district as flexible way to get high quality development
D	Encourage retention and growth of existing businesses within Town including through the use of incentives and other appropriate municipal assistance.	no
E	Encourage commercial and industrial development, subject to proper location and standards that will enhance the tax base, provide employment opportunities, and provide a wide range of services for consumption.	no
F	Support new strategies, including a variety of TOD and mixed used initiatives to complement the creation of town center development and, as possible, the Berlin Turnpike's renaissance..	No except for TOD opportunity

To achieve these goals, many of the strategies specified in 2003 remain in place but there are several new strategic opportunities as well.

Table 5: Strategies to Achieve Goal #3

STRATEGY NUMBER	STRATEGIC IMPLEMENTATION STRUCTURE ELEMENTS	NEW SINCE 2003?	
1	Maintain a proactive economic development function with Town government to encourage the increase in supply of high quality sites and buildings for economic development and to market the town to capture a share of the regional business expansion demands.	*No*	
2	Utilize zoning to direct land uses towards areas appropriate for development.	*No*	
3	Continue policies that support infill development and use of 'brownfield' sites, and develop policies to anticipate any increase in development opportunities for 'greyfield sites' which are increasing statewide due to the economic and technological changes to retail, entertainment and other shopping-center based activities	*No but added greyfield*	
4	Update and refine standards for quality and type of future development that dictate the level of town/public assistance.	*no*	
5	Continue to use and update standards that can be used as guidance or requirements for design.	*no*	
6	Support the development of Targeted Economic Development Sties (TEDS) but acknowledge need for flexibility in light of economic and environmental changes to some sites, including updated zoning concepts.	*No but this will be a challenge as conditions change*	

Table 6: Policies to Achieve Goal #4: The Town shall work to preserve the current balance of housing stock while infusing any new growth with a sense of traditional neighborhood design, compatibility with adjacent uses, and ownership options that support housing choice for people of different ages and means.

POLICY		NEW SINCE 2003?	
A	The Neighborhood shall be the primary component of residential development. All new residential development should support existing neighborhoods, and create a neighborhood environment with activity centers, recreational areas, and pedestrian circulation.	*No*	
B	Residential development design should support the principles of both Berlin's development and its conservation policy, including the integration of elements that preserve and protect Berlin's unique natural environment.	*No*	
C	New residential development should be of the highest design standards, in a manner that creates a high quality residential environment and enhances the adjacent residential neighborhoods.	*No*	

Table 7: Policies to Achieve Goal #5: The Town shall provide for the level of public services necessary to best serve citizens' needs and expectations, including the coordination and location of those services that are necessary to the education, health and well-being of its residents.

POLICY NUMBER	POLICIES	NEW SINCE 2003?	
A	The Town shall provide for the efficient and orderly movement of people and goods through the community while promoting non-automotive, alternative modes of transportation and communication.	*No*	
B	Infrastructure investments should be limited to those that support land use principles within the Plan of Conservation and Development.	*No*	
C	The Town shall provide a supply of high quality water from reliable sources of supply.	*No*	
D	The Plan shall designate a Service Boundary, beyond which no water or sewer service shall be provided..	*No*	
E	The Town shall provide sufficient recreational activities for all Town residents.	*No*	
F	The Town shall provide the widest possible range of educational, recreational and social facilities consistent with the numbers to be served, and located so as to be easily accessible to all residents of all ages.	*No*	
G	The Town shall construct, maintain, and regulate storm water systems and implement zoning and development policies to insure that new development does not exacerbate flooding potential or degrade existing land uses. Storm water improvements, including Low Impact Development requirements, should be considered to reduce flooding risks in areas that have a potential to suffer significant personal or property damage.	*No*	

H	The Town shall continue to participate in the Mattabesset District Commission to provide a cost-effective way to dispose of sanitary sewage in an environmentally appropriate manner.	*No*	

Table 8: Policies to Achieve Goal #6: The Town shall work to maintain a strong sense of community, part of which includes support for a concentrated and improved Town Center that utilizes Town-generated physical improvements and investments, as well as state and federal transit improvements to reinvigorate the Berlin train station, to support the citizens' desires for a focused Town Center as so clearly expressed during the 2000 Strategic Plan Process and reconfirmed within the 2012 Community Survey ... a Town Center with a sense of place that helps to give eloquence to the essence of Berlin.

POLICY		NEW SINCE 2003?	
A	Focus on the Kensington center area and the area around the Berlin train station as a targeted economic development site (a "TEDS"). It has been recognized that this area has significant potential to: • Be a significant focal point in the community, • Capitalize on the planned rail service upgrades and improvements on the Hartford-New Haven rail line, • Implement transit-oriented development patterns, • Provide additional housing as a way to promote economic growth in this area and create an enhanced "sense of place".	*Yes*	
B	Encourage higher intensity development to strengthen the concept of a town center, take advantage of enhanced accessibility through TOD, and promote the economic development of the Town.	*No*	
C	Enhance the corridor from the New Britain line through Worthington Ridge to become the commercial and cultural center of Berlin.	*No*	

Chapter 3. Conservation Strategies

The Town of Berlin is critically positioned at the heart of a key natural resource area within the center of Connecticut. Predominantly residential, with corridors and nodes of industry and commercial development, the community has been blessed by a countenance of rolling hills, woodlands, meadows, ridges and other features collectively contributing to what is generally termed open space. Its 17,592 acres [approximately 27.5 square miles] in the heart of the Mattabesset River watershed are virtually surrounded to the west and to the south by a series of traprock ridges. Within this green semi-circle lie the residences and businesses of Berlin, with homes spanning four centuries -- some date to the 17th century while others were completed in the first decade of the 21st century. Evidence of the historic villages that were centers for Berlin's farms abounds, and many residents enjoy the ambiance created by centuries of historic fabric and traditions associated with agricultural ways. Community spirit is evident in the annual Berlin Fair, located on the dedicated fairgrounds in the eastern part of the town.

> *"What are the natural features which make a township handsome? A river, with its waterfalls and meadows, a lake, a hill, a cliff or individual rocks, a forest, and ancient trees standing singly. Such things are beautiful; they have a high use which dollars and cents never represent. If the inhabitants of a town were wise, they would seek to preserve these things ... for such things educate more than any hired teachers or preachers ..." Henry D. Thoreau, 1861*

This unique landscape, both cultural and physical, began to come under threat by forces of development beginning in the 1950s. Balancing economic development with conservation was not yet understood to have value; hence, the open lands of Berlin started becoming scarcer. Additionally, the values placed on the town's historic and cultural assets were not sufficient of themselves to guarantee a future town with the same physical and cultural landscape.

Ten years ago, the POCD advocated changing priorities, adding 'conservation' to the Plan of Development. During the years that followed, improved information about environmental changes and their effects on the wellbeing of a community's water supply, health, and welfare has led the State of Connecticut and many communities to reevaluate some elements of land-use planning. The state has gone well beyond open space acquisition goals and similar calls for the landscape, with the University of Connecticut taking the lead on a constantly improving data base on land use changes, and the effect on the totality of the state's resources. With the new state POCD under development, they are modeling ways for Connecticut's cities and towns to be more proactive on environmental matters, and particularly calling for adaptation to environmental change as being crucial to long-term public health and safety for this century.

The blending of non-quantifiable community elements such as cultural landscape and sense of community is now seen by government, development and planning circles as key elements of livability – the intricate interplay between community character and sense of place, in which land use plays a critical role. While a decade ago, 'smart growth' was the terminology, that has been broadened to include a much more interconnected way to plan for sustainability, and community livability. Hence, ten years ago and again today, this document defining the principles on which the Town's land use planning and zoning regulations and decisions will rest recognizes the inherent value of undeveloped land as a component of 'sense of place' (the 'placemaking' described in Chapter I), along with its crucial role in public health and safety through environmental protection.

While Berlin's unique landscape merits careful stewardship for its peerless physical attributes, the national experience documents positive benefits of land stewardship that surpass that of simple environmental protection. Instead, benefits accrue to the community at large, including the fiscal advantage of tax neutral or tax positive results of open space versus certain types of developed space.

And, even more important in this new decade, there is statistical evidence that business locations, which recent technology has severed from some of the traditional elements of transportation, labor, and capital, are strongly influenced by the more qualitative aspects of a site, particularly the smaller businesses that are the growth generators of the future. As noted by the New York State Department of Environmental Conservation and the Department of State in their 2004 Local Open Space Planning Guide:

> *"Increasingly, businesses make decisions about where to develop or expand facilities based on the quality of life available to prospective employees. Communities that plan carefully for the future and conserve their important open spaces are better able to attract the businesses and jobs that improve the local economy and that create quality communities."*

The Central Connecticut Regional Planning Agency in their 2012 Comprehensive Economic Development Strategy echoes this and specifically addresses it, encouraging municipal land use decision makers to "encourage policies that minimize the amount of newly developed land, especially in environmentally sensitive areas or near critical environmental resources," encouraging its stakeholders to stop sprawling development that directly affects quality of life, making "the region a less desirable place to live and thus making it harder for companies to attract and retain high quality employees."[1] As cited in Chapter I, The Trust for Public Land compiled 100 different studies that confirmed the positive economic value of conservation lands, illustrating their benefits towards net positive tax flows for communities versus service-intensive development.

[1] Central Connecticut Regional Planning Agency, *Comprehensive Economic Development Strategy*, December 31, 2012, pp. 27-28.

Consequently, this philosophy that was the underpinning of the 2003 POCD forms the framework of the plan for the next decade.

Although, the 2003 POCD represented a huge leap forward in addressing issues of Conservation within the community and remains a very viable document in terms of recommendations, there are some elements of the plan that either were not addressed adequately as expected during the past decade, or that should be reconsidered in light of considerable changes. For instance, despite addressing topics of cultural resources, scenic roads, and agriculture, these items were – understandably – not on the top of a to-do list in an era of limited resources. And, back then, climate change – extreme weather events – and food security and locavore trends were not even on the radar, so to speak. Connecticut's universities did not yet know that sea level rise can actually alter groundwater tables, which could one day affect stormwater management and community water resources (since much of Berlin's waterways drain into the tidal Connecticut River.) Likewise, farms that eked out an existence through the 1990s have gone fallow as the steady erosion of Berlin's farming history continues; yet, there remains within the community interest in having agriculture as part of the balance of businesses, which is spawning creative thought about ways to enhance new models of community farming. Coupled with the interest in small-scale, boutique farming and the growing resource base Connecticut's many agencies and universities are directing that way due to the state prioritizing a strong agriculture base as good economic development, there might be approaches that could not be imagined a decade ago to stimulate the agriculture elements left in Berlin's economy.

While some conservation ideas from the last POCD did not get implemented due to the urgency of other issues in a complicated decade, this plan readdresses and evolves these policies for the forthcoming decade. And, the successful acquisition of so many important lands has created a new priority that is now addressed in elements of this Plan: the need to evolve from maintenance to management using resource principles that may even lead to fine-tuning the holdings of open space.

Managing the newly acquired forests, grasslands, and orchards has brought up a host of issues that ultimately could set precedents that this POCD may help to guide, be it the need:

- to consider silvaculture[*which is actually being strongly recommended by the state to enhance forest floor habitat and allow the understory to thrive*],
- to rethink new strategies to apply the strategic benefits of haying operations that maintain grasslands that are fast shrinking in our state [*and removing habitat for vast numbers of creatures*],

- to do a cost-benefit analysis on the possibility of trading pieces of parcels not as important to conservation values for either funds to maintain crucial open space or lands that better link and meet POCD goals, or
- to educate, plead or mandate a way to get adjacent owners to help buffer and protect the many stream corridors that form the backbone of the town's water resources.

With Connecticut's progress towards its percentage goals of open space conservation, the state has started to release more guidance on management issues. For instance, the state is creating more technical information to help communities, for instance, on:

- how certain lands are more valuable to protect due to forest fragmentation, or,
- how invasive species within these public and private lands are affecting habitat preservation, or
- how to calculate and update information on flooding, wetlands, and alternative scenarios for flood storage.

With the state pushing for a renewed emphasis on agriculture amongst Connecticut communities, touting its role in food security, natural habitats, and a variety of income possibilities, there are more programs and possibilities to engage existing stakeholders and those aspiring to a different model of local farming. At the same time as some big farms are disappearing, the evolution of interest in local food and small scale farming offers an interesting opportunity to expand the quality of life and unique attributes of this community that has evolved from farm and factory.

This is the context in which this Conservation section of the Plan has evolved since 2003, even as pieces of it echo that written a decade ago.

3.1 Philosophy and Study Summary

As part of this Plan of Conservation and Development, considerable attention was paid to identifying and conserving that which characterizes the community in a context that respects the rights of existing property owners. Policies and principles were approved to meld a careful blend of regulation-based and incentive-based programs to protect the community fabric, while allowing development to occur within those areas physically suitable. The studies leading to this Plan and its predecessor Plan in 2003 were clear on the fact that the Town and people of Berlin bear responsibility for the stewardship of the properties that contribute to the community's natural beauty and unique habitat. To that end, a multi-faceted policy program is envisioned.

Yet it is imperative to emphasize that Berlin's current land planning process is about balance. It is not about halting development – instead, it is about managing development

in a way to protect and preserve the best and most unique aspects of the land and cultural resources.

There are three key elements of the program, which are described in general in each section below, but can be found in detail in supporting documentation for the plan. They are in essence related to one another through a web of overlapping principles and the interrelationships of the natural environment, but sometimes within this document, they are discussed separately. Yet the strategies for implementation of the goals and policies of the plan use these elements interchangeably:

- Open Space
- Natural Resources(and Environmental Balance)
- Community Character and Cultural Landscape, including agricultural protection and historic assets

This document gives greatest attention to the open space elements in part because the town has made substantial progress in preserving a network of open space lands that contribute significantly to the community character. Without question, Open Space generally overlaps and/or deals with the same issues as Natural Resources and Environmental Balance, as well as the less definable Community Character and the Cultural Landscape. In 2003, the Plan placed agriculture under cultural landscape, but it is important to note this Plan is increasing the importance that should be given to planning for agriculture by helping existing farmers and stimulating new interest, while emphasizing that agriculture is key to our 'privately-held' open space. Hence, agriculture bridges the physical and cultural landscape of our town.

The inventory and mapping of open space and conservation land as well as vacant commercial and industrial property, when coupled with the Build Out Analysis completed by Turner Miller Group in 2010 illustrate an absolute truth: most easily developed lands have long since been taken, and many large tracts of vacant land remaining in the community include environmental constraints on development such as wetlands, slope, or floodplain. In these environmentally affected lands, this supposed negative for development becomes a positive for conservation. In addition, there are also many more easily developed parcels that remain undeveloped because of the values of the property owners who have given priority to maintaining agricultural uses or open spaces over opportunities for financial gains. These lands must be considered subject to rapid development at any time if the family circumstances of owners dictate a need or a desire to sell, especially if the land is not impaired by contamination associated with past use of pesticides.

This is a dichotomy within the conservation philosophy, since some lands to preserve have development constraints, while others merit conservation on the qualities of the land attributes alone.

Hence, by acknowledging in this first part of the Plan the scarcity of vacant lands without environmental constraints, this document reiterates the town's focus on economic development in Targeted Economic Development sites [TEDS], many of which contain their own development constraints. While TEDS are detailed in Chapter IV as they pertain to future economic development, these development constraints also pose significant barriers to large-scale residential development of all types on vacant lands remaining, which often would be directed at lands also suitable for conservation. And as documented elsewhere, preserving water quality and resources may further refine and limit the areas considered at first glance to be suitable for future residential development.

Reaffirming the importance of celebrating the features that have shaped Berlin visually and culturally since the time of the glaciers – forested lands, unsullied ridgelines, keen vistas, and rich hydrological areas – this POCD continues to emphasize Berlin's Heritage. By adopting a land use strategy that employs the University of Connecticut's recommended natural resource-based planning techniques, the Town has chosen to protect these resources that have survived millennia. Natural resource-based planning starts with a community's natural resource base and works 'backward' to development potential: "open space and development should complement rather than compete with one another." Preservation of Berlin's heritage will require a consistent long-term program of open space and cultural and historic assets protection through acquisition in fee or through easement and deed restrictions.

This then is the essence of the Conservation strategy that is described herein, a strategy that complements carefully targeted economic development in appropriate places within the community context of physical and cultural amenities, and a fee and easement acquisition program for long-term protection of critical lands and resources. The rich natural resources of the community merit designation as Berlin Heritage Lands, open space that can survive and, hopefully, flourish, well into the 21st century. This clearly meets the Connecticut Growth Management Principal #4 calling for town to *Conserve and Restore the Natural Environment, Cultural and Historical Resources, and Traditional Rural Lands.*

These Berlin Heritage Lands (aka Town open space) can be viewed in the maps section at the end of the Plan.

Additionally, and critical to consider for this next decade are the role that open space and conservation lands can play in protecting areas that are prone to flooding. With the state's emphasis on communities adapting for climate change, and identifying

vulnerabilities, in future, Berlin will need to consider whether lands for acquisition might also be prime to assist in Connecticut's growth management principle #5, *Protect and Ensure the Integrity of Environmental Assets Critical to Public Health and Safety.* In the latter half of the past decade, Connecticut has asked its communities to initiate adaptive policies that will allow them to anticipate and respond to environmental disturbances caused by climate change. The cruel storms of 2011 and 2012 illustrated why public safety and environment are so linked.

This initiative has already been addressed by many Connecticut municipalities. Interestingly, several of the 2003 strategies that were not completed would address these vulnerabilities in Berlin, particularly concerning protections of riparian corridors, floodplains and wetlands. The State of Connecticut's growth management policies reflect these new priorities.

To that end, this document will work towards the same vision, with the affirming reiteration of the goal established back in 2003:

> **GOAL#2: The Town and its people shall take responsibility for stewardship of the exceptional physical and cultural landscape that characterizes Berlin and gives it its sense of place.**

CLIMATE CONNECTICUT CHANGE

The *Connecticut Climate Change Preparedness Plan: Adaptation Strategies for Agriculture, Infrastructure and Natural Resources* (*Draft 2011*) pointedly addresses strategies to address "climate change vulnerabilities for the built and natural environment, agriculture and public health in Connecticut" as outlined in their 2010 report entitled, *The Impacts of Climate Change on Connecticut Agriculture, Infrastructure, Natural Resources and Public Health*"... these strategies will prepare Connecticut for a changing climate future, and be linked with preparedness efforts in other states ... to increase Connecticut's resilience to non-climate change stressors, such as increased development and demand on utilities and services as well as to create sustainable jobs." See the complete report and the work of municipalities across Connecticut on this issue at www.ctclimatechange.org

Part I: Open Space Lands and Natural Resources

The characteristic physical features of Berlin that surround each side of the Berlin Turnpike corridor south of Farmington Avenue and Mill Street are the rural, hilly topography replete with diverse bodies of water and streams. Brooks and watercourses crisscross the town while on the southern and western edges, traprock ridges define a greenbelt rich with water resources. The preservation of critical areas of the remaining open space and unique features, particularly the corridors that link areas and follow streambeds, is paramount in the Plan of Conservation and Development.

During the 2003 Plan of Conservation and Development update process, all vacant lands not zoned for commercial and industrial development were inventoried (complementing an inventory already complete for vacant commercial and industrially zoned property.) The purpose was to examine how these lands connected and supported existing open space, looking particularly at the natural features of slope, wetlands, and watercourses. Subsequent to the adoption of the 2003 POCD, the Town has achieved a GIS mapping capability linked to the Assessor's database and other Town databases. This GIS system allows the Conservation Commission to regularly update the mapping and databases for open space lands, from the addition of parcels to areas such as the Hatchery Brook Conservation Area to the creation of trails within, allowing them to be uploaded to the town website as well. The Linkage Areas and Stream Corridors maps can be found in the maps section.

While there remains interest in increasing the active recreational space in the community, the 2003 POCD stimulated action on the open space acquisitions mostly for conservation purposes. Since 2005 the Town has acquired approximately 800 acres of land by acquisition and donation including most of Blue Hills Conservation Area, Hatchery Brook Conservation Area and Beckley Quarry Conservation Area. These acquisitions have contributed to the creation and preservation of corridors of open space that are being linked throughout the community to allow all residents access to the unique terrain that contributes to Berlin's special sense of what some call 'the working landscape.' It appears that at present, virtually every one of Berlin's residents can now get to open space in town with less than a ten minute drive. If one assumes that the average person can walk ½ mile in ten minutes, a laudable goal under an alternative transportation scenario future would be to have within ten years the ability for residents to walk or bike to some type of open space within ten minutes.

As shown in the maps section, there are many types of public open space: town-owned properties used for open space, water company properties with limited access to humans but full access to the wildlife populations, State of Connecticut lands, lands owned by non-profit organizations related to recreation, open space or cultural uses, and private lands such as the farms that are open for vistas if not for walking.

But it is not just about tree hugging and recreation. As documented in Chapter 1, many studies illustrate the net fiscal gain to communities with open space lands. This contrasts with the negative fiscal impact of converting open lands into most forms of residential development. The relatively positive fiscal impact of open space in Berlin was confirmed in the report "Residential Build Out Analysis, April 2010" by the Turner Miller Group

At present, a well-planned array of formal recreational areas exists in the Town of Berlin, based on the original 1959 Plan of Development that embraced linking parks and playgrounds to schools to maximize open space, in addition to maintaining a few large

parks for town recreational purposes. [See the map of current Parks and Open Space in the maps section] Joining the original major town areas for passive recreation and resource protection, Bicentennial Park (first created in 1976) and Ragged Mountain Preserve, two more major (more than 50-acre) areas, Hatchery Brook Conservation Area and Blue Hills Conservation Area were added this past decade as a direct result of the POCD. Several smaller ones in key locations, particularly on the east side of town by the Mattabesset River were also added, along with a 77-acre town purchase of the financially troubled Pistol Creek golf club that came on line as golf interest was waning.

Complementing these Berlin-owned lands are the hundreds of acres of water supply lands owned by New Britain and Meriden. They use the land for reservoirs and protective buffer zones, creating an unusually large amount of non–Berlin municipally owned land within the community; however, it is not uniformly available for even passive recreational purposes such as hiking. Fortunately the Meriden and New Britain Water Departments have allowed hiking access across their lands on the NET – the New England Trail created in 2010 that unified three major New England hiking trails.

In 2011 the Town completed its first "formal" park, Veterans Memorial Park, as part of the work to create a revitalized 'heart' of Berlin along Farmington Avenue. This 9.2 acre park is located near the commercial corridor of Farmington Avenue. It includes a Veterans Memorial, gazebo for concerts with adjacent land and walking trails, all on the site of a former Town landfill/material storage yard. This park is planned to be a centerpiece for many future community events and concerts, with planning underway to secure the availability of parking for larger scale events hoped to be hosted at this venue.

Yet, in-between these existing publicly owned open space areas and within some prime development zones are related lands that are owned privately. Some of these lands offer qualities that merit community consideration for some level of protection (given property owner cooperation) as legacies for the future. But some of these parcels also need to be considered for protection not based on the attributes of the particular property, but rather on the role these parcels can play in furthering the ongoing process of transforming a set of distinct open space properties and parks into an interconnected system of protected lands. With Connecticut's strong emphasis on stopping further fragmentation of natural resource areas, particularly of forests, this offers a way to meet state goals as well.

Given the renewed community and statewide emphasis on open space as critical to resource management and community character, the Town and its people will be well-served by recommendations in this POCD to protect and preserve the key features of the lands which so define the character of the community. Key recommendations are to:

- Identify spatial relationships and attributes of current vacant land within the Town, particularly with a natural resource inventory requested through the NSCS.

- Embrace a series of goals for open space and resource-based land use planning.
- Articulate the need for a full range of strategies that can enhance linkages and promote vital goals among key properties.
- Identify critical areas that should be preserved while encouraging the Town to direct development to areas most able to accommodate it.
- Set up the framework for maintaining a level of protection using various planning and outright acquisition techniques including acquisition of development rights, which has not been used by the town in the past decade.
- Confirm the key open space configurations that will ultimately serve to endow the people of Berlin with open space lands over the next century.
- Examine the flooding maps and frequency and evaluate whether there are open space purchases that could help the community adapt to more severe storms by using these areas wisely.
- Create a process for the people of Berlin to make collective decisions on valuing different goals for open space and development so that future open space decisions may be made as part of a community-resource-based process.
- Create a process to distribute information and educate residents about their responsibilities in the delicate balance of environmental protection and open space preservation, from information on being a good neighbor to open space, to how to install and create benefits like streamside buffers, using native plantings, learning about invasive plant identification and eradication, and employing best practices for lawn maintenance, water conservation, and hazardous waste and materials disposal.

3.2 Open Space Policies Summary

Policy 1: Preserve and protect the natural resources, unique topographic features and scenic beauty intrinsic to Berlin. These include: the traprock ridgelines; open meadows and fields; woodlands and forests; wildlife habitat, refuges and corridors, including that of rare and endangered species of flora and fauna; wetlands [including vernal pools] and watercourses; and the scenic vistas within several parts of the town.

Policy 2: Protect lands identified as intrinsic to public health and safety, including surface and subsurface water resources used by Berlin and adjacent towns. These include areas upland of wetlands and water courses, aquifer recharge areas, drainage areas for current and proposed wellfields, water company lands, and, implicitly, critical parts of the Mattabesset watershed area. Most important given the severity and frequency of storms in the past decade, these must require that flood hazard areas including the floodways and floodplain areas as designated for 100 and 500 year storms and updated recently should be protected in some way whenever possible, whether or not the sites coincide with other open space values.

Policy 3: Preserve and protect key features of Berlin's cultural landscape. Examples of features with cultural importance include: the historic district of Worthington Ridge; Clark's Grove in East Berlin; historic industrial structures such as the Main Street complex by Paper Goods Pond being made into condominiums; the train depot; the Berlin Fairgrounds; remaining agricultural lands even if not actively farmed; and, the unique features of historic church and parish life in old Berlin, including cemeteries and greens.

Policy 4: Complete a town-wide natural-resource inventory so that the town can integrate Sustainable Development principles with the information on Berlin's natural and irreplaceable features to determine how best to channel development towards other lands within the community, and which lands should be protected in perpetuity. By identifying the lands that would be a priority for protection and by encouraging development in areas with existing infrastructure, this process supports concentrating resources on those lands that will be most appropriate to develop/redevelop.

Policy 5: Emphasize the natural beauty of Berlin's historic, geologic and topographic features by linking them with a series of green corridors and contiguous greenbelts. As identified in the 2003 plan, green corridors sought to be created or reinforced include:

- *The Western Ridge-North Area [the Metacomet Trail north of Southington Road including Timberlin Park and Ragged Mountain Conservation Area]*
- *South Kensington Agricultural Area [both sides of the Chamberlain Highway south of High Road including Bicentennial Park and Hatchery Brook Conservation Area]*
- *The Western Ridge-South Area [particularly along Edgewood Road south of Southington Road including lands of the Meriden Water Company]*
- *The South Ridge/Silver Lake Area [including the Blue Hills Conservation Area]*
- *Lamentation Mountain*
- *The East Mattabesset Corridor [including Webster Park, the Fairgrounds and Beckley Quarry Conservation Area]*
- *The Brickyard Ponds Area north of Town Center with ponds, which is related to the Mattabesset and its tributaries to the south*
- *Stream Corridor #1: Main branch of Sebethe and Mattabesset River from Hart Ponds to the Cromwell town line*
- *Stream Corridor #2: Stockings Brook and John Hall Brook up to the confluence with the Sebethe/ Mattabesset River.*
- *Stream Corridor #3: Hatchery Brook from South Kensington Agricultural Area to Town Center*
- *Stream Corridor #4: Crooked Brook-Swede Pond streams and tributaries*

- *Stream Corridor #5: Silver Lake-Belcher Brook and tributaries*
- *Stream Corridor #6: Spruce Brook to Mattabesset River East*
- *Linkages from Timberlin Park to Ragged Mountain, further connecting to the Metacomet Trail/NET*
- *Linkages from Downtown to Bicentennial using Town Hall/Railroad Pond*

Policy 6: Place a high priority on agricultural assistance, farm acquisition by purchase of land or development rights for open space expansion, and stimulating interest in smaller scale agricultural-based operations of direct farming and related value-added products.

3.3 Planning Actions to Develop Strategic Objectives

The 2013 Plan of Conservation and Development Committee has embraced the community-wide goal of protecting critical lands as a finite resource. The impetus for such a method of planning, while intrinsic to the values inherent in the Plan of Conservation and Development, reflects interests of those who have chosen to make Berlin their home, as initially articulated in the Strategic Planning Process prior to the Millennium, validated then and again in 2012 through community surveys.

That survey by the Center for Research and Public Policy in 2001 highlighted the fact that Berlin residents seemed to place a very high value on the natural environment that surrounds them. The 2012 survey confirmed that interest, although the questions were quite different, with the town's open space and rural character ranking second to centrality of location for the #1 reason to live in Berlin. Cleaning the Mattabesset River remained high on the list of many respondents to the 2012 survery!

Community Survey 2012

- Rural Character and Open Space ranked second in gross numbers reporting that as the reason respondents lived in Berlin, behind Centralized Location by only one vote.
- When asked what would make the town a better place to live, after the first choice of 'greater diversity of housing types,' additional recreational opportunities and additional open space and farmland protection ranked second and third.
- Cleaning up pollution from the Mattabesset River and other water bodies in Town ranked first in the list of statements to improve the community… note that in 2001, 90.8 percent of respondents supported cleaning the Mattabesset River.

3.4 Strategic Objectives for Open Space

To best implement these Open Space recommendations, the Town of Berlin must continue its mission to encourage stewardship of properties identified as critical to the natural resource base, that support community values and identity, and that ultimately contribute to the unique character of Berlin. The focus of that stewardship is to reinforce

and restate that linking open lands by interconnecting them as a series of green corridors and contiguous greenbelts is the essential core of Berlin's land conservation policy.

Stewardship may take a number of forms:

- It may consist of educational programs that foster appreciation of the unique lands within the Town.
- It may require that Berlin staff act as an intermediary to link owners of critical properties to resources that can assist, such as the Hartford and Middlesex County Soil and Water Conservation Districts, the CT Department of Environmental Protection, the CT Department of Agriculture, CT Farmland Trust, Connecticut Forest and Parks Association and the University of Connecticut's advisory services on land use planning, natural resources and agriculture.
- It may require that Berlin continue to fund a program to purchase critical lands and/or development rights as a community priority – in concert with state funds wherever possible, but without if need be.
- It may require that all town boards, commissions and entities be ever mindful of opportunities to dovetail open space preservation with other community goals.
- In any case, stewardship invests each member of the community with responsibility for ensuring that the community's physical and cultural landscape remains visible to succeeding generations.

By continuing to evaluate and make these linkages through actual acquisition, trails on easements and rights of way, or other creative opportunities to span properties, this will secure for posterity the natural beauty of Berlin's historic, geologic and topographic features. **This finding is so significant that the Committee has chosen to again embrace and celebrate this key feature of Berlin as the Berlin Heritage Lands** [illustrated within maps section of this document, which was referenced earlier].

3.4.1 Current Allocation of Governmental Responsibilities for Open Space

At present there are a few entities in the Town with responsibilities relating in some way to open space acquisition and preservation goals as outlined in the Conservation Plan for open space. During the last decade, with the increase in conservation acquisition and management activity, responsibilities were reallocated and better outlined.

Concurrent with this strategic plan and goals for Open Space, town staff will promote an understanding, and perhaps a further restating of the responsibilities of various town entities for open space protection, acquisition and maintenance. The current configuration for decision-making and current issues relating to land acquisition and protection is as follows:

1) The **Town Council** has taken the lead on the acquisition of open space, operating with the advice of the Town Manager and Town staff. The **Conservation Commission** is usually afforded the opportunity to evaluate and make recommendations on properties being considered. The **Berlin Land Trust** has also actively collaborated with the Town to acquire open space parcels including entering into land purchase contracts that are subsequently assigned to the Town. The process leads to identification of properties to be considered for purchase based on various methods, including the Town offering to buy a property on a referral from the Land Trust, Conservation Commission or by initiative of the property owner or its agent. Since September 1999, the Town Council adopted ordinances authorizing $6.5 million in bonds for the acquisition of real property for open space. In addition, $5.625 million was approved for the acquisition of 77 acres of the former Pistol Creek golf course for uses including open space in June 2008. Since late 2005, over 750 acres of open space has been acquired and the authorized open space acquisition funds are not yet depleted. To encourage maintenance of private open space, preferential tax treatment was also extended to open space parcels to add to the farm and forest protection incentives already provided pursuant to Public Act 490.

2) The **Berlin Conservation Commission** operates in an advisory capacity regarding open space acquisition. In the past the Commission has not had staff, but assistance by town staff has been provided for in the present charter. It does not have a budget for property acquisition or for retaining consulting services to investigate specific properties or to further develop property acquisition strategies. The Commission conducts research into uses of open space and has utilized consulting services to help it to educate the citizens on this subject. It keeps an index of open space publicly or privately owned and has developed management plans for open space parcels. The Commission is active in studying parcels targeted for acquisition by the town and creates detailed studies with recommendations for the Town Council. By town Charter the Conservation Commission is in charge of setting rules of use for open space parcels.

3) The **Parks and Recreation Commission** has responsibility for oversight of all Town Parks (as opposed to open space areas). In terms of acquisition of property, the Commission is actively involved in proposed acquisitions that relate to ball fields and other active recreational projects. Public Grounds maintains local parks and open space areas.

4) The **Public Grounds Department** maintains local parks and open space areas.

5) The **Water Control Commission** is primarily responsible for property acquisition related to the Town's water supply. Consideration was given to increasing the amount of water that is locally supplied (as opposed to purchase from the City of New Britain or other water supply systems). A plan for a well off Woodlawn Road was proposed and then dropped after further study. A long term plan is being considered to establishment a

new groundwater well at Bicentennial Park. This proposal will continue to be evaluated based on its economic feasibility compared with continuing to buy water from other sources. If additional property acquisition is undertaken either to expand local supply, or to protect the quality of existing local supply, or to bring online new local sources of supply, these water resource responsibilities should interrelate with the open space acquisition objectives. The Water Control Commission should work with the Planning and Zoning Commission as needed when utility and planning issues overlap.

6) The **Board of Education** obtains property for new schools by requesting that the Town purchase a school site on its behalf. In 2011 a plan was approved to renovate Berlin High School and construct a modest expansion. The Board of Education does not currently have a proposal in the Town's Capital Improvement Plan to acquire a site for a new school. If a need is identified for a school site in the future, its acquisition may interrelate with open space acquisition goals.

7) The Inland Wetlands and Water Courses Commission regulates activities wetlands related on open space parcels and may advise on improvements that may relate to wetlands areas.

In addition to the departments and committees within the Town of Berlin, there are also several important land-owning or land acquisition entities with open space lands within Berlin's borders that are not a part of the Town of Berlin government structure.

1) **The Berlin Land Trust** is a private, non-profit organization dedicated to acquiring open space. It receives no financial support from the Town. It has limited financial resources, so its acquisitions to date have been modest and have generally consisted of donations. The Berlin Land Trust has been instrumental in assisting the Town to acquire open space properties, including financial assistance and assigning contracts to the Town for acquisition of the Sheer, Sierra Ranch and Girl Scout properties. A list of their properties is in the Appendix.

2) The **City of New Britain** and the **City of Meriden Water Companies/Departments** are major open space landholders but are not engaged in any regular, formal process for future open space planning in Berlin.

3) The **State of Connecticut** (Silver Lake) and the **Shuttle Meadow Country Club** (the approximately 90 acres not developed as golf course) are also significant owners .

It is important to note that no entity has responsibility related to preservation of local farms. At the initiative of its owners, the 41.2 acre Cold Spring Farm was preserved by easement to the Connecticut Farmland Trust in December of 2004. This plan recommends that emphasis in the future for farm preservation and assistance, including easements, become the responsibility of the Conservation Commission.

3.4.2 Strategic Implementation Structure

In order to build on the progress to date in Open Space acquisition and planning the following steps are recommended. The details of these steps are within the strategic implementation section and in the Appendix, but there are several philosophical issues with this process that are imperative to emphasize in the body of the document.

Strategy 1. Coordinate the administrative structure and funding to support the plan.

At present the Town Council is the lead entity in terms of open space acquisition. It is important to have a centralized point for a property acquisition process when a transaction reaches the stage that the Town is actually negotiating for potential acquisition (which are Freedom of Information Act exempt negotiations). The Town Council would receive advice from other Boards and Commissions as described below on parcels to be considered for acquisition. The Town Council will be the sole party responsible for weighing the issue of price in the property purchase decision. In its role as lead agency for the acquisition of open space the Council should undertake the following actions.

1. Develop a financial plan, phasing in priorities for acquisition and other costly measures. Consider innovative concepts for funding of open space. Consider an annual bonding or appropriation for open space acquisition.
2. Provide staff and financial support to the lead entity (Town Council) sufficient to carry out its mission. Other entities could request staff and financial assistance from the Town Council if needed for identification and initial evaluation of candidate properties.
3. As priority parcels for acquisition or protection are identified, provide a staff resource that can be used by the Town Council to do proactive outreach to key property owners.
4. Acquisition of key parcels may wait years until the property owner or owners are ready to sell. Town staff should continue to maintain periodic contact with owners of key properties to assure them that the town is an interested buyer so that when a decision to sell is made, everything is in place to act.

The primary entity to recommend properties that would be appropriate from an open space perspective should be the Conservation Commission. The strategic implementation plan based on the goals and principles outlined in Chapter II creates a series of detailed actions that would be appropriate steps to be taken by the Conservation Commission.

Important to restate here for the purposes of defining the lead technical group for open space work is the need to:

- Continue the Conservation Commission process to complete property-specific open space plans and to keep the town-wide open space principles up to date with appropriate public input. On the recommendation of the Conservation Commission, the Town Council approved the Hatchery Brook Area Management Plan and the management principles for all Town open space properties in May of 2009.
- Continue to update the public presentation and related educational materials on open space and use it with various groups within the community to build understanding and support for this process. The goal is to foster community pride in its assets, in addition to understanding of simple land use controls. Include slides and other visuals that relate the open space to the character of the community, as well as to the protection of water supplies, flood storage, 'food security' for agriculture and other key environmental features. Maintain posting of this information on the Town website.
- Very important is an ongoing education process for adjacent landowners and others whose actions on their own properties may affect common lands and open space, giving them the understanding why and the tools how to respect the boundary. To further that process and avoid confusion, create a system to install open space markers on boundaries adjacent to development projects, which, along with appropriate signage, will confirm and publicize the presence of conservation lands. Publicize the issues of encroachments and the Connecticut system of penalties for such actions.
- In concert with the Planning and Zoning Commission, continue to utilize non-acquisition based measures to further open spaces, including but not limited to regulatory provisions within subdivision, health and zoning regulations, zoning for cluster development, and property tax incentives to preserve meaningful open space within private development. When a proposed open space contribution from a subdivision will not contribute to the Town's open space planning goals, then as possible, take the fee in lieu of open space and apply it towards open space acquisition or maintenance. The Land Trust should also continue to be considered as an entity to take title to parcels of open space that the Town identifies as too small or too unrelated to their corridors to take under Town ownership.
- Continue to make Town open space lands more accessible to the public by creating new trails and marking existing trails; building bridges and boardwalks, placing signage, creating and distributing trail maps, posting trails information on the internet and creating parking areas.

In order to fund conservation-based endeavors over the next years, the Conservation Commission recommends that the Town Council adopt a motion supporting and recommending to local legislators the Community Redevelopment and Conservation Act, which (as presently proposed to the state legislature but subject to amendment) would allow but not require communities to initiate a real estate conveyance fee in any amount up to 1% on buyers of real property over $150,000 that communities can use for planning and implementation (as well as local matches for funding opportunities and leveraging borrowed funds), particularly of some of the innovative and beneficial ideas within this POCD. Similar programs have been successful in nearby states. Categories that could be supported financially include but are not limited to:

- Alternative transportation infrastructure
- Brownfield remediation
- Clean air projects
- Energy conservation
- Green building retrofits
- Historic preservation
- Water treatment and storm sewers
- Working lands and open space

Strategy 2. Continue to use and adapt a variety of planning tools and innovative strategies to protect open space and the environment.

While the specifics of this recommendation are detailed in the strategic implementation plan, the philosophy behind this is important to understand. This POCD lists a host of Berlin-specific ideas for ways in which to improve open space – in fact, once a community is committed to improving open space, there is a myriad of opportunities to instill principles of land preservation. Berlin already has used a variety of 'tools' to acquire and manage its open space, but it is important for the purposes of the POCD to understand that these may change during the duration of this plan, and there must be adequate flexibility to access new financial and regulatory initiatives that add to the toolbox. This will always be a dynamic list.

Strategy 3. Evaluate the potential for the disruption of important ridgelines in the Town, and quickly adopt amendments to the zoning regulations as appropriate.

The ridgelines are living remnants of really old Berlin – the Berlin of the glaciers – and hence are the oldest symbols of Berlin Heritage Lands. The ridges embrace an unsullied area where to date the legal and environmental constraints have far outweighed the economic impetus to develop. From the many ridge areas protected as water resource lands to the ones that are already parklands such as Ragged Mountain, the ridges and abutting areas have been known to be a precious and critical resource for decades. The

Mountain Reserve zoning designation that has been in place since the earliest Plan of Development reflects the understanding of their fragility.

That was behind the state-led emphasis on ridgeline protection codified in the Connecticut General Statutes, which eventually spawned the idea of a compact to be signed by those communities sharing the ridge – the 19-town Metacomet Ridge Conservation Compact. In the Connecticut General Statutes, key traprock ridges are identified, including the Metacomet Ridge, and Section 8-1aa in Chapter 124 authorizes communities to extend special protection to these irreplaceable features.

Although the Conservation Commission and its members, along with several others, have brought attention to the ridgelines in various ways over the years, nothing has been done to legalize the town's ability to stop/control development, in part due to the absence to date of clear threats. However, this requires proactive work now since the impetus behind the state ridgeline legislation and the concept of the Metacomet Ridge Conservation Compact was to prevent confrontation by putting in place clear policies and regulations governing each town's traprock ridges. Meriden, Farmington and Southington share the same ridge and already have ridgeline-specific zoning. Therefore, as part of this POCD process, the Town of Berlin commits to:

Key Phrases Within Metacomet Ridge Conservation Compact Signed by Berlin

"... The Metacomet Ridge Conservation Compact affirms our commitment to protect the natural resources of the Metacomet Ridge...

... Therefore, we enter into this voluntary inter-commission compact to affirm our commitment to:

- *Conduct a natural resources inventory of our portion of the Metacomet Ridge that identifies priority areas for protection, and incorporate those areas into our Open Space Plan and call for their protection.*
- *Assist and work with our Planning and Zoning Commission to update our Plan of Conservation and Development to incorporate protection of the identified priority areas of the Metacomet Ridge.*
- *Assist with our Planning and Zoning Commission to update Zoning and Subdivision Regulations to promote retention of the natural landscape, maintain and enhance recreational opportunities, minimize forest fragmentation and avoid visual pollution on or near the Metacomet Ridge.*
- *Encourage and/or sponsor educational programs aimed at informing the public about the important value of the Metacomet Ridge. ..."*

- Request assistance with a natural resource inventory of the ridge and specify the areas of the ridge within the town needing to be protected under the state legislation, confirming with a resource inventory of the ridge area.
- Detail the areas of the zoning regulations and other resources to be amended to incorporate protection per the state statute Section 8-1aa in Chapter 124.
- Submit amendments to protect the area with the zoning amendments to be requested as part of this plan.

Strategy 4: Update and redefine the town's relationship to the recommendations of the Mattabesset River Watershed Plan, which was incorporated as part of the town's 2003 Plan of Conservation and Development, and further incorporate pertinent recommendations addressing riparian corridors and inland water resources of the Connecticut Climate Change Preparedness Plan, Draft 2011, once in final form and the supporting documents.

REMINDER OF WHAT IS YET TO BE DONE:
Goals Adopted within the Management Plan for the Mattabesset River Watershed

1. Create awareness among watershed residents about the network of rivers and streams that comprise the Mattabesset River Watershed.
2. Educate watershed residents about the link between land use and water quality.
3. Promote sustainable land use practices in the Mattabesset River Watershed.
4. Facilitate appropriate recreational use along the Mattabesset River, including the establishment of Paper Goods Pond Park, with its accompanying bank stabilization.
5. Restore and maintain wildlife habitat in the Mattabesset River Watershed.
6. Protect wetland and watercourse areas from development and other disturbances.
7. Modify regulations to incorporate stream protection requirements into regulations to promote conservation-based development, such as the reduction of impervious surfaces, and the use of swales.
8. Encourage the re-establishment, restoration and enhancement of wetlands as part of new development or redevelopment projects.
9. Identify, investigate, correct and prevent pollution problems.
10. Restore and maintain in-stream and riparian habitat to support healthy fish populations and other aquatic life.
11. Evaluate and balance in-stream flow needs, including flow volumes necessary for aquatic life habitat, drinking water supply, and other consumptive uses.
12. Obtain a consistent and stable funding stream to accomplish the action plan's objectives.

The 2003 Plan of Conservation and Development Committee voted to adopt and incorporate within the Berlin plan the principles of the Management Plan for the Mattabesset River Watershed, dated September 2000. The Mattabesset River Watershed is a 45,000-acre area whose waters drain into the Mattabesset River, which forms part of the eastern border of Berlin. No other among the ten towns in the watershed has as great a percentage of town acreage within

the watershed area – Berlin has 97.5 percent of its land area, some 16,930 acres – within its boundaries.

A wealth of water resources characterized Berlin's topography. The most important features stem from the age of the glaciers, which deposited glacial till and created landforms that ultimately defined the quality and location of water resources. The superiority of these resources has allowed three communities – Meriden, New Britain, and Berlin – to take advantage of Berlin's water supplies, using an extensive system of reservoirs and holding areas. Protection of these surface water supplies is of course paramount; yet there is also a complex web of underground supplies that ultimately feed the aquifers used by many communities and by the water systems and residential wells serving Berlin's citizens.

As the interrelationship of land use and water supplies has become further understood during the past decades, the premise underlying land use planning has shifted. The basic principle is that what happens on the land affects water quality; logic then dictates that land use planning is critical to protect water resources. Yet protecting water resources ultimately reveals links to other issues not traditionally associated with zoning and land use planning, such as habitat, riparian corridors [streambelt buffer areas], and ecosystems. While acknowledging the importance of its natural setting, there has not been a systematic relationship between the collection of information on the myriad natural resources and the technical assistance or regulatory mandates within the town to foster ways to protect these resources.

Although as part of the 2003 Plan, the town adopted the Mattabesset Plan, there was minimal progress towards incorporating Mattabesset Plan principles into the regulatory structure. There have been victories, including Berlin's adoption of new regulations governing an upland review area by the Inland Wetlands and Watercourses Commission. Work on a state-of-the-art fishway for migratory species around the StanChem dam in East Berlin that began the first week of October, funded with a state Ecosystem Management and Habitat Grant, may offer a model for other waterways.

This plan reemphasizes the need to examine the natural resource base of the community as related to land use and how best to regulate and protect these assets. Critical elements for the next decade that need to be integrated whenever feasible into the town's planning, zoning, subdivision and wetlands regulations include Low Impact Development [LID] requirements. LID, while reducing and redirecting stormwater, can save costly infrastructure expenditures by restricting impervious surfaces, altering runoff pathways, encouraging on-site infiltration, and decentralizing to 'micromanage' stormwater at its source. The result helps to minimize land disturbance and essentially preserve open space by slowing, filtering and percolating water onsite reducing the need for piping systems. Ten years ago, LID was one of the recommendations in the POCD pertaining to

the Mattabesset River and its tributaries; now it is viewed as a crucial element of the DEEP's emphasis on municipal activities to minimize the impacts of excessive precipitation from climate change, and better prepare communities for what seem to be significant increases in 100 and 500 year storms.

Flooding potential from increasing numbers of severe and frequent storm events, along with stream flow issues that are of growing concern throughout the state ultimately will force decisions for and actions to be taken by the town unless the town can proactively plan. With public safety as the underlying goal, made all the more urgent by recent storm events with drastic loss of life, adaptation is the mantra the CT DEEP is asking of towns as environmental events force communities to react rather than plan.

Related Elements of Connecticut Climate Change 2011 DEEP Draft Community Action Plan that echo the Mattabesset Plan:

"Historically, land acquisition in Connecticut has been focused on protecting rare ecosystems and imperiled species from non-climatic stressors, most notably from development pressure. **However, land acquisition through the lens of climate change must establish additional goals, with longer planning horizons to assure the protection and persistence of natural resources that may be threatened by climate change today and in the future.** Land acquisition cannot only preserve habitats and species as static features on the Connecticut landscape, but also must accommodate change to maintain habitat functioning or allow for the migration of new habitats and species assemblages. **Land acquisition that improves connectivity of critical habitat and migration corridors, especially in forest lands, headwaters, riparian lands and shorelines, is needed to maintain long-term ecosystem resiliency to climate change. ..."**

The DEEP draft sets out a number of goals for communities' planning purposes that will be crucial in the next decade, and should be referenced in this POCD when final, such as:

- Acquire land and conservation easements in riparian adjacent to coldwater streams ... coldwater streams were identified as one of the most imperiled habitats to the negative impacts of climate change.
- Further regulate the introduction and spread of invasive species ... climate change may cause current, non-aggressive exotic species to proliferate and become invasive, and new invasive species may become able to thrive in Connecticut due to changes in climate.
- Promote and require LID practices to decrease storage and treatment requirements and mitigate effects of climate change that contribute to flooding during extreme events.
- Promote and require preservation of natural features that treat and infiltrate runoff such as buffers, wetlands, and related landscape conditions.

The full list can be found in the document

Note these are in draft form at present and should be finalized concurrent with the POCD process over the coming months.

Due to the proximity of the town's many streams, including the Mattabesset River, to highly capitalized areas such as the downtown and various business parks and shopping plazas, stormwater management has taken on an urgency not seen ten years ago. Technology is catching up with and even surpassing need, but communities like Berlin need both to use (leading by example with new town projects) and to require the new technologies for site planning and design. LID combines preserving the natural ability of

ecological and biological systems to hold and filter water by leaving them intact, as well as mimicking natural hydrology and processes with smaller scale, less centralized treatments that naturally reduce sediments, nutrients and toxic loads. Green roofs and grassed swales and creating wetland areas for storm retention work alongside saving forests, preserving even individual trees and to allow them to capture and filter stormwater.

The guiding principles of the Mattabesset Plan validated the interrelationships between land use and water resources. These issues are even more relevant across the various parts of town now. Given that Berlin has the largest land area of any of the Mattabesset communities within the watershed, the goals of this plan had the potential to set up a new type of critical thinking on various land use activities. The Mattabesset Watershed is so intrinsic to the quality and character of Berlin's lands that the 2003 POCD committee recognized that the recommendations of that Plan could help to sustain a quality of environment that is of local benefit regardless of regional implications. Yet, in a busy decade since the 2003 plan, those recommendations did not end up achieving what had been hoped; none were codified as regulatory policy.

In 2013, it is different. The state of Connecticut's emphasis on towns planning for future climatic events that vary from historic patterns actually goes beyond many of the principles in the Mattabesset report of 2000, as well as incorporating many related innovations. As detailed in the state's 2009 document, *FACING OUR FUTURE: Adapting to Connecticut's Changing Climate* released in March 2009, there are a series of actions that CT DEEP recommends all municipalities to undertake in order to adapt infrastructure and planning practices for this 'new' world. Since Berlin has 26.3% of its land area within 300 feet of a riparian corridor, this is not just environmental planning. As urgently described by the state, and as so painfully witnessed with Hurricane Sandy in 2012, this relates to emergency services, public health and safety.

Yet, within the context of the Mattabesset basin, it is very important to recognize the underlying issue of stream flows, which dominate and may effectively preclude the town of Berlin from achieving significant progress by itself. The stream flow issue will be critical should DEEP be correct and Connecticut enter an era of climate change. The state has been working extensively on stream flow issues.

And, the number of reservoirs within the community, waters held back by dams, will be very important to consider over time should climactic events continue to defy definitions of 100-year and 500-year storms. As detailed in the Natural Hazard Mitigation Plan for the Central Connecticut Region approved by FEMA in June of 2011, Berlin has 2,286 acres in flood zones, 47% of which is zoned residential, 34% industrial, 7% commercial and 11% agriculture/open space. Berlin has 23 dams, ten Class A, four BB, three B and six C's which include Kensington Dam, Paper Goods Dam, Lower Hart Reservoir Dam,

Kenmere Reservoir Dam, Hallmere Reservoir Dam and Wasel Reservoir Dam. Due to the potential for catastrophic failure, each of these are on two year inspection plans.[2]

At present, the water companies control the stream flows since their lands and reservoirs form the headwaters of key parts of the basin. Water diversion permits for water supply systems currently divert a substantial amount of water from reaching the stream and river corridors that pass through the Town. Given the low flow conditions within the upper reaches of the Mattabesset Watershed that exist during the summer months in normal years – not to mention those of recent droughts – and the water quality issues in the lower portion of the watershed beyond the confluence of Willow Brook, there is little opportunity to 'develop' the local ponds, rivers and streams for either swimming or for cold water fisheries. Therefore, while the protection and preservation of the Mattabesset Watershed to enhance the water quality of its tributaries is a valuable pursuit, it must be considered realistically, since dramatic improvements tangible to the general public will be very difficult to achieve. The Connecticut Department of Energy and Environmental Protection stream flow regulations became effective as of December 12, 2011.

The Governor's 2012 budget proposed closing the Berlin Fish Hatchery, although it was not in the final bill. It is important to keep the fish hatchery open or if it is closed to make sure that the site is preserved as open space to protect the upper reaches of Hatchery Brook. The Town already owns most of the length of Hatchery Brook from the Fish Hatchery to Norton Road.

Strategy 5. Use open space lands for recreation in accordance with their fragility. AND

Strategy 6: Continue to link open space land within Berlin and on its borders.

The most recent open space parcel mapping confirmed that Berlin still has an outstanding opportunity to link its major open space lands into a single network that enhances public accessibility and that it has made significant progress towards this goal. Unlike efforts to preserve elements of the Town's past, the vision for linkage is to create an interlocking system of lands that is available for public access. Public accessibility to follow trails through the interconnecting system of open space must consider wetlands and floodplains that may prevent practical passage between contiguous properties. However, bridges and

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[2] The Connecticut Department of Environmental Protection (DEP) has created five dam classifications, based on hazard potential: **Class AA:** negligible hazard potential dam which, if it were to fail, would result in no measurable damage to roadways, land and structures, and negligible economic loss **Class A:** low hazard potential dam which, if it were to fail, would result in damage to agricultural land, damage to unimproved roadways, or minimal economic loss **Class BB:** moderate hazard potential dam which, if it were to fail, would result in damage to normally unoccupied storage structures, damage to low-volume roadways, or moderate economic loss **Class B:** significant hazard potential dam which, if it were to fail, would result in possible loss of life; minor damage to habitable structures, residences, hospitals, convalescent homes, schools, etc; damage to or interruption of the use or service of utilities; damage to primary roadways and railroads; or significant economic loss **Class C:** high hazard potential dam which, if it were to fail, would result in the probable loss of life; major damage to habitable structures, residences, hospitals, convalescent homes, schools, etc; damage to main highways or great economic loss. Source; CCRPA Hazard Mitigation Plan, page 23.

boardwalks may be an option in some areas as demonstrated by the Connecticut Forest and Park Association 2010 spring workshop that built a bridge and boardwalk at Bicentennial Park to complete a portion of the connecting Metacomet Loop Trail. To achieve the linkage that is the focus of this open space plan, there is a need to connect existing trails, ridges, streambeds and open space within Berlin into a network of open space.

The concept of trails is a useful metaphor for how open space can be linked to provide wildlife habitat and migration corridors for human's four-footed and avian counterparts as well as for the residents of and visitors to Berlin. Trails are one of the primary ways in which open space can be experienced across towns, states, and regions.

In recent years, there has been an emphasis on the restoration of natural walking trails, along with the addition of paved biking trails, such as those along old rail beds or canal paths. Berlin is lucky to be positioned on the NET (New England National Scenic Trail) at the junction of the Metacomet Trail that cuts through the state and into Massachusetts with the Mattabesset Trail that also offers a multi-town walking experience traveling south. Being on the NET, Berlin hikers can travel south nearly to Long Island sound, or north to New Hampshire! But like the trails and open space corridors in Berlin, these major through trails are threatened since their existence in many places depends upon the permission of private landowners that can be withdrawn at any time. A significant section of the NET in Berlin was protected by the Town's acquisition of the Blue Hills Conservation Area.

Over the years, the trails on private land have become more difficult to negotiate with property owners, and concurrent with the emphasis on linking Berlin's lands, it is incumbent upon the plan to look to create or preserve trails where possible to make the open space more accessible. The trails that connect Berlin are located on the perimeter of the community creating a natural greenbelt that embraces these critical habitat and resource areas within Berlin.

Some ways in which to do this include:

- Work with the Connecticut Forest and Parks Association and other groups to permanently secure the path of the Mattabesset and Metacomet trails and NET in Berlin.
- Support efforts to promote the NET. Note that kiosks for the NET have already been installed at Ragged Mountain and Timberlin Trails.
- Improve the link between the Mattabesset and Metacomet trails and move sections off the road if possible.
- Link Bicentennial Park and Hatchery Brook Conservation Area. The "Chotkowski Farm" property now under contract would complete this linkage.

- Improve the linkage between the West Peak area/Castle Craig/Meriden Water Department properties and Timberlin Park.
- Link Bicentennial Park, Timberlin Park and the Metacomet Trail by the completion of the last section of the Metacomet Loop trail section within Timberlin Park on Short Mountain.
- Link Timberlin Park and Ragged Mountain Park
- Link Blue Hills Conservation Area and the Meriden Water Department properties.
- Link Town Hall/Railroad Pond and Bicentennial Park (including indirect link via sidewalks).

In any case, it will be critical to continually scope out opportunities to enhance existing open space areas, in addition to any new areas. Samples of the thinking that should stimulate discussion of innovative ways to expand open space would be:

- Explore obtaining an easement from the Berlin Fairgrounds property at Beckley Road to access Webster Park, which was isolated by construction of Route 9.
- Explore the potential for protection of a large open space parcel that Shuttle Meadow Golf Club owns next to Ragged Mountain Park.
- Explore opportunities to expand existing Town parks and to improve parking and accessibility to portions of the parks available for passive recreational use of open space.
- Create and improve linkages between Berlin's downtown and nearby open space properties including Lower Lane properties, the Railroad Pond and the rear of the Kensington Firehouse.
- See if these will allow Berlin to proclaim that every resident is 10 minutes walk, bike ride, or drive from open space or parkland, based on walking a half mile in 10 minutes.

Flexibility to respond to opportunities and changed conditions is the key.

Strategy 7: Adopt appropriate regulations to protect the groundwater resources of the Town that are being used or could be used for drinking water.

The town of Berlin relies on a number of sources for drinking water, only some of which are under the Town's direct control. As future growth of any sort is anticipated, it has been critical to examine options for future water supply needs. Likewise, it is critical to anticipate and rectify the locations of uses that might not be compatible with the need to establish new wells. To do so, there are a number of activities that are recommended for the immediate future, working closely with the Water Control Commission and others that can effect improved practices.

- The Town Water Control Commission and the Kensington and Worthington Fire Districts should not establish public drinking water supply sources in areas where the aquifer may be adversely impacted by existing or planned land uses.
- Work with the Water Control Commission to allocate responsibilities for a comprehensive approach to groundwater management to protect existing and future supplies.
- Map and identify the critical areas of the underlying aquifers and other sources of existing and potential water supply.
- An 'aquifer protection boundary' has been created and should be updated if new groundwater resources are to be tapped for water supply.
- Identify potential major sources of known polluting practices.
- Identify more subtle issues relative to discharge from residences and parking areas, etc.
- Evaluate alternative methods for evaluating and controlling detrimental practices within areas determined to be key to drinking water sources via groundwater and aquifers, including the potential for regulatory changes and best management practices based on those proposed to be added to the Connecticut General Statutes in sections 22a-354i-1 through 22a-354i-10 [Regulations for Delineation of Aquifer Protection Areas, Best Management Practices and Prohibition of Regulated Activities within Such Areas].

A new well at Bicentennial Park had been considered. It is incumbent upon both the Water Control Commission and the town to develop the well in a fashion consistent with the open space use and natural setting of Bicentennial Park.

Strategy 8: Commit the Town and encourage private landowners to keeping "Forests as Forests" to protect critical upland forest habitat, genetic diversity, and opportunities for species movement.

As strange as it may seem in the context of conservation, forests need human intervention to stay healthy. Forest regeneration and future forest composition "depends on management decisions made today," according to the CT DEEP and the CT Agricultural Experiment Station. Yet challenges such as fragmentation, parcelization, deer and invasive species are threatening a healthy future. Wildfires cannot burn as they once did in the less human-populated tree stands. Disturbance is a natural process that releases new seeds from the forest floor and grows successive generations, but is rarely encouraged. Good conservation practices can include select timber harvesting to facilitate the regeneration of tree and shrub species on the forest floor, to encourage wildlife habitat and differentiation. This not only improves the health of all the trees and understory, but also increases the ability of the forest habitat to weather traumatic events

such as the October 30, 2011 snowstorm and 2012's Hurricane Sandy had it affected more of the inland area.

CT's State Forestry Plan (2004-2013) asks towns to establish measurable goals for the following topics to monitor gains or losses in forest health (effects of biological and human impediments):

a. Forest fragmentation
b. Age diversity within forests
c. Species diversity/composition within forest
d. Seedling regeneration
e. Wildlife diversity and stability of populations
f. Invasive species (both plant and animal)
g. Erosion
h. Forest and habitat maintenance on public and private lands
i. Education on forest management and silviculture treatments
j. Rare and endangered species populations

Given the amount of forested land in the town, both publicly and privately owned, the next decade should include a series of goals concerning healthy forests. When necessary, consistent with the state's emphasis on arresting the processes of fragmentation and parcelization, Berlin should involve the University of Connecticut and Connecticut Agricultural Experiment Station staff dedicated to forests as well as DEEP to undertake workshops for town staff and private landowners about healthy forest management.

Strategy 9: Create a Sustainable Community, across all topics from energy to transportation to housing.

The concept and terminology of sustainability can be ambiguous. According to the American Planning Association 2000 paper on Sustainability, it is "the capability to equitably meet the vital human needs of the present without compromising the ability of future generations to meet their own needs by preserving and protecting the area's ecosystems and natural resources. The concept of sustainability describes a condition in which human use of natural resources, required for the continuation of life, is in balance with Nature's ability to replenish them."

Sustainable communities, according to the documentation of the New England Sustainable Knowledge Corridor, of which Berlin is a part, "are urban, suburban, or rural communities that have more housing and transportation choices, are closer to jobs, shops or schools, are more energy independent and help protect clean air and water." According to the Capitol Region Council of Governments, sustainability means "Developing and supporting integrated, regional approaches to planning, projects and investments that will promote vibrant, healthy communities, protected natural resources and open spaces,

equitable access to opportunities and an economically competitive Capitol Region to serve all our citizens today, and in the future."

For the Town of Berlin and this document, it should mean a concerted effort to lead by example, to work towards the goals clearly set out by DEEP for healthy communities. The CCRPA 2004 Report, "Central Connecticut Inventory of Energy Use and Greenhouse Gas Emissions – Base Year 2000" in cooperation with ICLEI [Local Governments for Sustainability] estimated that the Municipal Government emissions were 7,717 tons eCO2, while the population of 18,215 contributed approximately 223,145 tons of eCO2 to the atmosphere. That plan lauded the 2003 POCD goal of increasing open space as a primary recommendation for climate protection planning. The report assumed that 71% of municipal emissions came from buildings.

This POCD is about land use, however, and minute managerial decisions are not technically in its purview; however, given the emphasis placed by DEEP on municipal participation in a whole community effort to move towards sustainability, especially to counter climate change impacts, there are a number of initiatives that can be referenced in the POCD. As with many similar ventures, public education and communication will be crucial to making this work. For instance, Berlin could:

- Complete a community-wide GHG inventory.
- Develop a climate change action plan with GHG reduction goals such as LEED building – there are funds available through the Clean Air Cool Planet Community Catalyst Fund for communities that make the municipal energy efficiency and renewable energy pledge.
- "LEED by example" might offer opportunities during construction of new municipal projects as well as elements of Transit Oriented Development in conjunction with the train station.
- Encouraging renewable energy resources and, often more important for municipalities, ending energy inefficiencies in buildings and fleet vehicles [although Berlin's natural gas fuel program put it ahead of the curve] would be laudable goals.
- Transportation is a key element of sustainability, and the possibility of commuter train service is one of a host of new transportation options that should help Berlin's sustainable initiatives.

As discussed particularly in the next chapter, land use and zoning that promotes smart growth, walkability, and community character are all elements of sustainable goals, along with Transit Oriented Development, Low Impact Development policies, and brownfields development. And, the forestry initiative may help to sequester carbon and promote cooling, one of the major benefits of natural forest cover. Food security, and local

agriculture, which will be discussed later in the agriculture section, also promote sustainable communities.

In sum, although sustainability cuts across some elements within the purview of the town POCD, and some well outside, it is part of the whole package that will be very important to the conservation ethic of Berlin over the next decade. Great strides were made since 2003 … the road – or perhaps this should say the railway – ahead is promising.

3.5 Land Conservation Summation

The town philosophy towards open space and critical lands that is presented here began with the expressed concerns of Berlin's residents well over a decade ago, echoing the growing recognition across the state and the nation that land is a finite resource that is not appreciated until it disappears. When coupled with the public health and safety issues starting to be seen from environmental degradation and misused resources, this plan continues to stress that the town's natural resources are crucial to protect, and that land use planning must create a framework to do so.

And, as so diligently expressed by the CT Department of Energy and Environmental Policy, municipalities MUST learn to adapt before environmental change and storm events do further harm to the physical and cultural landscape they hold dear. Interrelationships between land use and water resources force towns to realize that healthy water supplies for all are critically linked to what happens on the surface. The pressure of population increases and the issues of water and wastewater further justify the need to secure environmentally unsuitable lands from inappropriate and damaging development. Hence, this document and strategic framework present a multi-faceted approach to continuing necessary protections into future development scenarios for the community.

Berlin's Plan reflects the philosophy underlying the past decade of new programs and initiatives by the state Connecticut Department of Energy and Environmental Protection and the Legislature and Gubernatorial branches, as expressed within the DEEP Vision section of their Landscape Stewardship Initiative:

> "We envision a future Connecticut where development patterns will result in both the enhancement and restoration of vibrant and livable urban, suburban and village centers and the protection of viable and functional working, rural, and natural landscapes."

Part II. Cultural Landscape: Agriculture and Historical Roots

Agriculture has been from its inception part of the history of Berlin. For many of its early residents, right up through the 19th century, farming was the primary business

activity. Using the soils and water resources that characterized the fertile plain of the Mattabasset River and its tributaries, farming thrived. Even as the farms made way for residences and other developments, the imprint of Berlin's farming heritage is evident in the ancient village centers scattered around the town, marked by burying grounds and churches, as well as the meadows that remain in several locations, bordered by a forest edge that speaks of the importance once placed on woodlots. The interweaving of the agricultural heritage and historic resources are for many residents sacrosanct symbols of the Berlin that was, translating Berlin's qualities from an earlier period of time into the sense of place and community fabric that remains a high priority to many of Berlin's current residents.

At the same time, the community from its earliest days also fostered small industries. These were typical within Connecticut's agriculture-based economies. Processing of local materials and small mill-based manufacturing were a secondary occupation for many residents, whether as home weavers or similar 'cottage'-based occupations or as proprietors of the early mills that used the rivers and streams to power lathes and grinders and other essential elements of early agrarian-based industry. Parts of the community today reflect the mill villages that were characteristic of New England towns at the dawn of the Industrial Revolution – farm to factory was the trend and both coexisted for centuries.

There are two threads of this cultural landscape that have been emphasized by residents and community leaders as important to consider within this Plan of Conservation and Development.

- First, while many recognize that the economics of small farms preclude some families from continuing what is a hard-working lifestyle, and many of the major farms and dairies within Berlin have long since moved to other pursuits, many of Berlin's residents expressed strong sentiment to support the farms that remain. Whether running a horse farm between the meadows of High Street, or tilling and planting soils every year to stock a small farm stand with locally grown fruits and vegetables, or growing perennials and annual plants for wholesale to nurseries throughout the state, these landowners have become part of the community fabric and expectations of residents and visitors alike. Additionally, agricultural lands, farmland and woodland, provide what is known as 'non-market environmental services' – maintaining habitat, filtering water (providing agricultural wastes are dealt with appropriately), reducing flooding or at

least minimizing flood impacts due to undeveloped land, sequestering carbon, and preserving open space that municipalities need not maintain.

- Likewise, the cemeteries and church greens and centuries-old structures –residential and industrial and institutional – that mark Berlin's passage through time are also a cherished part of the community context for Berlin's residents. Yet many residents do not know the benefits of historic preservation to the community, nor do they know the rich history of Berlin's cultural icons.

Therefore, the Plan of Conservation and Development embraces the strategies below regarding cultural resources of agriculture and agriculture-based industry, as well as the historic and cultural resources of the community.

Because the State of Connecticut has, over the last decade, altered many of its policies to encourage the preservation of agriculture in particular, future implementation of the recommendations requires flexibility to adapt to new programs and policies encouraged by the State and others committed to maintaining Connecticut's agricultural heritage. As this plan evolves, the best ways to do this should be worked out during the implementation process by those groups with the skills and knowledge to detail how best to keep Berlin's cultural icons intact and available for future generations.

As part of the plan, it is critical to recognize that there are ways in which the community can strengthen its commitment to these aspects of Berlin life. But because agricultural and historic features are generally subject to change as part of development, **many of the detailed recommendations for the incorporation of protective measures are addressed in the next chapter of the Plan of Conservation and Development,** since most of the conflicts with uses occur within residentially zoned areas and it is there that proactive measures can be instituted.

This section will concentrate on the general philosophy underlying the role these considerations should play in conservation measures and the diverse array of tools available for use, along with two strategies.

Strategy 10: Actively pursue ways in which to strengthen the agricultural product industry and working farms within the community, including the retention of existing farming operations, the encouragement of new farming operations including those on

a small scale, and the encouragement of new, smaller operations in agricultural products.

To do this, the community will need to make a commitment that farming and related products are a desirable part of the community economic and cultural fabric.

'Changing consumer trends' are currently favoring a resurgence of farms' relationships to municipal economic growth, remembering that 'related products' can be food manufacturers and processors, garden centers, veterinarians, farm equipment wholesalers and retailers, repair shops, and large-scale bedding plant propagation. Expenses from all these operations flow through the community and stimulate the local economy, leading the Connecticut Conference of Municipalities to place the agricultural industry as a primary growth area with niche potential for many of Connecticut's towns. The Central Connecticut Regional Planning Agency, in their Comprehensive Economic Development Strategy states: "The local food movement and the growth of agritourism are changing the face of the industry. ... Americans are increasingly interested in food systems and this interest presents an opportunity to strengthen the region's remaining farms." (P. 138) Reminding its constituents that agriculture is economic development, in real dollars and in image, CCRPA as part of the CEDS calls for "Provide greater support to the region's agricultural cluster." They strongly advocate, as expressed elsewhere in this Plan, the benefits that a viable agricultural community offers to boost the image of a community, allowing quality of life to be front and center.

Although the past decades of development in Berlin have erased many of the farms from the landscape, several remain, some as farms that sell products on an on-site produce stand, some as "pick your own" tourism-inducing entities, and some as nursery farms, propagating plants for sale each year to the thriving nursery trades within and outside of Berlin, including one major nursery export operation that uses lands throughout the community. [See Public Act 490 map.] A few farms keep livestock, and Berlin has several places for horses in private residences and commercial stables. The remaining farms – about a dozen – continue to offer positive attributes to the community, from the jobs, income, and ambiance they lend to the town, as well as the fact that farms require little in town services while contributing greatly to the open space visible within the community.

Yet to date, the ebb and flow of farming has been allowed to happen without significant governmental assistance, except for the commonly used PA-490 tax exemption. The town has not had the resources to be proactive for agriculture, and opportunities may

have been lost. With the advent of interest in 'food security' and 'locavore' eating, more and more communities are seeing new enterprises that are small enough to farm without the traditional farm family model, especially selective, high-quality product operations. CRCOG in their model agricultural regulations suggests that less than three acres be defined as a 'limited farm' – that is a very viable model for Berlin's future.

As the town has grown, there have been two key effects on agriculture.

- First is the simple reality that many residential developers can buy and sell agricultural land for much higher values than farming alone could ever command, setting up the system that sees more open lands lost to development. Family farms are a dying breed, and research proves that it takes significant commitment to maintain that way of life. Yet many communities are finding that it is in their best interest to find ways to support the local farmers through innovative methods that directly and indirectly help them, rather than lose the land to development. In 2004, Cold Spring Brook Farm in Berlin chose to obtain a conservation easement through the Connecticut Farmland Trust to ensure that the property remained in farming; 2012 was its 102nd year in family operation. Two years later, the Scheer Farm chose to offer their land to the Town of Berlin, working with the Berlin Land Trust, for open space; currently the only community gardens in town are on that land where most recently corn grew.

- Second, as a community balances agriculture and residential growth, it often finds an increase in simmering concerns by some residential neighbors about the reality of living adjacent to farmland – the fact that farming operations include some practices that detract from nearby residences – noise, odors, etc. Over the past several years, 'right to farm' ordinances have been developed to ensure that new residents fully understand that moving into an area where active farming occurs will entail various 'inconveniences' at times. Most important, a good 'right to farm' ordinance can deflect conflict before ending up in court; there are many examples here in Connecticut. Another strategy is to require buffers to be built by developers adding new residences adjacent to farmland; many Connecticut communities have embraced this strategy in their agricultural 'toolkit.'

When Berlin's first Plan of Development was completed in 1959, 10,702.1 acres – 62.5 percent of the total land area – were designated as a "Farm Zone", which was considered a residential district subject to growth in the future, with 88% of the land undeveloped. By the time of the 1974 plan, approximately 10.8 percent of the land was under active cultivation and the town had "acquired the characteristics of a single-family residential suburb of Hartford and New Britain."

While the 1974 plan did not actively support farming, it did specify an extraordinary amount of open space to be protected, with great details as to what should be protected. It included virtually the entire area from two lots south of Norton Road and both sides of Kensington Road from where it curves to the west after the Norton Road intersection, excepting only a subdivision that included Old Hatchery Road and Longview Drive. In essence, the plan proposed to protect a large part of the active farmland, including many of the farms at risk today.

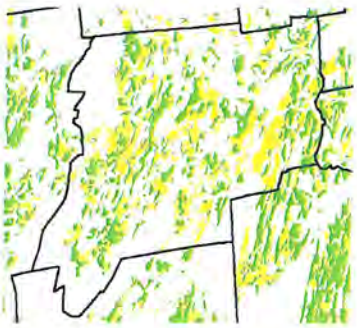
Today there are approximately one dozen active farms in the community. Most of these have remained in the same families for decades and have PA-490 tax protection that has long since exceeded its years with constraints on sale of the land. Special taxation and patronage by local residents is not enough to ensure their survival. This plan would propose to assist them as possible to allow farms to remain as open space within the 'working landscape' of the town, as well as encouraging a new generation to take up what is often a part-time occupation but full-time passion, with products geared more to today's consumers.

Berlin's PA-490 Exemptions & Ag Soils

Forest	Open Space	Orchard	Pasture	Tillable
1141.90 acres	83.46 acres	67.97 acres	82.34 acres	1057.40 acres

Note that several categories were omitted from the analysis by the assessor ... but these are all private lands

Green represents prime agricultural soils; the peach color shows important farmland soils



Although issues of farms and agriculture intersect with issues of open space and natural resources, the recommendations specific to agriculture are important to articulate. The essence of the near-term recommendations would be to:

- Consider farm preservation and agricultural support as a separate category of open space preservation and make it a renewed priority for the next decade.

- Give the Conservation Commission the responsibility for policy recommendations for farm preservation, after completing:

    - an inventory of the number and types of farms,
    - the acres farmed,
    - the number of people employed by these farms and related agricultural businesses, and
    - any other information that will help to quantify the economic value of Berlin's agriculture and related products.

- The Commission also needs to quantify what farmland is currently fallow, as well as what open lands could be suitable for farming. Map current farms as well as fallow farms, and overlay agricultural land data available through the NSCS and related data bases such as UConn CLEAR. The result can give the town some data, particularly about properties with potential for small scale enterprises. The NRCS offers these services to towns as well, since they are well-positioned to look at 'locally important' soils that do not show up in macro-maps. Important to add to this mapping is the intersection of this data with other critical environmental areas, be they watersheds, critical wildlife habitat or corridors, floodplains, etc.

- Hold a focus group or listening session with Town farmers to solicit their ideas about preserving the future of farming in the community, including the successional plans among farm families, interests in changing the focus of their business or the scale by adding lands or renting out lands. This must happen in winter to meet their seasonal schedule; since many Berlin operations do holiday greenery, January or February should be a target date.

- Consider creating an agricultural advisory board as a subset of Conservation that meets quarterly to consider the town's agricultural base, including the agricultural products industry. If there is not enough 'critical mass' within Berlin alone, create a mechanism for Berlin's farmers to join with those in adjacent towns to discuss regional farming concerns. CCRPA's 2012 CEDS has on page 31 as action 2-5b: Consider establishing a standing region-wide agricultural advisory committee.

- Partner with CCRPA as feasible since it has articulated agriculture as an economic priority for its revenue and its non-quantifiable image benefits to communities.

- Evaluate and implement opportunities for farm uses on town-owned parcels, such as open space properties, expanding on the current year to year leases for haying to keep meadows in other conservation lands. There are several models in the New England

region, some through the Trust for Public Land, that combine public lands with the opportunity to train and mentor a new generation of young farmers, as noted below.

- Also look at other town boards and commissions to see if any include voices of farmers and related agricultural products industries, and encourage town agricultural interests to have a voice on at least one town committee, to bring that perspective into various governmental decisions. Experience across Connecticut illustrates that a single voice can help various committees and commission remember to consider this economic sub-group.

Once the data on farming and the voices have been heard, the town will need to pursue a variety of options, depending on the policy priorities that are determined. Some of the initial recommendations include the following:

- Have the Town Council establish a policy within its open space acquisition program to encourage the acquisition of development rights on farmland. Also actively pursue collaborative funding with State, federal, and private funding sources to buy development rights to preserve farms, noting that most of the state programs are limited to farms in excess of 30 acres. Offer opportunities for local farmers and those who might be interested to attend workshops on selling development rights and similar conservation easements, which will also allow them to network within the community and the region.

- Be certain that the town zoning laws use the agricultural definitions in the Connecticut General Laws [CGS §1-1(q)], which are seen as 'broad and inclusive.' At present, the zoning definition of a farm is: "A parcel of land used principally for agricultural activities, nursery or truck gardening, or for the raising, keeping or sale of livestock or fowl, but excluding the raising of animals for laboratory use or their fur." The agriculture regulations are codified in Section XI., Special Regulations §C1-10.

- By knowing which agricultural businesses Berlin has and which would be desirable to add, the definition can be evaluated to be sure that valuable agricultural-based businesses would not be excluded in appropriate zones by linguistic nuance – this has happened in many Connecticut communities due to well-intentioned but poorly written zoning bylaws. Use the CCROG document with model ordinances and similar legislation assistance. Check what is proposed with the Connecticut Farm Bureau.

- Be certain that somewhere in town, or on the website, there is a place to get advice and information on farming related issues – for many communities in Connecticut, this is handling with direct website links to the Department of Agriculture, the Connecticut Farm Bureau, regional and national organizations such as the Connecticut and American Farmland Trusts.

- Evaluate opportunities for the town to lease land to young or new farmers. There are many more models of municipalities purchasing farmland specifically to lease to farmers, creating open space, tradition, and development protection while absorbing the infrastructure costs, especially while the farm operation is getting underway. As noted, access to land is particularly important for beginning farmers who are crucial to the continuance of a local agricultural identity. The state has a very useful place in their website to link available land to interested farmers.

- Evaluate the potential for value-added agricultural operations that add processing facilities such as wineries, bakeries, kitchens for canning and food products etc.

- Encourage 'buy local' opportunities, from farmers markets to farm to institution.

- Highlight local farm products and destinations – at present, Berlin's farms and greenhouse operations are NOT on the state map.

- Do not expand water and sewer infrastructure in areas deemed suitable for agriculture, removing the temptation to development.

- Consider creating an agricultural overlay district or an agricultural zone that will:

  (1) help the town and landowners to understand expectations for the protection of farmland and agricultural operations,

  (2) reduce the impact of new development on agriculture, and most importantly,

  (3) identify those areas with priority for farming that certain zoning provisions might either be waived or created [Planning for Agriculture summary]. These can be used for towns to allow by right certain agricultural uses, as well as institute extra guidelines for such developments.

3.6 Land Use Conflicts between Agriculture and Residential Development

There is another element of the relationship between farm uses and residences that has not been addressed in the past. Residential development in rural areas has many impacts upon the land use and services of a community. These impacts are often most dramatic in rural communities or formerly rural communities that are experiencing residential development. These impacts included the alteration of community character and a greater demand for services. However, another impact may be an inhibition upon the remaining agricultural operations.

Many people build or purchase homes in rural areas to take advantage of the overall character of the area. In many situations, the character includes farms. However, farms can be unsightly, and the keeping and raising of livestock can generate odors. The irony

here is that people seeking a rural lifestyle may find some of the inherent characteristics of that rural lifestyle somewhat offensive.

Sec 22-3 of the Connecticut General Statutes includes a definition of agricultural land:

> b) As used in this section "agricultural land" means any land in the state suitable with reference to soil types, existing and past use of such land for agricultural purposes and other relevant factors, for the cultivation of plants, for the production of human food and fiber or other useful and valuable plant products and for the production of animals, livestock and poultry useful to man and the environment and may include adjacent pastures, wooded land, natural drainage areas and other adjacent open areas;

While one issue facing Berlin in this Plan of Conservation and Development is how to protect agricultural lands from complaints and opposition by homeowners who do not like some of the impacts and characteristics of agriculture, there is still expressed in surveys by the community a true desire to see farming remain. Therefore, compromise makes sense.

Planning for Agriculture

As advocated in the Connecticut Conference of Municipalities/Connecticut Farm Bureau document, ***Planning for Agriculture***, which is being used across the state to help communities govern and assist this promising economic and community asset, there are several guiding principles for assisting a local agriculture economy:

- Include all farms when defining agriculture.
- Help farm stands be successful.
- Allow adequate and effective signage.
- Accommodate farm structures.
- Minimize farmer-nonfarmer conflicts.
- Support compatible commercial enterprises on farms.
- Assist farms with laws and regulations regarding the sale of food products.
- Ease the permitting process for farms.
- Address livestock concerns.
- Recognize the benefits of local agriculture and consider other forms of tax abatement besides the PA-490.
- Encourage agricultural use of town-owned farmland.
- Keep agricultural land productive for the future [link landowners to state resources to help with soils, etc.]
- Reasonably regulate wetland compliance.

Berlin, like most other suburban communities, does not have a specific agricultural zone. It is interesting to note that the earliest zoning in Berlin, however, did have an agricultural zoning district that covered much of the Town. Most of the current zoning of agricultural land is a one, two or three acre minimum lot size. Although two- and three-acre zoning ensures low density residential development of rural areas, it does not promote or protect agriculture. At one point, the residential zoning actually limited agricultural uses, as barns were considered to be an accessory structure and limited in height. This has been changed to a large extent, although the zoning still inhibits certain agricultural related activities, such as the use of signs or retail activities, as well as the placement of barns and other agricultural buildings.

Agricultural zoning usually works best when it can encompass a large agricultural area left largely intact, with little intervening residential development, and an intact agricultural infrastructure. Unfortunately, the remaining rural areas of South Kensington have experienced considerable residential development over the past several years. The agricultural operations that are left are not very large and are geographically isolated from each other, with little remaining agricultural infrastructure. Therefore, the recommendation would be to establish regulatory oversight via an agricultural zone or if sufficient contiguous areas cannot be identified by an overlay district, although as detailed in below, there are a number of options that should be considered while structuring such a zone or overlay district. There are several potential methods that may be used to protect agriculture.

Agricultural Zoning with Residential Uses as a Special Permit

This would establish a zoning district in which agriculture would be a permitted use. All activities associated with agriculture, including the raising and keeping of livestock, and associated commercial activities would be permitted as of right.

Residential development would be by special permit. One of the criteria that can be included in the regulations is the potential impact of residential development upon agricultural operations. In addition, where residential development abuts an agricultural operation, there could be requirement for a buffer on the residential property.

Agricultural zoning is most appropriate within the South Kensington area, which is where most of the remaining Town agriculture exists. However, there has been substantial residential development within the South Kensington Area over the past two decades, which has resulted in a somewhat 'checkerboard' pattern of development.

Right to Farm

Section 19a-341 of the Connecticut General Statutes was a response to the burden of nuisance complaints and restrictive regulations upon farmers. Initially, many

communities used this to help farmers. The act protects farmers from nuisance lawsuits stemming from the sights and smells of agriculture. But, the CCROG work on agriculture, cited herein, includes several ideas much more suited to a community like Berlin. The Capitol Region Council of Governments in 2006 created model regulations that should be incorporated into the Berlin zoning regulations addressing this topic as well as the whole range of issues related to agriculture and other uses. These changes would help to ensure that all agricultural operations are in compliance with the zoning regulations, and protect the farms from zoning enforcement actions. The document is incorporated by reference herein: "Regulating the Farm: Improving Agriculture's Viability in the Capitol Region," July 2007.

There are also resources available to help farms prepare Conservation Plans as well as Comprehensive Nutrient Management Plans for livestock operations.

Definition of Agriculture

The zoning regulations should include a definition of agriculture that references the definitions within the State Statutes. The regulations could also include a minimum size for a parcel to be classified as agricultural. Connecticut statutes do not have a minimum size but the state of Massachusetts has a five-acre threshold for agricultural protection.

3.7 Summary and Recommendations for Agriculture

Given that the townspeople of Berlin so vehemently expressed concern about the loss of the local farms and farming families, the Town of Berlin can act to assist owners in several direct and indirect ways. From direct involvement such as the purchase of development rights to the indirect assistance promoting local products, there are a number of items for consideration, many of which have been successful in other towns. The goal is to protect existing farms, to encourage them to remain in agricultural use, and to facilitate open communication between the Town and the farming community to foster a positive and productive relationship.

Policy changes and agricultural supports that should be initiated include:

1. Encourage use of selected town-owned parcels with appropriate soils and configurations for agricultural purposes, as is being done in many Connecticut communities. Explore the options regarding the leasing models and young farmer educational models that are being fine-tuned by other communities. With farms and agricultural lands being a desired attribute of lands to be targeted for conservation acquisition in the future, this option needs to be developed quickly so that Berlin is in a position to act should an inquiry come in about appropriate lands.

2. Agricultural zoning or an agricultural overlay district should be instituted over the areas of South Kensington where there are significant areas of agriculture, and over the remaining farms throughout the community. In the Agricultural Zone scenario, agriculture would be a permitted use, with residential uses permitted by Special Permit. A criterion for approval of the Special Permit for residential use would be the potential impact upon agriculture.

3. The zoning regulations should include provisions similar to the Connecticut "right to farm" regulations, in which customary farming practices are not in violation of the zoning regulations.

4. Agriculture should be specifically defined in the zoning regulations, which would include a minimum size of an agricultural operation, recognizing that many new agricultural based operations can be on areas as small as one acre.

5. Certain non-residential uses that are associated with agricultural operations should be permitted by Special Permit. These could include bed and breakfast establishments, agricultural related recreational activities and the sale of crafts, produce and related food items. Allowing accessory uses such as farm stands more broadly defined, or bed and breakfast rights, would assist the economic vitality of farming operations.

6. Amend the zoning ordinances to permit farm signage, including off-site signage for farms not on major thoroughfares. Seasonal signs are generally needed as well.

7. Protect productive soils that support agricultural, horticultural and forest uses as defined by the Hartford County Soil and Water Conservation District.

8. Act as an intermediary when necessary between local property owners and the CT Department of Agriculture or the Connecticut Farmland Trust or other private land trusts dedicated to farm preservation on matters ranging from assistance with farm products to purchase of development rights.

9. Promote Berlin's local farm produce and continue to support the 'Pick Your Own' farms and the farm stands that exist in the community through publicity and encouragement, and get town farms on the state maps and the state's map of nurseries and plant operations

10. Continue the support for the Berlin Fair each October as a manifestation of the farming base of Berlin.

11. Evaluate how best to continue PA-490 tax breaks for valid agricultural uses while maintaining some level of control beyond the current legislation's deadlines limiting development of PA-490 properties.

12. Establish that the Town policy will include purchase of development rights of farms as part of the Town's open space acquisition program and aggressively pursue collaborative funding partners for development rights purchases.

13. Encourage the creation of an agricultural museum and/ or an agricultural heritage site.

Strategy 11: Retain and improve the cultural landscape of the community including the historic fabric, scenic views, stonewalls and scenic vistas along roadways.

Berlin Historical Society
Elements of Berlin's Cultural Landscape

Worthington Ridge Historic District
The Central Victorian Core of East Berlin
Peck King Building
Kensington Grammar School
Meeting House at Worthington Ridge
Paper Goods Factory [and pond]
18th century homes and barns identified in the Berlin Historical Society architectural survey
Augustus Moore home/property/stables on High Road
Pistol Creek site and bridge/dam on Spruce Brook
Seven Sisters Railroad Bridge
Berlin Train Station
Tower House on Farmington Avenue
Lustron houses on Tollgate Road, Westview Terrace, and Mountain View Road
all monuments
churches built before 1950
cemeteries
Selden School
Ledge School
Fontanella Farm
Chotkowski Farm
DeMaria Farm
Krystopik Farm
'scenic highway along Chamberlain Highway from Dr. Chotkowki's farm to Meriden Lane'
Timberlin Golf Course and Park
Sebethe River and banks

Source: Letter dated March 15, 2001 from Kathryn Heffernan Kearns, President of the Berlin Historical Society to Brian Miller, Director of Development Services

The Town of Berlin has an active Berlin Historical Society that has monitored the preservation of the town's historic resources over the years. Yet, over time, the definition of a community historic resource base has changed from traditional colonial-era historic districts and independent homesteads of founding families. Instead, historic resources that contribute to the community fabric are much more subtle, from the visual amenities of winding, scenic roads bordered by stone walls and mature trees, to the understanding of how old brick factories and their functional interiors may represent a critical insight into a community's past. Berlin has all this and more, as seen in the detailed list of historic assets within the town's cultural landscape compiled by the Berlin Historical Society as part of the open space plan.

From the lonely graveyards that dot the locations of former villages to the post and beam houses of Worthington Ridge, Berlin's cultural landscape is replete with

evidence that the people of Berlin lived, worked and died in a town marked by its existence through every major event of this nation. Many of Berlin's eldest houses contain plaques confirming that they were standing before 1776, with the oldest dwelling assumed to be the Richard Beckley House built in 1668-1669.

History even played a role in the Town's first major piece of passive recreational open space, dedicated on November 1, 1976 as part of the nation's Bicentennial celebrations and called Bicentennial Park. It was celebrated as a legacy for future generations, 'leaving for posterity one of God's most treasured gifts, pure clean water and a natural site of permanent peace and beauty.'

As keepers of its historic legacy, the Town's Berlin Historical Society supports its existing historical districts as well as the numerous individual properties of historic merit that lie within the community. They have identified the sites in the table on this page as those meriting attention as part of the town's cultural landscape. These are part of the town's historical assets that should be considered in the town's future development and conservation.

In addition, the Connecticut Historical Commission maintains a detailed inventory of historic structures in Berlin complete with black and white photographs, based on the 1983 Historic American Engineering Record [HAER], and compiled by Matthew Roth. Berlin also has four sites on the National Register of Historic Places.

Given that it has been three decades since the Connecticut Historical Commission has actively assisted Berlin, the time could be right to examine and update the inventory, given that the importance of cultural landscape elements from scenic roads to stone walls has been greatly expanded since the original survey. It would be prudent to work with the Berlin Historical Society to contact the Connecticut Historical Commission and identify possible assistance to update the inventory.

The Central Connecticut Regional Planning Agency included historic preservation in their CEDS with Objective 2-4 on page 29 of the document: "Increase the effectiveness of, and regional support for, historic preservation policies and incentives" noting that "one of Central Connecticut's most valuable assets is its rich history." They called for towns to create or update their historic resource inventories as part of their POCDs, to advocate local policies that encourage adaptive reuse instead of demolition, and to investigate the possibility of completing an analysis of impediments to historic preservation and building rehabilitation (often, now, accessibility requirements).

1. Protect and promote the town's rich historical heritage that ranges from the 17th century homes of its founding families to the 19th century manufacturing sites that brought prosperity to many of its residents, as well as all other sites as detailed by the Berlin Historical Society and other qualified entities.

2. Encourage an updated inventory and photo documentation of key sites in Berlin's cultural landscape, including cemeteries, greens, structures both residential and commercial, and other cultural icons, including perhaps portions of the Metacomet or Mattabasset walking trails.

3. Amend the zoning and subdivision regulations to encourage the preservation and reuse of historically significant structures within proposed developments.

4. Inventory and protect Berlin's scenic roads and byways.

Although scenic roads are a relatively new concept for many communities' planning departments, the state Department of Transportation long ago recognized the importance of them in Public Act No. 87-280, leading to a definition for state purposes of: *A scenic road is defined as any state highway that: 1) passes through agricultural land or abuts land on which is located a historic building or structure listed on the National Register of Historic Places or the State Register of Historic Places; or 2) affords vistas of marshes, shorelines, forests with mature trees or notable geologic or other natural features.*

The scenic road designation means that any further alteration or improvement on that section will maintain the character of the road. Many communities have taken this several steps further, and defined specific guidelines to help protect the vistas both large [meadows and orchards] and small [stonewalls] that define our state heritage. Given that the Berlin Historical Society already identified scenic roadways as part of the community historic fabric, the following recommendations can codify this interest to protect Berlin's uniquely rural roadways:

- Define the features that distinguish Berlin's scenic roads and byways – agricultural vistas, open meadows, historic properties, stonewalls, mature trees, notable geologic formations.

- Inventory roads within Town that could merit scenic road designation as part of the historic and cultural landscape defining the community

- Create a definition of scenic road [related to but not necessarily identical to the one in the Connecticut General Statutes.]

- Study the benefits of a Scenic Road Ordinance per the enabling section of the Connecticut General Statutes.

- Develop regulatory controls for scenic roads; at a minimum, include requirements in the subdivision regulations for preliminary mapping of all stone walls, significant trees, and tree lines along existing town roads abutting a potential development so they are part of the subdivision review process.

Investigate the designation as "scenic roads" for several key routes in town, including but not limited to Southington Road, and sections of the Chamberlain Highway.

3.8 Conclusion on Cultural Landscape and Resources

Cultural resource sites are now understood to be an intrinsic element of community identity, critical to the sustainability and livability of communities. Studies prove that their place in the community fabric ultimately helps to attract economic development of many types. They may be archeological sites, historic sites, or areas that simply help to define a community's sense of place. As detailed by the University of Connecticut in their educational program for communities,

> "Our communities are often seen from three perspectives: The panoramic view from afar, or the community's setting. In New England a village cluster dominated by church spires outlined by scenic vistas of mountains or rolling hills is a setting often expressed as representative of the regional sense of place. The gateway to the town leading to the outer edge of development, usually viewed along major approach routes. This area often contains the farmland and open space cited as representing the "rural" character of the community. The developed community dominated by the town or village center of downtown. This area often contains the man-made physical focal point which stands out in people's minds as the prime image providing a sense of identity."

These areas are not the same from community to community, nor may the perception be the same from one resident to another. Yet, as the University of Connecticut advises the many communities within the state, the cultural landscape is comprised of all these:

> "Scenic villages, main streets, historic districts, institutional buildings, historic landmarks, urban plazas, town greens, gazebos, front and side yards, cemeteries, church yards, heritage trails, bridges, historic mills and dams, community walks or trails, neighborhood parks, skating ponds, stone walls, tree canopied roads, dirt roads and the last farm in town."

Herein lies the basis of the Conservation ethic within this Plan of Conservation and Development– with **the Berlin Heritage Lands as the open space link between Berlin's rich history and its wealth of natural resources**.

Chapter 4: Commercial and Industrial Development

Planning and community building are about trying to shape destiny. Some elements are pre-ordained by economic conditions (i.e., the 2008 economic meltdown), some by governmental edict, and some by blind luck. But underneath and in between all these elements is the need to have a plan and, as so accurately phrased by the state of Connecticut in the introduction to their 2009 Connecticut Economic Strategic Plan: "Creating a comprehensive strategy that will expand economic prosperity for all citizens … requires policymakers to begin at the end – meaning the destination must be decided before the journey commences."[1]

Berlin's journey, begun anew with the 2003 plan, had a destination in mind. By carefully directing development to those areas most able to sustain it, including a number of 'brownfield' and 'greyfield' sites, along with other 'smart' locations for development, as recommended by the state in their move towards 'responsible growth,'[2] Berlin balanced the conservation of unique and delicate lands as described in the previous chapter with the targeting of developable lands. Using a combination of incentives (such as zoning changes) and restrictions (such as utility service area limits), Berlin worked to balance property owner rights and desires with the potential for greater benefits from development – the right kind of development for the fragility and surroundings of the lands available, hence the term 'targeted.' Berlin's policies and actions echoed the regional and state planning edicts under consideration at the time, later formalized during the last decade, towards resource-based planning that could allow the state (and Berlin) to retain its character and a role "as a place where families, students, workers, entrepreneurs, companies, government and other organizations come together to enhance its competitive advantage, distinguishing the *state* (*mentally substitute 'Berlin'*) as a dynamic place to live, work and relax." [3]

The Connecticut Department of Economic and Community Development in 2008 issued the following growth criteria, based on the input derived from the Commission on Responsible Growth Task Force. These criteria defined the Central Connecticut Regional Planning Area's Comprehensive Economic Strategy and are crucial in that state grant money can only go to projects conforming to these state growth management goals. These are important to note here since elements of these are underscored in this development plan:

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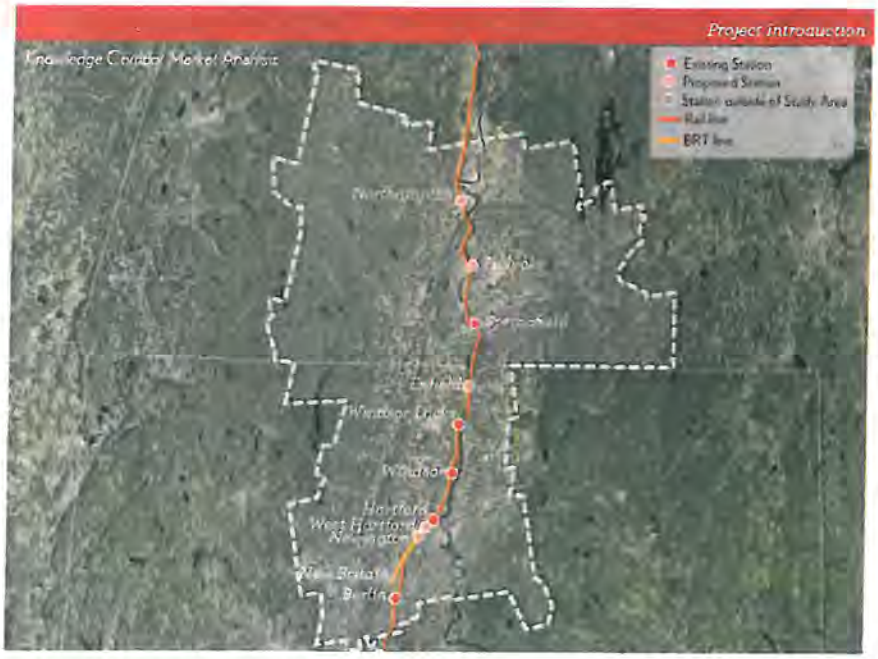
[1] Department of Economic and Community Development, Joan McDonald, Commissioner "Connecticut Economic Strategic Plan," September 2009, page 4.

[2] US EPA Office of Sustainable Development with Connecticut Capitol Region Council of Governments, "Smart Growth Guidelines for Sustainable Development," November 2009, in partnership with CT DECD, CT OPM, CHFA and DEP.

[3] *Op. cit.*, "Connecticut Economic Strategic Plan," September 2009, page 4.

1. Project activities should be in conformance with the Conservation and Development Policies Plan for Connecticut.
2. Locate projects within existing developed areas and promote infill development.
3. Locate projects within existing public utilities service areas (water, sewer, etc.).
4. Projects outside of public utility services areas should be scaled to use on-site systems, where practicable, to manage un-planned development of adjacent land.
5. Promote transit-oriented development.
6. Promote energy/water conservation, energy efficiency and "green" building design.
7. Avoid impacts to natural and cultural resources and open space.
8. Promote mixed-use development and compatible land uses (pedestrian-friendly with access to multiple destinations within close proximity of each other).
[Source: Connecticut DECD Growth Criteria, 2008]

The Connecticut Economic Strategic Plan calls for "a vibrant, diversified and resilient economy that provides the highest possible quality of life and access to opportunity for all. The state will promote responsible transit-oriented growth, balancing the conservation of existing assets and natural resources with innovative economic development." [4] There is no better way to describe the newest element of the plan put forward below for the economic development of Berlin over the next ten years than to use those same words.



The new Springfield to New Haven commuter rail that links the Knowledge Corridor[5] is due to open by 2016, part of 1.53 billion dollars of new transportation investments in the corridor over the next ten years. With this, Berlin has a prime opportunity to add an image and lifestyle enhancing development, possibly leading to the investment of millions of dollars at the center of Berlin, to the more traditional economic drivers within the many existing business parks and commercial properties. With major retail activity starting at last to move south from

[4] *Op. cit.*, "Connecticut Economic Strategic Plan," September 2009, page 4.
[5] This is a PowerPoint slide from the 2012 State of the Region Conference on the Hartford Springfield Knowledge Corridor, from the presentation by Lyle Wray of CRCOG on "Achieving Sustainable Regions: New England's Sustainable Knowledge Corridor, June 5, 2012."

Newington along the Berlin Turnpike, the plan foresees a chance for the town to attract a new critical mass of development south of route 9 along the turnpike, which in turn can open up development in several underutilized areas with infrastructure. With the continued interest amongst mid-size commercial and industrial firms in locating in Berlin, hampered primarily by the lack of mid-size buildings meeting their needs, the town continues to offer a good, central potential location. Innovation and flexibility may allow some unique chances for synergy in certain locations. Factoring in the workforce housing completed over the last few years, the ability to attract talented young workers to the community has been enhanced, and may allow new opportunity as well.

Yet, expanding on the quotation from the Regional Plan Association handbook on "Creating Livable Communities," that was included on page IV-1 of the 2003 POCD,

> *"We do not have to make stark choices between development and open space. We also do not need to hobble our economy or make it too expensive to live and work here as the price of preserving the character of Connecticut towns. And we do not have to accept the destruction of the character of the region and its communities. Rather, we need to create new patterns of development which meet public needs while respecting and perpetuating those attributes of our communities that have given them their sense of place."*[6]

Given the scarcity of developable land in Berlin, this plan must continue to use carefully targeted planning to consider alternate patterns of development. Since the community does not have a significant supply of sites 'ready to go' packaged in a way that would attract buyers and developers, it is the intention of the town to continue to work with those planning tools available to foster the creation of supply in the appropriate locations that balance new development with conservation of critical resources. And, importantly, as set out in the previous chapter, the definition of what is 'critical' is changing as well, being more refined today than a decade ago as the scientific and technological knowledge increases, coupled with actual experience of how certain lands and topographies absorb change. New patterns of development can help avoid this problem.

To that end, this plan advocates a four-part strategy for development of various types, to meet this POCD goal:

> **Goal #3: The Town shall encourage economic development in those areas best suited to sustain growth given current environmental, infrastructure and transportation conditions.**

[6] Regional Plan Association, Creating Livable Communities, page 35.

First, as was the backbone of the plan in 2003, the town continues to focus on the TEDS as drivers for development, although changes are recommended to the zoning and planning concepts for several of those sites. Understanding that these sites are not necessarily currently assembled when under multiple ownerships, and availability is always a function of price (which has seen great variations both before and after the Great Recession), the inclusion of the TEDS remained a high priority not only of the town's Economic Development Commission, but also of the POCD Committee. They represent an innovative approach to development in challenging areas, and with some recommendations to 'tweak' the zoning, could still offer the primary opportunities for new development. This plan gives emphasis to the Design District as a flexible tool that will allow proposed developments to be judged on their features and their merits without limiting development in these select sites to a 'cookie cutter' approach that will not take site characteristics into consideration. Design districts and design-based initiatives are transforming zoning elements of many communities in Connecticut by emphasizing a 'common vision' that keys back to the master planning process, and by allowing a dynamic framework in which to discuss community design. The TEDS provide an ideal opportunity in which to use this fast-growing and newly accepted planning tool. As a case in point, the center area along Farmington Avenue and by the train station is TEDS 2. Because that area is on the verge of significant redevelopment, the narrative below opens with the center vision.

Second, the town advocates a continued emphasis on infill development for commercial and industrial entities, as possible, in those areas with the infrastructure to support it. In particular, the community will continue to look for opportunities to accommodate small to medium manufacturing businesses looking for between 5000 and 25,000 square feet. During the last decade, this type of development occurred within areas appropriately zoned, renovating existing properties along with some new construction. Sometimes this required a brownfield remediation, other times not. This very resource-realistic development strategy underlies the state and region's plans of conservation and development, being the essence of the growth management philosophy as described in the next paragraph.

The CCRPA 2012 CEDS recommends that communities, in addition to prioritizing "projects that reuse previously developed sites, have compact footprints and preserve critical environmental resources," should also "Maintain, improve and develop the region's infrastructure so that it meets the needs of existing and growing industries and clusters," and, most important to Berlin's next decade, "Continue to identify key sites in the region for development, focusing on infill sites, sites near transit and transportation nodes, and sites that avoid negative impacts to environmental resources." (*emphasis added*)[7] When considering development opportunities on

[7] Central Connecticut Regional Planning Agency, "Central Connecticut Comprehensive Economic Development Strategy: A plan for sustainable economic development," December 31, 2012, pages 16 and 20.

the Berlin Turnpike and the Farmington Avenue/New Britain Avenue center corridors, these policies will be paramount.

Third, the POCD Committee supports continuing the policy of a utility service area boundary as set out in the 2003 plan (with revised boundaries as indicated in the maps section and with separate water and sewer service area maps) as a critical tool to be sure that development is able to be absorbed in those areas best able to handle change. This particularly affects lands on the southern end of the Chamberlain Highway, which are currently within a predominantly agricultural area adjacent to many of the lands surrounding the reservoirs of Meriden. Once looked upon as greenfield lands with high potential, the fragility dictates otherwise. These areas were not served by water and sewer historically and that is the recommendation to continue.

As a footnote to the issue of infrastructure and development, as identified in the previous chapter, issues pertaining to wastewater and utility limits of existing properties are taking on more urgency. The ability of the town to help with emergency management when conditions arise, such as the flooding, loss of power, and damages that have occurred in several storm events, will become more important if lands are developed that have the potential to exacerbate these conditions. Compromised electrical supply, wastewater management, and even water delivery can affect the future for development, since unreliability becomes a business risk. Hence, infrastructure improvements that could remove some of the risk, such as a municipal grid, an alternative energy source through a power district, site and structure changes to minimize flood damage, etc. will be very important to some future development scenarios. Some are underway; some require visionary acts to initiate.

Fourth, housing, demand for age-restricted multi-family housing, has probably peaked according to the latest buildout analysis. At the same time, the progress towards diversifying towards an affordable base of housing units needs to be continued with the percentage being so close to the state requirement. As more housing units are built, the Planning and Zoning Commission may consider a mechanism to encourage an equivalent percentage of affordable units.

Like other towns across the state, Berlin may be finding its citizens desiring some downsizing in houses while remaining dedicated to the community spirit and committing to continue to reside in Berlin. To that end, and with growing interest amongst several age cohorts in walkable living, the center, tied into the new railway service, might offer an ideal setting for Berlin to create its own village-based lifestyle center with a residential component. This will be a facet of the development potential to be explored this decade. Yet, while encouraging carefully targeted housing options elsewhere in town, many of the zoning and subdivision regulations that currently are on the books might need to be tempered based on new knowledge about building on fragile

and difficult lands, such as traprock ridges, and in upland areas of wetlands and floodplains. This will be a short-term priority for the area of residential management.

4.1 *Concentrating on The Center*

The biggest external change coming to Berlin is the introduction of commuter rail service between Springfield and New Haven. This expanded rail service will begin in 2016. In addition there is bus service between the Berlin Station and the New Britain Station for CTFastrak (aka New Britain/Hartford busway). In the initial operating model for the NNHHS rail service there will be no connecting stations between the NHHS commuter rail and CTFastrak bus services south of Hartford so the on road bus service between the Berlin and New Britain stations will be the best connector. In addition, a study is underway of the Waterbury to Berlin rail corridor. Thus there are prospects for the Berlin Station to have an even more important role in the region's future transit network. With the work that has been done over the past decade, from design guidelines for Farmington Avenue to the creation of pocket and major parks to significant investment in new structures and businesses, the Farmington Avenue corridor area is poised for development. With the benefit of funding from the State of Connecticut, Berlin worked with the consultant Planimetrics to evaluate an area adjacent to and surrounding the train station, including the section along Farmington Avenue. That study began by assessing current conditions in the area, including the work that had been done further down the corridor over the past decade to create development opportunities. It raised numerous ideas for possible development scenarios that could include the lands around Berlin Steel, and posited how development could change and improve Kensington Center.

This area is essentially the area that is also known as TEDS 2 and includes the traditional downtown area of Kensington along Farmington Avenue, centered upon the railroad crossing. Also included are the:

- Berlin Steel property at the north end of Depot Road, extending out to Old Brickyard Road
- Farmington Avenue east of the railroad underpass toward the area west of the intersection of Burnham Road – Porters Pass.
- The "triangle area" including the area bound and along the area defined as Main Street – New Britain Road – Farmington Avenue.
- North side of Farmington Avenue; west of the railroad track and east of Harding Street.

As expressed by Planimetrics in its Incentive Housing Zone analysis, "Kensington is the area of Berlin that best exhibits the 'village/node' characteristic of community structure. Studies have shown that these types of areas can make a significant contribution to community character and 'sense of place.'" Town centers of this scale have 'identifiable focal points with distinctive characteristics, often containing pedestrian-oriented development patterns.' As documented in Chapter V of the 2003 plan, "Berlin, unlike many of the Connecticut suburban communities, lacks a recognized center or downtown. The block of Main Street between Kensington Road and Farmington Avenue was the traditional center of Kensington, which was part of the original parish of Berlin, but it does not serve as the center of Berlin. Instead, Berlin's 'downtown' is essentially a strip of Farmington Avenue, Mill Street, and to a lesser extent, New Britain Road."

Interestingly, when Berlin created its first Plan of Development in 1959, it focused on Webster Square as the major 'principal planned business area,' seeking to stimulate it to become a regional shopping area able to compete with New Britain, rendering the other commercial areas as 'small neighborhood shopping districts." In its opening pages, the plan documented that "more than 50% of Berlin's residents do most of their retail shopping out of Town, usually in New Britain." It also noted that 50% of the residents formerly lived in New Britain and 40% of employed residents worked in New Britain. The 1974 plan's only goal related to commercial development was "to provide adequate space, protected through zoning, to meet the market demands for commercial use within the town." Not until the 1992 plan was there a policy stating that "a major element of this Plan of Development is to encourage the continued revitalization of the New Britain Road and Farmington Avenue core areas," and the suggestion for four design districts to help "encourage a vital, dynamic Town Center."[8]

Hence, this Plan's renewed focus on Kensington and Farmington Avenue recognizes that it was historically a village center for services and convenience goods. In addition to the longevity of the banks and the barber shop, and of course the Dairy Queen, there were actually more buildings and density in the past in the triangular area created by the intersection of Farmington Avenue, Kensington Avenue, and Main Street. Kensington center was the original location for the post office before it moved down Kensington Road, as

[8] See 'Core Areas Study Plan" map and descriptions on pages 63-67 of the Town of Berlin Plan of Development, April 1, 1992 by Harrall-Michalowski Associates, Inc. However, those design districts did not get codified over the decade that followed.

well as the site for municipal services such as the Kensington Fire Department (now a hairdressers and driving school) on the opposite side of the railroad tracks, along with some residences and industries and smaller commercial businesses. Stores were generally of the convenience variety – dry goods, etc. – because the primary shopping, theatres and restaurants were available in the city of New Britain less than three miles due north of Kensington Center. Yet, despite its small size, Kensington was for decades the *defacto* heart of Berlin, since it had some critical commercial mass and a much more active train station that, even if not used by Berlin residents exclusively, provided the first access to the train south of the big city of Hartford. Berlin's residents' continued caring for the center appeared in the 2001 survey and was echoed again in 2012.

In the community survey completed as part of this POCD process, respondents were asked how to respond to the opportunity of the improved railroad line, with the Berlin station poised to become an important commuter connection. Focusing on the underutilized or vacant commercial and industrial properties in the station vicinity, respondents were asked how and if the Town should stimulate development. Only 10.1% said the community should not include any redevelopment within the area, while 46.8% thought the town should 'create a Town center by encouraging a mixed-use development consisting of multi-family condominiums or apartments, offices and retail uses in a mixed use pedestrian environment which would provide housing and employment opportunities." 43.2% wanted future development to be limited to non-residential uses such as retail, office and industrial use. While this is close to a split on the residential component of a mixed-use development, 85% of respondents to another question about the Town Center supported the Town investing in the improvement of a Town Center along Farmington Avenue to include the area in the vicinity of the Train Station, 55% of the total placing their support at the strongest level.

Buoyed by concerns voiced by residents as the community engaged in a comprehensive strategic planning process at the dawn of the new millennium, the 2003 plan devoted an entire chapter to discussing "The Heart of Berlin" – the Farmington Avenue's linear corridor that seemed a jumble of non-walkable, unrelated uses. That plan looked at two nodes for development – the area along Massirio Drive, and the area by Kensington Center and the train station. As was described at length in the first chapter of this plan, considerable progress was made towards the former, while the tools were put into place for the latter, awaiting the state's commitment and confirmation of the train station and commuter rail transformation. In the meantime, as described earlier, Berlin began incremental moves towards "placemaking," with visual, social and economic achievements. The plan itself included a

number of design suggestions and guidelines, which were furthered by the document above, which set out standards for development, many of which have already resulted in significant improvements to context and details in the renovations and new construction completed and underway.

Before addressing the overall recommendations that are part of the TEDS, the key information from the Summary Report by Planimetrics on the Possible Zoning Options for Kensington Center will help to set the stage.[9] For a number of years, the Town of Berlin has been looking at the Kensington center area and the area around the Berlin train station as a targeted economic development site (a "TEDS"). It has been recognized that this area has significant potential to:

- Be a significant focal point in the community,
- Capitalize on the planned rail service upgrades and improvements on the Hartford-New Haven rail line,
- Implement transit-oriented development patterns,
- Provide additional housing as a way to promote economic growth in this area and create an enhanced "sense of place".

Efforts underway to expand rail passenger service in the Hartford-New Haven rail corridor will provide direct benefits to Berlin in general and the Kensington area specifically. There are a number of examples from around the country where development near transit stops has helped to meet community needs, enhance community character, and create an overall "sense of place." The same opportunity exists in Kensington. Some of the benefits which could result from transit-oriented development in Kensington include:

- Improving the quality of life for people of all ages and abilities.
- Providing opportunities to live, work, shop, learn and play in a compact area.
- Providing transit connections to other areas.
- Helping meet the diverse needs of younger and older residents.
- Taking advantage of existing infrastructure.
- Enhancing local economic development.

As Planimetrics notes, housing is an important element of centers. Having more people live in a mixed use area increases the vibrancy and vitality which attracts more people and activity. In fact, it is hard to imagine a village without a major residential component. The housing in the center area should occur at an appropriate density. The appropriate density in a given area is a reflection of the existing community fabric and the opportunities which exist to support overall community development goals and address local housing needs.

[9] All the information on pages 9-12 is pulled directly from the Summary Report on Possible Zoning Options for Kensington Village (May 2012) written by Planimetrics with the assistance of Crosskey Architects, funded by the Incentive Housing Zone grant administered by ....

Demographic and economic trends seem to indicate that the major housing needs of the future are likely to be:

- Housing types *configured* for older age groups (not necessarily age-restricted)
- Housing types *available* at lower price levels (not necessarily price-restricted)

While the detached single-family homes in Berlin will continue to meet the housing needs of many, there may be an interest in other housing options in the future. The housing market of the future could look significantly different from that of today, and the aging "baby boomers" (people born between 1945 and 1965) may play an essential role in influencing some of that change. Even though many households will choose to "age in place", others will seek opportunities to find other housing types in their own community or near family, children, or other support networks. Whether due to economic changes or life-stage changes, older households may end up looking for places that are smaller, more affordable, lower maintenance, and with appealing features (one floor living, handicapped accessibility, nearby shopping, churches, transit, and other facilities).

Housing that is less expensive will continue to be an issue for all types of households. Younger people and families can find it difficult to enter into the housing market due to housing costs and additional housing choices can help that transition as their income rises. For elderly and retired persons, their income may be less than it was before and housing costs for insurance, utilities, taxes, and maintenance (even if they have no mortgage) may make it difficult to stay in their current homes.

Transformation Opportunities

Planimetrics completed a Strategic Vision analysis of Kensington Center and its environs in collaboration with a number of municipal boards and agencies, along with other consultant studies. The train station will undoubtedly be a focal point for the area with a surrounding blend of business and residential uses. Their thoughts and analysis are shown in the table on the next page.

The overall concept is that the "Public" program area (Train Station core area) will have a defining architectural theme that will incorporate traditional Berlin brick building materials and other architectural elements of the Train Station along with newly created pedestrian friendly spaces. The commercial strip of Farmington Avenue and New Britain Road will continue to be revitalized with new retail, office and services businesses along the first floor frontage. Consideration will be given to incorporate multi-family housing on the upper floors encouraging a walkable village lifestyle for both shopping and mass transit. Given the existing scale and character of development in these areas it is anticipated that any new buildings will be 2-3 stories in height. If new housing units are introduced in this area, consideration should be given to

requiring project amenities to enhance livability and to incorporate design and material elements as well as management and ownership structures that all encourage long term maintenance.

Program Area	Description
Kensington Center	The traditional focal point and mixed use node in Kensington has many of the characteristics of traditional village centers (mixed use buildings, sidewalk connectivity, on-street parking, etc.). Represents a significant opportunity area for a re-invigorated mixed use center based on redevelopment of existing sites into a denser mixed-use configuration with shared parking.
Center Opportunity Area	An area adjacent to Kensington Center with potential to enhance the village development pattern through compatible uses and/or redevelopment (such as for the former school at 462 Alling Street).
Single-Family Residential	The areas surrounding Kensington Center and the other business areas. Represent stable neighborhoods which have been in existence for many years. No significant changes are being considered for these areas.
Multi-Family	Areas with existing multi-family development or potential for future multi-family development based on location, neighborhood characteristics, and other considerations.
Public	The train station area which has the potential for establishing civic uses (such as a police station) and helping support the Business / Center Opportunity Area.
Business Campus	An area containing existing business and light industrial uses in a campus or park type arrangement.
Commercial Strip	The properties fronting on Farmington Avenue (Route 372) which consist primarily of automobile oriented uses and development patterns. This area has some opportunities to promote consolidation of parcels and redevelopment in a mixed use and pedestrian-oriented configuration.
Business / Center Opportunity Area	The area north of the train station, presently used for low density light manufacturing uses, has the potential for either for redevelopment as a significant mixed use, pedestrian oriented expansion of the Kensington Center or more intensive business use to augment the business campus.
Undetermined	This area is detached from the existing roadway network and separated from other uses by active railroad lines. Its future use (residential, business, open space, etc.) will depend on how the surrounding areas evolve and on how access can be improved.
Rail Use	An area which is expected to remain in rail use. The double tracking is expected to require a realignment of the spur lines in this area.

Existing single family residential neighborhoods will be preserved as a healthy component of the area development pattern and new multi-family residential uses will be developed at infill locations as part of the redevelopment of properties that need revitalization. Another aspect of the TOD plan is to reinforce the area as a location for job creation based on the opportunity for employees to commute to work. There is potential to significantly increase the concentration of jobs within walking distance of the station through commercial redevelopment projects. Making a more direct pedestrian connection between the Station, Berlin Steel and Old Brickyard Lane will help establish Berlin's TOD zone as an employment hub taking advantage of improved rail service as it evolves over the next several years. Also being evaluated is the creation of a parking district to facilitate an increase in business and residential density in the vicinity of the train station. The parking district would be based on the recognition that a growing percentage of residents and employees will be using the train and that shared parking arrangements can be accommodated based on differing peak parking demands.

To promote the appropriate development or redevelopment of the Kensington village area and to encourage the provision of housing choices, several regulatory approaches were considered, including (1) the establishment of an overlay zone only for housing, (2) allowing for an overlay zone only for housing that would require property owners to apply for a map change within the eligible area, (3) establishing new zones for mixed uses and housing that would be area-wide under the village district designation of CGS§8-2, or (4) allowing for a design district. After discussion and evaluation by the Planning and Zoning and Economic Development Commissions at a joint meeting in January 2012, the regulatory approaches were refined to include:

Option	Description
1. Establish An Overlay Zone Only For Housing (area-wide)	• Leave existing zoning in place • Adopt an area-wide overlay zone (text and map) to allow for housing at higher densities provided there is an affordability component (i.e. – an "incentive housing development" is created) • Planning and Zoning Commission applies to adopt the map change
4. Allow For A Design District (site-specific)	• Leave existing zoning in place • Change the regulations (text only) to provide for a "design district" - a special type of zoning district where a development is approved through a zone change process (the standards are not specified beforehand) • Describe the desirable land use concepts in a "design district" in the POCD • Allow property owners within the "eligible area" to apply for a map change to have the design district sited on their property and the development approved

Having settled on the design district option as offering the greatest flexibility for the Center, it should be noted that design districts will be a theme throughout the TEDS discussion that follows. Connecticut communities have had increasing experience with design-based initiatives, supported by the evolution of the state's planning experiences and edicts. Positive experiences have led this option to be more understood as a way to solve some of the problems in conventional zoning. Allowing more flexibility, creating a dynamic framework for community design consideration, and targeting difficult properties or assemblages where creativity needs to be given a free hand to solve the intersect of planning and economics, design districts will be an element of Berlin's future.

Subsequent to the analysis of the train station area by Planimetrics, the POCD consultants have worked with the town to look at the area as part of the TEDS analysis. The scope of the area is a bit larger than the target area for the earlier study, since certain areas in proximity to this area have a strong relationship to TEDS 2; including all the following:

- The traditional downtown area of Kensington along Farmington Avenue, centered upon the railroad crossing, including:
    - Berlin Steel property at the north end of Depot Road, extending out to Old Brickyard Road
    - Farmington Avenue east of the railroad underpass toward the area west of the intersection of Burnham Road – Porters Pass.
    - The "triangle area" including the area bound and along the area defined as Main Street – New Britain Road – Farmington Avenue.
    - North side of Farmington Avenue, west of the railroad track and east of Harding Street.
    - The east side of Harding Street.
- Properties on the south side of Porters Pass, northeast of the intersection of Farmington Avenue.
- The Cambridge Heights industrial subdivision off of Porters Pass.
- Properties fronting on the south side of Farmington Avenue, east of the intersection of Porters Pass, including those areas on Washington and Willard Avenues.

Most of this area is zoned Commercial Core District 2 (CCD-2), which permits a range of commercial uses, and residential uses under limited circumstances. The Berlin Steel property adjacent to the train station is zoned Planned Industrial and the property on the east side of Harding Street is zoned General Industrial.

At present, the land uses here would be categorized as follows:

- Underutilized industrial property at the Berlin Steel property.
- Low intensity commercial uses along Main Street.
- Mixed commercial and residential uses along Farmington Avenue.

- Small office and non-intensive commercial uses along Main Street.
- Industrial uses within Cambridge Heights.
- Residential and commercial uses along Porters Pass.
- Industrial uses on the east side of Harding Street.

As discussed earlier, this area's 'highest and best use' determination is tricky, due to a confluence of uses Some of those uses are based on the days when rail service was the primary transport mode for industries, leading to rail yards and side spurs. Some uses stemmed from the way in which colonial Berlin developed from the historic district at Worthington Ridge eastward along what is now Farmington Avenue. Some uses were originally the institutional and municipal uses found in centers, but the relocation of the town hall complex and the post office outside the center started to diffuse the center. When coupled with the historic planning direction documented earlier, where the focus was not on the enlargement of any of the various village centers into a vibrant downtown, instead looking to the creation of 'modern shopping' at sites such as Webster Square, the condition is understandable.

That being said, the progress towards a vision of a center, including the creation of a new community park to be a gathering place alongside ponds where kids once fished for trout, can be measured by the surrounding, higher quality development. It can be measured by the crowds at the first band concert and the delight when the fountains spouted in that former trout pond. It can be measured by the refinement of the visuals along Farmington Avenue. And, it can be measured by the community's nearly 90% responses that they want more town center development, to take advantage of the train station's increasing prominence in Connecticut.

Therefore, as part of the TEDS analysis, the following recommendations were made:

The planning for this area requires an overall concept and vision as to what should be the future role of this area of Berlin. At different points in history, this area has functioned as the historic central business area of Kensington, a vibrant industrial area, and the railroad transportation center of the Town. This area should now become the transit oriented commercial and residential center, which provides a contemporary compact suburban development, with a strong pedestrian orientation, which will enhances the economic base of the community.

To achieve this, this POCD incorporates the following recommendations, with the proviso that this development scenario will be playing out over the decade in conjunction with the rail service, which cannot be completely forecast at this point. This should be catalyst-driven. Hence, given the success already within the community with its design standards for Farmington Avenue and the Berlin Turnpike, the economic and physical enhancement of the mixed use area stretching from Kensington Center to the improved area at Massirio Drive will be driven in part by design-based initiatives that will allow flexibility in assessing development proposals.

- Maintain the design standards for any development along Farmington Avenue and Main Street, with consideration for the implementation of a Design District for this area. This form of zoning would formally implement design considerations to development or redevelopment which may occur within this area.
- The Town should consider amending the zoning regulations to authorize the Planning and Zoning Commission to modify some of the requirements for parking within the traditional downtown Kensington area, essentially the properties along Main Street, Kensington Road and Farmington Avenue, west of the railroad underpass. This area, particularly which along Main Street, appears to have adequate on-street parking at this time, which could accommodate increased intensification of uses.
- The situation along Farmington Avenue east of the underpass is somewhat different. The south side of Farmington Avenue, east of Burnham Street has a similar land use pattern to that of the area on the other side of the underpass. However, the parking situation could be somewhat problematic as on-street parking within this area is limited. However, it may be appropriate for the Commission to retain the authority to modify parking requirements for this area as well, as described above.
- The current zoning regulations permit multi-family uses under limited conditions. This has resulted in very little multifamily uses within this core area of the Town. This area of Berlin may be the most appropriate for multi-family use of all areas of the community, due to its historical development patterns and proximity to future mass transit. Therefore, more residential uses within this small area would enhance the redevelopment potential of this area. This could include the following amendments to the zoning regulations:
    - The maximum residential density within a Core Commercial District is four units per acre. The Planning and Zoning Commission may want to consider higher density residential development in appropriate situations, as discussed within the Incentive Housing Study performed by Planimetrics.
    - Permit "upstairs" residential uses on commercial properties along Farmington Avenue and Main Street, by special permit with a reduced minimum parcel size requirement. The Commission could impose a degree of affordability requirements on these units.
    - The zoning requirement that all buildings with multi-family residential uses require first floor retail uses reflected a goal to revitalize this area for retail uses. This is still a valid goal and should be retained. However, this zoning requirement did not address the potential to locate additional buildings behind buildings located on the street frontage of the same lot. Consideration should be given to allowing purely residential buildings at the rear of a lot as long as there is a retail or commercial use on the first floor of building located on the street frontage on that lot.
- There should be an increased emphasis on internal pedestrian circulation and connectivity within this area. This should include the installation of sidewalks which connect the

Municipal Complex with adjacent neighborhoods and the commercial area of the TEDS, as well as sidewalks which connect any development off of Farmington Avenue with the commercial area along Farmington Avenue.

- The Berlin Steel property is an extremely important parcel within this area, encompassing approximately 14 acres. This property, as mentioned previously, is underutilized and is a prime candidate for transit oriented development. It is currently zoned Planned Industrial, but when its owners are ready to consider reuse or more intensive use possibilities, its future use options could include a comprehensively planned mixed use development which includes multi-family uses, and appropriate pedestrian connections to the railroad station and the commercial areas of Kensington.
- Similar conditions are evident for the residential properties and industrial area on the south side of Porters Pass, between Farmington Avenue and Massirio Drive. These properties are currently zoned R-7 and CCD-2. These areas may be well suited to the use of the Design District approach to encourage reuse of these properties, but with a long term goal of consolidation and redevelopment.
- To help the 'center creation,' the Town has already acquired two empty structures at 903 and 913 Farmington Avenue from the former Kensington Furniture to make way for the new Police Station, using a $2 million local bond. In cooperation with the state through their brownfields program, the Town will demolish the structure and remediate the soils at 889 Farmington Avenue, a property acquired through foreclosure. Bringing municipal uses back to the center is a good step towards center creation; the community should explore other opportunities, for instance, should the Post Office consolidation and shrinking lead to a need for a new location.
- Finally, the Berlin Façade and Landscape Improvement Grant program just funded offers a model for the center. The program should be expedited whenever possible to show rapid progress towards Plan goals.

Most of these POCD recommendations are for the 'hardscape' that makes development – a downtown or village center – work. Additionally, while not necessarily a part of a POCD, it should be mentioned there are 'soft' recommendations somewhat outside the purview of this plan that should nonetheless be part of the package. One very useful program if a sponsoring entity could be found would be to find a way to become a part of and instigate the key elements of the Connecticut Main Street Program (http://ctmainstreet.org/) which is based on the National Trust for Historic Preservation's four-point program to help small downtowns, as described in their words on the following page. Leadership from the private sector would be critical to this public/private partnership model, proven in scores of communities and states over more than 25 years. As Berlin's town center continues to develop, these elements will become more important to making certain that the new sense of place offers the image, quality and vision that is worthy of the Town of Berlin.

The Main Street Four-Point Approach® by the National Trust for Historic Preservation

Organization

"Organization establishes consensus and cooperation by building partnerships among the various groups that have a stake in the commercial district. By getting everyone working toward the same goal, your Main Street program can provide effective, ongoing management and advocacy for your downtown or neighborhood business district. Through volunteer recruitment and collaboration with partners representing a broad cross section of the community, your program can incorporate a wide range of perspectives into its efforts. A governing board of directors and standing committees make up the fundamental organizational structure of volunteer-driven revitalization programs. Volunteers are coordinated and supported by a paid program director. This structure not only divides the workload and clearly delineates responsibilities, but also builds consensus and cooperation among the various stakeholders.

Promotion

Promotion takes many forms, but the goal is to create a positive image that will rekindle community pride and improve consumer and investor confidence in your commercial district. Advertising, retail promotions, special events, and marketing campaigns help sell the image and promise of Main Street to the community and surrounding region. Promotions communicate your commercial district's unique characteristics, business establishments, and activities to shoppers, investors, potential business and property owners, and visitors.

Design

Design means getting Main Street into top physical shape and creating a safe, inviting environment for shoppers, workers, and visitors. It takes advantage of the visual opportunities inherent in a commercial district by directing attention to all of its physical elements: public and private buildings, storefronts, signs, public spaces, parking areas, street furniture, public art, landscaping, merchandising, window displays, and promotional materials. An appealing atmosphere, created through attention to all of these visual elements, conveys a positive message about the commercial district and what it has to offer. Design activities also include instilling good maintenance practices in the commercial district, enhancing the district's physical appearance through the rehabilitation of historic buildings, encouraging appropriate new construction, developing sensitive design management systems, educating business and property owners about design quality, and long-term planning.

Economic Restructuring

Economic restructuring strengthens your community's existing economic assets while diversifying its economic base. This is accomplished by retaining and expanding successful businesses to provide a balanced commercial mix, sharpening the competitiveness and merchandising skills of business owners, and attracting new businesses that the market can support. Converting unused or underused commercial space into economically productive property also helps boost the profitability of the district. The goal is to build a commercial district that responds to the needs of today's consumers.

Coincidentally, the four points of the Main Street approach correspond with the four forces of real estate value, which are social, political, physical, and economic."

http://www.preservationnation.org/main-street/about-main-street/the-approach

4.2 *Targeted Economic Development Sites Across the Rest of the Town*

Ten years ago, the POCD also created a Targeted Economic Development Site-based plan for certain parcels, to put the power of the town's zoning at work to encourage development in places that best serve public interest, whilst protecting health and safety. By supporting development where infrastructure and systems are already in place, rather than greenfields development, especially in Berlin's many areas with environmental constraints such as wetlands, floodplain and excessive slope; the Town was consistent with the decade's exploration of "Responsible Growth" and "Sustainable Communities."

The Development portion of the 2003 plan demanded significant changes to the commercial and industrial zoning regulations with an ultimate goal to bolster the tax base and create local job opportunities, while building on existing infrastructure, a more sustainable method of economic development and change. While the TEDS strategy addressed 'greenfield' and 'brownfield' development on vacant or nearly vacant lands, a major element of the economic strategy to bolster the tax base and create local jobs included zoning amendments to benefit the commercial and industrial zones. By expanding some of the commercial and industrial zones at the margins in certain areas and creating allowable uses in zones that better fit the locations and the market, Berlin was able to keep its vacancy rate low and its businesses humming in a tough time.

It is useful to recall that when the last POCD process was underway, capital markets appeared healthy, housing was booming, risk taking for reward was still considered to be a viable lending model, and developers still sought land for speculative housing and commercial projects, and to a lesser extent, industrial projects. Recognizing that the 'best laid plans' for development could be significantly altered by circumstances beyond the town's control, and that state development goals and incentives were evolving as the consequences of the zero-sum competition amongst communities within a region were being scrutinized, Berlin created a new model for development. By identifying developable sites and putting the appropriate zoning into place at the outset, the town hoped to set the stage for development proposals with a flexible and educated ability to respond quickly to development proposals.

Yet a confluence of economic and structural circumstances meant that the Targeted Economic Development Sites (TEDS) strategy identified at that time did not lead to commercial investment on the scale desired by the community during the decade, particularly since many of the sites were difficult to develop for a variety of factors. Since the TEDS re-zoning process ten years ago included landowner input while creating a whole-town strategy so those lands remained available for the right opportunity for both the landowners and the town, there was some success, including the dialogues opened with owners. Of course early in the decade, our economy slowly dealt with the aftermath of 9-11, then came the risk and uncertainty of war spending, then came the Great Recession, with major implications for all types of businesses and development.

It is important also to step back and recall the origins of the TEDS concept, which was a carefully studied evaluation of how best to achieve development on the limited lands available. These lands generally offered significant potential owing to location, but many had obstacles to development as a result of:

- environmental factors such as wetlands and floodplains and topography,
- the reality that the TEDS designation did not mean that the properties were on the market for sale (and even if they were for sale it could not assure that offering price reflected fair market value), and
- the fact that significant development in most of the TEDS areas required assemblage of properties, further complicating the challenge of putting together land for a major development.

On the other hand, the 2003 POCD did help improve development potential by triggering the conversation amongst the owners and offering support in terms of zoning. As preparation for the 2003 POCD, the Planning Committee had identified the following as TEDS, with those with the asterisk (*) actually having preliminary site concept work completed as part of the study, adding three more as a result of the public hearing process and further evaluations:

1- New Britain Road (Rear)
2- Old Brickyard/Depot Road (Berlin Steel) – Renamed Town Center Train Station Area
3- Corbin-Russwin*
4- Northwest of Deming Road and Berlin Turnpike
5- South West Intersection of Deming Road and Berlin Turnpike*
6- Northeast Utilities Area*
7- Beckley Road Area
8- Intersection of Route 9 and Berlin Turnpike ("Golden Triangle")*
9- Berlin Turnpike south of Sage Park*
10- Berlin Turnpike south of Meadow Lane
11- Southeast Intersection of Berlin Turnpike and Deming Road – added in after the TPA study
12- Mill Street at Route 9 Ramps – added in after the TPA study
13- Farmington Avenue, Porters Pass, Massirio Drive Triangle – added after TPA study per map in the appendix

This formed the basis for the last POCD Development section and subsequent zoning amendments.

The Berlin Economic Development Commission has been evaluating these TEDS regularly over the last decade, to tweak where needed and to track this process. The result was an analysis that

in 2011 modified the list and redefined the boundaries of a few of the TEDS areas; in 2012 the POCD consultant completed an evaluation of the sites and examined related opportunities to grow the community, reflecting the realities of the marketplace, ownership, and other obstacles to development. For instance, the Beckley Road TEDS 7 once considered for industrial development has seen considerable residential growth adjacent, leading the Commission to decide that age-restricted housing was a better use for a portion of that TEDS. The Farmington Avenue, Porters Pass, Massirio Drive Triangle TEDS was eliminated because the area has already been significantly redeveloped with the completion of the Legion Square retail development and Berlin Veterans Memorial Park and, responding to the marketplace and sudden shuttering of a car dealership in 2008 by Webster Square [where a new Subaru dealership opened in December 2011], the commission added Webster Square, the underutilized shopping area with several sites for sale adjacent to the Woodlawn Road industrial area, to become TEDS 13, Webster Square/Woodlawn Road area.

A decade later, the TEDS remain difficult sites. As a consequence, this POCD proposes several modifications. To achieve those changes in a timely manner as the economy started to pick up, the Economic Development Commission along with the POCD Committee considered a series of zoning changes concurrent with the final reviews of the POCD, some changing the zoning designation and some refining the allowable uses and bulk requirements. These zoning amendments reflect the Town's updated land use planning vision that may enhance development potential in some areas, effectively codifying changed circumstances and the refinement of the long-term community development plan. In terms of the TEDS, several of these are geared toward the concept of design districts where development proposals can come before the Planning and Zoning Commission for consideration in their entirety. The complete TEDS report completed by Turner Miller Group is available within the background documents for this process, but the primary results and changes are summarized here.

The consultant reviewed all the TEDS as originally outlined and evaluated by TPA Associates in their Land Developability Analysis (begun after the initial CERC work on sites in 1999 at the time of the last POCD), and the ongoing work of the Economic Development Commission on the TEDS. Having considered all the TEDS, along with those where conditions had not changed (TEDS 1, 3, 6, 7, 9), the consultant analyzed and updated recommendations for the following TEDS:

- TEDS 2: As described in the previous section, the Town Center/Train Station Area TEDS has been enlarged to reflect the planning area and possibilities particularly with the revived and expanded train station. In addition, upon review, the zoning for the northern section of this TEDS was deemed appropriate. (That analysis was already addressed in the first section, although the precise zoning changes being recommended are included below.)

- TEDS 4, 5 & 11: As suggested by the Economic Development Commission, recommendations for these three TEDS, all located at the intersection of the Berlin Turnpike and Deming Road, were clustered since activity on any of the sites affects the others, and hence are presented together.
- TEDS 8: The intersection of Route 9 and the Berlin Turnpike, now called the "Hilltop" (once known as the "Golden Triangle"), continues to elicit interest with property owners uniting to foster development.
- TEDS 10: The property west of the Berlin Turnpike and south of Meadow Lane, which was the subject of a controversial development proposal, has benefited from a very detailed land assessment which revealed the environmental constraints that will help define a redevelopment.
- TEDS 13: The Webster Square area was added to the list of TEDS with this newly created number, with intentions to work with owners of the many vacant and underutilized buildings on the site to find a highest and best use given the many changes and current economic conditions.

4.2.1 Economic Conditions and Development Trends

The consultant also evaluated economic conditions and trends, with the quick summary below.

Berlin's grand list has become more diversified between 2001 and 2010, growing steadily at a rate somewhat higher than most other area towns. Rocky River Realty (NU) is still the largest tax payer but while the assessed value of Rocky River property increased by 50% during the period, their percentage of the Town's total taxable property decreased from 8.55% to 6.78%. The list of the Town's top ten taxpayers has changed in the last decade because two of the top ten taxpayers are businesses that closed or relocated in the decade. Berlin's grand list per capita is the highest in the Central Connecticut region and its mill rate is the lowest.

Berlin's unemployment rate is and has consistently been less than the State and national averages. In the current recession the unemployment rate peaked in February of 2010 and has declined since then. Berlin's employment level by place of work grew steadily from 2000-2008 but fell by 500 jobs from 2008-2009 as the recession deepened. Yet, Berlin outperformed the State during this entire period. Berlin is significantly more reliant on manufacturing than is the State or nation and of course manufacturing employment has steadily declined over a long period of time not only in the town, but also in the State and the nation. Four of the Town's top 10 employers closed or relocated between 2001 and 2010, with another closure from a top ten employer in late 2010. Since about one quarter of Berlin residents work in Berlin, this was of concern, but now, three years later, virtually every one of the empty spaces has been filled by new employment-generating businesses. So, the Town's top two private employers are utilities (NU and COMCAST) and five of the next six are manufacturers.

As documented in the charts in the first chapter, total building permit activity in Berlin during the 2000 to 2010 period ranged from a low of $19 million in 2009 to a high of $45 million in 2006. Very important to Berlin's balance, the percentage of industrial and commercial building permits has consistently exceeded the industrial/commercial share of the grand list. And, as discussed elsewhere, age restricted units that do not place as great a burden on local services have made up a significant portion of the residential permit activity, with one such unit, Stonebridge, becoming the fourth highest taxpayer.

4.2.2 Innovations – Thoughts on Zoning Definitions

The 2003 POCD utilized the Targeted Economic Development Sites as the implementation component of the overall plan, where specific actions taken by the town would facilitate appropriate development. This approach was beneficial in that it provided specific direction to address the developmental issues within these identified key areas, several of which were addressed by zoning changes concurrent with the plan, some of which have been further amended since. However, at this point, the need for more flexible planning tools will require a different approach to zoning, such as designed mixed use developments, much of which will be geared towards the appropriate ways to create and respond to high quality development opportunities, while protecting the underlying values of zoning.

As is amply evident in Berlin, many older communities where development preceded zoning show a far greater variety of proximate uses than standard zoning generally allows, leading to many nonconforming uses that pre-dated zoning. Like many New England towns, centuries ago, farm and factory were located where people could walk to work, proximate to housing. People lived above shops, the better to serve their customers. Parking spaces did not define site eligibility at a time when many people walked rather than drove. Density of housing allowed adequate air and sanitation and all the other public health measures at the base of the original zoning bylaws, but also allowed a different scale and sense of community than the developments of the last half-century. While without question, some of these proximate and different uses led to compromised living for some residents, others fostered a sense of community as different <u>but compatible</u> uses were clustered.

As part of the reexamination of zoning that has been underway much of the last decade, new models are under development, some of which offer new opportunities for Berlin, such as with Transit Oriented Development and sustainable growth measures. A variety of new models for zoning such as this are being considered and used by other Connecticut communities in order to facilitate the new type of development desired for community growth. Regional planning agencies, particularly CRCOG in Greater Hartford, which took a lead on sustainability and model regulations over a decade ago, have been creating new models for zoning sustainable development, while some communities are racing to make changes to foster new development, such as the town of Avon's pending zone changes to accommodate its new town center proposal. These new visions are particularly reflected in the state's POCD grown management principles:

#1 Redevelop and Revitalize Regional Centers and Areas with Existing or Currently Planned Infrastructure

#2 Expand Housing Opportunities and Design Choices to Accommodate a Variety of Household Types and Needs

#3 Concentrate Developments around Transportation Nodes and Along Major Transportation Corridors to Support the Viability of Transportation Options

Hence, taking a long view of the history of not only Berlin, but also of the many communities whose land uses evolved over time before there was zoning, there is precedent to allowing mixed uses to evolve on a specified TEDS location as long as they meet certain strict standards set by the town prior to development. Mixed use projects that include a residential component should be concentrated at transit nodes such as the Berlin Train Station. This allows opportunity and flexibility, without limiting the development by stringent dimensional requirements before it is even proposed.

The Economic Development Commission and the POCD Committee reviewed the TEDS areas in the spring of 2012 (all except TEDS 2) and in the fall of 2012 (TEDS 2). Recommendations for zoning modifications were made for some of the TEDS areas. Some of the recommendations are very specific, other recommendations were general. As approved at the January 2013 meeting of the Berlin Economic Development Commission for submission to the POCD Committee, the following zoning changes and map amendments are requested for TEDS areas.

TEDS 1 (New Britain Road Rear)

No zoning changes are recommended for this area.

TEDS 2 (Train Station Area)

The area is presently primarily zoned CCD with some PI in the Berlin Steel area, some GI on Harding Street. The EDC suggests that the boundary of TEDS 2 be changed to include the entire east side of Harding Street and to extend it eastward along Farmington Avenue to the Porters Pass/Burnham Street intersection on the east and the New Britain Road intersection on the west. The following changes should be considered:

1. Within TEDS 2, allow for the creation of design districts as proposed in Planimetrics Incentive Housing Zone Study.
2. Within the Kensington Village portion of TEDS 2, amend the zoning regulations to authorize the Planning and Zoning Commission to modify some of the requirements for parking within the traditional downtown Kensington area, essentially the properties along Main Street, Kensington Road and Farmington Avenue, west of the railroad underpass. This area, particularly which along Main Street, appears to have adequate on-street parking at this time, which could accommodate increased intensification of uses.

3. Increase the multi-family residential density allowed by special permit in TEDS 2 to 10 units per useable acre (net of wetlands and flood plain) for conforming lots (minimum of 2 acres). The zoning regulation should address unit mix, unit size and parking requirement.
4. For non-conforming lots, less than 2 acres, allow residential density by special permit for multi-family at 2 units for the first ½ acre or part thereof, and 2 units for each additional ½ acre of useable property (net of wetlands and flood plain).
5. Allow "first floor" residential uses by special permit in industrially zoned portions of Harding Street, on the portion of Farmington Avenue in TEDS 2 that is west of Harding Street and for rear buildings on commercial properties along Farmington Avenue and Main Street.

TEDS 3 (Corbin and Russwin Area)

No zoning changes are recommended for this area.

TEDS 4 (Northwest corner of the Berlin Turnpike and Deming Road)

The following changes to the PS-B Zoning should be considered:

1. Amend bulk table PSB zone per EDC recommendations – reduce minimum front yard from 100' to 50', reduce each side yard from 100' to 25', reduce side yard when abutting a residential district from 200' to 100', reduce minimum parking and loading setback from 50' to 25' for parking and 50' for loading, reduce minimum parking and loading setback when abutting a residential district from 200' to 100', reduce minimum front yard parking and loading setback from 50' to 10', increase maximum building coverage from 25% to 30%, decrease minimum lot size from 20 acres to 5 acres, and increase FAR from 0.3 to 1.0.
2. Change footnote in bulk and area table to permit the creation of smaller parcels if created as part of a master plan, with shared access or easements to permit shared access.
3. Require interior pedestrian circulation internally, to avoid the need for shoppers or employees to drive out to the Turnpike when accessing nearby establishments.
4. Additional screening provisions should be added for the reduced setbacks from residential districts to apply.

TEDS 5 (Southwest corner of the Berlin Turnpike and Deming Road)

The following changes to the BT-1 Zoning should be considered:

1. Increase the frontage requirement from 175 feet to 300 feet, to minimize curb cuts on the Berlin Turnpike.
2. Amend the regulations to permit development on lots smaller than the minimum parcel size if there remained a limitation on curb cuts with a minimum separation of 300', enforceable by a comprehensive site plan, the construction of alternative accesses on adjacent land and/or the placement of easements on adjacent land to assure the combined use of a curb cut. The goal for this TEDS, as well as other TEDS on the Berlin Turnpike should be to minimize curb cuts, to

preserve the safety and traffic carrying capacity of the road and requiring interior pedestrian circulation internally, to avoid the need for shoppers or employees to drive out to the Turnpike when accessing nearby establishments.

3. Require coordination of vehicular access between adjacent parcels and integration of pedestrian access between adjacent parcels.

TEDS 6 (Northeast Utilities)

The area currently zoned OT and R-43.

1. Rezone area north of Deming and south of Elm Street from R-43 to Office Technology.
2. Add medical offices as a permitted use. Corporation Counsel should review this proposed change for implications in regard to 8-30g.

TEDS 7 (Beckley Road)

No zoning changes are recommended for this area.

TEDS 8 (Hilltop, aka Golden Triangle)

Existing Zoning is SPDD

1. Retain as Design District for the major part of the area.
2. Adjust requirements for residential development as compared with commercial development. Instead of the threshold of 250,000 square feet of commercial development before any residential development is to occur, change the requirements to permit one-square foot of residential development for every two square feet of commercial development.
3. Remove the requirement from the regulations that the residential development should occur along the east ridge of the property.
4. Reduce the minimum front yard setback along the Berlin Turnpike to 100 feet.
5. Reduce minimum lot size to 10 acres. Keep Footnote 11 for table within Section VI.E that halves the setback requirements for existing lots less than 10 acres.
6. Eliminate setback requirements for lots which are developed jointly in conformance with master plan.

TEDS 9 (Berlin Turnpike South of Sage Park)

No zoning changes are recommended for this area.

TEDS 10 (Berlin Turnpike South of Meadow Lane)

This area is zoned OT.

1. EDC suggests that we rezone this area to PI, establish design guidelines and evaluate setbacks. The goal is to create a high quality industrial business park type environment.

TEDS 11 (Berlin Turnpike Southeast of Deming Road)

No zoning changes are recommended for this area.

TEDS 12 (Mill Street Parcel)

No zoning changes are recommended for this area.
The Town should work with the property owner to confirm that a driveway access from Mill Street can be developed.

TEDS 13 (Webster Square)

The current zone is PS-A.
1. Recommend that the regulations be amended to eliminate religious and charitable-related uses and automotive repair facilities that are now special permit uses, and that consideration should be given to permitting the installation of a design district, if a developer is proposing a transformational idea for the site which may not fit neatly into current zoning categories.

It is critical to note here, as also expressed in the last POCD, that the purpose of defining TEDS was not to exclude development in other areas. The TEDS are driven by the scarcity of available land without constraints for development and the need to define a way to achieve significant high quality development to maintain a diversified tax base that can continue to contribute a third of the town's tax base. These high quality developments can set a tone for future economic development that will encourage a more balanced local economy by:

- Expanding zones available for office and flex development
- Promoting a high quality industrial development for remaining industrially zoned lands
- Concentrating major new retail development on the northern section of the Berlin Turnpike and
- Encouraging the creation of a Town Center and a reinforced mixed use commercial area along the Farmington Avenue/New Britain Road corridor.

4.3 The Berlin Turnpike in the Decade Ahead

Additionally, this plan took a longer look at the Berlin Turnpike as an economic generator. While the complete evaluation is part of the background documents[10], it is important to consider the overall growth issues along the Berlin Turnpike, including those TEDS located along its corridor. The Turnpike offers more underutilized but already developed acreage, a situation that perfectly meets the state POCD goal of developing where there is infrastructure in place.

The Berlin Turnpike epitomizes the automobile-oriented "strips" which were established during the middle of the last century. The road was designed for high speed traffic, not necessarily

[10] Economic Transformations and TEDS – Approaches for the 2013 POCD, March 14, 2012 by Brian J. Miller and Karen M. Pierson

accommodating business growth. Therefore, proposed development along the Turnpike has faced certain challenges, such as one-way access, and limitations on curb cuts. There is extensive "abutting development" on the southern portion of the Turnpike. Meanwhile, the 1980s and 1990s automobile-oriented commercial strip is being challenged across the nation by emerging economic and societal conditions. These conditions include more desire and investment available for mixed-use, pedestrian-oriented development, as well as the slow projected growth of the retail sector, particularly the 'big boxes' which were the major engines of retail growth over the past two decades, amidst an environment of energy pricing concerns which call for other transportation options.

The intensity of residential growth during the last decade along the Turnpike demands some consideration over the next decade to address any planning improvements that can improve function and safety for residents, while offering an economic opportunity. The POCD recognizes as a planning goal for this critical corridor:

The future of the Berlin Turnpike Corridor is for strategic intensive development within key areas to establish this area as a contemporary growth corridor with an appropriate mixture of uses. This area should be designed and oriented to accommodate the growth industries and businesses of the twenty-first century. The overall direction of the American and regional economy is uncertain. The strong retail growth which we experienced within the past ten or twenty years can no longer be projected. Therefore, new economic development opportunities may occur, and it would be advantageous for communities to permit and embrace many of these new opportunities, even if they are not anticipated at this time. It is recommended that most of the TEDS along the turnpike include regulatory provisions which would enable the Planning and Zoning Commission to use its discretion to accommodate potential economic growth enterprises and facilities which may not be envisioned within traditional zoning classifications, as discussed briefly above.

1. The Berlin Turnpike is unfriendly and dangerous for pedestrians. There are no sidewalks, and a limited number of crosswalks. New development within the TEDS along the turnpike should include pedestrian circulation, both internally and with external connections if feasible. As outlined in the 2000 plan, rear inter-parcel connection to limit curb-cuts are important; a variation has already been used along the hotel and residential development near the Hawthorne Inn.
2. Even with the retail progress to the north, the most significant development along the Berlin Turnpike within the past decade has been residential along the south end. This residential development transformed this area from an area of scattered marginal commercial uses into a growing vibrant neighborhood. Future development along the south end of the turnpike should be supportive of the transformation of this area into a neighborhood, with supporting commercial services and infrastructure and the

potential to improve connections to nearby open space such as Silver Lake and Lamentation Mountain.

3 There has been a significant increase in retail development just north of the Town line in Newington. This trend has started to spill over into Berlin with the recent opening of the Kohls Department Store. Sites north of Berlin have been more attractive due to higher traffic counts, greater residential density and other site specific factors. With retail development spreading south on the Turnpike, Berlin has an enhanced opportunity to capture new retail development, particularly near the Deming Road intersection.

4 In the long term, physical reconfiguration of the Turnpike may be appropriate as part of the transformation of the Turnpike from an arterial highway – the near-freeway speeds as described in the 2000 report do not safely allow cars to transition to residential speeds – to a viable economic and social component of the community. While many elements of the 5/15 study back in 2000 were not accepted, in hindsight, they were not necessarily supporting the final four elements of the original study goal – "to address the current and future needs of the corridor relative to traffic flow, safety, transit, ridesharing, bicycle and pedestrian usage. (*emphasis added*)" Today those are more aligned with a community seeking a balance between being on a major transportation corridor with its benefits, and looking for a more 'sustainable' growth trajectory. Freeway speeds do not invite perusing the opportunities to shop, live or play along the way. In addition, solutions to possible pedestrian access and crossings might need to be examined in the context of the development.

5 At some point, consideration should be given to alternative transportation along the turnpike. This would likely be some type of bus shuttle, with thoughts of a coordinated system that could perhaps link with the commuter railroad stations in Berlin and Meriden and to CTFastrak.

6 As stated earlier, the changing economy has affected traditional economic land use classifications. On a parallel basis, a contemporary development for growing businesses might allow some diversity of uses. The Berlin Turnpike offers an ideal place for such transformation, with extant infrastructure, and new development already underway.

7 Retail components need to be linked to the other business areas to enhance the overall business environment, as well as hotel, restaurant and lodging facilities.

8 Despite the success of the new Berlin Turnpike zones [BT-1 and BT-2] with limiting the most objectionable uses, along with the imposition of the Berlin Turnpike Design Guidelines, signage remains very distracting and unattractive. Guidance for signs and some way to incent improvements would be in order, using a combination of enticement/leverage and negotiation.

In sum, the Berlin Turnpike and the TEDS thereon offer a prime development scenario for encouraging attractive and functional transformation of properties that are underperforming;

furthermore, if site factors allow, this is a place to create some signature developments that will balance site factors such as wetlands or slope with new models of sustainable development that works with, not against, the landscape. There is an opportunity for this decade to see a critical mass of development further transform the turnpike.

4.4 Conclusion on Economic Development

In conclusion to the economic portion of the document, the guiding policies for the next decade should include the flexibility to consider transformational opportunities. As described in the 2012 report, "Economic Transformations and TEDS – Approaches for the 2013 POCD," these may include:

1. Plan to capitalize on the once in a generation transit investment being made in the NHHS rail and CTFastrak projects. Berlin's train station is a unique asset that can help stimulate significant **Transit Oriented Development**.
2. Suspend thinking only in terms of individual sites; or, when thinking of individual sites, think in the context of a broader, integrated strategy. Real change will come from a **more linear and linked approach**, particularly along the Berlin Turnpike. This holds true for Farmington Avenue/New Britain Road and the creation of a town center as well and possible transit-oriented development in conjunction with the train station.
3. Lay the groundwork for one or more **community-defining developments** through innovative zoning choices. Look at where the most development can occur to alter the grand list, the defining sense of community, and the opportunities for Berlin's residents to live, shop, work and play. Consider carefully the community resources and funding from grants that can reasonably be allocated towards these developments.
4. Consider the need to **rebrand Berlin**, a community known superficially for the 1950's era automobile 'mecca' of its namesake Turnpike with dated uses and excessive curb cuts. Public perception has not caught up with the high-end housing of the last decades, including along the changed turnpike, the town's extraordinary array of open space and conservation land that now includes a significant section of the National New England Trail System, or the reality of Berlin's diversified range of businesses. As part of the branding, think about several new "**gateways**," especially along the turnpike, that celebrates the community and showcase its assets through signage.
5. **Look for opportunities to link to developments beyond the traditional Central Connecticut planning region.** For instance, while Farmington isn't traditionally linked with Berlin, the Jackson Laboratory development and possible spinoffs may be the most singular 21st century economic development engine for the region as a whole for this decade. While the biotechnology incentives are limited to Farmington, parts of New Britain, Plainville and Bristol, Berlin is positioned to supply services, housing, and transportation for the influx of jobs and people this may bring to the site. And, it is a mere 9.7 miles by I-84 from UConn Medical Center to the Berlin train station with its

transport link and Transit Oriented Development possibilities for new, walkable housing and mixed use concepts.

6. Similar developments in adjacent communities may find Berlin's community assets to be attractive to employees. The March 2010 report by the International Economic Development Council "Creating Quality Jobs – Transforming the Economic Landscape" states on page 10 that: "The economic development literature today overflows with articles noting that the presence of a strong, skilled workforce has replaced a low-cost business environment as the number one concern of expanding and relocating companies. A subset of that literature focuses on the priorities of young, productive workers, people who won't go just anywhere for a good job. **These are workers who value a clean environment and places with amenities that often require public investment** (such as a thriving downtown, good parks and good educational opportunities). This represents a seismic shift away from economic development strategies that focus solely on what businesses want, rather than what people and communities want." Rivers Edge and Fieldstone Crossing, Lofts at Sherwood, and similar residential products are important steps to provide more housing choices for this demographic, along with very affordable single family homes that are a large part of the town's housing structure.
7. Economic literature and experience in Connecticut is showing that the "next new thing" is no longer limited to traditional economic engines and research groups. Some may come from businesses started by those un- or underemployed by the Great Recession. There is a need to reexamine the zoning policies and ensure that home businesses and startups can find a place within this new realm of **'economic gardening'** – the idea is not to target a specific sector but to spread opportunity across them to grow quality jobs across a wider range of skill sets and levels. Step one is to attract them to the community and step two is to help give them the spark.
8. Strongly connected to this, while acknowledging until Irene and the Halloween Storm in 2011 and Sandy in 2012 and their energy interruptions, there was a general lack of interest across Connecticut in energy districts, this POCD as both a conservation and a development goal, **considers the opportunity to use creative energy options both as an economic draw and as an adaptive response**. From Energy Independence Districts to energy sources such as solar arrays on the former landfills or other compromised 'brownfield' open areas, the State is encouraging municipalities to take a more active role. This ties directly to the policy requirements of the State of Connecticut DEEP, OPM and related agencies, along with the legislature, for adaptive planning to respond to possible effects from climate change, and resource shifts, and dovetails with the Conservation policies.
9. Given how technological change is altering how people work, shop and gather, coupled with a forecast for continuing economic doldrums, **Berlin's POCD must address the need to look at 'greyfield' sites**, the term for defunct shopping centers, movie theatres, 'big boxes' and office complexes that are outdated with little economic use potential. These may become redevelopment opportunities in the next decade, and there will be a

need to facilitate the community's ability to respond quickly and creatively should alternative uses be requested. This could possibly affect an area as big as Webster Square area, as well as the many smaller strip plazas along several town corridors.

10. Although technology changes are hard to predict, communities that are wired have some competitive advantage, acknowledging that where once physical wires were needed, now wireless made that infrastructure moot. **Consider incorporating such 'wired/wireless' goals in the POCD with flexibility to achieve the right technology**. Again, the center and the train station development would be a logical place to start, but think about the synergy of such innovations in future manufacturing and commercial business locations.
11. Although the term '**sustainable**' is overused, it is being demanded in state planning documents, in state policy, in federal grants. This POCD must address viable sustainable actions in the Conservation and the Development section – a few are suggested above but there are many more that might be considered as part of the process. The model ordinances and sustainability regulatory work underway by CRCOG, which is including Berlin in its circle of transportation infrastructure and influence, is focused on giving communities the tools to achieve good, sustainable, and appropriate development.
12. At the risk of reiterating this mantra one too many times, be sure that the term '**flexible**' and variations thereof are a part of the development section of the POCD. The world is changing, the weather is changing [which has profound implications on such things as using land near floodplains and wetlands, which affect several of the original TEDS – *sea level rise leads to water table rise*], and the lives of every one of Berlin's residents are changing as givens become more uncertain. The TEDS strategy update must reflect the evolution of economic futures and the paradigm shifts that are coming to Connecticut towns.

Conclusion on Economic Development

The fundamental conclusion of the Plan continues to be that changes to commercial/industrial-zoning districts may be considered to create, modify and expand these zones to fit the revised vision of future land use for economic development. The challenge is to capitalize on opportunities such as:

- to transform the Town center,
- to capture major new development to be a catalyst to shape and hasten the ongoing transition of the Berlin Turnpike,
- to attract more growing businesses,
- to achieve more major development in TEDS,
- to continue progress on in-fill development including brownfields properties.

The philosophy of the Town with respect to development is that it be private sector driven whenever possible. The ability to make progress on the POCD vision will be significantly influenced by the decisions of existing owners of undeveloped or underdeveloped properties. Will they offer their properties for sale at prices that reflect market value? The Town will continue to communicate with owners of key properties and their representatives and encourage cooperation among adjacent landowners, assist in marketing to users or developers, and selectively offer tax incentives and utility extensions of subsidies to support appropriate development. Since the significant areas of major future non-residential are few in numbers and have been defined, the Town should continue to consider more aggressive intervention to achieve its goals including more extensive incentives or property acquisition if necessary in limited cases. For example, the Town prepared a redevelopment plan and provided a grant to offset a portion of the site remediation costs for the Lofts at Sherwood Falls condo project on Main Street. This project is transforming a vacant mill to 72 residential condominium units and at 2/3 completion it is already contributing an additional $200,000 in annual real estate taxes from the site.

The key actions recommended by the Plan to stimulate economic development include consideration of:

- zoning amendments in TEDS 2 (Train Station Area) to address Transit Oriented Development Opportunities,
- zoning amendments to address contemporary business trends and definitions,
- zoning amendments to assist retail development on the northern section of the Berlin Turnpike,
- rezoning of TEDS 10, Berlin Turnpike south of Meadow Lane to allow a broader range of industrial type uses,
- zoning amendments to allow design districts as a tool to accomplish major transformative development,
- continued public investments to support POCD vision, particularly for the downtown area.

Chapter 5: Build-out Analysis, Residential Development and Infrastructure

This chapter can essentially begin with the same opening line as the last: "Planning and community building are about trying to shape destiny." But, importantly, there are very strong reasons why destiny needs a forecast in order to try to shape it. For Berlin, this is critically important regarding infrastructure-based needs such as water supply, which has mostly been drawn from local resources through the water districts, or through private wells. Capacity of a community to handle growth is one of the primary determinants of its future. These needs relate significantly to residential analysis, as well as to the potential for economic development so important to the long term balance within the community. Therefore, this closing chapter groups these topics that relate so closely to growth.

5.1 Buildout Analysis

As described at length by the professors and researchers behind Connecticut's NEMO program in their 2008 "how-to" guide, About Buildout, "A buildout generally is not tied to a specific timeframe, but is rather an 'end point' scenario that might occur in some indefinite future, whether it is in ten years or a hundred. The analysis is most often used to estimate future population or number of housing units, and the secondary fiscal, environmental or other impacts of this growth." They go on to say that an "understanding of the potential pattern of future growth can have wide ranging effects on local government decisions. Policies from housing to economic development to transportation are all influenced by the quantity and quality of future growth, so the ability to see into the future can help local decision-makers make more informed decisions. ... can help guide discussions of common local issues like open space planning and future capital improvement needs." [1]

Just north of the border, they have an interesting perspective that pertains precisely to some of this POCD's recommendations, detailed in the Commonwealth's Buildout Book: Where Do You Want to Be At Buildout?" that calls these analyses "A community empowerment tool to inspire people to make decisions to enhance the quality of life for all residents and create a legacy for future generations." In words that mirror the experience in this town:

> "In the last one hundred years ... we have seen development patterns change drastically. In the early 1900's, much of the residential housing was concentrated around traditional town and village commons within walking distance of commercial and retail activity as well as churches and other cultural institutions. This scale of living allowed people to gather and interact closely with one another on a daily basis, providing a secure network of relationships. This kind of development created special 'places,' many of which we still enjoy today. ... Recent decades of decentralized 'sprawl' development are

[1] Connecticut NEMO Program by John S. Rozum, Chester L. Arnold and Emily H. Wilson, A Brief Guide to Buildout Analysis and Why and How to do Them: A technical report of the CT NEMO Program, a part of the Center for Land Use Education and Research, University of Connecticut, 2008. Page 2.

threatening our natural resources, our biodiversity, the quality of our water, the character of our communities and our quality of life. … Some say 'smart growth' or 'new urbanism' is the way to mitigate the impacts of growth by relieving development pressure on 'greenfield' sites. **Ironically, today's 'new urbanism' movement touts the very land use patterns for which (our state) is historically famous … bringing the good ideas of the past into the future.**" (*emphasis added*)

Berlin's changing land use patterns have been well documented through the University of Connecticut's CLEAR program over the past two decades. Their most recent land cover analysis is below.

Berlin Land Use Change Summary: 1985-2006

clear
Land Use Education & Research

	1985		2006		Change	
	acres	% of town	acres	% of town	acres	% change*
Developed	3591	20.7%	4452	25.7%	861.3	24%
Turf & Grass	2288	13.2%	2577	14.8%	289.4	12.7%
Other Grasses & Agriculture	236	1.4%	345	2%	108.8	46.1%
Deciduous Forest	6121	35.3%	5529	31.9%	-592.1	-9.7%
Coniferous Forest	1564	9%	1523	8.8%	-41.4	-2.6%
Water	601	3.5%	548	3.2%	-29	-5.4%
Non-forested Wetland	9	0.1%	14	0.1%	5.3	60.2%
Forested Wetland	892	5.1%	805	4.6%	-87	-9.7%
Agricultural Field	1752	10.1%	1195	6.9%	-556.8	-31.8%
Barren	163	0.9%	237	1.4%	74.3	45.7%
Utility Right-of-Way (Forest)	140	0.8%	131	0.8%	-8.7	-6.2%

Coupling the CLEAR analysis, which only goes to 2006, with the results of the buildout analysis below illustrates the urgency to addressing many of the policies within this plan.

Berlin commissioned Turner Miller Group New England to undertake a buildout analysis in 2010. A Geographic Information System (GIS) was utilized in an analysis of residential development potential. The purpose of the analysis was to calculate the potential full

development of the Town of Berlin, given environmental constraints and current land use regulations. In order to assess development potential, privately owned vacant and over-sized lots most susceptible to further development were identified. State and Town-owned lands and transmission easements were assumed to have no potential for further development.

Once the lots were identified, the next step was to identify the factors that would affect the development potential of each lot. The factors considered included:

- The Town's current zoning classifications;
- FEMA Floodplains;
- Wetlands;
- Waterbodies; and
- Steep slopes.

The extent of the known constraints are based on various sources of data including mapping products acquired from the United States Geologic Survey (USGS), the Connecticut Department of Environmental Protection (CTDEP), the Federal Emergency Management Agency (FEMA), and the Army Corps of Engineers (ACOE).

Environmental constraints were factored, with deductions on a parcel-by-parcel basis to yield a net developable lot area. In determining residential development potential, the net developable lot area was decreased by 15% to take into account space for the installation of infrastructure and inefficiencies in lot layout. The remaining net developable lot area was then divided by the minimum lot area of the respective zoning districts to yield the potential number of additional residential development lots.

The analysis indicated there is the potential for an additional 1,660 residential development lots in the Town, in addition to the 452 units that at that point in 2010 had been approved by the Planning Commission. According to the 2000 U.S. Census the average household size for the Town of Berlin is 2.69 persons. If an additional 2,112 dwelling units were constructed in the Town, the population would increase by approximately 5,681 persons.

The study then analyzed the costs to the town for this projected development. With costs apportioned to the various land use types within the Town, per unit costs were established to predict the future costs of various land use scenarios. For residential units, costs are estimated based on the future population and number of students. For agricultural use, costs are apportioned on a per acre basis assuming one three-bedroom $350,000 home on a two-acre lot surrounded by 13 acres of land used for farming, orchard and waste land. For public open space and agricultural land, costs were assigned on a per acre basis based on the proportional valuation of one acre of land. Population multipliers were taken from population and public schoolchild multipliers developed by the Rutgers Center for Urban Policy Research in 2006. The projected results in the TMG-New England Study are shown in Table 1.

Table 1: Per Unit Costs

	Population	Students	Population Cost	Student Cost	Land Cost	Total Cost	Rate
Residential	3.610	0.940	$4,108.59	$8,847.52	$0.00	$12,956.10	Per Unit
Agricultural	0.209	0.039	$237.49	$370.22	$5.60	$613.30	Per Acre
Open Space	0	0	$0.00	$0.00	$53.04	$53.04	Per Acre

For the purpose of the TMG-NE analysis, only revenues directly associated with the three representative land use types were considered (only real property and motor vehicle taxes were calculated.) For residential use the analysis is based on only single family dwellings. Multi-family residential development was not analyzed. While other revenues are collected by the Town to fund its operations, the impact of different types of land uses on these types of revenue is impractical to predict. In most cases, it is likely that changes to these revenue sources over time will not be tied to the Town's land use decisions regarding vacant and underutilized land.[2]

Per unit values were established based on conversations with the Town Assessor. Residential values are based on a $570,000 market value. Agricultural land is based on a two-acre home/site with a market value of $350,000 and 13 acres of land used for farming, orchard and waste land with an average value of $700 per acre (based on PA 490 exemptions). It was assumed that $20,000 worth of motor vehicles would be owned by each household. Public open space is predicted to be wholly exempt and therefore generate no real property tax revenue.

For purposes of calculating revenue, the 2009 mill rate of $22.69 per $1,000 of assessed value was utilized.

Table 2: Per Unit Revenues and Net Impact

Revenue	Unit Market Value	Unit Assessed Value	Unit Revenue	Net Impact	Unit
Residential	$570,000	$399,000.00	$9,053.31	-$3,902.79	Per Unit
Agricultural	$25,273	$17,691.33	$401.42	-$211.88	Per Acre

[2] Per unit values were established based on conversations with the Town Assessor. Residential values are based on a $570,000 market value. With the decline in residential market values since 2010, the $570,000 market value for the average new unit is high so the negative impact per residential unit as likely underestimated. Agricultural land is based on a two-acre home/site with a market value of $350,000 and 13 acres of land used for farming, orchard and waste land with an average value of $700 per acre (based on PA 490 exemptions). It was assumed that $20,000 worth of motor vehicles would be owned by each household. Public open space is predicted to be wholly exempt and therefore generate no real property tax revenue.

Open Space	$0	$0.00	$0.00	-$53.04	Per Acre

The buildout analysis indicated that based on the amount of remaining vacant and underutilized land, the potential exists for an additional 1,660 units on 2,170 acres. Based on the predicted per unit costs, the net fiscal impact of future buildout under the three representative land uses are as follows:

Table 3: Net Impact of Future Buildout Scenarios

	Net Impact	Percent Increase of Existing Budget
Residential	-$6,478,636	9.83%
Agricultural	-$460,214	0.70%
Public Open Space	-$115,214	0.17%

It should be noted, that these results are based on a number of assumptions and apply only to the scenarios studied. Other types of residential development such as luxury housing, senior housing, or attached housing with fewer units were not studied. Also, the study assumed existing zoning with limited sites available for new multi-family housing. It also assumes that the remaining vacant land is not already receiving agricultural exemption. In reality it is likely that much of this land is already receiving exemption, and that the impacts of its future use as agricultural land is less than indicated.

The importance of buildout analyses as a planning guide to help predict the future and to "suggest" interventions to achieve an acceptable destiny should be readily apparent from this analysis.

5.2 Residential Development

Berlin is primarily a residential community with the majority of its land area zoned or used for housing of many types. Although pre-twentieth century homes were scattered along various village areas within town, the first post-war residential growth in the town occurred within the northern part of town, with early subdivisions concentrated in sections of town north of Norton Road. Beginning within its first Plan of Development in 1959, Berlin has voiced concern about the range of housing types and densities within the community, focusing on the limited areas served by public water and sewer – the capacity issue addressed above. From that time, they zoned for a variety of densities but were always guided by the utilities' reach, along with the

fragility of many open lands within the town in addition to the reasonable expectations for use by existing property owners.

As the community has developed and grown, residential units have been developed on and close to some of its fragile lands. Each time this happens, more and more pressure is placed on the town as it tries to balance the impact of residential development on fragile properties. This development may result in the loss of rare habitat and environmentally unique lands. Worrisome now are the discoveries elsewhere in the region about the long-term damage from building on traprock and similar ridge material. Added to this stress on the landscape is the loss of lands – taken for granted in many ways – that once were open, with key features that define the community. Abandoned or declining farms, onetime orchards, woodlots larger than a few acres here and there (forest fragmentation is a major problem within our state), and meadows that are protected from successional growth to support a diversity of habitats, evidence a cultural and physical landscape that is becoming increasingly rare.

GOAL #4: The Town shall work to preserve the current balance of housing stock while infusing any new growth with a sense of traditional neighborhood design, compatibility with adjacent uses, and ownership options that support housing choice for people of diverse ages and means.

While some of these lands have been used for residential development in the past two decades, growing awareness of issues from pollution from past agricultural practices, or habitat destruction, or the loss of intangible and unquantifiable community character is being voiced by more and more residents and officials. Berlin's rural character and open space were a very close second – by one person – as the primary feature about living in Berlin in the 2012 community survey. In the community survey, over-development ranked second to traffic congestion as the factor most important to address to improve the quality of life in Berlin. The fifth most important action to improve the community in the survey ranking of 19 different actions was to maintain the undeveloped areas within the southern and western areas of the town (generally those areas along the Chamberlain Highway south of the Southington Road intersection, route 364, and west of the railroad tracks) as important to the character of the town.

The concern of Berlin's public about preservation of the community character was one of the major concerns expressed by the Plan of Conservation and Development Committee during the process. While the character of the community has many aspects, one of the most visible components of Berlin's character is the design and quality of its residential neighborhoods, which not only reflect various eras in the town's development, but which often signal important elements of the town's attractiveness and, in some areas, its rural heritage. The traditional layout and stability of two town 'villages,' East Berlin and Worthington Ridge (which is a local historic district), exemplify some of the values that residents find attractive, build community, and are worthy of protection.

The POCD Committee chose to address this issue of community character in various ways, some of which are actually addressed in other chapters as they relate to conservation and economic development, including mixed used developments in the latter. Specifically, the Committee identified the following issues related to residential development in Berlin:

- Although the site design of most of the new residential development is appropriate and well situated, there have been some circumstances where the design or layout of the site has led to problems, including the placement of retention and detention ponds and the treatment of sloped areas.

- Some of the newer residential development in zones within South Kensington had a more dramatically adverse impact on the overall rural character than may have been necessary.

- There have been examples of poor orientation of houses or design that resulted from the construction of houses.

- There have been conflicts between residential and agricultural uses. Residents sometimes complain of the noise, odor and activities inherent in agricultural operations.

- Planning staff note that there are state-legislature derived problems currently on issues of construction bonds and street acceptance that essentially tie the community's hands regarding enforcement of high standards of development, which need to be addressed in the future.

- And, of concern to the Conservation Commission as well as other planning officials, despite some discussion during the decade, and mention in the 2003 POCD, the community has not achieved Low Impact Development regulations or guidelines, despite considerable progress on this topic being made statewide, increasing the body of knowledge and experience.

- After analyzing the types and patterns of recent growth, and projections for future growth, the Committee chose to endorse the 2003 philosophy for residential development and housing that embraced maintaining the Town's housing stock with a range of housing types to meet the needs of the different segments of the Town's population. While they believe that owner-occupied housing should continue to be the predominate tenure of housing, rental housing will be required to meet the needs of certain special segments of the population. With the town so close at present to achieving a 10 percent affordable component, the situation in 2013 is dramatically different than 2003.

Berlin is primarily (85%) single-family owner-occupied. The current housing market with demand for new apartments creates an opportunity for this town to diversify its housing stock further to meet the needs of its citizens, now and in the future. As described in the chapter on

economic development, there are reasons to attract a young, entrepreneurial population that may be part of the 'economic gardening' of the future. Additionally, while some senior markets were temporarily overbuilt during the past decade, there remains a need for affordable senior apartments as evidenced by demographics and demand.

Metro's two projects in Berlin (Orchard Ridge, Stonebridge) were very popular. They offered one story, walk out units with separate entrances, a high quality, energy efficient 80/20 project with clubhouse, quite attractive to "younger/more-active seniors." Most units were affordable at 60% of the median income. Likewise, Sage Pond Place's multi-story, apartment building style on the Berlin Turnpike took longer to lease up, but did get done (note that it came online and went head to head with the Stonebridge/Metro project). This proved more attractive to "older/less-active seniors."

As 2013 is underway, the Town has identified and is working with the Berlin Housing Authority to address a third type of senior housing need, for the very low income (below 60% of median) elderly population. After the Housing Authority identified the need, the Town was able to enter into an option agreement with the Housing Authority to provide land for the development at no cost if the Housing Authority can get funding for the project. As mentioned in the previous chapter in connection with the possible options related to Transit Oriented Development by the railway station, one benefit of having affordable senior housing projects in communities is that it lets folks stay in Town (or near their Town or near their kids) when their housing needs and choices change. This POCD assumes that meeting that need is a valuable town service.

The economic impact and benefits of this past decade's development is considerable. While there has only been a subjective fiscal impact analysis of these projects, it appears that while they do generate police (ambulance) type calls, they are a positive net contributor to the local budget – "ratable." The three completed age restricted rental projects of 398 units generate $463,931 in annual taxes. The largest project, Stonebridge, ranks fourth on Berlin's top tax payers list, with the tax revenues from Orchard Ridge plus Sage Pond Place together equaling those of Stonebridge.

The recent venture into workforce housing has added somewhat to Berlin's small number of apartments that are not age-restricted. Berlin's "doughnut hole population" age cohort (the missing cohort) is comprised of young adults , with numbers worse than the state which is considered to be low in that age group. In fact, in every age cohort between 20 and 39, Berlin has a lower percentage of population than the State (which has less than the nation). Workforce housing can provide opportunities for young folks to live in the town in which they work; this is not just for service jobs. There is currently a mismatch – many vacant skilled manufacturing jobs and fewer resident manufacturing workers. Workforce housing also has the potential not only to increase the diversity of the town's population in many different categories, but to add tax revenue with the economic impact as these two projects come onto the grand list this year. The POCD embraces the policy of trying to give people who work in Berlin the opportunity to

live in Berlin. Diversifying the housing stock and including affordable housing options can have positive social and economic benefits for the community but it is a long term process that will require a long term commitment. As additional multi- family housing units are added, consideration should be given to providing adequate parking, particularly for guests. In addition, consideration should be given to requiring amenities to enhance livability and to incorporate design and material elements as well as management and ownership structures that all encourage long term maintenance.

The POCD committee realized that it is much better for a community to control its destiny regarding where and how affordable housing can be absorbed into the community fabric. The town has carefully used the moratorium option to attain some immunity from 8-30g suits while finalizing projects. Berlin made a strong move to plan for the location, type and density of growth. As of early 2013, approximately 140 more units are needed until the ten percent affordable housing metric is achieved. However, the POCD committee intends that this plan also embraces the idea of continuing to seek some affordable component that complements each new residential project to be certain that the community continues to maintain the ten percent affordable goal once it has been achieved.

5.2.1 Residential Recommendations

With these issues in mind, the POCD committee endorsed a continuation of the following policies to govern future residential development within Berlin, in concert with the residential policies discussed in the earlier chapters:

- Preserve the integrity of existing neighborhoods where the Plan does not designate other uses. In established, sound, single-family areas, multi-family development should not be permitted unless there are special circumstances that would eliminate the potential adverse impacts on the neighborhood.

- Encourage and protect sound residential development of long term quality with a variety and range of housing choices and value.

- In appropriate locations, to preserve or create open space worthy of protecting consistent with the overall goals of the plan, consider the clustering of new single-family and multi-family units. However, as detailed in the chapter on Conservation, the town policy should become that "when a proposed open space contribution from a subdivision will not contribute to the Town's open space planning goals, then, as possible, take the fee in lieu of open space and apply it towards open space acquisition or maintenance." In certain circumstances, the Berlin Land Trust may be an alternative entity to take title to discrete parcels.

- Explore and require where appropriate Low Impact Development measures for stormwater management (also see Chapter 4 section 4.2 of the Connecticut Stormwater

Quality manual). Additionally, when lands are fragile underneath or abutting a residential development, it is important to educate, if not require that the homeowners undertake sustainable landscaping measures, from stream buffers when abutting water resource areas to native plantings and lawn alternatives to non-chemical IPM practices.

- Support the preservation of the physical and architectural characteristics of historic houses and their sites. The overall goal is to maintain and/or improve the exterior of the houses.

- Encourage housing options for mature families (empty-nesters) and senior citizens who no longer desire single-family housing but who would prefer to live in Town in planned environments that offer a wide range of residential amenities or alternate living arrangements more appropriate for their stage of life.

- Concentrate most new multifamily development in the vicinity of the train station.

- Recognize as public responsibility the encouragement of affordable housing for families and individuals who cannot afford current housing costs. Affordable housing should be provided in a manner that it meets an actual local and regional need in a manner that is consistent into the town's land use plan, and policies.

- Recognize, as one segment of the town's housing demand, the desire for large single-family lots.

- Control orientation and placement of residential uses, as it is an important component of the quality of the residential neighborhoods.
- Control the development of each individual lot to ensure that sensitive environmental features are protected to the degree practical and that where applicable soils are adequate to handle subsurface disposal needs.

- Protect residential neighborhoods from the detrimental impacts of overbuilding on a lot through imposition of bulk and coverage requirements.

- Continue to improve pedestrian access from nearby neighborhoods to the Town Center and neighborhoods to the Town's expanding open space areas.

- The neighborhood should be the primary component of residential development. All new residential development should support existing neighborhoods, and create a neighborhood environment with activity centers, recreational areas, and pedestrian circulation.

Conclusion on Housing and Residential Growth

Still, there remains potential for infill development in certain areas of the community, and to that end, the importance of defining target housing markets and appropriate design goals remains a function of this Plan of Conservation and Development. Housing as an economic development tool in mixed use developments may be important in carefully defined areas such as the Town Center/TEDS 2. In very select circumstances, it may be a viable component of other TEDS. In short, the community has a continuing opportunity and obligation to evaluate and determine the future of a variety of housing developments.

5.3 *Infrastructure*

The public infrastructure of a community supports the health, convenience, economic vitality and quality of life of citizens and businesses. It can also determine a community's growth pattern and its ability to support additional growth. The previous plan update included a broad assessment of the Town's infrastructure and discussed the need for additional public facilities. The Town Strategic Plan also identifies needs for other public facilities, including recreational and educational facilities. Therefore, staff believed that the most appropriate approach for the Plan of Conservation and Development was to perform an assessment of the Town's infrastructure, with assistance from staff of the Engineering Department and Water Control Commission. The conclusions and recommendations of that work are detailed below.

Goal 5: The Town shall provide for the level of public services necessary to best serve citizens' needs and expectations, including the coordination and location of those services that are necessary to the education, health and well-being of its residents.

It is important to understand that, like the Economic Development section preceding this plan, this part of the plan led to an extremely detailed list of specific projects and changes, building upon the information and general understanding of town infrastructure in plans that have gone before. This becomes a cumulative assessment of needs.

5.3.1 Transportation

The 1992 Plan identified several improvements that were needed to the Town's road system. Some of these have been completed, such as the intersection of Farmington Avenue-Porter's Pass-Burnham Street. Others are dependent upon State action, and it is uncertain at best if they will occur, such as the full interchange at Route 9 and Christian Lane [there is currently only an eastbound exit and westbound entrance ramp]. Some projects such as reconstruction or straightening of Orchard Road and Reservoir Road were rejected in whole or in part due to neighborhood concerns. The roadway system of the Town is generally adequate to accommodate existing and planned levels of development.

The major change to the Town's transportation system will be the institution of commuter rail service on the NHHS rail line starting in 2016. Service on the CT Fastrak bus way in nearby New Britain is slated to begin in 2015. A study is being done of the Waterbury/ Bristol/ Berlin rail freight line. The Town is participating in these planning processes. The opportunities related to these major transit improvements include:

- Support to redevelopment of Berlin's downtown area and creation of a "town center place" in the vicinity of the train station.
- A transit choice as an alternative to the automobile for Berlin residents and workers employed in Berlin businesses.

To capitalize on the opportunity presented by these transit improvements, the next stage of planning will need to focus on better connecting the train station to residents and users by improvements of sidewalks, bike routes, and especially transit connections between the train station and major employers.

The intent of the plan is to improve efficiency and safety of the Town's transportation system, and to promote the desired economic development while retaining the rural character of residential areas. No major new roadways are called for. Improvements range from highway interchange additions to realignments of intersections.

5.3.2 Sewer and Water

The Town of Berlin is generally well served by the water and sewer services supplied by the Town, Kensington Fire District and Worthington District. Although the systems have adequate overall capacity to serve all anticipated needs, the Town is not self-sufficient in the supply of water. Currently, water is supplied by the City of New Britain, and the Elton Road well. There is also a connection to the Cromwell water system and some limited areas are served by the City of Meriden. The town investigated options to secure a long-term water supply that was self-sufficient, but came to the conclusion that the benefits of that did not justify the costs at present.

A coordinated town-wide sewer system exists in Berlin, consisting of the Kensington Fire District, the Worthington Fire District, and the Berlin Water Pollution Control Commission. The Kensington and Worthington District are separate municipal districts, with the ability to impose taxes and fees. The Berlin Water Pollution Control Authority, which controls the water and sewer in eastern and southern sections of the town, is a part of the Town government. Each of the WPCA's has a different financing mechanism. The sanitary sewer system of the Town of Berlin consists of approximately 113 miles of gravity sanitary sewers, 6.1 miles of force mains, and 14 sewage pump stations. The most recent average daily flows, measured in 2010 was 3.66 million gallons per day (MGD).[i] There are approximately 6,500 customers who utilize the Berlin sewer system.

The three systems have coordinated their activities, and operate within a defined sewer service area. They all utilize the treatment facilities of the Mattabasset Sewer District Commission, which serves the communities of Berlin, New Britain, Cromwell and Middletown. The Mattabasset treatment plan in Cromwell requires an upgrade for denitrification, which is underway. The Plant is at or exceeds capacity for high precipitation events. The next step is the reduction of inflow at times of high precipitation events which is underway.

The Berlin Water Control Commission analyzed the feasibility of separation from the Mattabasset Sewer District Commission, in lieu of contribution to the existing Mattabessett Treatment Plant, in a report from Loureiro Associates.[3] The analysis determined that separation and the construction of a new treatment facility was not economically nor environmentally feasibility. The geographic limits of the system are well established, and the only anticipated extensions are those which would facilitate planned economic growth and residential development within the planned service areas.

The Loureiro analysis indicated that anticipated development over the next 20 years would result in an additional sewer flow of 154,280 gallons per day. However, the proposed improvements to the system to address infiltration and inflow problems would reduce flow by an estimated average daily flow of 274,000 gallons per day. Therefore, projected additional sanitary sewer flows could be more than offset by improvements to infiltration and inflow impacting the current system.

The highest priority is the elimination of Inflow and Infiltration. This cost is estimated to be $4 million, to be financed by a low interest loan from the State. Another important need to upgrade the sewer system is the replacement of the 35 year old pump station on the Berlin Turnpike. Other planned projects include the extension of sewer lines to support economic development:

- Mill Street north of the Bethany Covenant Church.
- The area formerly known as the Golden Triangle.
- Berlin Turnpike south of Spruce Brook Road.
- Former Yankee Gas Property on Four Rod Road.
- Upgrade of sewer lines on New Britain Road.

In order to prevent sprawl and over taxing the water and sewer infrastructure, the Plan establishes separate water and sewer service areas. These areas are largely coterminous but there are a few areas in which water service has been extended beyond the sewer service limits. The sewer service delivery area map has been sent to DEEP and is the official guide for state planning and investment decisions. The geographic limits of the water distribution system are similar to that of the sewer collection system. Distribution is through the Kensington Fire District, Worthington Fire District and the Berlin Water Control District.

[3] Waste Water Treatment Plant Feasibility Study, Loureiro Engineering Associates; October 25, 2011.

Water usage in Berlin is 400 million gallons per year. 50% of the water supply comes through the Elton Field wells, while most of the rest comes through a connection with the City of New Britain supply. Enlightened long- term planning and the decline in manufacturing and population within the City of New Britain has resulted in a reduced demand for water for water consumption, and therefore the City of New Britain has adequate capacity to distribute water to adjacent communities. In addition, there has been discussion concerning an additional connection with the water system of the Cromwell Fire District, which appears to have more than adequate capacity. The Town's water system is also connected to the Metropolitan District Commission, through a connection in the northeastern section of the Town.

One of the goals of the 2003 Plan of Conservation and Development was to have the Town self-sufficient in water production. The Town of Berlin has an unused well site at Bicentennial Park and a former well site at Woodlawn Road. However, that goal is no longer necessary at this point in time, as both the New Britain and Cromwell system have sufficient excess capacity to supply any projected needs in Berlin for the foreseeable future. Therefore, consistent with state policies to encourage regional provision of services where feasible, the Town of Berlin has contracted with the City of New Britain, the Cromwell Fire District and the Metropolitan District Commission to supply water to the town. This POCD recommends that the town provide the most economically viable water that it can.

5.3.3 Stormwater Management

Most of Berlin drains to the north, through small brooks and streams within the Town towards the Mattabesset River, and into the Connecticut River. Much of the drainage basin consists of developed and urbanized areas. Urbanization results in greater amounts of impervious surface, which results in a negative impact upon water quality.

As described in the Conservation chapter, there is a brand new, significant statewide emphasis on improving stormwater management across all governmental entities. The regional POCD and the state POCD embrace these new technologies, as does the ***August 2011 Low Impact Development Appendix to the Connecticut Storm Water Quality Manual***, which claims: "LID represents a new philosophy in stormwater management. Runoff is viewed as a resource and hydrology used as an organizing principle for site design. Learning how to work with rain water in the landscape rather than just quickly disposing of it. LID is an ecologically friendly approach to site development and stormwater management that aims not just to minimize development impacts (reduce impervious surfaces), but instead restore vital watershed ecological processes (natural hydrologic regime) necessary to restore and maintain the physical

and biological integrity of waters and the quality of life."[4]

The advantages listed in the 2011 State Guidelines report include:

1. reduced consumption of land for stormwater management,
2. LID does not dictate particular land use controls,
3. reduced construction costs,
4. ease of maintenance,
5. takes advantage of site hydrology,
6. better quality of discharge,
7. more aesthetically pleasing development,
8. multiple benefits (such as reducing energy by using green roofs and proper location of trees for shading and water), and
9. improved profit margin.[5]

As evidence of the importance Connecticut places on new development using LID measures, Connecticut's growth management principle #4 includes the policy "Utilize the landscape to the extent practical to manage storm water, so that water bodies in Connecticut maintain optimal water quality to support their myriad uses"[6] This need to protect water quality and improve stormwater management is echoed in CCRPA's 2007 POCD and its December 2012 CEDS. While LID was a recommendation of the Mattabesset River Watershed Plan, now its urgency is reflected in the importance Connecticut DEEP has given to using LID as part of its Climate Action Readiness initiatives for municipalities, as one item that can help mitigate flooding and help for adaptive response to possible emergency scenarios.

The current storm drainage system within the Town of Berlin consists of a standard catch basin and pipe system, ultimately draining into the Mattabesset River. The current regulations require detention for a twenty-five years storm on-site. Current requirements are in conformance with the 2004 Connecticut Stormwater Quality manual. One of the problems with on-site detention in Berlin is the nature of the soils prevalent in Berlin. The predominant clay soils are not conducive to on-site infiltration.

Milone and MacBroom performed a study of stormwater management, which addressed issues of the quality and functionality of the system. This study resulted in recommendations to reduce infiltration and inflow at various points within the system.

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[4] Fuss&O'Neill on behalf of the Partners for the Connecticut Low Impact Development and Stormwater General Permit Evaluation, August 2011 Low Impact Development Appendix to the Connecticut Storm Water Quality Manual, with detailed "how-to" chapters with diagrams and illustrated examples, including Introduction to Low Impact Development, LID Planning and Design, Use of Integrated Management Practices in Various Settings, and Design Standards for LID Controls. The quotation above comes from page 4 of this document.

[5] Ibid, pages 2-3.

[6] 2013-2018 Conservation and Policies Plan for Connecticut, OPM

As identified in the CCRPA Hazard Mitigation Plan for the Central Connecticut Region, approved by FEMA in June of 2011, Berlin has a number of areas that experience flooding, primarily along the Mattabesset corridor. A large area along Farmington Avenue is within the 100 year flood zone. The presence of this flood zone has inhibited commercial development. Berlin's repetitive flooding loss properties, according to FEMA, are all along the Mattabesset River in the center area.

Apparently, the broadness of this flood zone in this area is caused by water backup caused by the culvert for the Mattabasset River under Route 9. The expansion of this culvert would reduce the extent of the flood zone within the Farmington Avenue. However, it would be very expensive and likely result in impacts downstream which may be unacceptable to properties in Berlin, Cromwell and Middletown. The town of Berlin should continue to encourage a study of this area, to fully analyze the impacts, and result in recommendations to address this problem.

Why Should Berlin Care? Look at these Riparian Corridors and Land Cover

- **Berlin Land Area Total** = 17,356.7 acres
- 1601.7 Acres are within the 100ft zone of riparian corridors
- ***That is 9.2% of Your Town***
- 4,566.1 Acres are within the 300 ft zone of riparian corridors
- ***That is 26.3% of Your Town***

Consider the Relationship of Land Cover and Flooding Given the fact that 26.3% of your town is within 300 ft of a riparian corridor ...

http://clear.uconn.edu/tools/habitats/riparian.htm

All of the communities within the State are required to adhere to the best management procedures for storm-water management in conformance with the 2004 state Storm-water manual, as amended. This requires a different approach toward the management of stormwater to assure the removal of contaminants and on-site detention. The Town has started the implementation of these standards, which include standards for treatment of stormwater. The State Storm-water manual should be referenced in the Town zoning and subdivision regulations.

This brings this POCD back to the newly evolving technologies of LID, based on natural hydrological processes. While the initial purpose of storm water drainage was to remove storm water from the subject property in a way not to adversely impact neighboring properties, when the waters got muddied, municipalities realized that gradually, the impacts upon the downstream areas of the drainage system had to be considered as part of the impact. And, end-point collection was and is extremely costly in terms of infrastructure creation, maintenance and impacts.

Adding to the definition earlier, the Department of Energy and Environmental Protection defines low impact development as:

> … an alternative way of developing land and managing stormwater that is aimed at minimizing the impacts of urbanization on natural habitats and hydrology. The creation of hardened surfaces such as roads, parking lots and rooftops in combination with culverts and other structures that alter the natural movement of water all contribute to degraded rivers and streams. The overall goal of LID is to design with nature in mind; work with the natural landscape, hydrology and unique features of a site to avoid unnecessary water pollution, environmental degradation, and flooding. LID accomplishes this by controlling runoff close to the point of generation and retaining more water on the site where it falls, rather than funneling it into pipes that drain into local waterways.[7]

The goal of Low Impact Development is to reduce and cleanse the stormwater discharge from developed properties. This is accomplished by the reduction of impervious surfaces, as well as the use of natural vegetation and other devices to remove pollutants from the runoff, and when possible, discharge the runoff into the ground on-site. Low impact development can include the following components:

Rain Gardens - Rain gardens are shallow depressions in the landscape that typically include plants and a mulch layer or ground cover. In addition to providing increased groundwater recharge, they are expected to provide pollutant treatment. Pollutant treatment in rain gardens has been attributed to adsorption, decomposition, ion exchange, and volatilization.

Grassed Swales - Vegetated swales can be incorporated into a site to help maintain predevelopment hydrology. Properly designed swales will help to infiltrate runoff water from smaller storms, and safely convey runoff from larger storms.

Green Roofs - Green roofs have been in use for many years in Europe. Traditional green roofs, so called intensive green roofs, were composed of a thick sod layer, plants and trees, and required extra structural support. An alternative green roof, called an extensive green roof, is gaining popularity in the United States. The extensive green roof uses a thinner, lighter, growing medium, and is planted with low growing, drought tolerant plant species such as *Sedum*. In most cases, the extensive roofs do not require extensive structural support, yet still provide a stormwater benefit.

Permeable Pavements - These are methods of pavement which permit the infiltration of stormwater, instead of draining it into a catch basin or gutter. These include a variety of alternatives, including:

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[7] http://ct.gov/dep/lib/dep/water_regulating_and_discharges/stormwater/manual/Chapter_2.pdf

- Concrete block pavers which add anywhere from 20% to 50% of open surface that would not have been there had an impermeable surface been used.
- Concrete grid pavers, which consist of concrete honeycomb structures, are laid upon the ground, which support vehicles, but permit the infiltration of stormwater.
- **Plastic grid pavers** are made mainly out of recycled plastic materials that provide a high porous surface using grass or gravel to make the area more attractive. These pavers are also flexible, allowing them to be used on uneven sites.
- **Pervious asphalt is** fundamentally the same as regular asphalt, but it does not contain the fine particles that asphalt does. This creates porosity in the matrix, which allows water to flow through and infiltrate into the ground. As would be expected, the volume of stormwater runoff that flows off the pavement is greatly reduced, and the need for curbing, catch basins, and large detention facilities is reduced.
- Pervious Concrete is a variation of traditional concrete. Similar to pervious asphalt, pervious concrete does not have the fine particles in the mix.

5.3.4 High Speed Telecommunication Access

This concept is new to all planning experiences in the 21st century, and reflects the increasing importance of technology to the locational issues of the future. It has dramatically altered the spatial distribution of economic and social activities. The advent of the computer was just the beginning – every year new uses are being found for technologies that in turn alter the entire process of locational decision-making for businesses and individuals.

There are two aspects that are important to address here. Much in the same way that major cities have become hubs for the digital economy by installing fiber-optic "backbones" – big pipes to carry cable – along critical rights-of-way, Berlin needs to conceive of telecommunications as part of an economic strategy. To that end, the Town should work to anticipate and maintain some influence over aspects of telecommunication technology. The goal would be first, to monitor and second, when possible, to assist in the development of what might be seen as the 21st century equivalent to the railways. However, unlike the railways, it should be acknowledged that before another decade passes, some of these telecommunication advances might be obsolete. Yet that does not make them any less important for future planning purposes.

The need for high-speed telecommunication access has grown exponentially within the past several years. Facilities to provide this access included antennas and their towers, fiber optic cable and DSL switching facilities. Private companies provide this access, but government does have a role. The town government has some regulatory authority over the placement of these facilities. Town officials can also request and encourage telecommunication service providers to install facilities where they would be helpful in serving an existing business, encouraging the location or growth of a new business, or better service to residents. For example, parts of the Town have recently received availability of DSL services, initially from Connecticut Telephone and now from SNET/SBC as well.

Therefore, the following policy recommendations are proposed for consideration:

1. The Town should work with private providers of telecommunication facilities and state regulatory officials to encourage that a full range of services be made available to the business properties of Berlin.

2. Since high-speed telecommunications services are also important to home-based businesses and to the increasing portion of Berlin residents using home computers to stay connected with the world, the Town should advocate for more extensive services for residential areas as well.

3. The installation and placement of these facilities should be done in accordance with a service plan prepared by the service provider, with proper input from the Town.

4. Many of these facilities may be visually dominant. The Town should work with the providers and use its regulatory and advisory authorities to try to have these facilities as least-visually-obtrusive as possible, so as to not detract from the residential quality of life of Berlin.

In conclusion, the Town must continue to anticipate technological changes and monitor and control infrastructure developments to be certain that future development does not stress the town's ability to maintain services and meet all citizens' needs.

5.3.5 *Infrastructure Recommendations*

1. The 2003 Plan created a Utility Service Area, which defined the area which would be served by public water and sewer service. This plan should consider two distinct service areas; one for water and one for sewer. The sewer service area supports relatively intensive development, as development can occur despite certain difficult soil conditions. The provision of public water service to certain properties allows certain types of development, but without sewer service it would not still need to be relatively low intensity. Both service areas will be relatively similar is scope, although the water service area may extend a bit further. Specifically, the water service areas may include R-40 areas which do not require sewer service.
2. The Town should commission a study or encourage the State to perform a study of the Mattabesset / Sebethe River basin to determine the most appropriate ways to enhance drainage and minimize the flood plain.
3. Continue the program to address inflow and infiltration measures to increase the capacity of the Mattabesset Sewer District treatment facility.
4. Upgrade the obsolete or dysfunctional components of the sewer system.
5. Promote extension of the sewer system to promote economic growth through cooperation with potential developers and the State of Connecticut.

6. Encourage the continued and enhanced coordination of the sanitary sewer service providers in the Town.
7. Recognize and adopt the regional nature of the water systems in Central Connecticut, and that it is mutually advantageous for Berlin to purchase water from neighboring municipalities. Therefore, municipal water independence should no longer be goal of the Town.
8. Adopt Low Impact Development design standards as part of the zoning and subdivision regulations. Elements of these regulations could include the following:
    a. Reduce the number of driveways, by encouraging the use of common driveways.
    b. Reduce the length of driveways, by reducing or eliminating front yard setbacks for garages.
    c. Allow various driveway designs, including ribbon drives.
    d. Encourage the use of non-impervious driveway surfaces.
    e. Amend the parking regulations to limit the installation of a maximum number of parking spaces. The regulations could also require that a certain percentage of the parking spaces, which would be used infrequently, must be of a pervious surface.
    f. Encourage the design impervious drives to follow contours encouraging sheet flow of stormwater over porous areas.
    g. Require that driveways be installed with a crowned surface, so that a greater portion is shed to the sides as sheet flow.
    h. Where impervious driveway surfaces are installed, avoid direct connections to the storm drain system by using porous materials in the area where the drive intersects the road

Chapter 6: Conclusion

The 2003 Plan of Conservation and Development set out a new course. Rather than encourage development on any lands appropriately zoned, the Town set up a multi-tiered hierarchy. The first step was to assess the fragility of lands and determine what lands were more suited to development or redevelopment. Once this assessment was completed, Targeted Economic Development Sites were identified as possible sites for redevelopment or development according to the economic needs and site constraints. Similarly, lands and attributes were identified for conservation, as possible with the cooperation of interested landowners. Among those lands identified for possible conservation were lands deemed critical to stream corridors, water supplies, environmental quality, open space linkages, traprock ridges, vernal pools, glacial kettles, and habitat preservation, along with the cultural landscape.

This decennial plan stays the course, with the addition of several refinements to the TEDS both in terms of scope and vision, along with some changes to zoning in specific areas. There is a new focus on design districts as a motivating and regulating force that can not only respond to and stimulate development innovations to suit the sites, but can also protect the public interests inherent in zoning regulations by the review mechanism. This plan acknowledges the value of limiting utility extensions into fragile lands, and hence continues the 2003 utility restrictions that defined boundaries to more intense development that requires public utilities.

This plan emphasizes two potential development corridors, the first related to the town center. There the railway resurgence can allow Transit Oriented Development to stimulate and define a new Kensington village center that can be physically and visually connected through already acquired parcels along the Farmington Avenue corridor to the successful streetscape and town center "placemaking" work such as Veterans Memorial Park already created in the last decade. The focus on the train station as a key element of commuter rail opens up commercial as well as residential possibilities to strengthen the town center as a destination for municipal business and necessity-based shopping.

This also has great potential due to the town's most recent prospective acquisition of 848 Farmington Avenue in concert with the Berlin Land Trust to allow a creative pedestrian linkage that begins in downtown and that can flow onto and through the town lands by Railroad Pond and the Town Hall complex. Consistent with several of the state's growth management principles, such development linked to transit initiatives and using existing infrastructure may be further enhanced by working to figure out how best to connect this pedestrian opportunity further towards Bicentennial Park and the Hatchery Brook Conservation Area with all its onward connections towards the NET. Imagine the possibilities for such a singular rail link to the NET, a perfect blend of conservation-oriented development and transit-oriented development!

Second, this Plan explores the possibilities of an updated and revived Berlin Turnpike that, while still needing a development of sufficient critical mass to tip the financial benefits of redevelopment along the corridor towards transformational investment opportunities, has already made significant headway since 2003. The addition of so much residential development along the southern core has yet to stimulate significant related development, but it is beginning. The image of the turnpike is changing, and a few more successes, noting of course that almost half of the TEDS are on or proximate to the turnpike, have the potential to open up this already utilitied, greyfield-rich, critical transportation corridor to transformational development.

This plan also embraces the reality faced by Berlin's industrial and commercial businesses where expansion and growth within the community can be limited by the lack of space. To that end, infill development and creativity with projects will need to be the watchword. As expressed by the state in the POCD within its Growth Management Policy #1, Berlin has already and will continue to "proactively identify and market available properties that are currently served by infrastructure and that could meet the needs of new or expanding businesses, especially those within close proximity to existing industry clusters."

In the future of housing development, the Plan includes a realistic assessment of the costs to carry further residential development. Realizing how most of the lands that are left to develop have many underlying issues from wetlands to slope to flood potential, open space and similar cluster developments will be considered by this plan as a means of protecting fragile portions of undeveloped properties that would otherwise be allowed to be built on. The lands are fragile and improved scientific information on geology and hydrology lead a prudent community to recommend that development be restricted on lands where the cost of development is too high in terms of public safety and environmental degradation, including degradation of geology and hydrology.

Recognizing Connecticut's major admonition and implied order to municipalities over the past two years to prepare for climate change by adapting existing practices as well as limiting as possible further activities leading to carbon buildup and possible warming, and acknowledging the CCRPA work and report of recommendations concerning hazard mitigation, Berlin has reemphasized many of the recommendations from the last POCD, including LID and similar measures to protect its resources as well as the watershed for the Mattabesset River. Many of these practices underlie the POCDs of both state and regional recommendations.

Refining and continuing the success of the last decade's conservation initiatives is paramount, with an added strong emphasis in the future on agricultural assistance and stimulus. CCRPA clearly states in their Comprehensive Economic Development Strategic Plan that "agriculture is economic development" and Berlin, where possible, will explore the use of agricultural preservation along with the encouragement of young farmers and value-added agricultural

products as business opportunities. The community vision and image may be more tied to Conservation in the future, and Berlin uses this plan to set in motion even more elements to celebrate the unique resources ... Berlin's Heritage Lands.

Consistency with State and Regional Plans

Rather than limit this discussion to one place in this document, references and connections to the various state plans and initiatives are strewn throughout this assessment of Berlin's next decade possibilities and programs. This POCD is found to be consistent not only with the regional POCD but also the state POCD and its six growth management principles. Additionally, the state and regional economic development strategies and their formal documents have been evaluated for consistency, and this plan accords with their goals and strategies. The only possible addition that might be needed in the state plan in future, depending on where the "Kensington Village" and its Transit Oriented Development were to lead, would have been for the state to include that area in its map as a village priority funding area; however, since that designation was originally reserved for rural towns this is not appropriate at present. Absent decisive plans for Kensington as a TOD town center, that is currently premature. Note however, that the State POCD Plan did reflect the TOD possibilities. Otherwise, these plans are extremely consistent with Berlin's plan, policies and programs as described throughout the previous chapters and referenced herein.

Finale

Acknowledging that Berlin has many unique assets, if one substitutes the word "Berlin" for "region" in the vision statement on page 14 of the CCRPA Comprehensive Economic Development Strategy adopted in December of 2012, this presents a fitting conclusion as well as introduction to this Plan, honed amidst an environment of change for a community that embraces its past while not hesitating to reflect and act on its future.

> "In the year 2030 the Central Connecticut Region will be a vibrant industrial, commercial and technological region that supports a thriving educational community, successfully embraces diversity, and recognizes the value of its rich spectrum of popular, cultural and natural environments. It will be the home of an energized technological cluster of industries, and will have a fully employed, multi-skilled, effectively educated work force upon which the region's strong public institutions and its participatory democracy will be built. The region will be addressing its challenges on a regional basis with strong inter-community cooperation and with institutions capable of dealing satisfactorily with the needs of its disadvantaged citizens. The region's success will be founded upon an integrated fabric of well-designed, constructed, and maintained community infrastructure facilities. It will host a series of community events and programs that will demonstrate

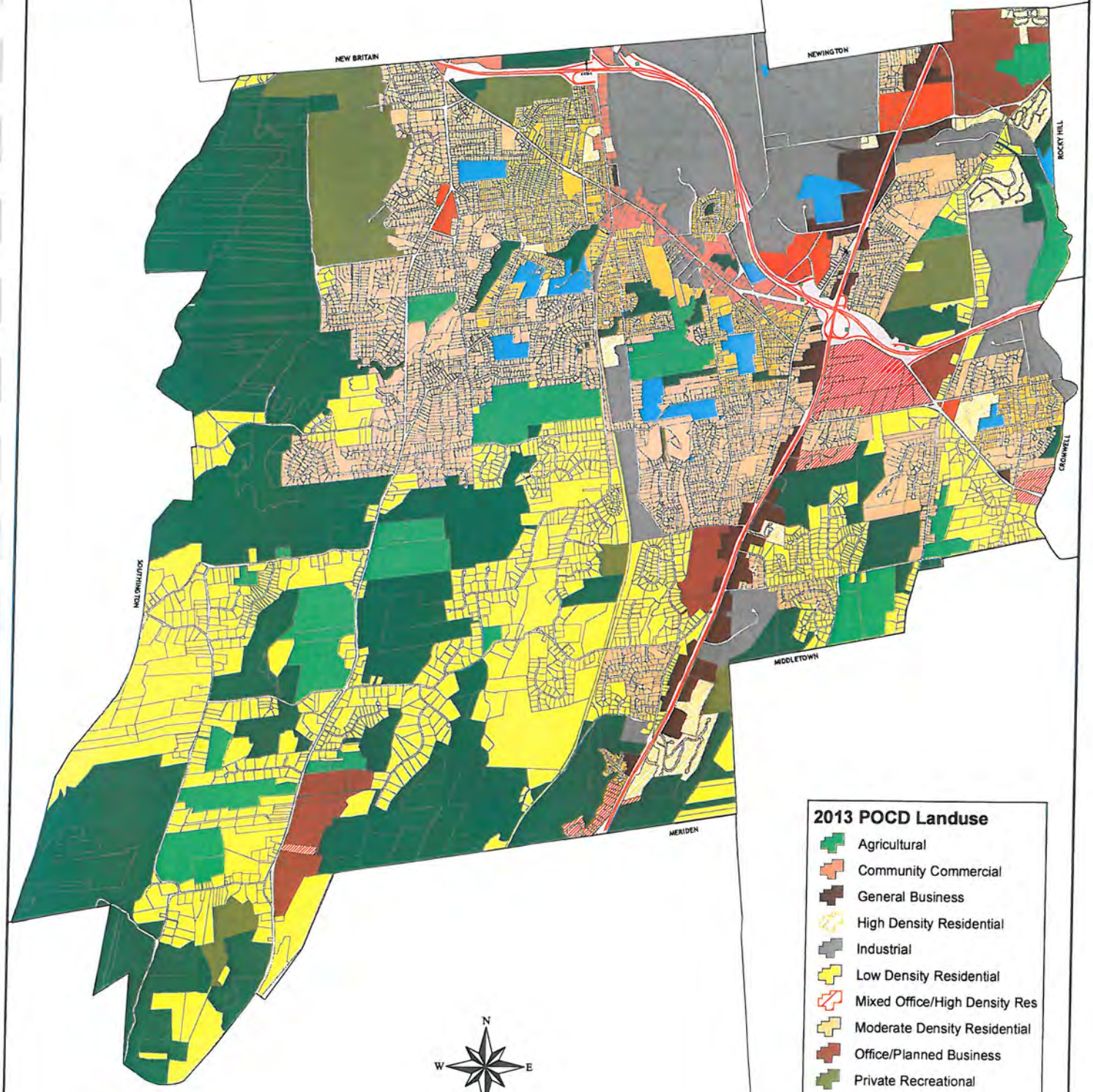
the effectiveness of its cooperative spirit, and will capitalize on the region's valued historic heritage. It will be a place that is perceived as successful and desirable, as well as one which its residents and businesspeople will speak of with great pride."

This, too, is Berlin. And this Plan is presented to work not only towards giving Berlin the 'eloquence' some yearn for, but to allow its sense of community to prevail amidst the many economic, social and environmental changes yet to come in this century. After all, this statement, too, reflects the essence of Berlin.

There is no power for change greater than a community discovering what it cares about. – *Margaret J. Wheatley*

TOWN OF BERLIN, CT

POCD 2013 Landuse



1 inch = 4,500 feet

0 4,500 9,000 13,500 18,000 Feet

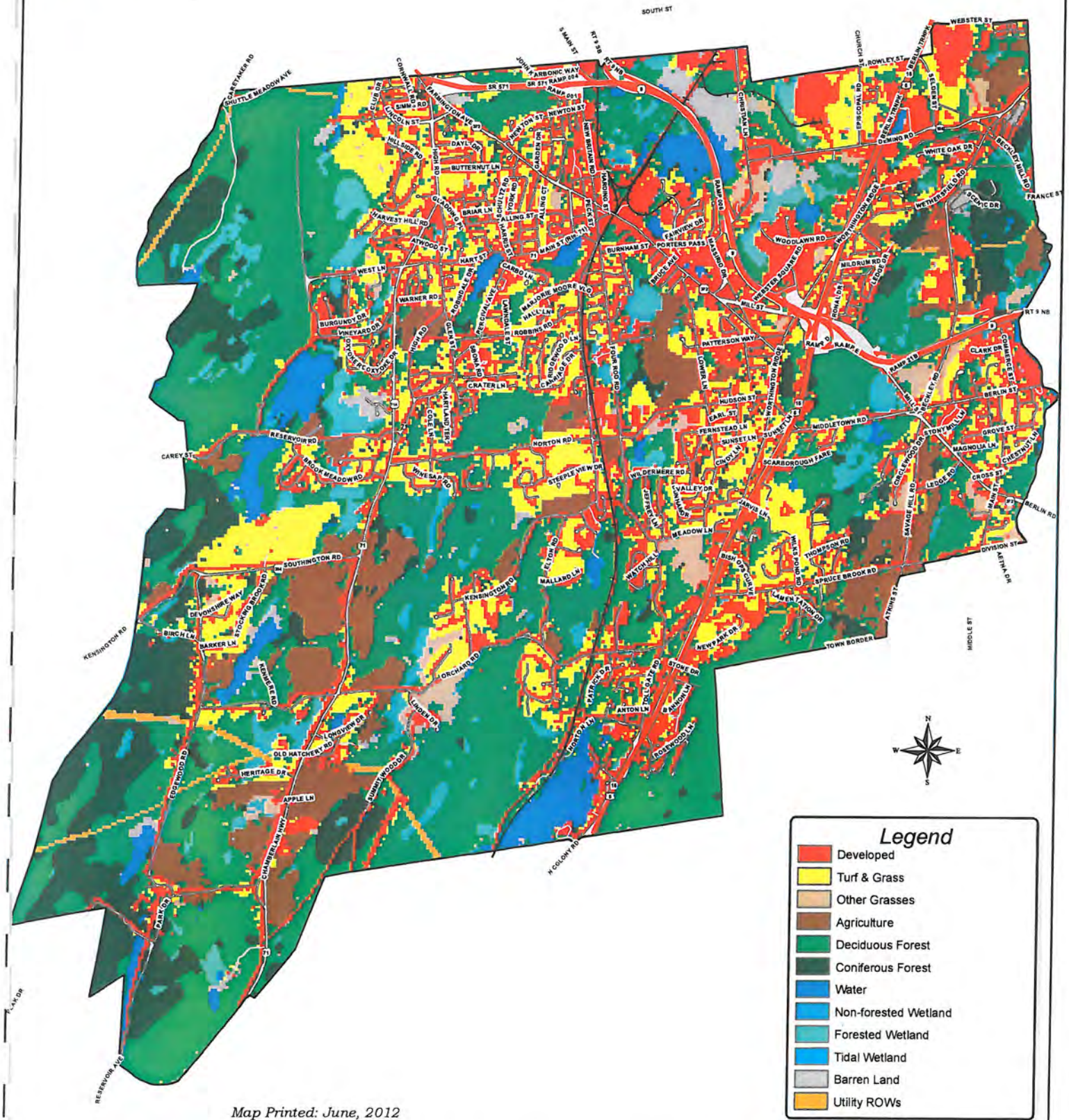
2013 POCD Landuse

- Agricultural
- Community Commercial
- General Business
- High Density Residential
- Industrial
- Low Density Residential
- Mixed Office/High Density Res
- Moderate Density Residential
- Office/Planned Business
- Private Recreational
- Public Facilities
- Public Parks/Open Space
- Regional Commercial
- Retail/Shopping
- Village Residential

NEW ENGLAND GEOSYSTEMS

Town of Berlin, Connecticut

NEMO Land Cover 2006



Legend

- Developed
- Turf & Grass
- Other Grasses
- Agriculture
- Deciduous Forest
- Coniferous Forest
- Water
- Non-forested Wetland
- Forested Wetland
- Tidal Wetland
- Barren Land
- Utility ROWs

Map Printed: June, 2012

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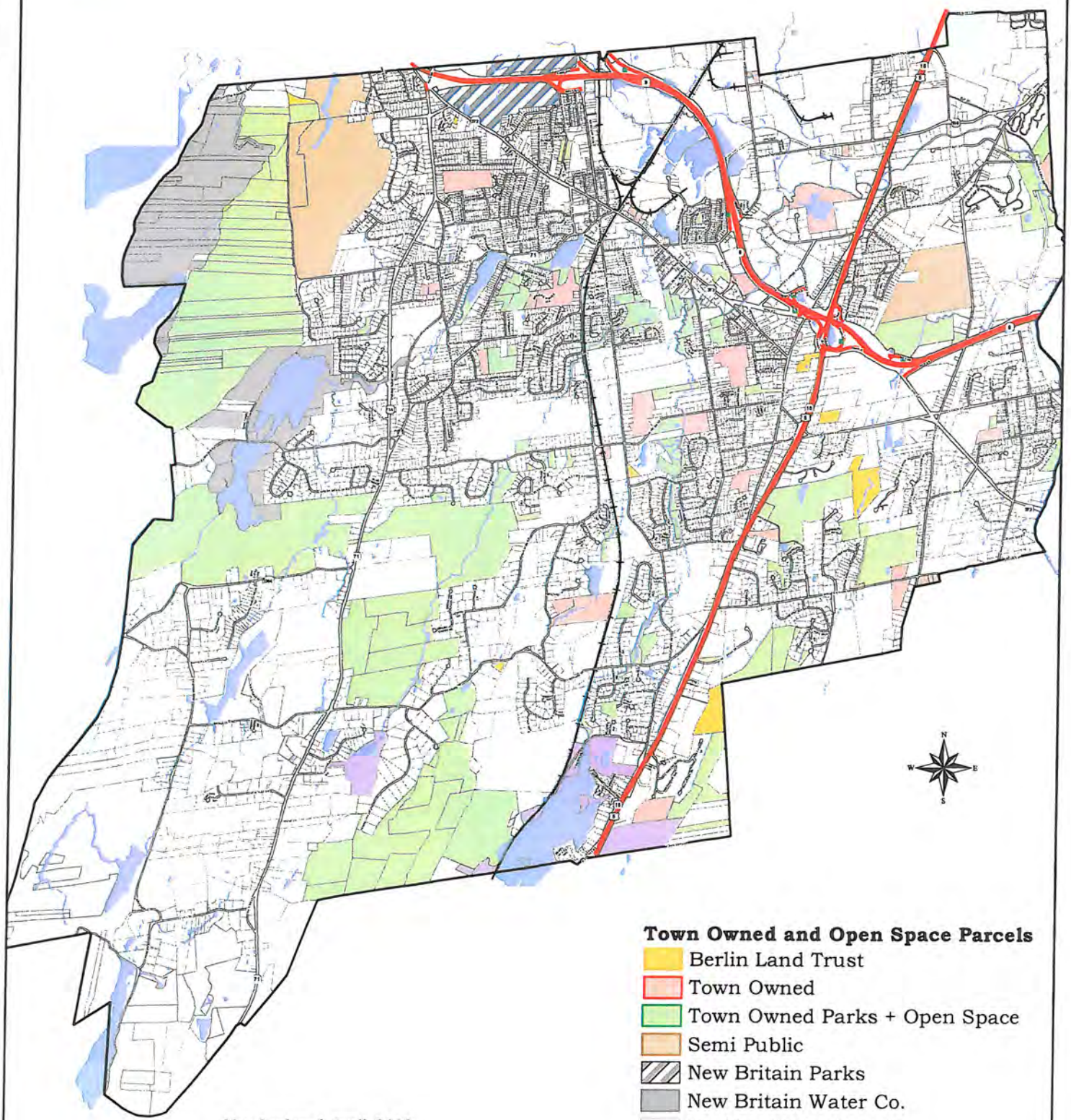
Source:
UCONN, Nonpoint Education for Municipal Officials

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

NEW ENGLAND GEOSYSTEMS

Town of Berlin, Connecticut

Public, Semi-Public and Open Space Properties



Town Owned and Open Space Parcels

- Berlin Land Trust
- Town Owned
- Town Owned Parks + Open Space
- Semi Public
- New Britain Parks
- New Britain Water Co.
- Meriden Water/Public
- State of Connecticut

Map Produced: April, 2013

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NEW ENGLAND GEOSYSTEMS

0 2,000 4,000 8,000 Feet

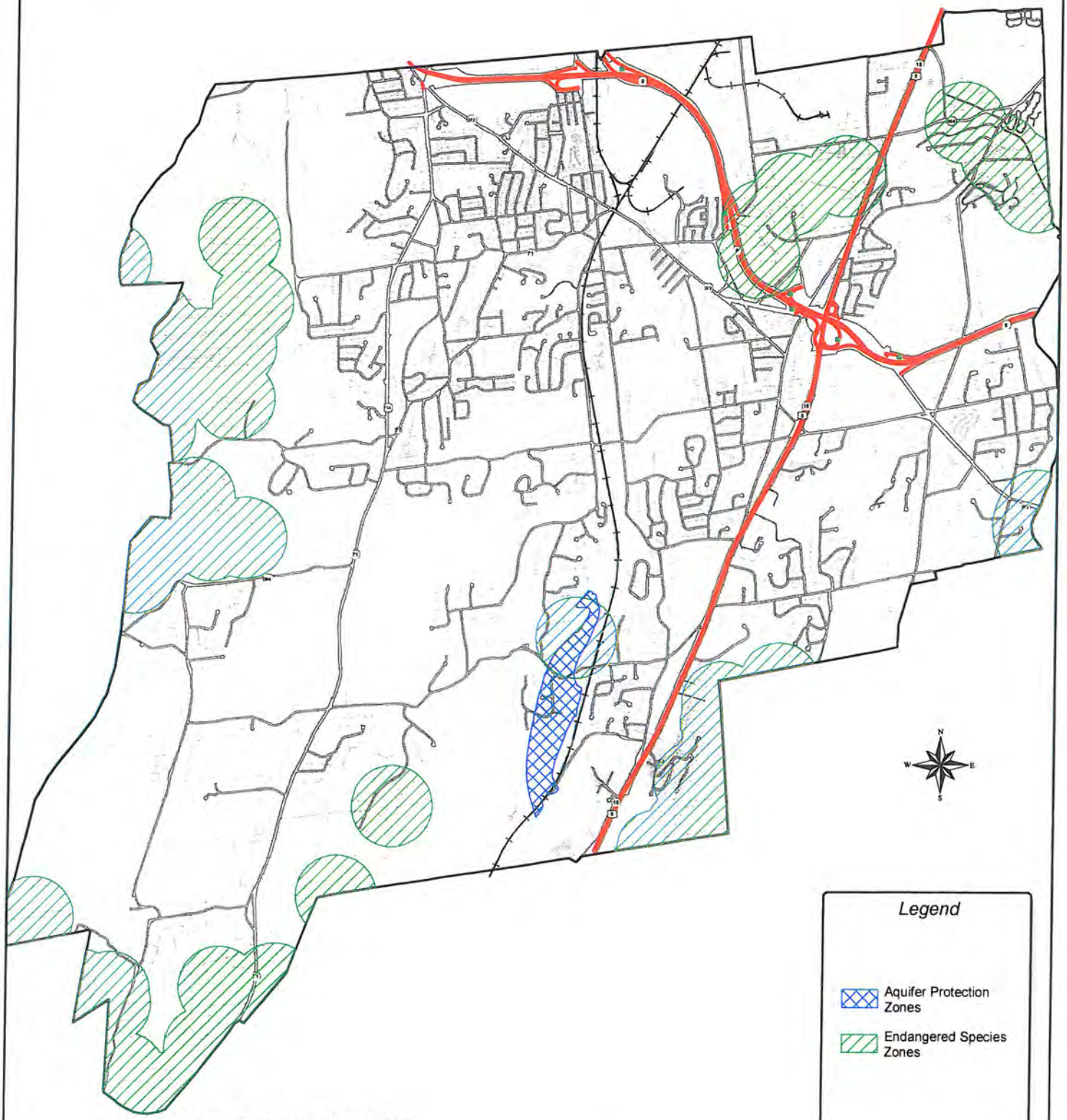
0 0.475 0.95 1.9 Miles

Source:
Parcels updated Nov 2012
Properties identified are derived from assessment data

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Town of Berlin, Connecticut

Aquifer Protection Areas and Endangered Species



Legend

- Aquifer Protection Zones
- Endangered Species Zones

Map Produced: May 2012

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NEW ENGLAND GEOSYSTEMS

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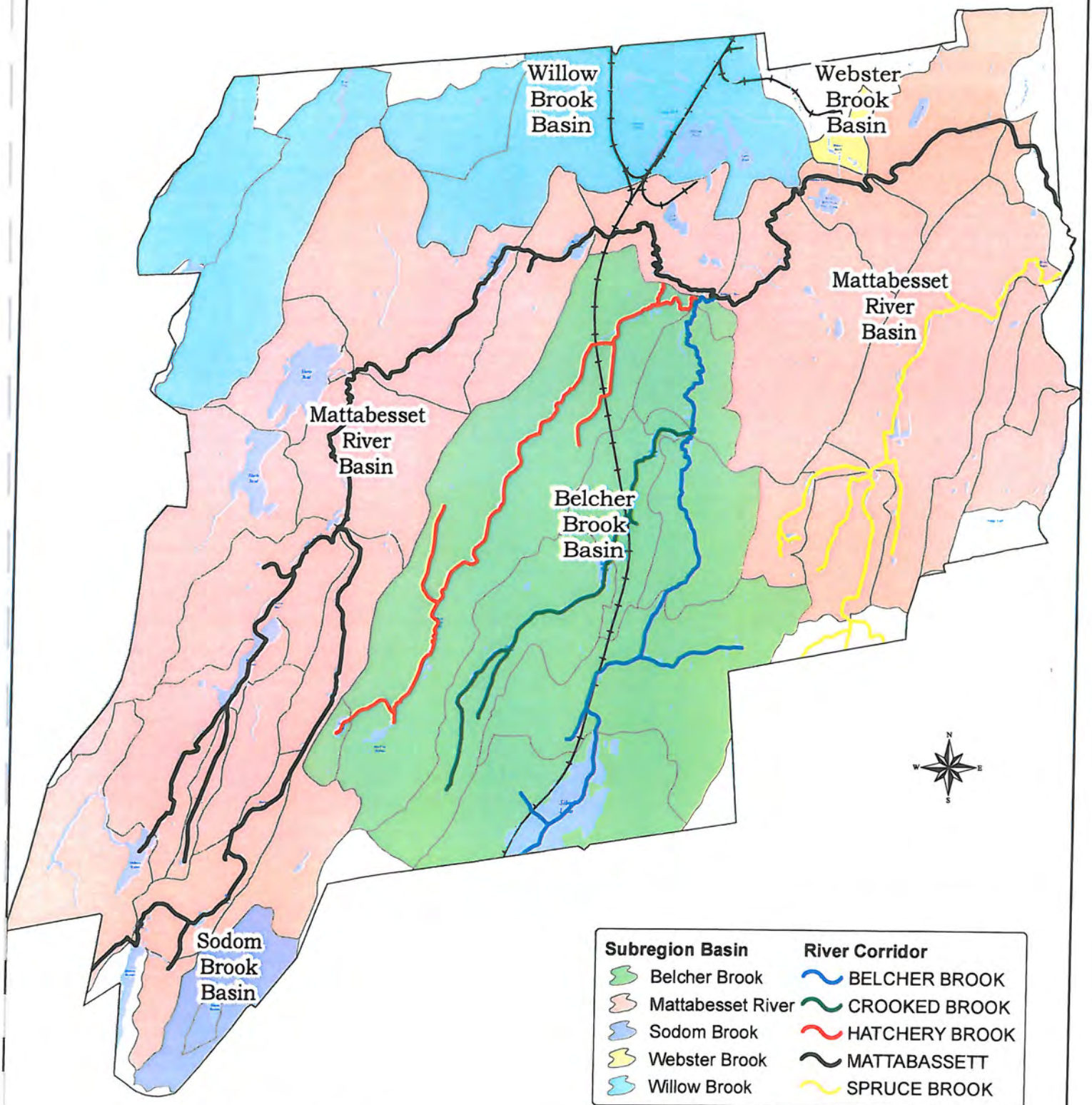
Source:
Feature data gathered from CT DEEP:
Aquifer updated: Jan 19, 2012
Natural Diversity Database updated : Dec 2011

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Town of Berlin, Connecticut

Sub-Regional Basins & River Corridors



Map Produced: March, 2013

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NEW ENGLAND GEOSYSTEMS

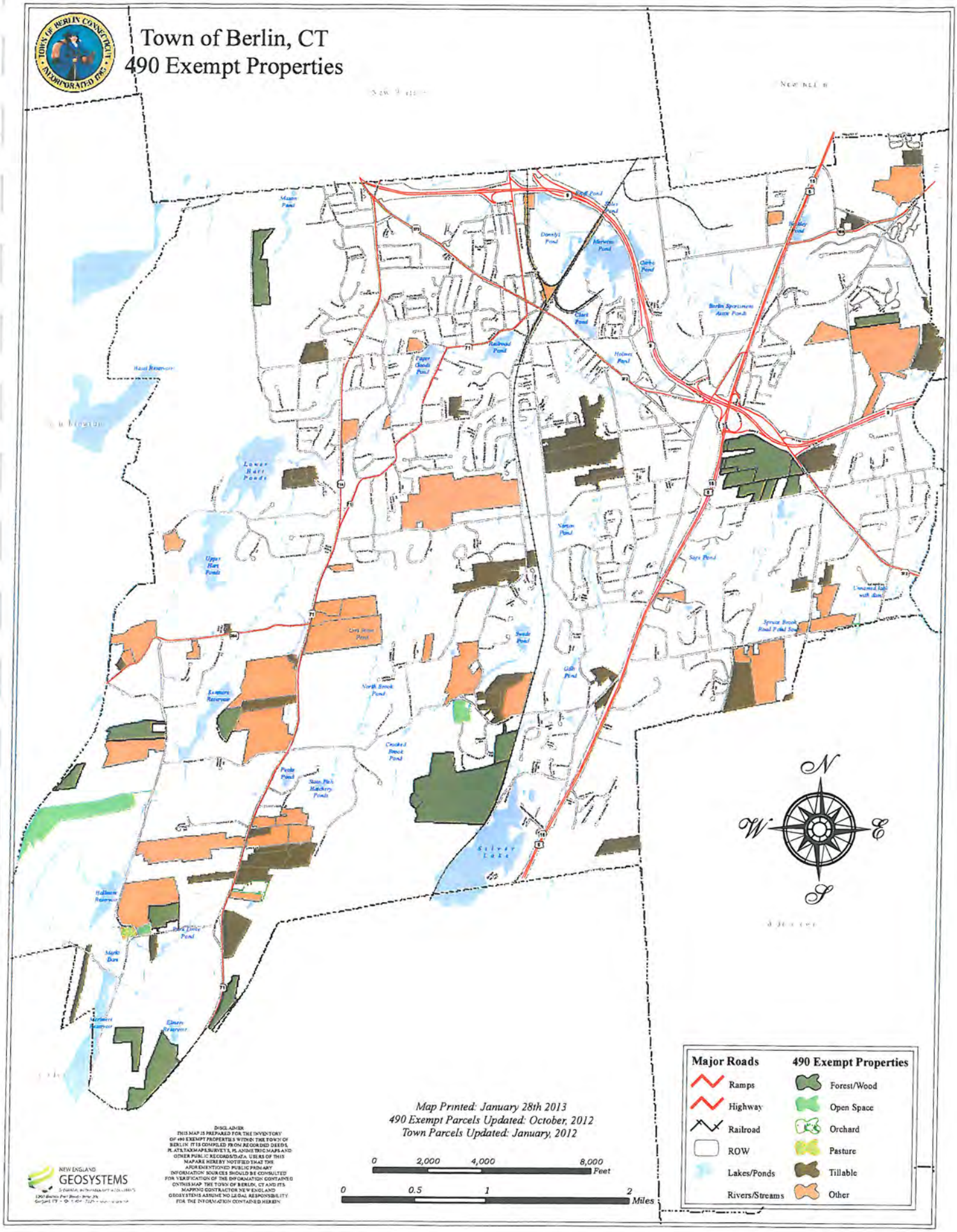
0 2,000 4,000 8,000 Feet

0 0.5 1 2 Miles

Source:
Feature data gathered from CT DEEP;
Aquifer updated: Jan 19, 2012
Natural Diversity Database updated : Dec 2011

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Town of Berlin, CT
490 Exempt Properties



Map Printed: January 28th 2013
490 Exempt Parcels Updated: October, 2012
Town Parcels Updated: January, 2012

DISCLAIMER
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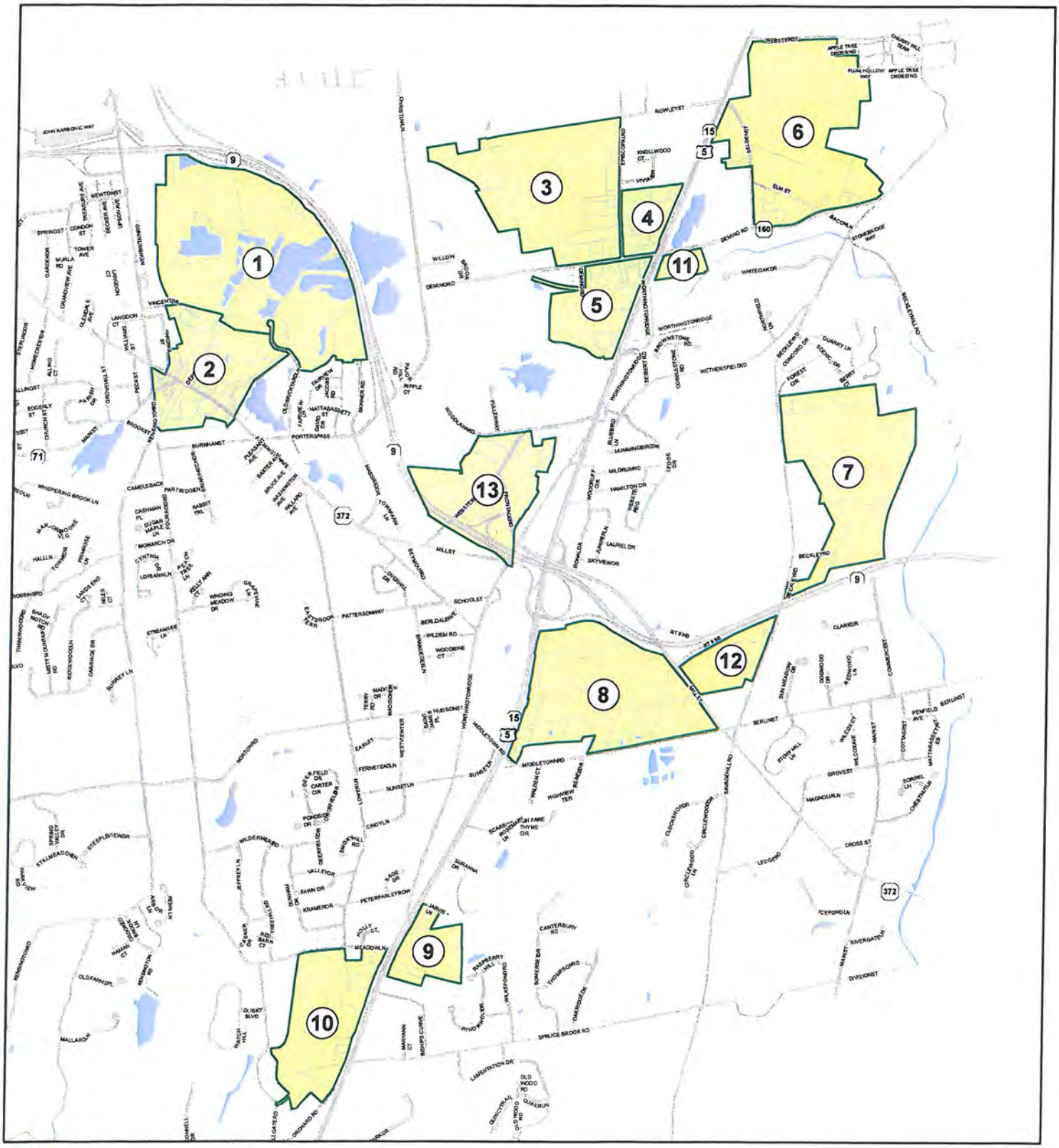
NEW ENGLAND GEOSYSTEMS

Town of Berlin
Targeted Economic Development Sites



Town of Berlin Economic Development

TED Sites

N

0 1,250 2,500 3,750 5,000 Feet

1 inch = 2,500 feet

NEW ENGLAND GEOSYSTEMS

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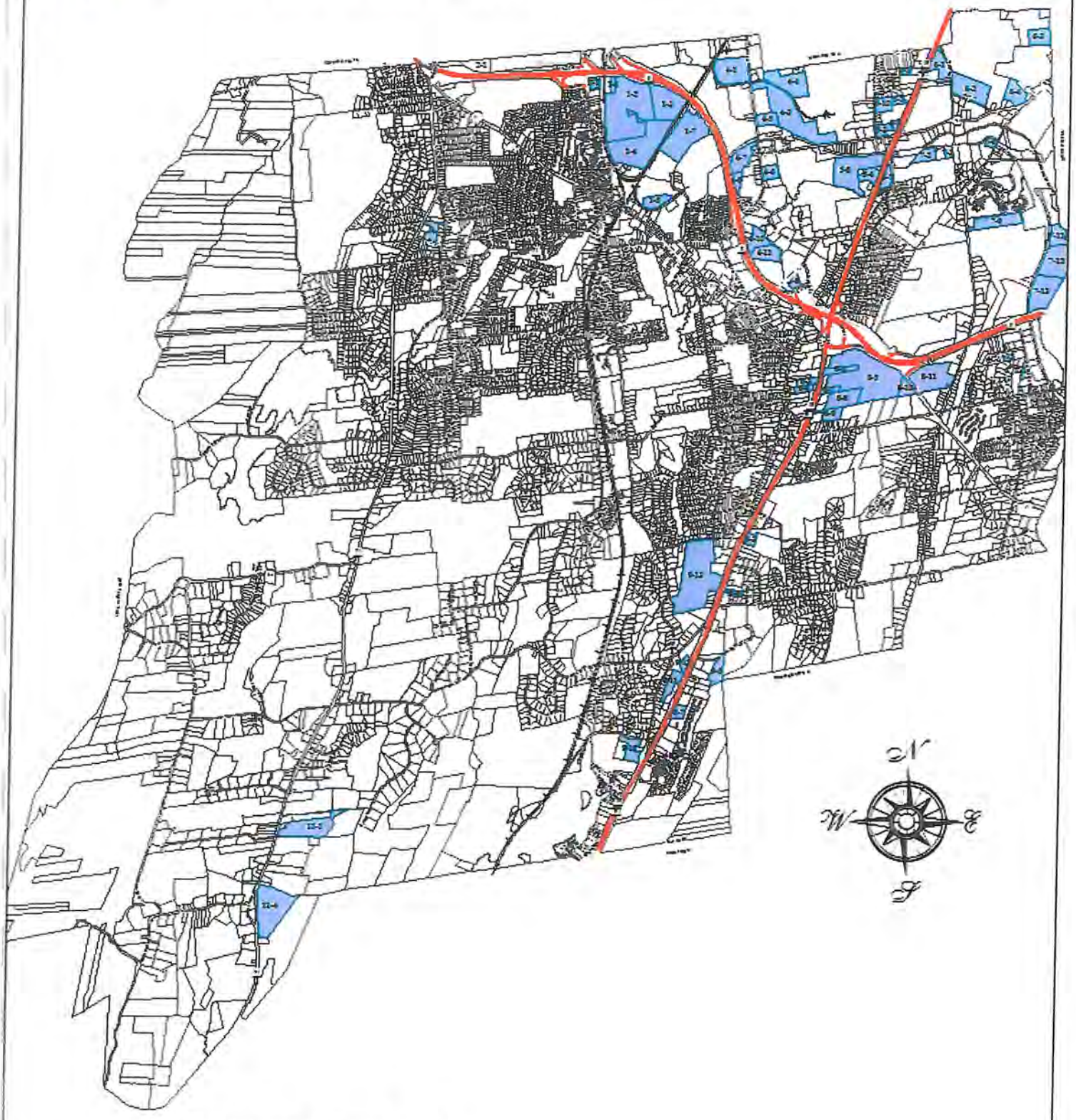
TOWN OF BERLIN 2013

Undeveloped Commercial and Industrial Zoned Parcels



MAP PRODUCED : January, 2013

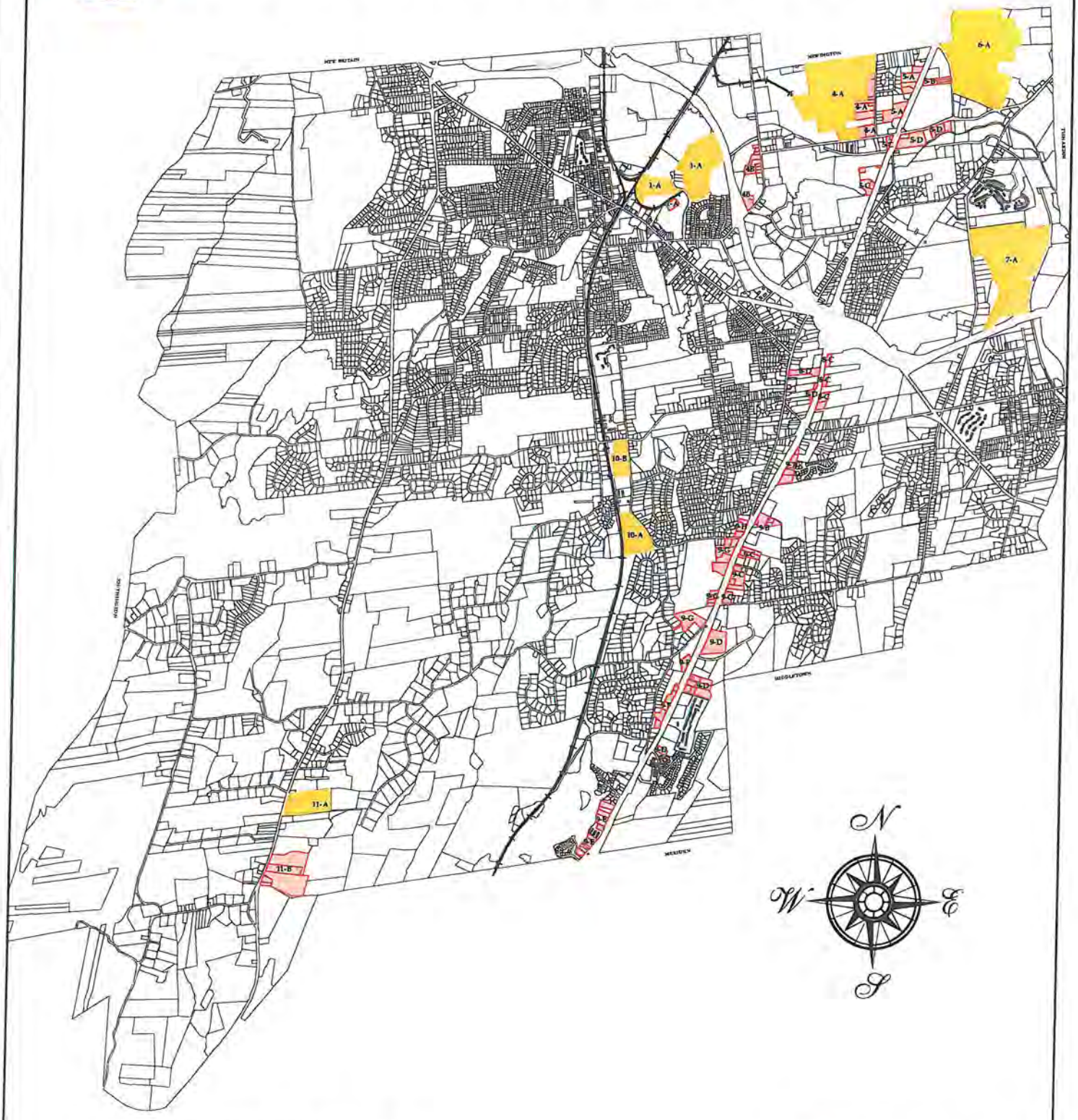
GEOSYSTEMS

Undeveloped Land

Parcels

TOWN OF BERLIN 2013

Areas with Future Development Potential



MAP PRODUCED NOVEMBER, 2013

NEW ENGLAND GEOSYSTEMS

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0 2,100 4,200 6,300 8,400

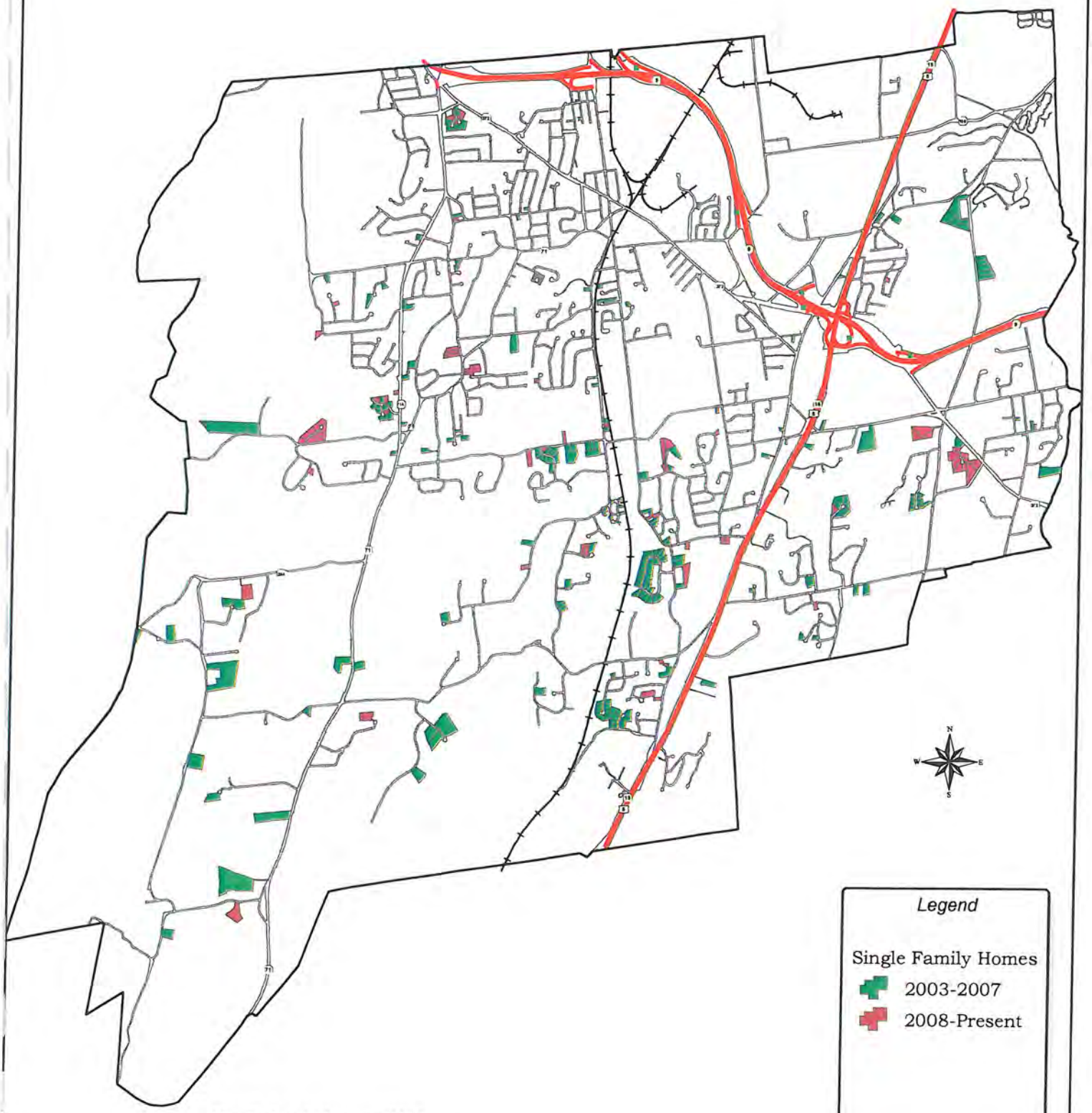
Feet

Developable Properties Category

- Considered for Redevelopment
- Potential Excess Land
- Parcels

Town of Berlin, Connecticut

New Single Family Homes



Legend

Single Family Homes

2003-2007

2008-Present

Map Updated : January, 2013

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NEW ENGLAND GEOSYSTEMS

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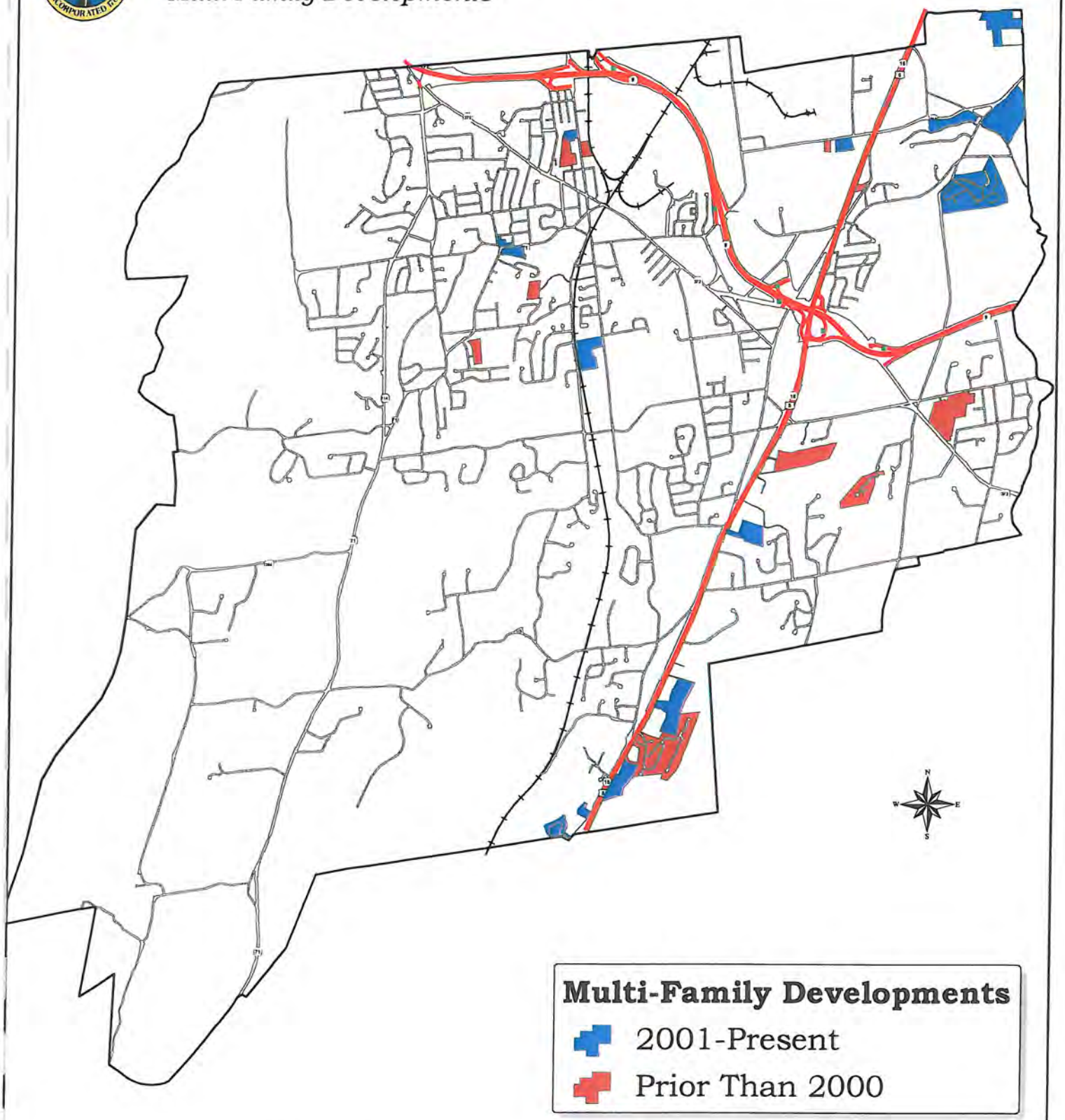
Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Town of Berlin, Connecticut

Multi-Family Developments



Multi-Family Developments

- 2001-Present
- Prior Than 2000

Map Updated : March, 2013

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FOR THE INFORMATION CONTAINED HEREIN.

NEW ENGLAND GEOSYSTEMS

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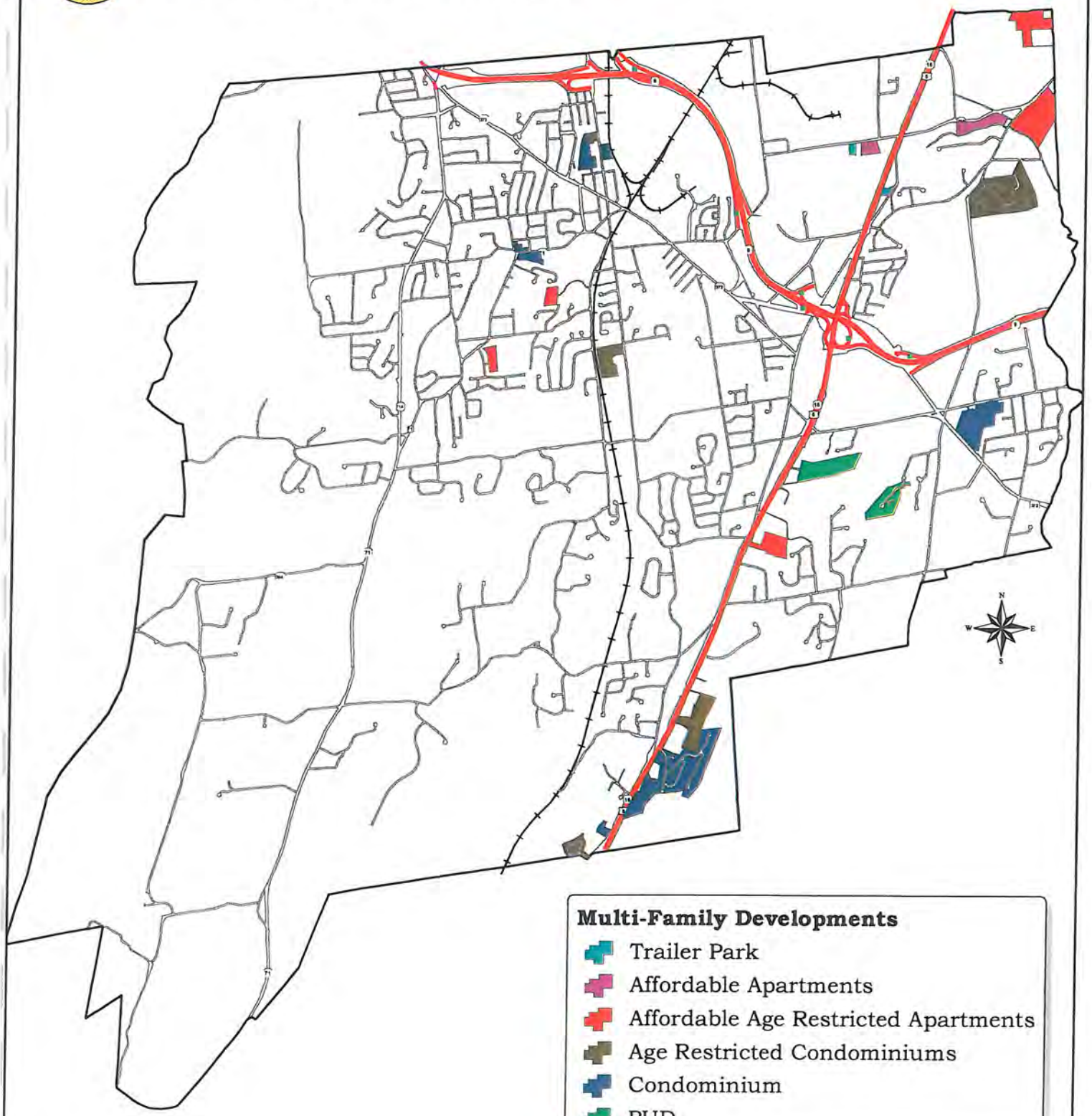
Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Town of Berlin, Connecticut

Multi-Family Development Types



Multi-Family Developments

- Trailer Park
- Affordable Apartments
- Affordable Age Restricted Apartments
- Age Restricted Condominiums
- Condominium
- PUD

Map Updated : March, 2013

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NEW ENGLAND GEOSYSTEMS

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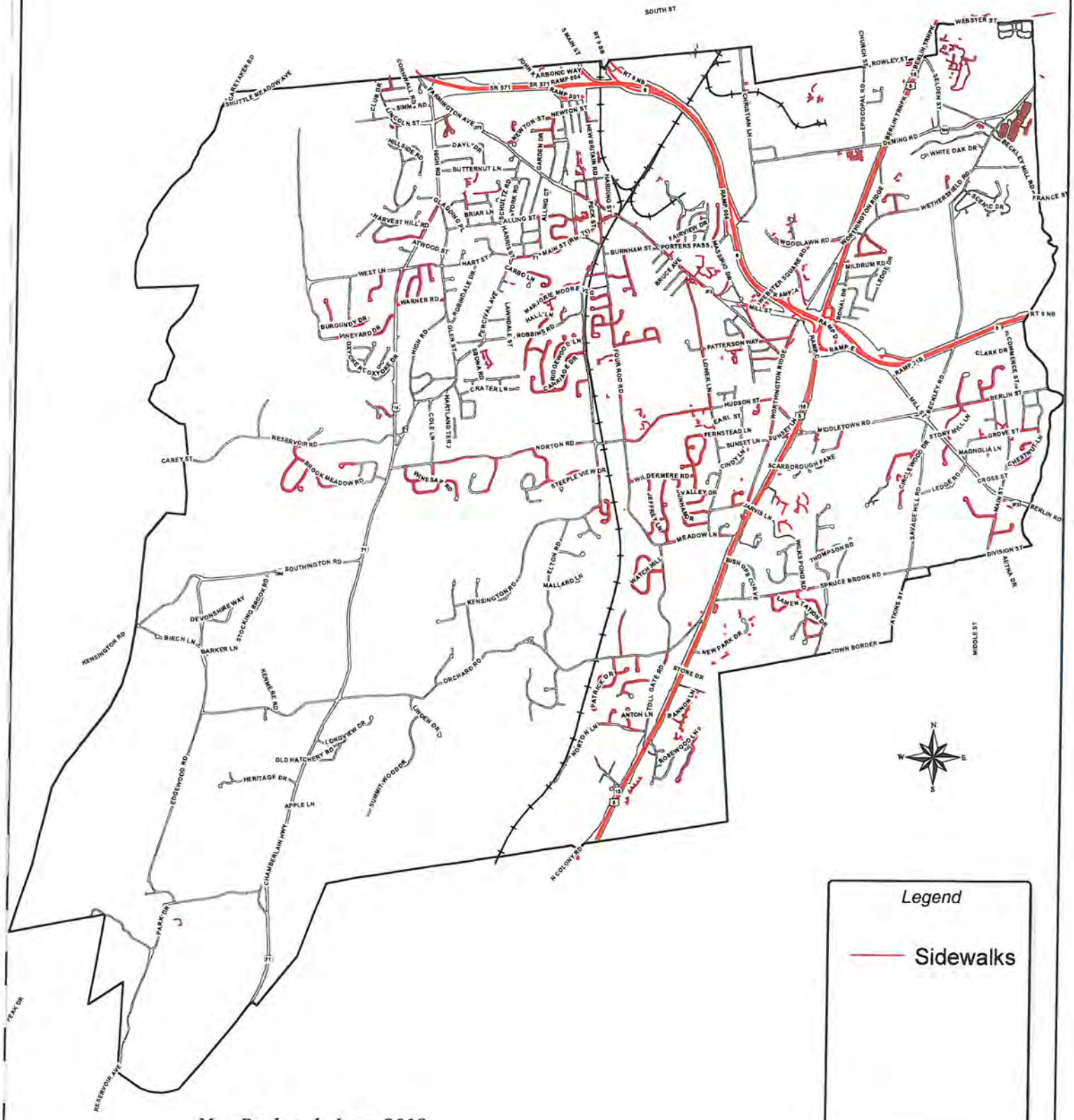
0 0.5 1 2 Miles

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Town of Berlin, Connecticut

Sidewalks



Legend

Sidewalks

Map Produced: June, 2012

DISCLAIMER:
THIS MAP IS PREPARED FOR THE INVENTORY OF REAL PROPERTY WITHIN THE TOWN OF BERLIN AND IS COMPILED FROM RECORDED DEEDS, PLATS, TAX MAPS, SURVEYS, PLANIMETRIC MAPS AND OTHER PUBLIC RECORDS AND DATA. USERS OF THIS TAXMAP ARE HEREBY NOTIFIED THAT THE AFOREMENTIONED PUBLIC PRIMARY INFORMATION SOURCES SHOULD BE CONSULTED FOR VERIFICATION OF THE INFORMATION CONTAINED ON THIS MAP. THE TOWN OF BERLIN AND ITS MAPPING CONTRACTORS ASSUME NO LEGAL RESPONSIBILITY FOR THE INFORMATION CONTAINED HEREIN.

0 1,950 3,900 7,800 Feet

0 0.475 0.95 1.9 Miles

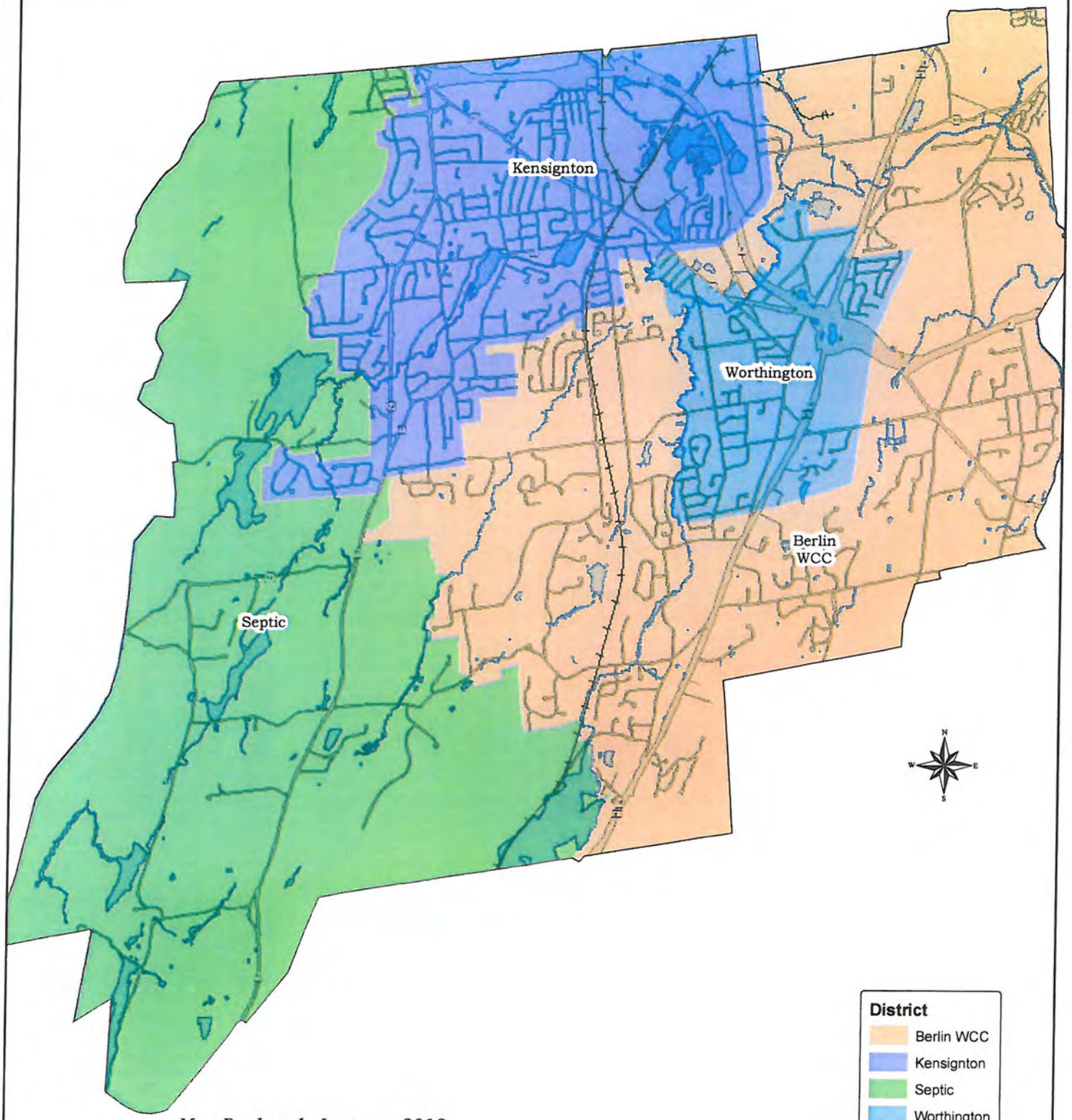
NEW ENGLAND GEOSYSTEMS

Source:
Sidewalk data was extracted from CAD drawings supplied by the Towns Engineering dept

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Town of Berlin, Connecticut

Water Districts



District

- Berlin WCC
- Kensignton
- Septic
- Worthington

Map Produced: January, 2013

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FOR THE INFORMATION CONTAINED HEREIN.

0 2,000 4,000 8,000 Feet

0 0.5 1 2 Miles

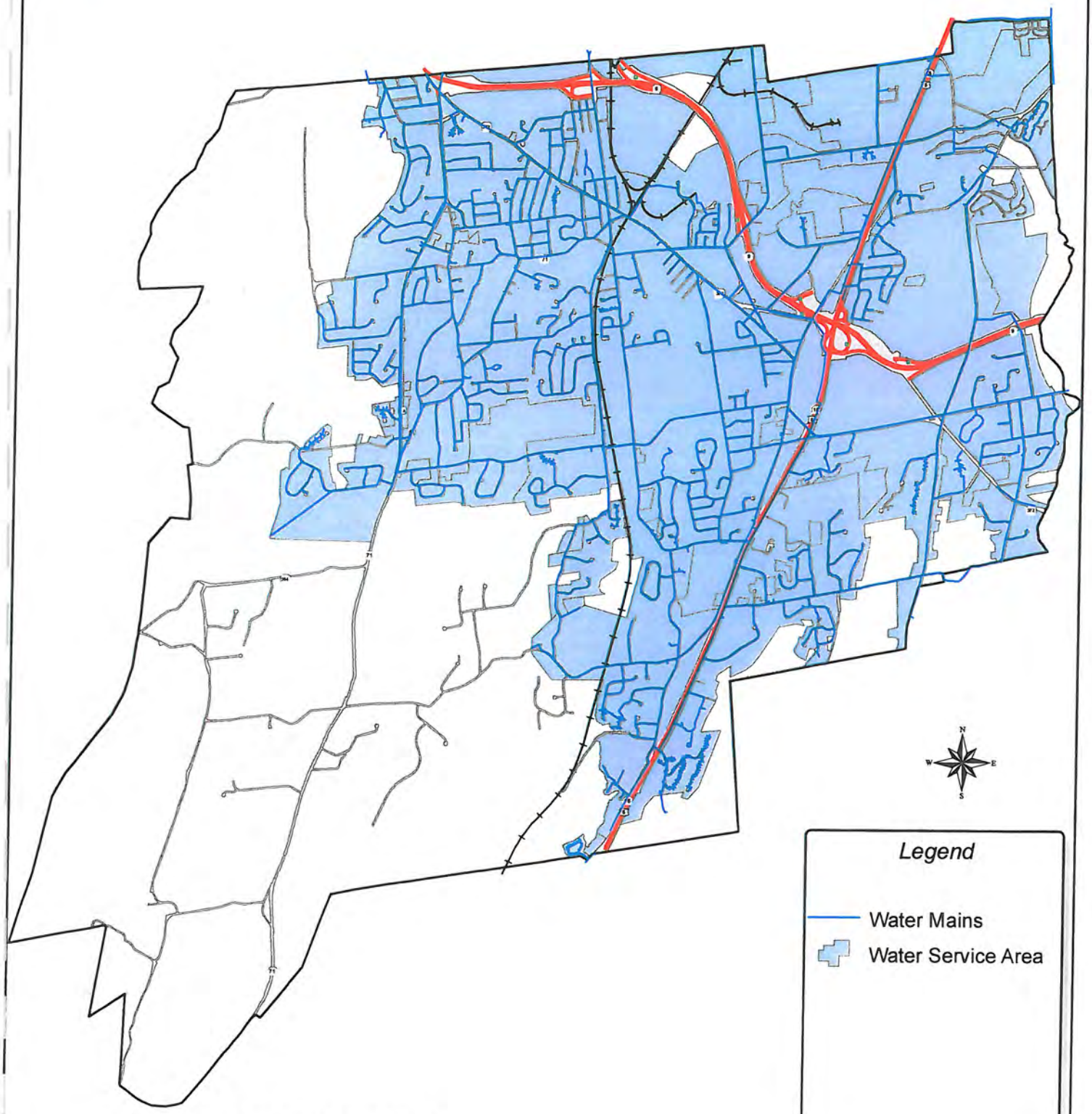
Source:
Feature data gathered from CT DEEP:
Aquifer updated: Jan 19, 2012
Natural Diversity Database updated : Dec 2011

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

NEW ENGLAND GEOSYSTEMS

Town of Berlin, Connecticut

Water Service Area



Legend

- Water Mains
- Water Service Area

Map Produced: March 2013

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FOR THE INFORMATION CONTAINED HEREIN.

0 2,050 4,100 8,200 Feet

0 0.5 1 2 Miles

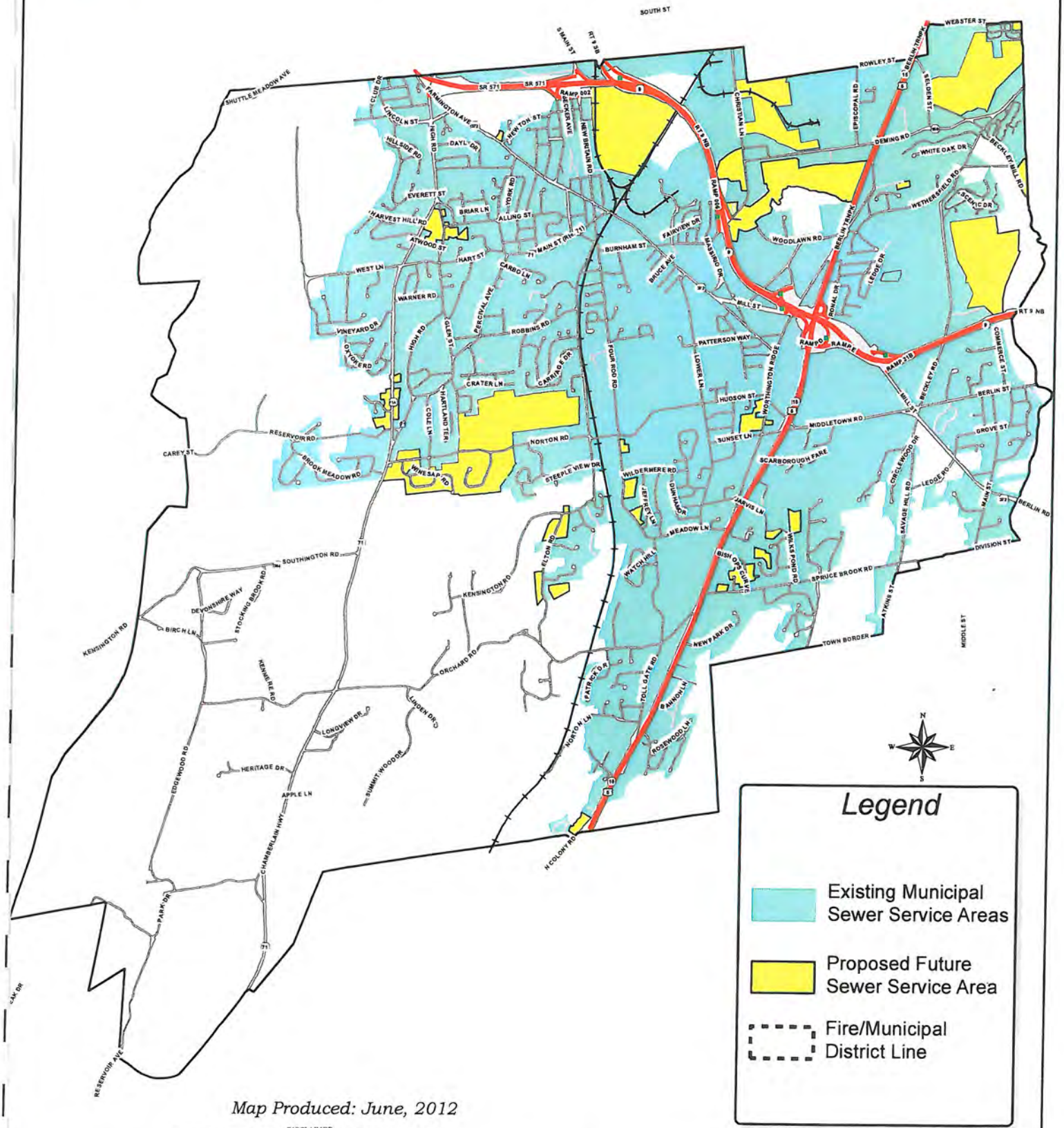
Source:
Water Mains data was extracted from CAD drawings supplied by the Towns Engineering dept

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

NEW ENGLAND GEOSYSTEMS

Town of Berlin, Connecticut

Sewer Service Areas



Legend

- Existing Municipal Sewer Service Areas
- Proposed Future Sewer Service Area
- Fire/Municipal District Line

Map Produced: June, 2012

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0 1,950 3,900 7,800 Feet

0 0.475 0.95 1.9 Miles

Source:
Sewer service data was extracted from CAD drawings supplied by the Towns Engineering dept

Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

NEW ENGLAND GEOSYSTEMS