

Lower Connecticut River Valley Plan of Conservation and Development 2021-2031



Sustainable



Connected



Innovative



Community

Acknowledgments

RiverCOG Members

- Anthony Salvatore, Town Manager, Cromwell (Chair)
- Lauren Gister, First Selectwoman, Chester (Vice Chair)
- Edward Bailey, First Selectman (Secretary)
- Noel Bishop, First Selectman (Treasurer)
- Karl Kilduff, Town Manager, Clinton
- Angus McDonald, First Selectman, Deep River
- Laura Francis, First Selectwoman, Durham
- Robert Smith, First Selectman, East Haddam
- David Cox, Town Manager, East Hampton
- Norman Needleman, First Selectman, Essex
- Robert McGarry, First Selectman, Haddam
- Cathy Iino, First Selectwoman, Killingworth
- Steve Mattson, First Selectman, Lyme
- Benjamin Florsheim, Mayor, Middletown
- Timothy Griswold, First Selectman, Old Lyme
- Carl Fortuna, First Selectman, Old Saybrook
- Susan Bransfield, First Selectwoman, Portland
- Joseph Comerford, Estuary Transit District
- Darlene Briggs, Middlesex Chamber of Commerce

RiverCOG Staff

- Samuel Gold, AICP – Executive Director
- Torrance Downes – Deputy Director
- Paula Fernald – Financial Administrator
- Robert Haramut – Senior Transportation Planner
- Megan Jouffas – Senior Planner
- Margot Burns – Senior Environmental Planner
- Janice Ehle/Meyer – Community Planner
- Kevin Armstrong – GIS Planner
- Eliza LoPresti – Financial & Administrative Assistant
- John McDonald – Planning Intern
- Ben Lovejoy – Planning Intern

Regional Planning Committee

- Frank DeFelice (Chair), Durham
- Raul deBrigard (Vice Chair), Haddam
- Bruce Edgerton (Secretary), Deep River
- Crary Brownell, East Haddam
- Nick Demetriades, Cromwell
- Mary Dickerson, Portland
- Beth Emery, Middletown
- Michael Kowalczyk, East Hampton
- Alan Kravitz, Clinton
- Alec Martin, Killingworth
- Doug McCracken, Old Saybrook
- Bill Neale, Westbrook
- Paul Pizzo, Middlefield
- Michael Sanders, Chester
- Jane Siris, Essex
- Mary Stone, Lyme
- Harold Thompson, Old Lyme
- Maurice Adams (alternate), Haddam
- Kellin Atherton (alternate), Middletown
- Tony Bolduc (alternate), Deep River
- Marie Farrell (alternate), Westbrook
- Sandra Childress (alternate), Essex
- Martin Jaffe (alternate), Clinton
- Anthony Lacava (alternate), Cromwell
- Cindy Lignar (alternate), Chester
- Karen Jo Marcolini (alternate), Old Saybrook
- Louis Salicrup (alternate), East Haddam
- Humphrey Tyler (alternate), Lyme
- Stephanie Warren (alternate), Killingworth

Consultant

- FHI Studio

The Lower Connecticut River Valley Regional Plan of Conservation and Development 2021-2031 was made possible by grants from the Connecticut Office of Policy and Management, Federal Highway Administration, and annual dues from RiverCOG Member Municipalities.

Contents

Introduction.....	1
Existing Conditions Summary	4
Public Outreach Summary.....	26
Plan Themes.....	32
Sustainable.....	34
Connected.....	40
Innovative.....	45
Community.....	49
Future Land Use Map.....	54
Implementation.....	67
Appendix.....	81

Introduction



The Lower Connecticut River Valley (LCRV) Region is shaped by its abundance of natural, cultural, recreational and built resources. Natural amenities, such as beaches, forests, protected open spaces, and trail systems contribute extensively to the character of the Region. The built environment in the Region is diverse, including rural, agricultural, suburban, and urban settings, anchored by Middletown, the Region's only city. The Regional economy is supported by a variety of activity centers that range from vibrant historic centers to modern shopping centers and strong manufacturing centers. The Region is also home to several tourist destinations, including the [Essex Steam Train](#), [Gillette Castle](#), the [Goodspeed Opera House](#), [Brownstone Exploration & Discovery Park](#), and [Powder Ridge Mountain and Ski Resort](#).

However, the Region is facing a critical moment in which it must confront several challenges in order to preserve, promote, and build upon its many resources for the enjoyment of future generations. Today, the Region's shifting demographics, shrinking workforce, wavering economy, and a housing market that excludes large portions of the population provide us with an opportunity to make important planning choices that address these challenges and create a stronger Region that supports quality of life for all. Important choices must be made about how and where the Region will grow in order to address these challenges and make the Region stronger.

Connecticut state law requires all Regional Councils of Government to create a Regional Plan of Conservation and Development (RPOCD) at least once every ten years to serve as a blueprint for future growth. The statute (CGS 8-35a) requires that the plan address land use,

housing, principal highways and freeways, bridges, airports, parks, playgrounds, recreational areas, schools, public institutions, public utilities, agriculture, and such other areas as may be beneficial to the Region. In addition, the plan must be designed to promote abatement of water and air pollution and consider the Region's needs for technology infrastructure.

Importantly, the plan must identify areas for compact, transit accessible, pedestrian-oriented mixed use development patterns and land reuse and should promote the following growth management principles:

- Redevelopment and revitalization of regional centers and areas of mixed land uses with existing or planned physical infrastructure;
- Expansion of housing opportunities and design choices to accommodate a variety of household types and needs;
- Concentration of development around transportation nodes and along major transportation corridors to support the viability of transportation options and land reuse;
- Conservation and restoration of the natural environment, cultural and historical resources and traditional rural lands;
- Protection of environmental assets critical to public health and safety; and
- Integration of planning across all levels of government to address issues on a local, regional and state-wide basis.

The Lower Connecticut River Valley Council of Governments (RiverCOG) was formed in 2012 from a voluntary merger of the Midstate and Connecticut River Estuary planning regions. Work on its first RPOCD began in 2016. After substantial public outreach with Regional residents and stakeholder groups, it was determined that this RPOCD would center around four key themes that define the Regional vision: Sustainable, Connected, Innovative, and Community.

These themes build toward the state's growth management principles by encouraging growth to occur in existing activity centers with access to infrastructure, that are, or will be, linked by a multimodal Regional transportation system. As activity centers develop, they are envisioned as the mixed-use heart of each community where residential, commercial, employment, and civic uses are all present and integrated. Recognizing the unique character of each municipality in the Region, it is assumed that these activity centers would be context-sensitive in scale and character, and that all would be pedestrian and bicycle-friendly, characterized by attractive streets and public spaces, and would incorporate a variety of housing types affordable for people with different incomes and needs. Over time, these centers would connect to each other via an enhanced multimodal Regional transit system, connecting where people live with where they work, shop, learn and recreate.

Focusing growth on existing activity centers utilizes existing infrastructure and supports economies of scale while also preserving the greatest amount of open space. This strategy recognizes the importance of both the built and the natural environment to the Region's overall identity and reinforces the vitality and sustainability of each.

While the RPOCD can provide a blueprint for this Regional vision, it is incumbent upon every municipality to invest in its success as we plan for the years ahead. It is the hope of RiverCOG that each municipality in the Region partners with us over the coming decade as we work to make this vision a reality. The RPOCD also bolsters, and is supplemented by, additional Regional plans such as [RiverCOG's Metropolitan Transportation Plan](#), [Hazard Mitigation Plan](#), [Regional Housing Plan](#), and its future Active Transportation Plan, now underway.

Creating an RPOCD During a Pandemic

The COVID-19 Pandemic was a challenge in the creation of this plan. The quarantine and shutdowns impacted the work of the Regional Planning Committee (RPC), RiverCOG, and the project consultant, FHI Studio. The public outreach process had to be re-scoped and re-envisioned for a virtual context. After some months of retooling and adapting to function virtually, presentations, municipal meetings, and public workshops were conducted via virtual meeting formats. Hundreds of people participated in the virtual meetings and many more watched the recordings that were posted to the project's website (rivercogregionalplan.org).

The RPC was pleasantly surprised that many more people attended and viewed the public outreach events than would have attended if the meetings had been held in person. This occurred in part because the virtual meetings did not require travel and could be comfortably accessed from home. The Regional Planning Committee is aware

that participation in virtual events required participants to have access to a computer or mobile device, broadband Internet, and the technical wherewithal to join a meeting virtually. Participants also skewed towards those pre-disposed to an interest in the project where, typically, we would have supplemented meetings with in-person pop-up events that would have engaged more random members of the public, that might not otherwise be involved in a regional planning effort. However, pop-up events that encouraged in-person interactions between strangers were not pursued.

It is clear that the Pandemic will have lasting impacts in our region, but it is just too soon to make predictions about those impacts that are not merely conjecture. The essential nature of high-speed Internet became abundantly clear during this Pandemic. Expanding access and improving the reliability of broadband Internet service is now a priority for every municipality; in a way that was not recognized before the Pandemic. Remote work and learning is likely to continue and the growth of virtual connections, that are disconnected from physical place, is reshaping our relationship with the places where we live and work.

Some impacts from the pandemic may be short-lived, as the region's resiliency will allow it to quickly return to pre-Pandemic normalcy. Vehicular traffic and transit ridership will likely recover, however, many workers who have successfully transitioned to working remotely may never resume five-day-a-week commutes. It is expected that regional tourism, restaurant, hospitality, and performing arts uses will fully recover; and may be bolstered by a preference to stay within driving distance, and to avoid travel by plane or train. Other land uses, such as commercial office space and brick and mortar retail, are unlikely to fully recover any time soon, providing opportunities for re-imagining and re-development.

The RPC is aware of recent trends, which at this point are unclear as to their permanence. A recent influx of new residents, particularly from the New York City metro area, has jump-started the Regional and state residential real estate market. It is too soon to know if these new owners will become permanent residents or seasonal / weekend residents of our region. We also do not know if the strong demand for housing will continue long enough to support a sustained boom in new construction. Finally, the RPOCD and the [Existing Conditions Report](#) (found in Appendix A) were created with demographic and statistical data from 2019 and years before. These data precede the pandemic, leaving only anecdotal data available for understanding the impacts of COVID-19. Statistics from 2020, (when available) lack the context of future years' data to analyze trends. RiverCOG and the RPC will continue to track these data sets as they become available and will issue reports or amend the RPOCD, as necessary.

What is the RPOCD?

The Regional Plan of Conservation and Development (RPOCD) is a visionary land use plan intended to identify and address issues of regional concern; making recommendations for cooperative, voluntary action.

How is the RPOCD intended to be used?

The RPOCD is intended to be used by RiverCOG, the Region's land use commissions, municipal governments, and state agencies. The primary use of the document is to inform land use decisions made by municipal commissions, and to encourage land use coordination across municipal boundaries.

What is the relationship between the RPOCD and municipal Plans of Conservation and Development?

The priorities identified in the municipal POCDs guided the creation of the RPOCD. The RPOCD is written to address local issues from a regional perspective. Municipalities should find recommendations and goals in the RPOCD that support their own POCDs. Nevertheless, the RPOCD is non-binding on municipalities.

How will the goals and recommendations of the RPOCD be implemented?

The primary implementers of the RPOCD will be municipal land use commissions. RiverCOG or the state may prioritize funding for projects in the region based upon the recommendations of the RPOCD.

How to use the Regional Future Land Use Map

The future regional land use map is an advisory map that shows, at a very general level, locations where the RPOCD suggests development and conservation activities could occur. The map does not supersede municipal POCD future land use maps or current zoning maps.

Existing Conditions Summary

The purpose of this section is to provide a summary of existing conditions information prepared for the RPOCD. The full [Existing Conditions Report](#), which provides detailed data, source material, and context for all information presented here, is provided in Appendix A.



Image Source: GrowSMART Plan

The Planning Area



Regional Context



Lower Connecticut River Valley Region

The Lower Connecticut River Valley (LCRV) Region is located in Southeastern Connecticut. The LCRV is defined by the Connecticut River and Long Island Sound. The Connecticut River transects the Region from north to south, ending in Long Island Sound. The Region spans two counties and includes all municipalities located in Middlesex County and two municipalities located in New London County (Connecticut does not have county governments). The Region is comprised of seventeen unique municipalities, united by their geographic proximity to these defining natural features. The Region is generally accessible by Rte. 9 from the north, I-95 from the east and west, and I-91 from the north and west. The LCRV Region is bordered by several other planning regions: South Central to the west, Capitol Region to the north, and Southeastern to the east.

The Regional planning area (from north to south and west to east) includes: Cromwell, Portland, East Hampton, Middletown, Middlefield, Durham, Haddam, East Haddam, Killingworth, Chester, Lyme, Deep River, Essex, Clinton, Westbrook, Old Saybrook, and Old Lyme. The planning region covers all of Middlesex County and Lyme and Old Lyme in New London County.

Natural amenities, such as beaches, forests, protected open spaces, and trail systems contribute extensively to the character of the Region. The built environment in the Region is diverse, including rural, agricultural, suburban, and urban settings, anchored by Middletown, the Region's only city. The Regional economy is supported by a variety of activity centers that range from vibrant historic centers to modern shopping centers and strong manufacturing centers. The Region is also home to several tourist destinations, including the Essex Steam Train, Gillette Castle, the Goodspeed Opera House, Brownstone Exploration & Discovery Park, and Powder Ridge Mountain and Ski Resort.

Demographics

Population Change

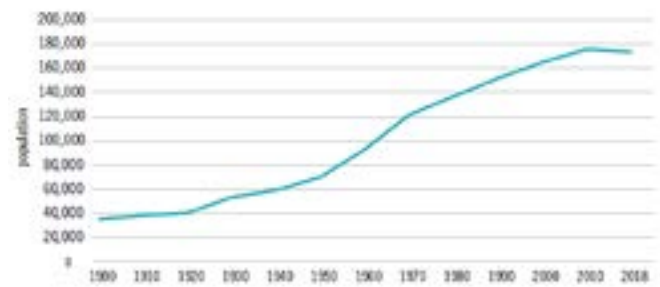
- Between 2010 and 2018, the Region's population declined by 0.9%. As of 2018, the Region had an estimated population of 173,268.¹
- In total, 4,313 people left Middlesex County for other places in the country. However, this loss was mitigated by an increase of 2,379 people who migrated into the county from abroad.¹
- The Connecticut Data Center model predicted a 2.6% population decrease for the LCRVR from 2015 to 2040.²

Age

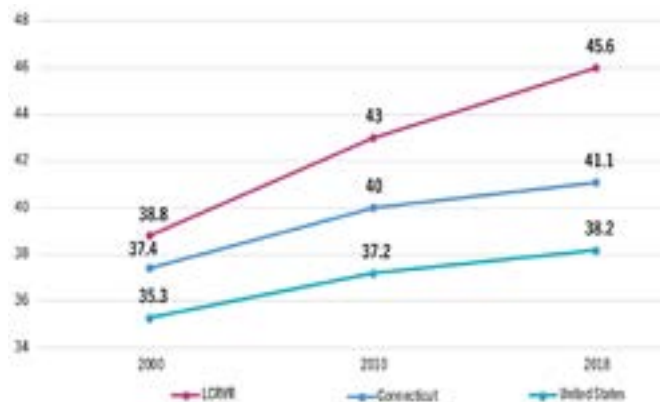
- Between 2000 and 2017, the Region's median age increased by 18%. In 2018, the Region had a median age of 45.6 years old.³
- The difference between the highest median age (54.7 in Essex) and the lowest median age (36.6 in Middletown) as of 2018 was eighteen years.³
- The Region has a sizable baby boomer population (1946-1964) and relatively few millennials (1981-1996). The age gap is expected to increase.³

Diversity

- 89% of the Region's residents identified as being White alone, while 5% identified as Black alone, and 3% identified as Asian. The 3% remaining identified as another race (American Indian/ Alaskan or Native Hawaiian/Pacific Islander) or as more than one race.⁴
- Middletown is the most diverse municipality in the Region and is home to its largest percentage of Black (15%), Asian (6%), and bi- and multi- racial (8%) populations.⁴
- The least diverse municipalities are Durham (98% White), Portland (97% White), Middlefield (97% White) and Chester (97% White).⁴
- In 2018, 5.9% of the Region's total population identified as Hispanic. This represents a substantial increase from 2.9% in 2000 and 4.6% in 2010.⁴
- In ten of the Region's municipalities, the White population accounts for 95% or more of the total population.⁴
- Only 60% of residents under the age of 30 identified as White alone, making the Region's younger residents substantially more racially diverse than the overall population.⁴



Regional Population Change 1900-2018 ⁵



Median Age 2000-2018 ³

	Median age
Essex	54.7
Lyme	52.9
Westbrook	52.7
Old Saybrook	52.2
Old Lyme	51.7
East Haddam	49.3
Middlefield	49.2
Haddam	49.1
Chester	48.9
Killingworth	47.9
Durham	46.6
Clinton	46.2
Portland	46.2
Deep River	46.0
East Hampton	45.6
Cromwell	42.5
Middletown	36.6

Median Age by Municipality, 2018 ³

Household Composition

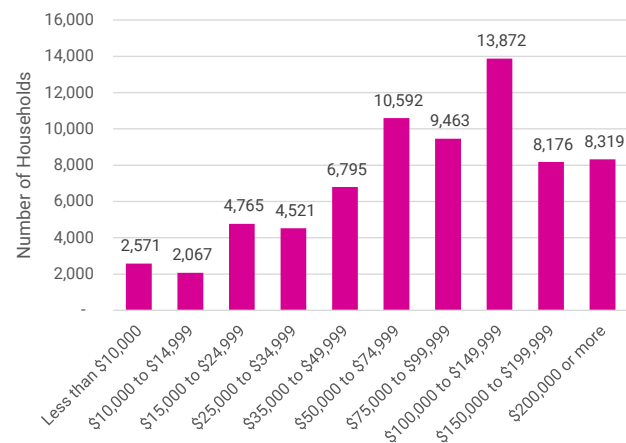
- Married couple families accounted for 52% of all households in the Region. Apart from Cromwell, Middletown, and Westbrook, most households in each of the Region's municipalities were comprised of married couple families.⁶
- 35.7% of households in the Region were non-family households; this represents an increase of 14.3% from 2000.⁶
- There were an estimated 9,002 households in the Region comprised of an individual over the age of 65 and living alone. This accounts for an estimated 13% of all households in the Region.⁶
- Municipalities with the largest elderly populations also have the highest percentage of seniors living alone. These include Chester (18%), Essex (16%) and Old Saybrook (16%).⁶
- As a result of the increase in single-person households and declining birthrates, the average household size in the Region is now 2.37 persons per household, down from 2.46 in 2010.⁶
- The Region has a homeless population; population size and location information is not available.

Household Income

- Middletown had the lowest median household income (MHI) at \$67,651, while Durham, East Hampton, Haddam, and Killingworth all had an MHI of over \$100,000.⁷
- While 13,872 households in the Region earn between \$100,000 and \$149,999 annually, 20,719 households earn less than \$50,000. There are 69,724 households in the Region.⁷
- The Federal Poverty Level for 2017 was \$12,228 for single-person households and \$24,563 for a household of four. According to this standard, 7% of the Region's total population, or 4% of its households are living in poverty.⁸
- There was a 17% increase in the number of residents living in poverty in the Region since 2010.⁹
- In 2016, 28% of the Region's households were Asset Limited, Income Constrained, Employed (ALICE).¹⁰
- Under the United Way ALICE Household Stability Budget, a single adult in Middlesex County would need to earn over \$36,816 annually, while a family of four would need \$114,192 to afford to live in the Region. A majority of the Region's households would fall below this Stability standard.¹¹

	Median Income
Durham	\$117,631
Killingworth	\$113,068
Haddam	\$108,800
East Hampton	\$100,780
Lyme	\$96,146
Middlefield	\$93,750
Chester	\$92,417
Old Lyme	\$92,383
Cromwell	\$91,841
East Haddam	\$91,339
Portland	\$91,295
Westbrook	\$89,489
Essex	\$87,000
Old Saybrook	\$81,411
Clinton	\$76,360
Deep River	\$71,641
Middletown	\$67,651

Median Household Income, 2018 ¹



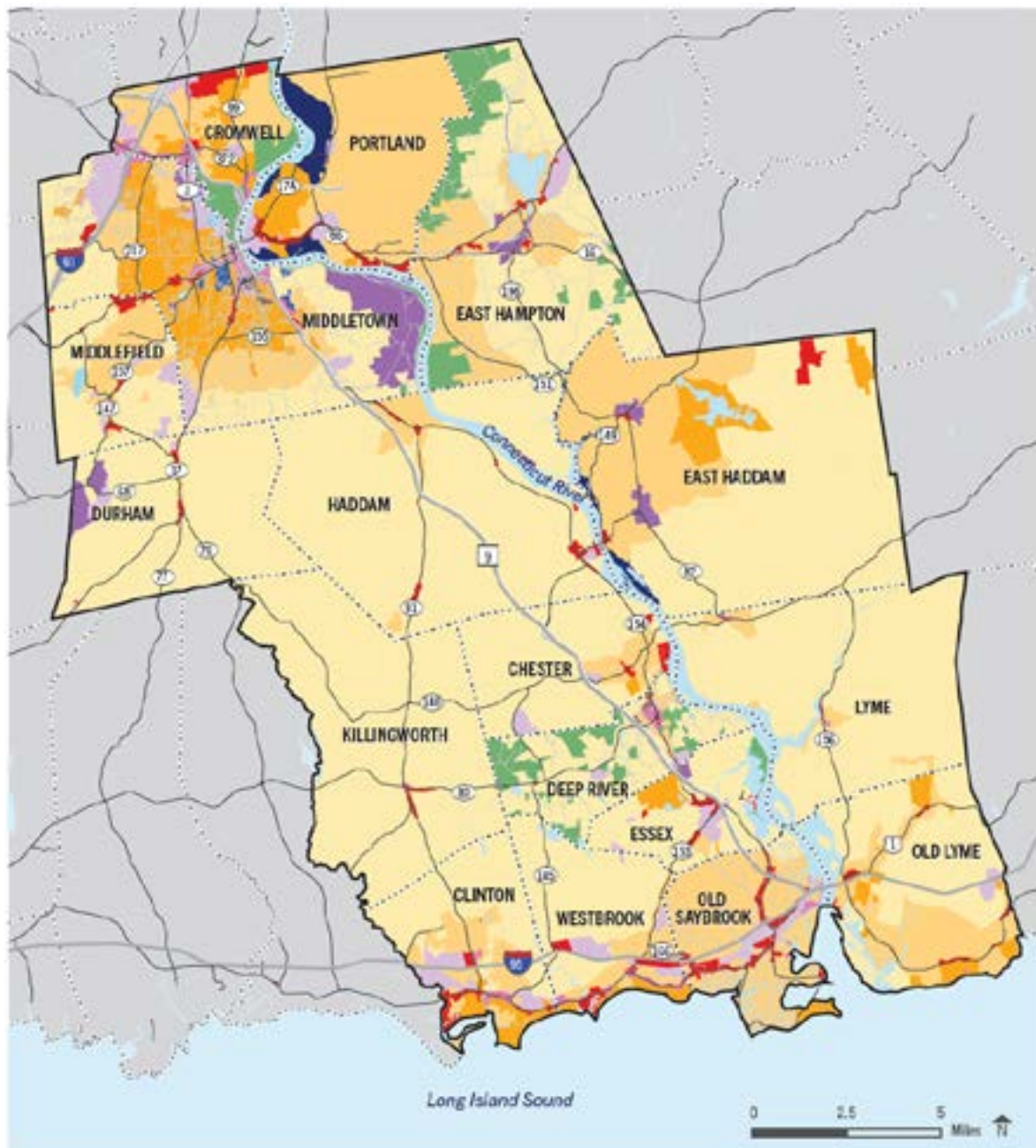
Household by Income Bracket Across Region 2014-18 ¹

Zoning

Zoning regulates land use and is administered at the municipal level. Each town or city in the Region has its own zoning regulations and zoning districts that differ from municipality to municipality. These districts do, however, have comparable characteristics. The map below shows zoning districts by type for comparison across the Region. This map does not represent actual zoning districts, which are unique to each community. Additionally, several communities in the region have districts that are zoned for agriculture but allow low-density residential uses.

Zoning Category

- Low Density Residential
(Less than 1 dwelling unit per acre)
- Medium Density Residential
(1-2 dwelling units per acre)
- High Density Residential
(Over 2 dwelling units per acre)
- Commercial
- Mixed Use, Commercial and Industrial
- Mixed Use, Residential and Commercial
- Mixed Use, Residential, Commercial, Industrial
- Industrial
- Institutional
- Conservation
- Floodplain



Generalized Zoning Map Source: Compiled Municipal Zoning Maps

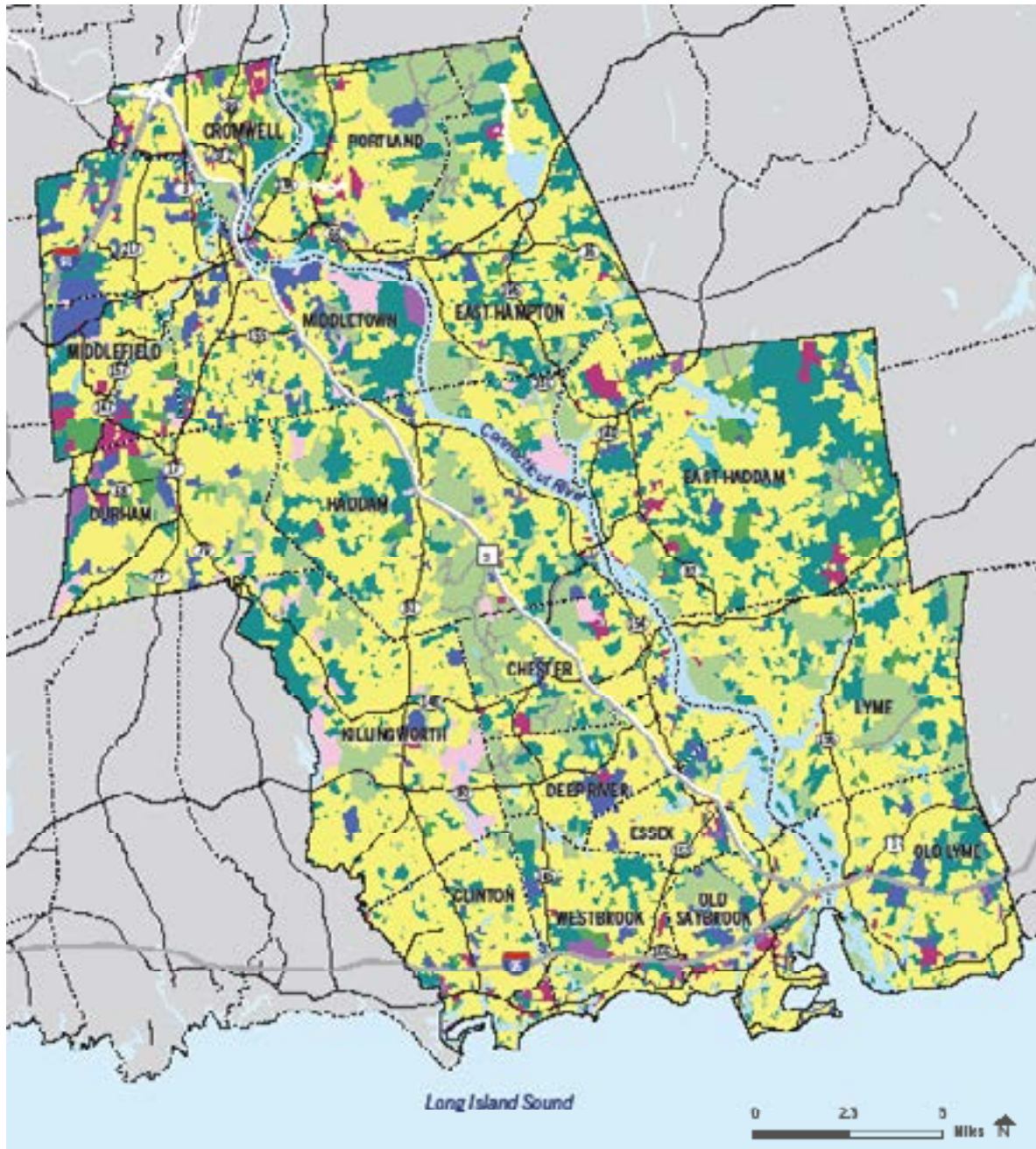
Land Use

Existing land uses were identified from municipal data and 2013 aerial photography. The map below reflects the predominant land use on a parcel by parcel basis, actual land uses within the shaded areas may differ. The land use classes presented below may also differ from those presented in local land use maps. This map has been generalized for comparison purposes.

Land Use Category

Residential	Institutional	Right of Way
Residential Condo	Mixed Use	Utility
Commercial	Agriculture	Vacant Land
Industrial	Open Space	Water Feature

Source: RiverCOG Seamless Parcel Layer, 2013



2013 Generalized Land Use Map*

**This map is a generalized land use map for the purpose of comparing land use across the Region. It is not intended to replace local land use maps which may be more accurate than this map.*

Residential Zoning and Land Use

- ▲ Residential zones predominate the Region – approximately 243,515 acres, or 86% of the Region, is zoned for residential use.¹²
- ▲ Residential land use is the most prominent in the Region, accounting for 106,950 acres, or 38% of land.¹²
- ▲ Approximately 171,480 acres or 60% of the Region is zoned low density residential (< 1 dwelling unit/ac). This is compared to 56,684 acres or 20% medium density residential (1-2 dwelling units/ac) and 15,351 or 5% higher density residential (>2 dwelling units/ac).¹²
- ▲ Medium density and high density residential zones are concentrated in the northern part of the Region (Middletown, Cromwell, and Portland) and the shoreline towns (Clinton, Westbrook, Old Saybrook, and Old Lyme), with clusters in East Haddam and near village centers along the Connecticut River.¹²
- ▲ The predominant residential density in the Region is less than one dwelling unit per acre, demonstrating the relatively sparse development pattern in the Region.¹²
- ▲ Only around 2,070 new building permits for housing units were issued in the Region from 2010 to 2019; an equivalent of roughly 207 permits per year.¹³
- ▲ Municipalities that saw the largest number of permits issued over the past decade were those with highest residential density: Middletown (388 permits), Cromwell (221 permits), and Old Saybrook (215 new permits).¹³

Commercial and Industrial Zoning and Land Use

- ▲ Commercial land use accounts for only 8,838 acres or 3% of the Region. Similarly, commercial zoning districts account for 4,883 acres or 2% of the Region.¹²
- ▲ Commercial centers are scattered throughout the Region and can be categorized as historic village centers, neighborhood commercial centers, and regional commercial centers.¹²
- ▲ Industrial land use accounts for only 4,028 acres or 1% of the Region. Similarly, industrially zoned land accounts for 3,969 acres or 1% of the Region. The Region is characterized primarily by light industrial manufacturing operations.¹²

Generalized Zoning Districts in the Region ¹²

Zone	Acreege	Percentage
Residential	243,515	85.7%
Low Density Residential	171,479	60.4%
Medium Density Residential	56,684	20.0%
High Density Residential	15,351	5.4%
Commercial	4,883	1.7%
Industrial	3,969	1.4%
Mixed Use	8,907	3.1%
Mixed Use Commercial/ Residential	6,961	2.5%
Mixed Use Commercial/ Industrial	1,783	0.6%
Mixed Use Urban (Legacy Transitional Zone, Commercial, Residential, Industrial)	163	0.1%
Institutional	295	0.1%
Conservation	7,328	2.6%
Floodplain	2,590	0.9%
Water	7,136	2.5%
Right of Way	5,458	1.9%

Agriculture

- ▲ Agricultural land use covers approximately 11,119 acres or 4% of the Region. The Region does not have an exclusive agricultural zone, however, agricultural land uses tend to be consistent with low density residential zoning.¹²
- ▲ There are over 400 farms in the Region.¹⁴
- ▲ According to the USDA Agricultural Census, the number of farms in Middlesex County (which does not include Lyme and Old Lyme) that were less than 50 acres grew by 69.0% from 2007 to 2017 while the total number of farms increased by only 12.2% during the same period.¹⁴

Open Space

- ▲ The open space land use designation is attributed to any parcel of land owned by the Federal Government, State, municipality, or local land trust that's purpose is to hold the land as open space in perpetuity. Open space land use accounts for approximately 44,842 acres or 16% of the Region. The Region does not have an open space zone.¹²
- ▲ Of the land designated open space, 29,820 acres (67%) is zoned low density residential and 7,636 acres (17%) is zoned medium density residential. Protected open space is often within areas that are zoned for low to medium density residential uses.¹²
- ▲ Designated open space lands overlap with the [Connecticut River Gateway Conservation Zone](#), which is a State designated area established for the protection of the Lower Connecticut River Valley. Designated open space within the Zone totals 7,328 acres or roughly 3% of the Region.¹²

Transit Oriented Development

- ▲ Major transit stations in the Region include the Middletown Bus Passenger Terminal; Clinton and Westbrook Shore Line East stations, and the Old Saybrook Amtrak and Shore Line East stations which also serve 9 Town Transit / CT Transit Commuter Express.¹²
- ▲ Thirty percent of all land within a ½ mile of transit stations is zoned medium density residential. Statewide policies are aimed at increasing the concentration of housing around stations.
- ▲ Only 15% of land around these transit stops is zoned for mixed use development.¹²
- ▲ The area surrounding the Middletown bus passenger terminal is well zoned to promote transit-oriented development with high proportions of both mixed use and high-density residential zoning.¹²



Prime Agriculture Soil ⁴²



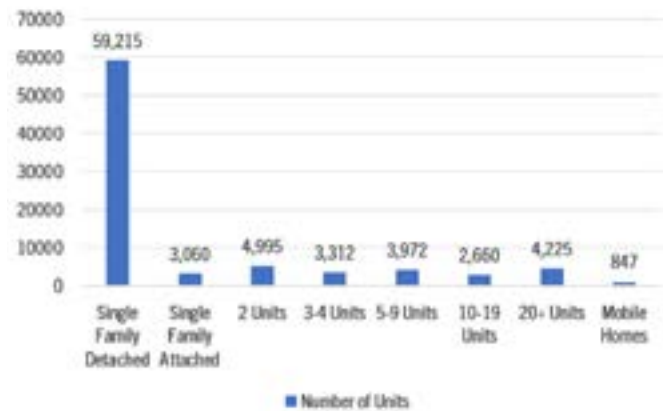
Transit Stations in the Region

- Transit Station
- 1/2 Mile Walkability Buffer

Housing

Supply

- ▲ The Region had 82,313 housing units in 2018.¹²
- ▲ The vast majority of homes in the Region (59,215) are detached single family units; more than twice the other housing types combined.¹²
- ▲ Middletown provides the largest portion of the Region's housing, roughly 25%, as well as the greatest variety of housing types. In contrast, Lyme provides the least amount of housing, roughly 1.5%, and the least variety in housing type. Of Lyme's 1,202 units, only 17 are multi-family units.¹²



Regional Housing Supply, 2018¹

	Single Family Detached	Single Family Attached	Duplex	3-4 Units	5-9 Units	10-19 Units	20+ Units	Mobile Homes	Total Units
Chester	1,587	8	56	82	37	73	159	0	2,002
Clinton	4,881	131	342	152	190	216	86	236	6,234
Cromwell	3,558	999	220	290	404	225	465	0	6,161
Deep River	1,492	74	180	97	48	106	100	24	2,121
Durham	2,555	32	60	130	0	0	0	17	2,794
East Haddam	4,101	36	249	44	99	37	44	0	4,610
East Hampton	4,746	297	246	154	106	0	21	10	5,580
Essex	2,611	142	235	194	53	0	148	0	3,383
Haddam	3,148	49	115	51	98	0	69	0	3,530
Killingworth	2,011	14	64	13	0	0	0	309	2,411
Middlefield	1,781	53	69	18	0	32	7	21	1,981
Middletown	9,251	884	1,952	1,406	2,596	1,785	3,094	17	20,985
Old Saybrook	4,952	122	224	176	237	68	0	21	5,800
Portland	3,505	64	447	208	10	52	32	0	4,318
Westbrook	3,460	98	294	124	70	0	0	168	4,214
Lyme	1,180	5	8	0	9	0	0	0	1,202
Old Lyme	4,396	52	234	173	15	66	0	51	4,987
Region	59,215	3,060	4,995	3,312	3,972	2,660	4,225	874	82,313

Housing Unit Type and Supply by Municipality, 2018¹

Tenure

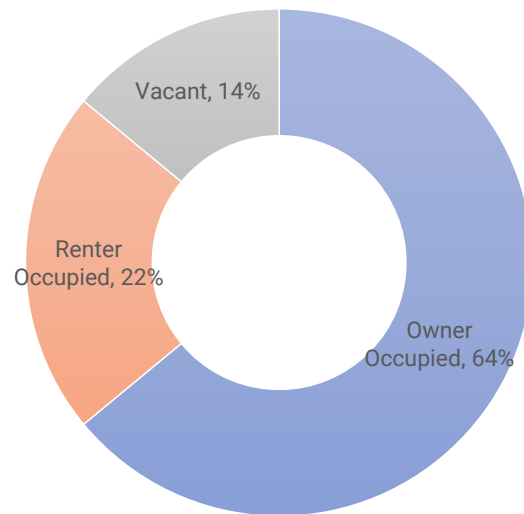
- ▲ The ratio of homeowners to renters in the Region is about 3:1.¹²
- ▲ Within the Region, Middletown has the largest number of renter-occupied units (8,972) followed by Cromwell and Clinton (1,370 and 1,137 respectively). Lyme has the fewest renter-occupied units (139) followed by Killingworth (164), Middlefield (238), and Durham (253).¹²
- ▲ As of 2017, the Region was estimated to have 5,602 “seasonal, recreational, or occasional use” housing units, 45% of which are located in Old Lyme (vacancy rate of 36%) and Old Saybrook (vacancy rate of 25%).¹²

Age and Condition

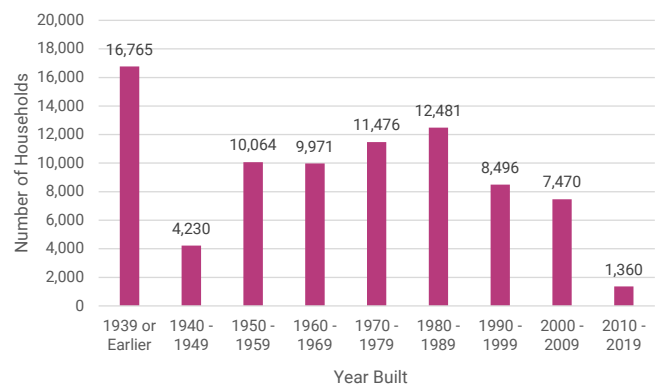
- ▲ Approximately 63% of the Region’s housing stock was built prior to 1980 and 20% was built prior to 1940.¹²
- ▲ From 2010 to 2017, every municipality except for Chester and Essex, saw the net number of new houses being built drop by 50% or more. Five of the Region’s municipalities experienced an over 85% decrease in new houses built.¹⁵

Home Values

- ▲ As of 2018, the median home value in the Region was \$325,494. This is higher than the median home value for the state of Connecticut (\$272,700).¹
- ▲ The largest portion of homes in the Region (42%) are valued between \$200,000 and \$500,000 with 16,534 homes valued between \$200,000 and \$299,999 and 18,285 homes valued between \$300,000 and \$499,999.¹
- ▲ A majority of homes valued at under \$200,000 are located in Middletown (4,011), followed by Cromwell (1,469), East Hampton (988), and Clinton (801).¹
- ▲ Lyme has the highest median home value in the Region (\$555,000); almost double that of Middletown, which has the lowest median home value (\$227,000).¹
- ▲ As of 2020, no municipality had fully recovered from the 2008 housing crisis and housing values have remained relatively constant since 2012. This does not account for market impacts experienced in 2021 associated with the COVID Pandemic.¹



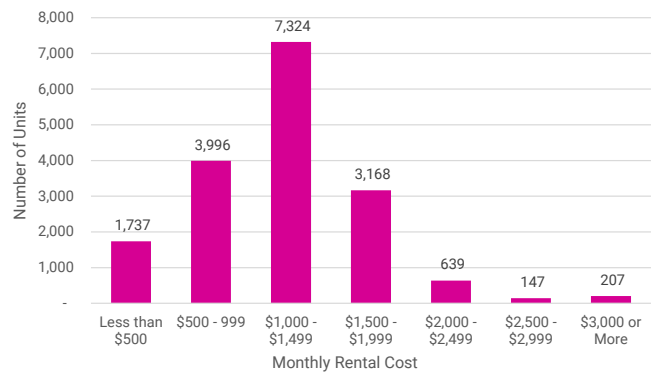
Housing Tenure (2018) ¹



Housing Units by Decade of Construction ¹

Rental Rates

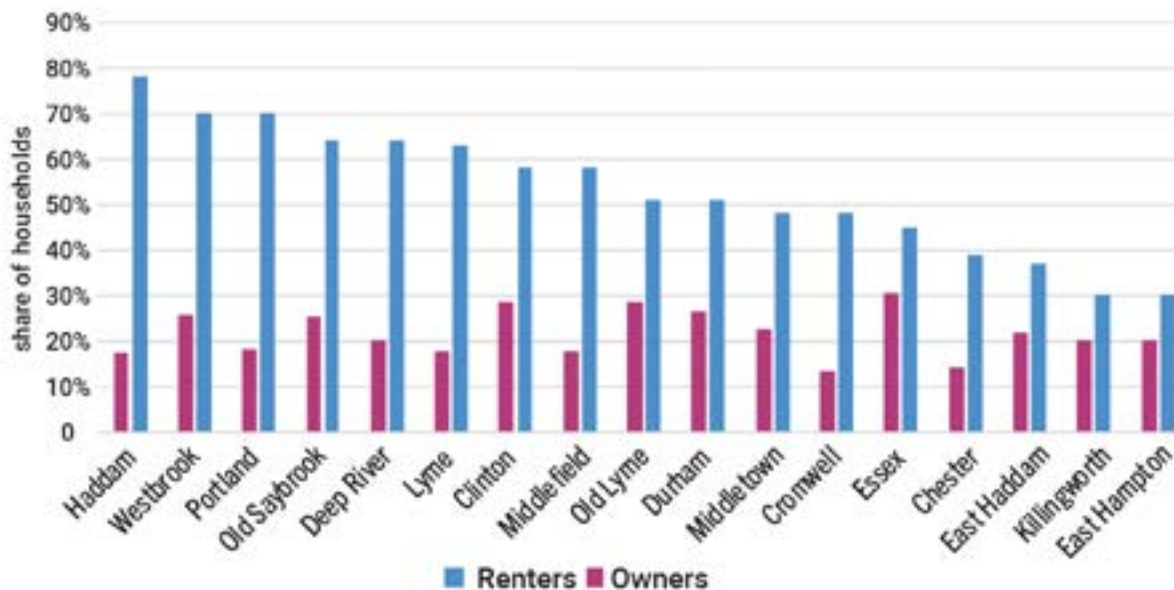
- As of 2018, the average rent for occupied units in the Region was \$1,200. This rate varies by municipality, with Old Saybrook having the highest average rate of \$1,514 and Haddam having the lowest rate of \$879.¹
- Approximately 43% of the Region's rental housing (7,324 units) rented at between \$1,000 and \$1,500 per month. In addition, 33% of units (5,733 units) rented for under \$1,000 per month while 24% of units (4,162 units) rented for more than \$1,500.¹



Regional Rental Units by Monthly Rental Cost, 2018 ¹

Affordability

- Approximately 8% of housing units in the Region qualify as affordable units pursuant to Connecticut General Statute Section 8-30g.¹⁶
- Middletown is the only municipality in the Region to be considered 8-30g exempt as approximately 22% of its housing meets the standards for statutorily affordable units. Middletown accounts for roughly 70% of the Region's supply of statutorily affordable housing.¹⁶
- Households spending more than 30% of their income on household expenses (including rent/mortgage, utilities, taxes, and maintenance) are considered to be cost burdened. As of 2018, 51% of renters, 30% of homeowners with a mortgage, and 19% of homeowners without a mortgage in the Region were cost burdened by their housing expenses.¹



Housing Cost Burdened Households, 2018 ¹

Economic Development

Employment

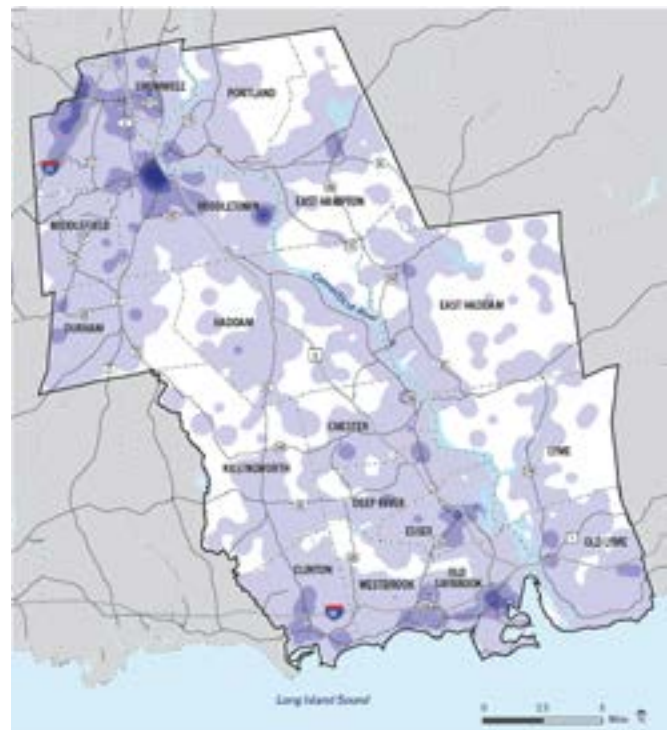
- As of 2017, there were roughly 63,000 jobs in the Region.¹⁷
- Middletown is the primary employment center for the Region, accounting for over one third of the Region's jobs. There are also significant employment centers in Cromwell, town centers, industrial parks, and large commercial developments located along I-95 and Route 9.¹⁷
- The Region has a workforce population of over 80,000 residents.¹⁷
- Approximately 26,000 (32%) of the Region's workforce population is employed within the Region.¹⁷
- The Region's residents hold roughly 41% of the Region's jobs.¹⁷
- Approximately 37,000 jobs within the Region are filled by commuters, primarily from the Meriden, New Britain, and Hartford areas. Conversely, approximately 55,000 of the Region's residents, or 46% of the Region's workforce, is not employed within the Region and commute to cities such as New London, Hartford, and New Haven.¹⁷

Workforce Characteristics

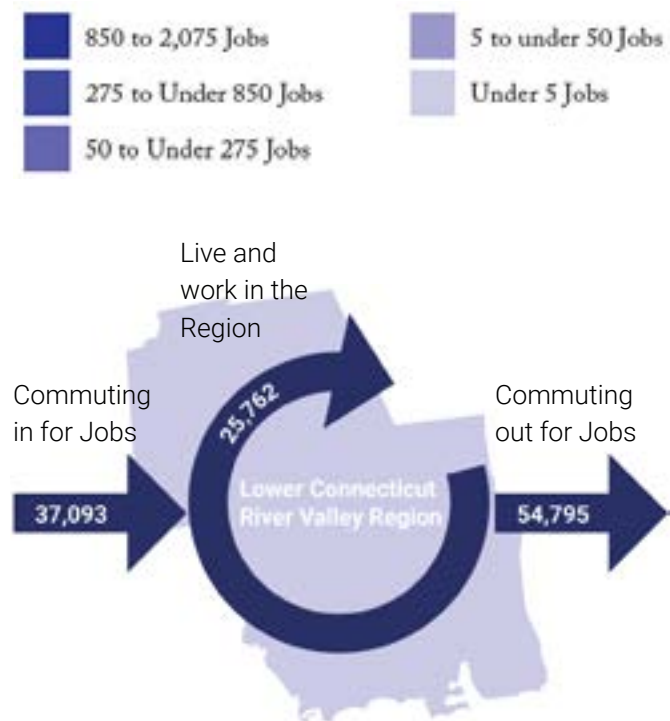
- The bulk of the Region's workforce population is made up of individuals between the age of 30 and 54.¹
- Approximately half of the workers are age 30 to 54, with roughly 20% age 29 or younger and roughly 30% age 55 or older.¹⁷
- Workers employed in the Region, but living outside the Region, have an overall lower monthly income than the workers that live in the Region. A significant share (62%) of the Region's resident workers make more than \$3,333 per month.¹⁷

Regional Industries

- Five industry sectors account for nearly 64% of the total jobs in the Region: health care and social assistance, manufacturing, retail trade, educational services, and accommodation and food services.¹⁷
- A substantially higher share of the Region's workforce population is employed in finance and insurance than there are jobs of that type in the Region. (6.8% of the workforce population compared to 2.8% of jobs in the Region).¹⁷



Location and Concentration of Jobs in the Region, 2017¹⁷



Jobs in the Region or Held by the Region's Residents, 2017¹⁷

Regional Industries (cont.)

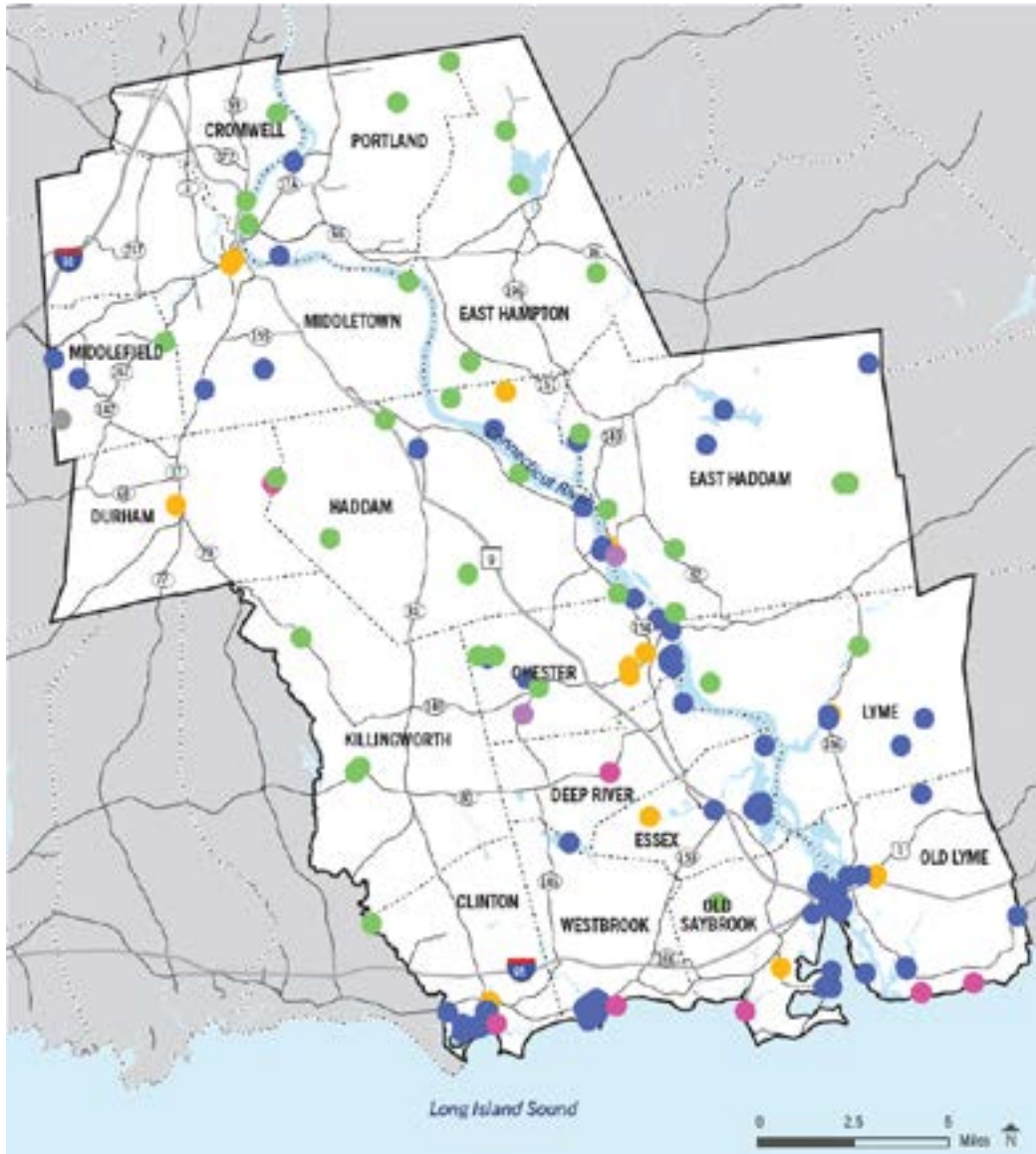
- ▲ The largest employment sector in the Region is the health care and social assistance field. It accounts for approximately 11,600 jobs, or 18.5% of all jobs in the Region. This industry also accounts for four of the five largest employers in the Region – Connecticut Valley Hospital, International Society for Clinical Densitometry, Middlesex Health, and Middlesex Health Mental Health.¹⁷
- ▲ The fourth largest employment sector in the Region is Educational Services, which includes K-12 and higher education. Approximately 6,000 of the Region's jobs, or 9.5%, are in this sector.¹⁷
- ▲ Manufacturing accounts for 15% of the jobs in the Region. The largest manufacturing sectors include transportation equipment (including aircraft engines and parts), machinery manufacturing (including navigational equipment), and manufacturing for the medical fields.¹⁸
- ▲ Retail trade makes up approximately 12% of jobs in the Region.¹⁷
- ▲ According to RiverCOG's 2016 GrowSMART study, there are many self-employed individuals in the Region providing services in the real estate, rental, and leasing, finance and insurance, construction, and professional scientific and technical services fields.¹⁹
- ▲ Businesses in the Region that have employees are typically comprised of small and mid-sized businesses. Only 14 employers in the Region have more than 250 employees. Four of the five largest Regional employers were in the health care sector, with the Connecticut State Police being the fifth largest. Twenty-five percent of employers have between ten and one hundred employees, while the majority, 52%, have less than four.²⁰
- ▲ Although Agriculture, Forestry, and Fishing and Hunting make up less than 1% of the Region's jobs, the agriculture sector is nonetheless important to the Region's character.²¹

Industry Sector	Jobs in the Region		Regional Workforce Population in Industry Sector	
	Count	Share	Count	Share
Healthcare and Social Assistance	11,646	18.5%	12,711	15.8%
Manufacturing	9,218	14.7%	9,430	11.7%
Retail Trade	7,679	12.2%	8,057	10.2%
Educational Services	5,999	9.5%	9,020	11.2%
Accommodation and Food Services	5,400	8.6%	5,314	6.6%
Construction	3,315	5.3%	3,632	4.5%
Professional, Scientific, and Technical Services	3,038	4.8%	5,276	6.5%
Administration & Support, Waste Management and Remediation	2,597	4.1%	3,318	4.1%
Wholesale Trade	2,790	4.4%	3,704	4.6%
Other Services (excluding Public Administration)	2,331	3.7%	2,691	3.3%
Finance and Insurance	1,774	2.8%	5,475	6.8%
Public Administration	1,748	2.8%	3,474	4.3%
Transportation and Warehousing	1,223	1.9%	1,830	2.3%
Arts, Entertainment, and Recreation	1,153	1.8%	1,676	2.1%
Management of Companies and Enterprises	875	1.4%	1,490	1.8%
Information	690	1.1%	1,701	2.1%
Real Estate and Rental and Leasing	519	0.8%	808	1.0%
Utilities	434	0.7%	594	0.7%
Agriculture, Forestry, Fishing and Hunting	420	0.7%	343	0.4%
Mining, Quarrying, and Oil and Gas Extraction	6	0.0%	13	0.0%
Total Jobs	62,855	100%	80,557	100%

Jobs in the Region by Industry Sector, 2017 ¹⁷

Regional Industries (cont.)

- ▶ Agricultural land use accounts for approximately 11,119 acres or 4% of the Region's acreage and includes over 400 farms. These farms, along with other agricultural business, sell over \$50 million in products annually.²¹
- ▶ The Region's tourism market is driven by its cultural, water-based and natural resource assets. The 2016 GrowSMART study estimated that Regional tourism generated between 5,000 and 7,000 jobs with a payroll range of \$120 to \$170 million.²²



Recreational Amenities in the Region*

*This map is for the purpose of highlighting the Region's recreational assets. It is not a comprehensive map of all recreation locations in the Region.

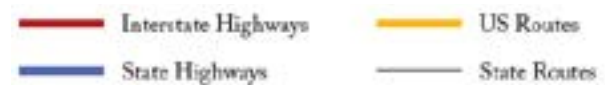
- | | |
|--|---|
| ● Airport | ● Parks and Trail Facilities |
| ● Arts and Cultural Facilities | ● Beaches |
| ● Boating Related Facilities | ● Skiing |

Transportation

- The Region's three major roadways are: I-95, which runs along the shoreline providing access from east to west, Rte. 9, which transects the Region from north to south, and I-91, which crosses the far western portion of the Region.²³
- Route 66 connects Middletown to Meriden and Waterbury in the west and Portland and East Hampton to the east, and U.S. Rte. 1 (Boston Post Road) serves as a main road along the shoreline.²³
- There are three major river crossings: I-95 in the south, the Haddam-East Haddam Swing Bridge at the Region's center, and the Arrigoni Bridge in the north. In addition, the Chester-Hadlyme Ferry provides additional crossings from April to November each year.²³
- With the exception of I-95 during an accident or summer weekend, and Route 9 in Middletown, few areas of the Region's road network can be considered truly congested. During the summer tourist season, the Average Daily Traffic (ADT) on Rte. 1 and other major connectors near the shoreline increases significantly.²³
- Due to the pattern of low-density suburban development in the Region, there has been significant reliance on highway travel and single occupancy vehicle trips.²³
- The majority of the Region's working age population (68%) commute outside of the Region for work at their primary job. Most of these workers (78%) travel less than 24 miles (one-way) for their work commute.¹⁷
- Middletown is the work destination for roughly 8,800 (11%) of the Region's working population. This is followed closely by Hartford, where over 6,900 (8.5%) of the Region's residents work. New Haven, Meriden, East Hartford, Newington, New Britain, Old Saybrook, West Hartford, and North Haven are commuting destinations for roughly 1,000 to 2,700 residents each.¹⁷
- Middletown Area Transit's (MAT's) five regularly scheduled bus routes (Routes 581-585) loop through Middletown and Cromwell with a one-hour headway. CT Transit Routes 55 and 921 facilitate access to job centers north of the Region. However, these routes do not connect well with MAT operated routes.



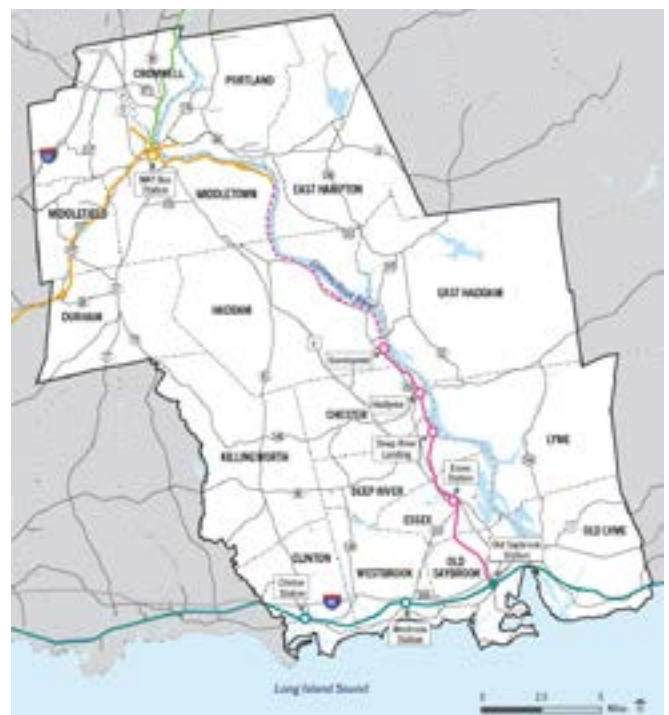
Transportation Network



Traffic Volume (2015 Average Daily Traffic)⁴³



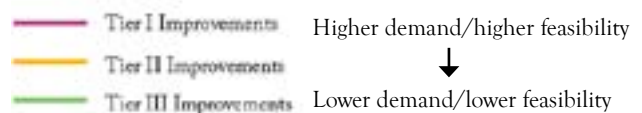
- 9 Town Transit (9TT) operates five routes that extend to Middletown, Madison, and New London. These routes operate at a headway of two hours or more. In addition, 9TT only connects to the town centers in East Haddam, Lyme, and Durham via reservation-based Dial-A-Ride service, requiring one day advanced notice.
- The 9TT routes provide connection to the Shore Line East commuter rail service which connects the Region to New Haven and the Metro North rail service to New York and the CT rail service to Hartford and Springfield. Although the 9TT routes are not coordinated with Shore Line East trains, 9TT's XtraMile service allows commuters to request a pickup at the Old Saybrook and Westbrook Train Stations to destinations in the XtraMile service area (Old Saybrook, Westbrook, and Essex), during service hours.
- The Connecticut Active Transportation Plan contains a Statewide Bicycle Planning Network. This network identifies key routes and connections which bicyclists can use to travel throughout the state. Many of these roads are being used for recreational purposes, and for others daily (or a few times a week) commuting. Improvements to the road conditions, and opportunities for multi modal (bike/bus/bike) commutes as well as the increasing use of E-bikes, is expected to increase the mode share of those that bike to work, schools, and shopping. The plan identifies three tiers of improvements. Tier I improvements are the highest priority improvements that are most feasible to implement in the near term. Lower tier improvements are less of a priority due to lower potential demand or feasibility of implementing improvements.
- Municipalities in the Region have a sparse and discontinuous network of paved walkways and sidewalks. These walkways are focused around town centers and connect the centers with residential areas, services, schools, and recreational facilities. Because the existence and formality of walkways is usually a function of greater development density, some of the more rural municipalities have little to no pedestrian infrastructure. Lyme and Killingworth, for example, have no sidewalks within their boundaries.
- Active commuting, or commuting by walking or bicycling, is not currently a viable option for much of the Region. Only 3% of the Region's working population walked to work and there is insufficient data on bicycle trips. Bicycle commuters likely fall into the 1% of residents using "other" modes of commuting.



Rail Network



Statewide Recommended Bicycle Network ⁴⁴



Built Environment

Sewer

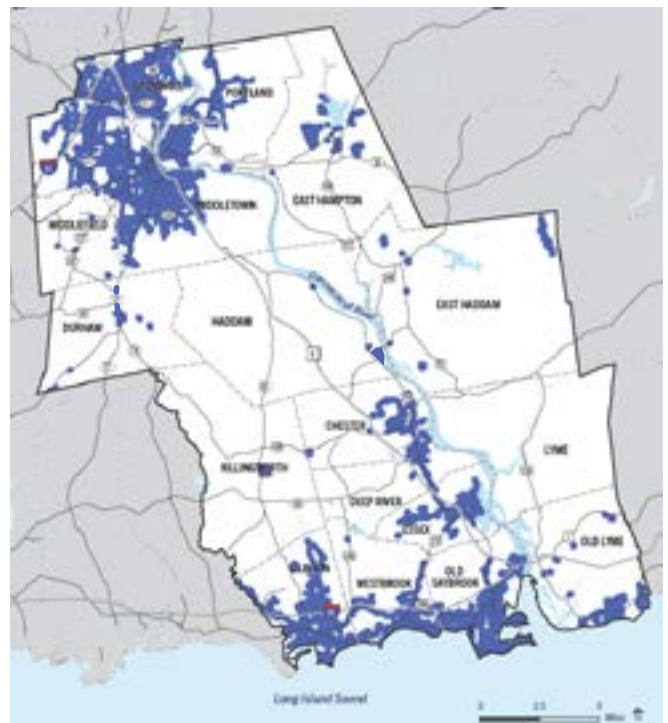
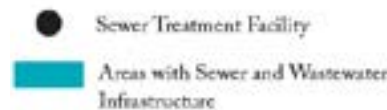
- Approximately 11%, or 45,000 acres, of the Region is served by sewer. This reaches approximately 35% of the Region's population. Sewer infrastructure is largely concentrated in the northern portion of the Region around Middletown and Cromwell. Smaller areas of Chester, Deep River, East Haddam, East Hampton, Middlefield, Old Lyme, and Portland also have sewer service.²⁴
- Areas not served by sewer are reliant on septic systems, which greatly limit the density of development.²⁴

Water

- Approximately 46% (79,873) of residents in the Region are served by public water systems. The main water suppliers in the Region, based on number of people served, are the Middletown Water Department (41,019), Cromwell Fire District Water Department (14,316), and the Connecticut Water Company (CTWC) which supplies 11,714 residents in the towns of Chester, East Haddam, East Hampton, Essex, Killingworth, Old Lyme, and Portland.²⁵
- Four municipalities have less than 1% of their population served by public water systems. These are Killingworth, Haddam, East Haddam, and Lyme. Five municipalities have over 50% of their population served by public water systems. These are Chester, Cromwell, Middletown, Old Lyme, and Portland. The remaining municipalities have between 2% and 23% of their populations served by public water systems.²⁵



Sewer and Wastewater Infrastructure⁴⁵



Public Water Supply Infrastructure⁴⁵



Internet

- High speed broadband coverage (250 Mbps download/25 Mbps upload or greater) is not present throughout the Region. There are no providers with this level of service through much of the Region and only one provider in most areas with coverage.²⁶

Energy

- Virtually all developed properties have access to electrical service.²⁷
- The Region's major gas transmission pipelines are located in Cromwell and East Hampton, with Hazardous Liquid Pipelines (carrying diesel fuel) spanning from Cromwell, through Middletown and Middlefield, to Durham connecting to Wallingford and New Haven. No major transmission lines are located in the southern portion of the Region, limiting access to these energy sources.²⁸
- During the period from June 2019 to June 2020, renewable energy sources accounted for approximately 4% of the total electricity generated in the state. During this time, natural gas accounted for approximately 55% of generation and nuclear for 39%.²⁹
- Of the renewable energy sources in Connecticut, biomass (approximately 2%) and hydroelectric (approximately 1.5%) are the most significant. Wind (less than 0.1%) and solar (approximately 0.5%) are currently not large sources of energy.²⁹



Fixed Broadband Coverage (ADSL, Cable, Fiber, Fixed Wireless, Satellite, Other) ²⁶

Number of providers with 250/25 Mbps service or greater

0 Providers 1 Provider 2 Providers



Regional Gas, Hazardous Liquid, and High Voltage Transmission ^{45, 46}

Gas Transmission Pipelines
Hazardous Liquid Pipelines
High Voltage Transmission

Environmental Hazards

Flooding

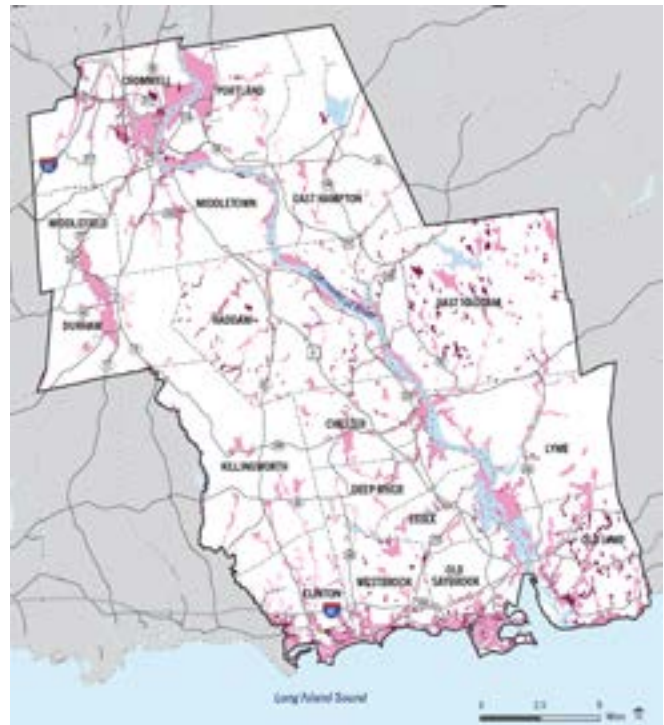
- ▲ The largest percentage of land (29%) within the Region's flood zones (100 and 500 year) is designated as open space.³⁰
- ▲ Residential land uses account for 23% of acreage within the flood zone, placing residents and their homes in potential danger during a flood event.³⁰
- ▲ Although only 57 of the Region's residents live in a census block group that is completely within the 100-Year Flood Zone, nearly 89,850 of the Region's residents (52%) live in a census block group that intersects the 100-Year Flood Zone.³¹
- ▲ There are over 1,900 acres of impervious surfaces located within the 100-year Flood Zone, this is approximately 5% of the total area (in acres) of the 100 – Year Flood Zone.³⁰

Sea Level Rise

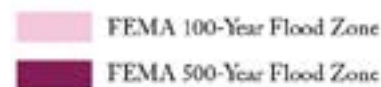
- ▲ A two-foot sea level rise is projected for the Region by 2050. This includes Long Island Sound and the Connecticut River which is also at sea level in the region. Approximately 14% of the land area in the Region will be affected by sea level rise.³²
- ▲ Old Lyme, Old Saybrook, Westbrook, and Clinton, which have dense shoreline residential and commercial development, are most vulnerable to sea level rise.³²

Hurricanes

- ▲ Approximately 14% of the Region's population lives within a Category 1, 2, or 3 Hurricane inundation zone. These areas often overlap with the FEMA 100-Year Flood Zone and are also in danger of damage from other flood events. The shoreline areas in Old Saybrook, Westbrook, and Clinton are in particular danger during a hurricane.³³
- ▲ There are approximately 1,050 acres of impervious surfaces located within the Category 1, 2, or 3 Hurricane Zone, this is approximately 10% of the total area (in acres) of the Category 1, 2, or 3 Hurricane Zone. Impervious surfaces impede the absorption of stormwater into the ground and can worsen flooding.³⁰



FEMA Flood Zones ⁴⁷



Projected Sea Level Rise ⁴⁸



Natural Environment

- ▲ The Connecticut River, which transects the Region from north to south, is the longest river in New England, flowing 410 miles from Canada to the Long Island Sound. It is among the few major rivers, along the entire Eastern Seaboard, with a predominantly natural, undeveloped estuary.³⁴
- ▲ The Region is 59% forested and the Region's forests are primarily privately owned.³⁵
- ▲ The Connecticut Department of Energy and Environmental Protection (CT DEEP) lands constitute approximately 36,600 acres (57 sq miles) or 13% of the Region. Among these lands, 22,500 acres or 62% are comprised of acreage from three State forests: Cockaponset State Forest (15,130 acres within the Region); Meshomasic State Forest (5,709 acres within the Region); and Nehantic State Forest (1,670 acres within the Region).³⁶
- ▲ Each of the Region's municipalities contain a State Park or Forest.³⁷
- ▲ The Region's land trusts, along with other non-profit conservation organizations such as The Nature Conservancy, own approximately 10,000 acres or a little under 4% of the Region.³⁸
- ▲ Approximately 50% of the Region lies within a designated Natural Diversity Area. Natural Diversity Database data, obtained from a State database, is intended to identify areas with endangered, threatened, and special concern species and significant natural communities.³⁹
- ▲ There are approximately 43,000 acres of inland and tidal wetlands within the Region, or roughly 16% of the Region's total land area.⁴⁰
- ▲ Most of the Region's steep slopes are in inland towns such as Durham and Middlefield, while the coastal communities of Old Saybrook, Old Lyme, Westbrook, and Clinton tend to be relatively flat. Significant portions of the hillsides above the lower Connecticut River, within the Gateway Conservation Zone, have slopes between 10 to 20% and sometimes greater.⁴¹



Natural Diversity Database Areas ⁴⁹

■ Natural Diversity Database Areas



Wetlands ⁵⁰

■ Inland Wetlands
■ Tidal Wetlands

References

1. U.S. Census Bureau (2018). 2014-2018 American Community Survey 5-year Estimate. Retrieved from <https://data.census.gov/cedsci/>
2. "Connecticut's Population is Expected to Grow, Connecticut State Data Center Reports". Connecticut State Data Center at the University of Connecticut Libraries Map and Geographic Information Center. (2017). 2015-2040 Population Projections for Connecticut. Retrieved from <https://www.ctdata.org/>
3. U.S. Census Bureau. (2018). Age and sex. 2014-2018 American Community Survey. Retrieved from <https://data.census.gov/cedsci/>
4. U.S. Census Bureau. (2019). Race. 2015-2019 American Community Survey. Retrieved from <https://data.census.gov/cedsci/>
5. U.S. Census Bureau Decennial Census and U.S. Census Bureau(2018). 2014-2018 American Community Survey 5-year Estimate. Retrieved <https://data.census.gov/cedsci/>
6. U.S. Census Bureau. (2019). Occupancy characteristics. 2015-2019 American Community Survey 5-year Estimates. Retrieved <https://data.census.gov/cedsci/>
7. U.S. Census Bureau. (2018).Household Income Census of Population and Housing. Retrieved <https://data.census.gov/cedsci/>
8. U.S. Department of Health and Human Services. (2017). 2017 poverty guidelines. Retrieved from: <https://aspe.hhs.gov/2017-poverty-guidelines>
9. U.S. Decennial Census 2010 and U.S. Census Bureau (2018). 2014-2018 American Community Survey 5-year Estimate. Retrieved from <https://data.census.gov/cedsci/>
10. Connecticut United Way (2018). "ALICE IN MIDDLESEX COUNTY". Web. Retrieved from http://alice.ctunitedway.org/wp-content/uploads/2018/09/Middlesex-County-_2018-ALICE-9.26.18.pdf
11. Connecticut United Way (2018). "Middlesex County HHSB and Stability". Web. Retrieved from <http://alice.ctunitedway.org/wp-content/uploads/2018/09/Middlesex-CountyHHSBAnd-Stability-9.26.18.pdf>
12. RiverCOG Seamless Parcel Layer, 2013
13. CT DECD Housing and Income Data: Building Permit Data, Annual Demolition Data by town. Retrieved from: <http://data.ctdata.org/dataset/annual-housing-permits-by-town>
14. U.S. Department of Agriculture. 2017 Census of Agriculture.Selected Operation and Producer. Retrieved from: https://www.nass.usda.gov/Quick_Stats/CDQT/chapter/2/table/45/state/CT/county/007
15. CT Department of Economic Community Development (2018). "Annual Housing Permit Data by Town from 1990 thru 2017". Retrieved from https://portal.ct.gov/DECD/Content/About_DECD/Research-and-Publications/01_AccessResearch/Exports-and-Housing-and-Income-Data
16. <https://portal.ct.gov/DOH/DOH/Programs/Affordable-Housing-Appeals-Listing>
17. U.S.Census Bureau, Center for Economic Studies. (2017). "On The Map". Retrieved from <https://onthemap.ces.census.gov/>
18. U.S. Census Bureau. (2014). "County Business Patterns".Retrieved from <https://www.census.gov/programs-surveys/cbp/data.html>
19. Lower Connecticut River Valley COG (2016). "GrowSMART: Regional Economic Growth Strategy Final Report". Retrieved from https://www.rivercog.org/wp-content/uploads/2020/01/growsmart-final-report_020416.pdf
20. Connecticut Department of Labor, Office of Research. (2016) "Labor Market Information". Retrieved from <https://www1.ctdol.state.ct.us/lmi/EmpSearchTopList.asp?intSort=6>
21. United States Department of Agriculture (2012). 2012 Census of Agriculture: Middlesex County, Connecticut. Retrieved from https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Connecticut/cp09007.pdf
22. Lower Connecticut River Valley COG (2016). "GrowSMART:Regional Economic Growth Strategy Final Report". Retrieved from https://www.rivercog.org/wp-content/uploads/2020/01/growsmart-final-report_020416.pdf
23. RiverCOG's Metropolitan Transportation Plan (MTP), 2019 - 2025
24. RiverCOG GIS Data Layers
25. <https://portal.ct.gov/DPH/Drinking-Water/DWS/Public-Water-System-Lists>
26. FCC Fixed Broadband Deployment Map, <https://broadbandmap.fcc.gov/#/>
27. Connecticut Economic Resource Center. (2014). Connecticut generation plants > 65 megawatts. Retrieved from: http://www.lebanontownhall.org/resources/fyi_-_interesting_-_map_of_ct_generation_plants.pdf
28. National Pipeline Mapping System (NPMS), Pipeline and Hazardous Materials Safety Administration, Accessed in February 2021,<https://pvnpm.phmsa.dot.gov/PublicViewer/>
29. United States Energy Information Administration. (2020). Electric Power Monthly. <https://www.eia.gov/electricity/monthly/>
30. Analysis of RiverCOG land use, Grand List, and CT-DEEP Data
31. https://rivercog.org/wp-content/uploads/2020/03/RiverCOG_Flood_Susceptibility_Report_July_25_2018.pdf

References (cont.)

32. <https://circa.uconn.edu/wp-content/uploads/sites/1618/2019/10/Sea-Level-Rise-Connecticut-Final-Report-Feb-2019.pdf>
33. FEMA Flood Hazard Areas, DFIRM Database
34. <https://www.ctriver.org/learn/watershed-facts>
35. RiverCOG, CT DEEP
36. <https://portal.ct.gov/DEEP/Forestry/Management-on-State-Lands/Forest-Management-on-State-Lands>
37. RiverCOG, CT DEEP, <https://portal.ct.gov/DEEP/State-Parks/Listing-of-State-Parks>
38. <http://www.ctconservation.org>
39. <https://portal.ct.gov/DEEP/Endangered-Species/Natural-Diversity-Data-Base-Maps>
40. United States Fish and Wildlife, National Wetland Inventory, 2020
41. CTDEEP, Connecticut Terrain Dataset
42. CT ECO, <https://data.ct.gov/dataset/Soil-Survey-Geographic-Database-SSURGO-Farmland-So/jcc7-zq3d>
43. CT DOT, <https://ctdot.maps.arcgis.com/apps/View/index.html>
44. <https://fhiplan.maps.arcgis.com/apps/webappviewer/index.html?id=48b41d2822a0476996def72610db2e0a>
45. Lower Connecticut River Valley Council of Governments GIS Database
46. National Pipeline Mapping System, <https://pvnpm.phmsa.dot.gov/PublicViewer/>
47. FEMA Flood Hazard Areas, DFIRM Database
48. NOAA Sea Level Rise Viewer; <https://coast.noaa.gov/slr/#/layer/slr>
49. CT DEEP, Natural Diversity Database Areas
50. United States Fish and Wildlife, National Wetland Inventory, 2020

Public Outreach Summary

The Approach

Extensive public outreach was conducted by the planning team to solicit input from a diverse group of residents and stakeholder groups throughout the Region. This outreach was conducted so that participants would have meaningful influence over the long-term vision of the Region and policy recommendations. The issues, concerns, opportunities, and goals identified as part of this outreach effort have directly shaped the recommendations of the RPOCD, ensuring that this document is reflective of the Region it serves.

Background and Methodology

Due to limitations on in-person meetings caused by the COVID-19 Pandemic, public outreach for this project was entirely virtual and conducted primarily via Zoom meetings. This method resulted in higher levels of public participation from those with reliable access to Internet connection. However, it is acknowledged that segments of the population without reliable access to Internet connection were underrepresented. Effort was nevertheless made to consider and address the needs of this underrepresented population in the creation of the RPOCD.

Public outreach efforts included two Region-wide Introductory Presentations, Municipal Meetings with each of the Region's 17 planning commissions, and a series of four interactive Regional Workshops. All events were open to the public and advertised on RiverCOG's website and Facebook page. Invitation flyers were emailed to the Chief Elected Officials, chairs of the Planning and Zoning Commissions, Town Planners, Zoning Enforcement Officers, and RPC members of the Region's 17 municipalities with a request to circulate widely. The flyers were also sent to the [Gateway](#)

[Commission](#), [Regional Agricultural Council](#), and [Lower Connecticut River Land Trust](#).

Information, progress, and recordings of public outreach efforts were posted to the project website (<http://www.rivercogregionalplan.org>) where the public was invited to ask questions and submit comment throughout the process.

Introductory Presentations

The Region-wide Introductory Presentation was given on June 29, 2020. Due to a high attendance rate (over 100 attendees), a repeat presentation was given on July 7, 2020.

The Introductory Presentation set the stage for the project by introducing RiverCOG, the RPC, and the RPOCD to attendees. It explained the benefits of a Regional Plan, set the stage for Regional thinking, and provided a timeline and series of steps for public participation in the process. Participants were given contact information for project managers and RPC members and encouraged to reach out with comments and questions. The project website was provided so that attendees could follow along with the process.

Municipal Meetings

From July 2020 to September 2020, RiverCOG held a series of Municipal Meetings in each of the Region's 17 municipalities via a virtual meeting format. While open to the public for any municipality, the meetings were focused on the perspective of individual municipalities. Attendance ranged from 10 to 30 participants and were hosted by the Planning and Zoning Commissioners, town planners, RPC members, residents, and representatives from various stakeholder groups.

At the Municipal Meetings, attendees were asked to answer the following questions:

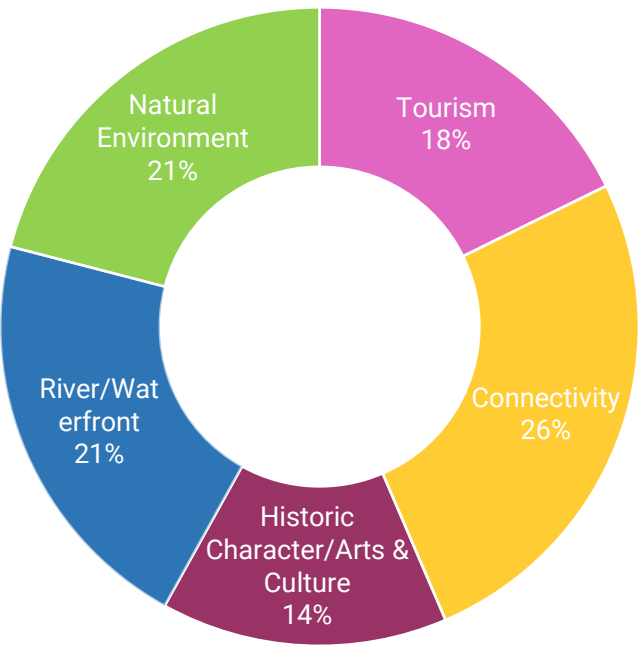
- What is your vision for the Lower Connecticut River Valley?
- What do you see as your town's role in the Region?
- What are the challenges your town is facing that would be easier to address working regionally or with neighboring towns?
- What do we do well in our Region? What don't we do well?
- How could a Regional Plan of Conservation and Development support your town?

Key findings based on the answers to these questions are summarized below.

What is your vision for the Lower Connecticut River Valley?

When asked about the vision for the Lower Connecticut River Valley, several common themes emerged across the Region:

- Natural Environment
- River/Waterfront
- Historic Character/Arts & Culture
- Tourism (Eco-Tourism, Shoreline Tourism, Agritourism)
- Connectivity



Responses to "What is your vision for the LCRV?"

What do you see as your town's role in the Region?

Each municipality saw their role as multifaceted, however there was a dominant concept for each. The responses are summarized in the table below.

Municipality	Role in the Region
Chester	Arts & Culture
Clinton	Hub/Gateway, Shoreline Access
Cromwell	Retail Center/Commercial Hub
Deep River	Mid-Region Hub, Historic Character
Durham	Agriculture, Suburban/Housing
East Haddam	Recreation, Agriculture
East Hampton	Recreation and Commercial Hub, Gateway to the East
Essex	Historic Character
Haddam	Eco-Center
Killingworth	Agriculture, Natural Environment
Lyme	Natural Environment, Agriculture
Middlefield	Agriculture, Suburban/Housing
Middletown	Economic Center, Destination for Business, Shopping, and Dining
Old Lyme	Shoreline Access, Economic Diversity, Destination for Shopping
Old Saybrook	Commercial/Business Hub, Gateway from the South
Portland	Recreation Hub/Suburban
Westbrook	Shoreline Access, Destination for Dining

Local Challenges to Address Regionally

When asked about challenges each town was facing that could be addressed working regionally, participants placed strong emphasis on affordable housing. Participants felt that regional perspective and regional coordination could help in determining where and what type of affordable housing could be built with the consensus that not every town was equally suitable for all types of housing. Similarly, towns generally agreed that the Region needed to attract a diversity of businesses, but that not every business was suitable for every town. Participants suggested that a regionally

coordinated approach to land use regulations and marketing as a “business-friendly” Region could help attract new businesses and direct them to the most appropriate locations.

Participants also identified the current lack of coordination and connection between the Region’s bike and trail network, noting that regional cooperation among the towns could result in a comprehensive system that would serve to support the Region’s tourism economy.

Participants noted that regional coordination could help towns utilize economies of scale to reduce the overall cost of services and infrastructure. Wastewater, 5G wireless networks, schools, and emergency services were all mentioned as opportunities for cost savings.

Importantly, participants also recognized the need for regional coordination in addressing environmental concerns such as protecting natural resources and addressing climate change and sea level rise.

Regional Strengths and Weaknesses

Participants identified quality of life as the Region’s primary strength and noted that the Region is particularly good at promoting a feeling of community and cooperation. Other notable strengths included the Region’s education system, manufacturing industry (even though many of the traditional manufacturing industries of the Region have disappeared) and protecting the Connecticut River. Conversely, participants identified the lack of job diversity and public transportation, high cost of infrastructure and services, challenges in job creation, retention of young people, and ability to provide affordable housing, and high income, sales, and property taxes as the Region’s greatest weaknesses.

How the Regional Plan Can Support the Towns

Participants identified several areas where the Regional Plan could assist municipalities. In particular, the Regional Plan could assist in the creation of affordable housing, bringing a diversity of people and businesses to the Region, facilitating the sharing of resources among municipalities, and marketing the Region as a cohesive unit to the rest of the state, country, and world. In addition, participants identified the role of the Regional Plan in coordinating land use and transportation infrastructure across municipal boundaries and creating physical and community connections between the towns.

Regional Workshops

Following the Municipal Meetings, RiverCOG and FHI hosted a series of four Regional Workshops that built upon the information gathered at the Municipal Meetings.

Regional Workshop 1: Regional Demographics

Regional Workshop 1 was held on December 9, 2020 and focused on addressing the Region’s changing demographics. Statistical data, compiled as part of the Existing Conditions Report, was presented to participants in three segments: 1) population composition; 2) employment and income; and 3) housing supply and market. Following each segment, participants were separated into small discussion groups of five to ten people and asked to discuss whether the information was consistent with their experience, what issues may arise for the Region based on the presented trends, and what steps the Regional Plan could take to address the issues.

Population Composition

Participants found the data on population composition generally consistent with their experience in the Region, with the exception of Middletown. They also brought up the influx of people moving into Connecticut because of the COVID-19 Pandemic and discussed how that might influence the data.

Issues identified by participants predominately related to the racial and ethnic composition of the Region and the trend toward decreasing population. These included fewer volunteers for community activities, potential decrease in property value and other negative economic impacts, and bigotry caused by a lack of diversity.

In addressing these issues, participants pointed to the need for a diverse supply of affordable housing in the Region to attract and retain a younger, more diverse population. Spencer’s Corner in the Centerbrook section of Essex was cited as a positive example of affordable housing in the Region. In addition, participants discussed the need for local job opportunities, better high-speed Internet service, and more entertainment in the Region.

Employment and Income

Participants found that regional employment and income data was consistent with their experience in the Region and noted that there is more poverty in the Region than most people realize. Issues raised by participants based on this data centered primarily around jobs and housing. Specifically, participants brought up the percentage of income residents must spend on housing as a reason that multi-generational families cannot continue to live in the Region. One participant noted that there are not enough jobs with sufficient pay to allow the adult children of residents to live here, even if the family has lived in the Region for generations. Further, participants noted that the Region is lacking the proper housing types for the Region's jobs and that the job market has been split into high income and low income with a disappearing middle. COVID-19 was also mentioned as exacerbating the struggles of workers and small businesses.

To overcome these issues, participants suggested encouraging new types of trade and skilled labor in the Region, including use of trade centers or feeder schools into the Regional workforce, finding space for contractors (plumbers, builders, etc.), and attracting workers from metro areas. In tandem, participants noted the necessity of creating more affordable housing to support this increase in mid-level labor.

Housing Supply and Market

Participants found the data related to housing supply and market generally consistent with their experience in the Region, however it was noted that new houses are being built in Haddam, even though there is existing supply. Many issues were noted in relation to the current housing supply and market, including the high cost of staying in a home, the impact of high-cost housing on racial and ethnic diversity in the Region, the struggle of young people to save for and buy a home, the inability of the Region to house young and old populations, and the difficulty of supporting 8-30g affordable housing due to conflicts between density, community character, and the carrying capacity of the land for wells and septic.

Suggestions to address these housing issues generally related to revising municipal zoning regulations. Participants mentioned allowing more mixed-use developments, rental units, and accessory dwelling units, eliminating minimum lot size, minimum frontage, and minimum building size, and considering the use of form-based codes to allow greater flexibility. In addition, participants suggested repurposing abandoned commercial and institutional buildings as well as age-restricted developments to generate additional housing supply and creating financial literacy programs to support home ownership.



Homes in Clinton

Regional Workshop 2: Vision and Brand

Regional Workshop 2 was held on December 15, 2020 and focused on developing the overall vision for the Region. The responses to the visioning questions from the Municipal Meetings were presented to participants, who were then asked to assist in developing key themes to support a Regional vision statement.

The following table provides a summary of key concepts, words, and phrases that were heard from participants.

Theme	Key concepts, words, and phrases
Resiliency	<ul style="list-style-type: none"> • Resilient People, Businesses, Development • Adaptable • Agile • Change • Not stagnant or static
Stewardship	<ul style="list-style-type: none"> • Preservation • Natural resources • Nature • Green • Nurture • Green Space in Megalopolis • River – History, Resiliency, Resource • River and Sound • Education • Outdoors • Recreation
Exploration	<ul style="list-style-type: none"> • Education • Outdoors • Recreation

Connection	<ul style="list-style-type: none"> • Gateway to Larger Region • Opportunity for Chester Airport • Electronic Infrastructure • Accessible • Connectivity Leads to Innovative Population • Everything is Connected - We Have it All • Don't Have to Settle or Choose • Multi-Centric Region - Maintain and Exploit
Community	<ul style="list-style-type: none"> • Inclusive Community • A Community You'd Want to be Part Of • Welcoming • Everything New England Has to Offer • Livability/Landscape for Living/ Quality of Life • Nurturing • Warm and Caring • Volunteerism
Culture	<ul style="list-style-type: none"> • Quaint • Character • "Cool Factor" to Attract Younger People • History
Inclusivity	<ul style="list-style-type: none"> • Need Diversity • Need to House Mid-Level Workers • Need Affordable Housing • Address Population Loss
Innovation	<ul style="list-style-type: none"> • Jobs, Education, Skilled Workers • Encourage New Types of Trade • Missing Mid-Level Jobs • Small Businesses • Naturally Innovative • Higher Education
Opportunity	<ul style="list-style-type: none"> • Growth

Regional Workshop 3a and 3b: Future Land Use Map and Mapping Exercise

The final Regional Workshop was held in two parts. Part A, held on December 21, 2020, was an informational session that provided an overview of the Regional future land use maps and previewed the Part B mapping exercise. During Part B, held on January 11, 2021, participants were given access to a virtual map of the Region with base map layers for reference. They were then given three weeks to work on the map and identify locations for the following:

Town Centers

- Integration of residential, commercial, employment, and civic uses
- Activity hubs that serve as the pedestrian-friendly core of the community
- Characterized by inviting and accessible streets and public spaces

Innovation Development Areas

- Industrial, commercial service, and commercial retail uses (or a mixture of these)
- Focus on areas for employment generating land uses

Housing Opportunity Areas

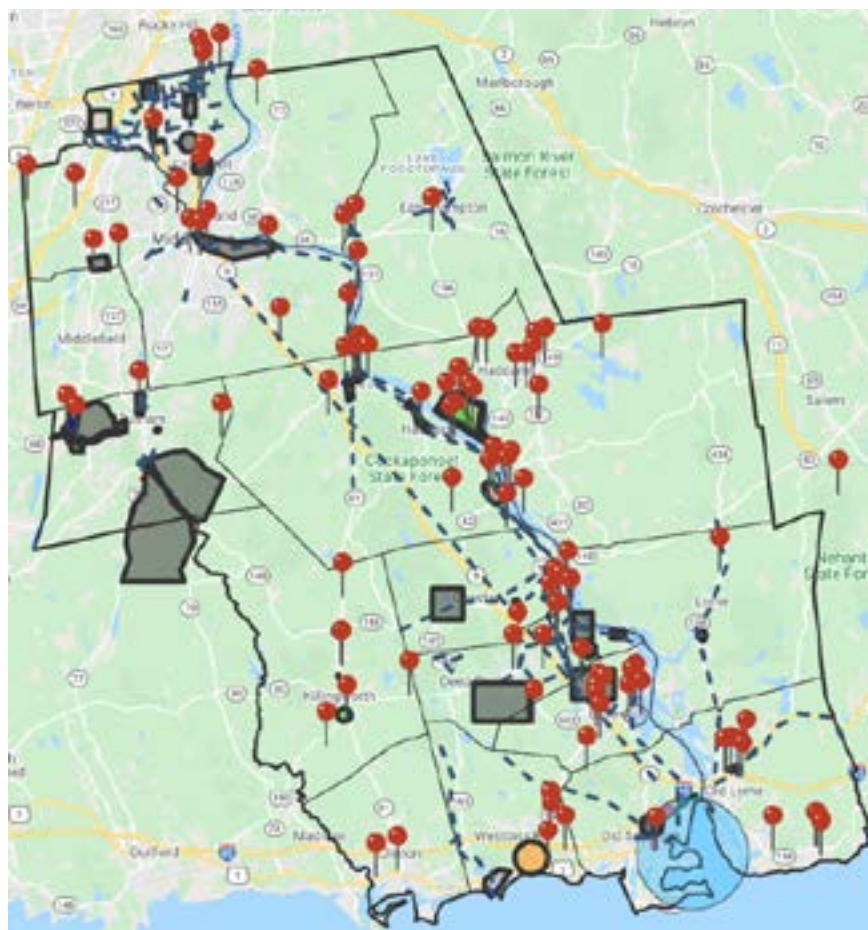
- A mixture of housing types that are suitable for households of various sizes and income levels
- Focus on creating economically and socially diverse communities

Utility Expansion Areas

- Areas for extended sewer, public water, gas, etc.
- Internet, cellular, and fiber optics

Connections

- Links or “connections” between important land use destinations
- Focus on a variety of modes or types of connections (sidewalk, bike path, transit, etc.) that can meet the needs of a diverse group of users



Future Land Use Mapping Exercise
(pins and drawn shapes correspond with comments provided)

Plan Themes

Through the course of engaging the Region's residents and stakeholders, four consistent themes emerged that were central to the values, concerns, and ideas for the Region. These themes include: Sustainable, Connected, Innovative, and Community. This Plan organizes its vision, goals, and recommendations around those themes.

Sustainable



The plan's vision, goals, and recommendations for a Sustainable Region are provided on pages 34-39.



Connected



The plan's vision, goals, and recommendations for a Connected Region are provided on pages 40-44.



Innovative



The plan's vision, goals, and recommendations for an Innovative Region are provided on pages 45-48.



Community

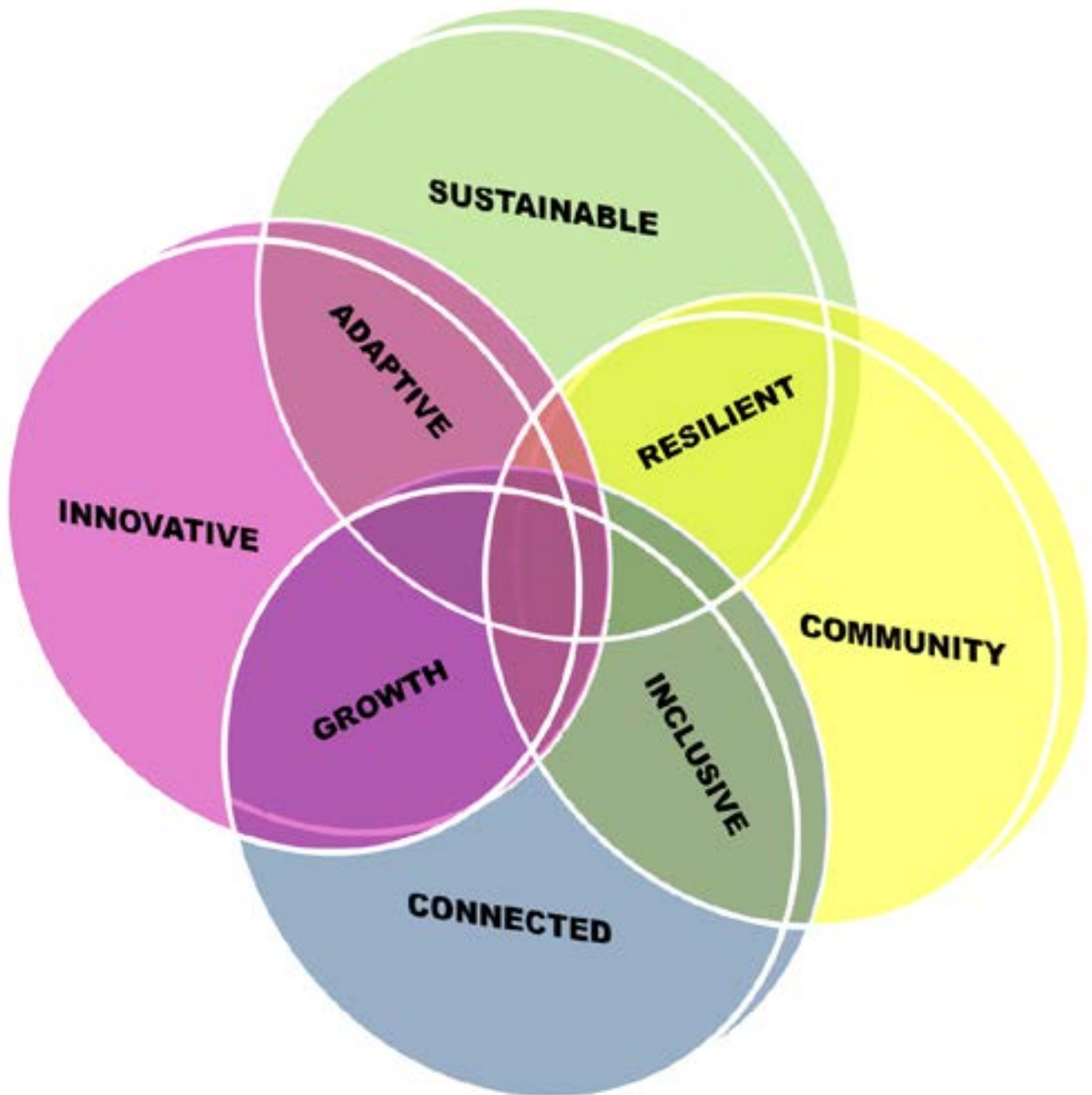


The plan's vision, goals, and recommendations for a Community focused Region are provided on pages 49-53.



How the Plan's Themes are Aligned

The themes identified by this plan are relevant to many aspects of the Lower Connecticut River Valley Region and community. **These four themes are complimentary and describe both current attributes and future aspirations for the region.**



Sustainable

The Vision:

Sustainability is paramount to this plan and is woven throughout the four themes. The Region's residents, stakeholders, and leaders value the landscape that we have inherited, and place significant value in stewardship of the land and its communities that call this place home. As such, the Region will grow and develop in balance with its natural, economic, and social resources. The Region's sustainable policies, practices, infrastructure, and development will make it resilient to environmental and economic threats, and will provide the stability necessary to support social equity across the Region. Sustainability also extends to the Region's residents and the need for their adaptability and resilience given environmental, economic, and social changes underway.



Image Credit: Melissa Steucek

Sustainable Strengths, Weaknesses, Opportunities, and Threats (SWOT)

In urban planning, sustainability is defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. Environmentalism is a significant aspect of sustainability, yet, embedded in sustainability are also concerns for social equity and economic development and resilience. These three pillars, environment, equity, and economy, create the foundation of sustainability.

In terms of natural environment, the Region is rich in natural resources, including forests, wetlands, and water bodies, which cover much of the Region. There is strong local stewardship of these resources, however, they are at risk from invasive species, climate change, and sea level rise. The rural suburban nature of our region makes the region more dependent on fossil fuels, exposing the region more to spikes in energy prices and adding to greenhouse gas emissions.

In terms of social equity, the Region's population is less diverse in race, age, and socio-economic status than other parts of the state. This is the result of the high cost of living, lack of variety of housing types, and limited access to alternative modes of transportation, which create inadequate access to the Region for people of diverse backgrounds.

Lastly, in terms of economic sustainability, the Region boasts several strong industries, but is limited in sewer, water, and broadband infrastructure to support these industries or create new industries. The Region's highly skilled workforce is aging and the Region is not attracting a sufficient number of young workers to replace them. These young workers are essential to supporting a sustainable economy, as well as the Region's volunteer emergency and public services. Nevertheless, the Region's communities are strong and resilient, as seen most notably during the COVID-19 Pandemic. Because sustainability underlies the entirety of this plan, additional factors related to social equity and economic sustainability are incorporated under the other three themes.

The SWOT matrix on the following page categorizes these and other important existing conditions and public input in the Region into sustainability strengths, weaknesses, opportunities, and threats. Organizing the Region's existing conditions in this way allows us to better assess the policies and recommendations that can assist the Region in achieving its vision.

Strengths

- Connecticut River
- Long Island Sound and shoreline
- Farmland
- Forests
- Wetlands and waterbodies
- Natural and undeveloped lands
- Institutions: Higher education, major employers, non-profit organizations
- Local stewardship of environmental resources
- Strong volunteerism from senior population
- Resiliency and adaptability of the Region's residents

Weaknesses

- Inadequate affordable housing for those working in or serving our towns
- High cost of housing
- High public school education costs
- Limited economic development
- Impaired water bodies
- Limited public transit options
- Lack of ethnic and cultural diversity
- Limited access to resources for low income populations
- Substantial reliance on single occupant vehicles for a majority of trips
- Shortage of skilled workers and continued need for technical job training

Opportunities

- Provide housing access to segments of the population in need of housing or in need of better housing
- Expand amount of protected open space by strategically targeting the most ecologically significant lands
- Encourage infill development and redevelopment over the use of undeveloped lands
- Provide more support and incentives for agriculture
- Support economic development that provides the Region with a range of jobs suitable for the residents of the Region.
- Improve and expand access to transit for all segments of the population

Threats

- Insufficient infrastructure and services to support aging population
- Population loss
- Climate change and sea level rise
- Aging infrastructure
- Loss of retail
- Loss of manufacturing
- Loss of agriculture
- Loss of biodiversity
- Invasive species
- High taxes
- Fragility of the power grid and Internet instability
- Global pandemic
- Projected loss of trees due to forest health and invasive species
- Increasing state and local tax rates

Sustainable Goals and Recommendations

The goals and recommendations below reflect and respond to the Region's key sustainability issues identified throughout the planning process and summarized in the SWOT analysis. These goals are representative of the priorities of all communities across the Region concerning issues that are common to the Region. The recommendations that follow each goal summarize the actions necessary to support achievement of the goals. Working toward these goals will support the Region in becoming more sustainable.

1

Goal 1: Continue to protect air, water, and land in the Region.

Recommendations

- Promote and expand natural resource stewardship.
- Increase the area of land classified as protected open space.
- Expand and protect open space along the Connecticut River.
- Coordinate and prioritize open space preservation throughout the Region.
- Protect the biodiversity of the Region and control invasive species by investing in invasive species removal and education and conducting outreach along rivers to make visitors and residents aware of the threat of invasive species.
- Maximize opportunities to link open space land and create an inter-connected system of protected habitat in the Region.
- Support shoreline towns in complying with the recommendations and requirements of the Long Island Sound Blue Plan and the Coastal Zone Management Act.
- Restore shell fish beds in the Long Island Sound consistent with the recommendations of the Long Island Sound Habitat Restoration Initiative recommendations for coastal habitat restoration.

2

Goal 2: Improve water quality and protect water supply.

Recommendations

- Ensure an adequate and high-quality water supply.
- Encourage preservation of water supply watershed lands.
- Reduce environmental impacts of sewage discharge.
- Reduce impervious surface and stormwater runoff.
- Discourage development in floodways and floodplains.
- Ensure that wetlands are restored, enhanced, and protected.

3

Goal 3: Prepare for potential impacts of climate change.

Recommendations

- Connect communities with tools and resources to address climate change.
- Strengthen and broaden network of partnerships to address climate change.
- Bolster a regional approach to climate change planning.
- Assist shore communities with resiliency planning.
- Promote renewable energy sources.
- Prepare and implement pre-disaster mitigation plans.
- Discourage and avoid high-density development in areas vulnerable to sea-level rise.
- Conduct and produce a regional coastal resiliency study and plan.

4

Goal 4: Preserve farmland and agriculture.

Recommendations

- Support the use of and access to locally grown food supplies.
- Identify vulnerable and potentially transitional agricultural properties and proactively work to keep those properties actively farmed.
- Support a viable and long-term agricultural industry and sustainable agricultural land uses that serve as beneficial resources to the Region.
- Support right-to-farm ordinances.
- Support the economic competitiveness of regional agriculture and encourage the diversification of potential sources of farm income, including value added products, agricultural tourism, roadside stands, organic farming, and farmers markets.
- Encourage best management practices in agriculture and animal operations to protect watersheds from contamination and erosion, reduce greenhouse gas emissions, conserve energy and water, and utilize alternative energy sources, including wind and solar power.

5

Goal 5: Support transportation and mobility systems and land use development that contribute to environmental and human sustainability while minimizing adverse environmental impacts.

Recommendations

- Improve and expand transit services with a focus on areas with low vehicular ownership rates as a means of improving equity in transit access.
- Support transportation management programs that reduce the use of single-occupancy vehicles.
- Encourage development that is located and designed to reduce vehicular trips and associated air pollution by utilizing compact development patterns in town centers and near major transit facilities.
- Incorporate a mixture of uses within town centers and near major transit facilities that encourage people to walk, bicycle, or use public transit.
- Encourage incentives for developers that maximize use of sustainable and low impact land development practices.
- Promote greater access to walkable neighborhoods—with healthy food, parks, shops, transportation options, and other amenities.

6

Goal 6: Take measures necessary to support a sustainable and resilient economy.

Recommendations

- Ensure that local regulations support business models that can adapt to a changing economic climate whether retail, office, industrial, or home-based businesses and online/remote work.

7

Goal 7: Ensure diverse and balanced neighborhoods and communities with housing available for households of all income levels.

Recommendations

- Reinvest in historically under-served communities.
- Promote affordable alternative forms of housing, including those that offer opportunities for economies of scale and shared supporting facilities.
- Encourage mixed-income developments accessible to lower income residents, especially in high opportunity and resource-rich areas.
- Take affirmative actions to further fair housing choice in the Region.
- Emphasize the need for affordable housing options for seniors, people with disabilities, and people with special needs near transit, healthcare services, shopping, and other amenities.
- Encourage and work with organizations serving populations with special needs to provide housing opportunities and or housing support for their service population.
- Encourage the development of resources to help struggling households avoid evictions or foreclosures.
- Monitor and support federal and state research, legislation, and funding for housing and housing related programs and services.
- Ensure an equitable distribution of supportive housing and facilities for people experiencing homelessness throughout the Region, especially sites that are collocated with support services for health, mental health, and workforce development and that are located near transit.
- Create a Regional Housing Plan that would encourage the development of affordable housing near transit, employment centers, opportunity areas, and resource-rich areas.
- Implement development policies to protect the public health, safety, and welfare equitably among all segments of the population and reduce the number of people who are disenfranchised by the process.
- Support access to high quality early childhood education facilities for all residents and workers in the region.

8

Goal 8: Balance growth with natural resource protection.

Recommendations

- Work with shoreline communities to address environmental concerns and protection for existing development in a balanced way.
- Guide growth to Regional centers and areas of established infrastructure.
- Increase redevelopment and infill development efforts.
- Encourage the Region's towns to review zoning district designations, boundaries, and allowed uses to ensure that zoning regulations are adequately protective of natural resources.
- Revise zoning and subdivision regulations to ensure that the environmental impact of new development is minimized.
- Guide growth towards areas of existing water and sewer infrastructure or areas where soils are suitable for sub-surface wastewater disposal.
- Support towns in facilitating the use of engineered wastewater disposal systems to enable development at appropriate densities where desired.
- Ensure equal access to benefits of a strong economy for all groups through job training to facilitate entry into the job market.
- Support the development of green infrastructure (low impact, environmentally friendly) in new projects and to replace existing infrastructure.
- Work with local institutions to expand job training in sustainable industries such as the green infrastructure construction and renewable energy sectors.
- Balance the need for renewable energy infrastructure with the need to minimize environmental and adverse land impacts.
- Protect the quality and quantity of regional supply of drinking water.

Connected

The Vision:

The Region will be a well-connected place with strong internal and external connections. Those connections will take all forms: social, cultural, physical, environmental, and digital. Municipalities will have strong connections within their communities and with surrounding towns. The Region will become better connected to surrounding regions and metropolitan centers via multimodal transportation infrastructure and enhanced communications technology, as well as open space and greenways, and the social and cultural connections that such infrastructure facilitates. The Region will be intentional in its efforts to become a better-connected place, accessible by all modes of travel and for all types of people. It will be an attractive place to live, work, learn, and play because of the ease of access that all residents, workers, and visitors enjoy.



Image Credit: Joe Gowac

Connected Strengths, Weaknesses, Opportunities, and Threats (SWOT)

In terms of physical connection, the Region benefits from its central location, which is easily accessible by several major highways. However, because of the relative ease of highway access and the region's overall pattern of low-density, suburban development, there has been significant reliance on highway travel and single occupancy vehicle trips. This reliance is compounded by the relative lack of reliable and comprehensive infrastructure for alternative modes of transportation. Although the region is served by bus and train, current lack of frequency, coordination, and diversity of routes make these transit options less efficient than driving for regular use. Further, while biking and hiking routes and trails are prevalent throughout the region, they are principally used for recreational purposes. Bicycle and pedestrian infrastructure remain insufficient to support safe daily trips for the average person. Internal connections between towns in the Region are also complicated by the Connecticut River, which transects the Region and can only be crossed at three locations.

In addition to physical connection, technological connection has become increasingly essential to modern life. Densely developed areas in the Region tend to be more reliably connected by wireless and wired broadband services than more remote areas. Due to limited infrastructure and/or topographic impediments, much of the region has been left with unreliable or insufficient Internet access.

The SWOT matrix below categorizes these and other important existing conditions and public input in the Region into strengths, weaknesses, opportunities, and threats. Organizing the Region's existing conditions in this way allows us to better assess the policies and recommendations that can assist the Region achieving its vision.

Strengths

- Highways (I-95, Route 9, and other State highways)
- Rail Lines (Shore Line East, Amtrak, and freight)
- Communications Infrastructure
- Connecticut River
- Long Island Sound and Shoreline
- Little sustained traffic congestion
- Central location in the State

Weaknesses

- Limited distribution of high-speed Internet
- Topography and landscape that impedes wireless services
- Limited transit service
- Limited bicycle and pedestrian facilities
- Limited multimodal integration into the transportation system
- Limited access for bikes on trains
- The Connecticut River acts as a barrier, limiting access east/west across the Region

Opportunities

- Expand high-speed Internet network
- Improve and expand access to transit
- Expand and improve bicycle and pedestrian facilities

Threats

- Aging transportation infrastructure
- Dependence on state and local subsidies for transit service
- Lack of expansion of high-speed Internet and associated lack of competitiveness
- Unreliability of electrical grid and Internet service

Connected Goals and Recommendations

The goals and recommendations below reflect and respond to the Region's key connectivity issues identified throughout the planning process and summarized in the SWOT analysis. These goals are representative of the priorities of all communities across the Region concerning issues that are common to the Region. The recommendations that follow each goal summarize the actions necessary to support achievement of the goals. Working toward these goals will support the Region in becoming a well-connected place for all people.

1

Goal 1: Expand pedestrian transportation options.

Recommendations

- Work toward achieving a complete, functional, and interconnected pedestrian network.
- Encourage a mix of uses in town centers and transit corridors so that it is possible for a greater number of short trips to be made by walking.
- Improve walkability by encouraging pedestrian-oriented design of public and private projects in areas where higher levels of pedestrian activity are present or desired.
- Link sidewalks, pedestrian paths, and multi-purpose trails into a continuous Region-wide network.
- Ensure that the pedestrian network is accessible to pedestrians of all abilities.
- Provide a connection between the Air Line Trail and Farmington Canal Trail.
- Provide an extension of the Shore Line Greenway from Hammanasset Beach to Clinton.
- Encourage active transportation routes, where safe and appropriate, for children to get to school.

2

Goal 2: Expand bicycle transportation options.

Recommendations

- Establish a safe and comprehensive local and Regional bikeway network.
- Develop a bikeway network that is continuous, closes gaps in the existing system, improves safety and serves important destinations.
- Promote safe, convenient, and adequate short- and long-term bicycle parking facilities and other bicycle amenities for employment, retail, multifamily housing, schools, colleges, and transit facilities.
- Coordinate with transit agencies to provide safe routes to transit stops and stations, to provide secure bicycle parking facilities, and to accommodate bicycles on transit vehicles.
- Create goals and recommendations for Complete Streets across the Region.
- Support bicycle-based tourism.
- Provide a trail connection between the Air Line Trail and Farmington Canal Trail.

3

Goal 3: Expand transit serving the Region.

Recommendations

- Work toward achieving reliable transit systems that serve as a viable alternative to single occupancy vehicle trips.
- Make transit planning an integral component of long range planning and the development review process.
- Plan for transit support in town centers, transit corridors, and other higher-intensity uses in areas that are served by existing or planned higher-quality transit services.
- Design for walkability as pedestrian supportive design also helps create a transit supportive environment.
- Achieve a transit system that is accessible to persons with disabilities.
- Take a leadership role in efforts to increase transportation funding to benefit areas that have the strongest commitment to locating or maintaining higher densities/intensities in areas served by existing or planned transit.
- Implement the recommendations of the LCRV Transit Study to support a merger of Middletown Area Transit and 9 Town Transit with a new shared maintenance facility in Middletown and a new bus facility along the shoreline.

4

Goal 4: Expand access to high-speed Internet.

Recommendations

- Support the expansion of 5G wireless service and infrastructure.
- Advocate for the expansion of fiber-optic network possibly using municipal gain on utility poles.
- Achieve "gigabit to the home" in the most economical way possible.

5

Goal 5: Adequately maintain transportation infrastructure and services.

Recommendations

- Ensure that the Region's bridges are adequately maintained and that replacements and rehabilitations, as necessary, are funded and conducted. Ensure that bridge rehabilitations include bike and pedestrian access where appropriate.
- Maintain the Region's highways and roadways in a state of good repair.
- Provide station area improvements at Shore Line East stations as needed.
- Encourage maintenance and preservation of rail freight service throughout the Region.
- Maintain operation of the Chester-Hadlyme Ferry.

6

Goal 6: Proactively manage Regional traffic issues.

Recommendations

- Coordinate local, Regional, and state efforts to improve traffic flow in key corridors and ensure continued investment in coordinated and adaptive traffic signal systems.
- Support the implementation of intelligent transportation systems that will make timely information on transit service more widely available, enhancing the user experience and helping potential passengers to utilize transit.
- Work with large employers, with support from CTrides and Connecticut DOT, to encourage greater implementation of transportation demand management strategies, including flexible work hours, employer provided transit benefits, telecommuting, and bike commuting.
- Support cooperation between CTDOT and City of Middletown in addressing safety and traffic congestion on Route 9 while ensuring public access to the riverfront.
- Work with Connecticut DOT and other stakeholders to identify options for improving highway segments and interchange bottlenecks within the Region.

7

Goal 7: Anticipate and plan for future transportation needs.

Recommendations

- Track Regional demographic, development, and commuting trends and identify transportation improvements necessary to support desirable trends.
- Encourage local officials to plan transportation projects for anticipated growth and to direct growth towards areas where transportation infrastructure can adequately serve development.
- Pursue funding sources at Regional and local levels for transportation projects that will support future transportation needs.
- Support proactive policies that set priorities for future transportation options and networks.

Recommendations

- Conduct a comprehensive study of trails in the Region with the aim of assessing assets and needs and identifying opportunities for improving and expanding the Region's trail system.
- Improve and expand greenways to improve connections to the Region's parks and open space resources.
- Expand or improve transit service as needed to provide connections to the Region's parks and open spaces.
- Support and expand existing trail networks and improve trail head amenities.
- Connect public parks to trails and pathways and other pedestrian or bicycle networks where feasible to provide linkages and connectivity between recreational uses.
- Conduct a study of public access along the shoreline and Connecticut riverfront to inventory public access locations, the capacity and condition of those locations, and potential for expanding or providing new public access locations.
- Expand public access to the western shore of the Connecticut River, with shoreline trails parks, picnic areas and canoe & boat launch sites.

Innovative

The Vision:

The Region has a long history of innovation that will continue to be central to its identity well into the future. Innovation in the Region has taken many forms over time beginning with a rich industrial history which emerged from mills along the Connecticut River and its tributaries, to industries that thrived from the Region's transportation connections whether water, rail, or highway. Innovation is diverse across the Region, which is home to advanced manufacturing, technology, aerospace, bioscience, arts, and education. The Lower Connecticut River Valley will foster an environment of growth and opportunity that supports, encourages, and attracts innovation. Additionally, the Region will provide a high-quality of life that is attractive to a highly skilled workforce.



Innovative Strengths, Weaknesses, Opportunities, and Threats (SWOT)

The Region is home to several major industries and institutions that lend themselves to collaboration and innovation, including healthcare, manufacturing, and bioscience. However, only a small portion of the region is zoned for industrial or commercial use. Furthermore, existing industrial and commercial zones are not necessarily located near important anchor institutions and seldom offer the level of flexibility necessary to generate innovation hubs. Limited public utilities and broadband access further hinder the ability for innovative industry to flourish in the Region.

While the Region possesses a highly educated and highly skilled workforce, the workforce is rapidly aging. The Region has not been able to retain or attract young residents to spur new and innovative industries and has not created strong programs to facilitate innovative business and foster partnership among institutions.

The SWOT matrix below categorizes these and other important existing conditions and public input in the Region into innovation strengths, weaknesses, opportunities, and threats. Organizing the Region's existing conditions in this way allows us to better assess the policies and recommendations that can assist the Region in achieving its vision.

Strengths

- History of innovation
- Institutions: Universities, Hospitals
- Industry: Manufacturing, Research, Bioscience, Technology
- Highly-educated workforce
- Highly-skilled trades persons and contractors

Weaknesses

- Young adults (young innovators) are underrepresented in population
- Limited economic development
- Limited high-speed Internet
- Perception of the Region as a tourism-based economy
- Limited locations for innovative business development
- Lack of cooperation/partnership in attracting new innovative businesses
- Limited public utilities in large portions of the region, especially along the I-95 corridor

Opportunities

- Retain and attract young adults
- Expand access to high-speed Internet
- Improve access to capital for start-ups and growing businesses
- Establish a medical/bioscience/manufacturing innovation hub
- Encourage growth of technology sector
- Outward movement of New Yorkers seeking close enough proximity of the region to metropolitan areas, and high quality of life
- Engage the business community on what could be done to encourage and support innovation

Threats

- Additional loss of young adults
- Migration of industry out of the Region
- Less engagement of institutions in innovation
- Reluctance or resistance of towns or communities towards innovation or change

Innovative Goals and Recommendations

The goals and recommendations below reflect and respond to the Region's key innovation issues identified throughout the planning process and summarized in the SWOT analysis. These goals are representative of the priorities of all communities across the Region concerning issues that are common to the Region. The recommendations that follow each goal summarize the actions necessary to support achievement of the goals. Working toward these goals will support the Region in becoming a destination for innovative business.

1

Goal 1: Establish the Region as a unique enclave that provides a high quality of life combined with an environment that is supportive of innovation.

Recommendations

- Support public relations and media campaigns to promote the Region as a home of innovation.
- Support increased business development efforts and efforts to raise the Region's profile among corporate site selection specialists as an innovation friendly environment and a place that is welcoming to families.
- Consider creation of a Regional development entity.
- Facilitate retention, expansion, attraction, and incubation of businesses that meet the Region's economic development objectives.
- Promote business outreach and collaborative initiatives among business leaders and economic stakeholders in the Region. Such outreach and collaboration should include partnering with local businesses and economic development and employment organizations, such as chambers of commerce, to identify strategies for local business retention and expansion, talent attraction, and Regional branding.
- Establish a user-friendly computerized central information system to be linked with development permitting and GIS to provide prospective businesses and developers with easy access to information, such as potential development sites and municipal requirements.
- Establish and maintain a consistent database of long-range economic data factors and update trend forecasts on an ongoing basis to enable policies and strategies to be proactive and timed to market change.
- Encourage the attraction of remote workers with supportive services, infrastructure, and transportation connections such as Amtrak to Boston and New York City.

2

Goal 2: Establish one or more "Innovation Districts" in the Region, where appropriate.

Recommendations

- Cluster and connect innovative anchor institutions and companies with supporting and spin-off companies, business incubators, mixed-use housing, office and retail, and modern amenities and transportation.
- Reuse and repurpose vacant, underutilized, and unmarketable properties and buildings to support the emergence of innovative businesses and industries.
- Support the development of an "Agriculture Innovation" district or districts that could be home to agricultural products suppliers and distributors, local food processing facilities, and a farmers market.

3

Goal 3: Support the development of environments that foster innovation.

Recommendations

- Encourage mixed-used development to foster an environment of live-work-play.
- Support the development of business incubators in the Region.
- Encourage and support major institutions and businesses to foster and invest in an innovative practices.
- Establish agricultural innovation education/trade programs at the Region's high school and trade schools.
- Introduce and/or grow the concept of innovation in the Region's school districts.
- Encourage innovation in municipal government.
- Coordinate efforts among municipalities to determine the best types of innovation hubs for different locations throughout the Region to ensure that the Region's communities are working collaboratively instead of competing for opportunities.
- Improve access to and collaboration with the Region's community colleges and technical schools.
- Encourage, via legislative initiatives and/or financial incentives, the development of a modern high-quality digital communication network, with true 5G cellular coverage throughout the area, and broadband download speeds greater than 1Gbps.

4

Goal 4: Provide the Region's businesses and start-ups with good access to capital.

Recommendations

- Work with the State, local, and national financial institutions to develop, expand, or promote financing for start-ups, innovative businesses, and research and development.
- Promote those resources within the business community.
- Strengthen partnerships with venture capital firms such as Connecticut Innovations.
- Create and integrate as necessary a full continuum of business creation, launch and bridge services to support a new generation of entrepreneurs and business owners in the Region.
- Work on recapitalizing and expanding the effectiveness of the Middlesex Revitalization Commission in supporting the growth of local business.

5

Goal 5: Promote State and/or Federal funding to support innovation.

Recommendations

- Encourage and support applications to the State's Manufacturing Innovation Fund.
- Encourage and support applications to the State's Bioscience Innovation Fund.
- Apply for grants through the US Economic Development Administration Regional Innovation Strategies Program.
- Support the creation of the Comprehensive Economic Development Strategy for the region.

Community

The Vision:

The Lower Connecticut River Valley is a welcoming and inclusive place. Communities are formed in neighborhoods, villages, and town centers, and also across town and city boundaries. These communities are situated across the Region's landscape including along the Connecticut River, the hills that define the river valley, and the Long Island Sound shoreline. The Region's communities are formed by and connected through social bonds established in its schools, workplaces, cultural institutions, social spaces, and neighborhoods. The Region is home to diverse communities that reflect the many cultures, ethnicities, and traditions of its peoples. These communities are inextricably linked, and it is this foundation of community that gives the Region its strength.



Community Strengths, Weaknesses, Opportunities, and Threats (SWOT)

The Region has several small villages and towns as well as one city, each with its own unique character and strong sense of community. Several of these communities have a vibrant, pedestrian-oriented center with a mixture of uses. These centers often play host to events and activities that strengthen the community bond. However, the Region generally follows a suburban pattern of development. Low density, single-family housing is dominant and is separated from most business or industrial uses. In-town pedestrian and bicycle infrastructure and multimodal transportation between towns is limited, necessitating a motorized vehicle for most trips. Housing costs in the Region are high and options for smaller housing units or rentals are limited most everywhere but the city of Middletown. In addition, the Region's population is stagnating and there is limited diversity in terms of race, age, and socio-economic status outside of Middletown. These existing conditions are the result of past practices which at times were deliberately intended to cause substantial racial and socio-economic stratification in the Region. This legacy must be addressed in creating more vibrant and sustainable communities.

The SWOT matrix below categorizes these and other important existing conditions and public input in the Region into community strengths, weaknesses, opportunities, and threats. Organizing the Region's existing conditions in this way allows us to better assess the policies and recommendations that can assist the Region in achieving its vision.

Strengths

- Small villages, towns, and cities
- Institutions with their own communities
- Communities organized around the landscape such as the shore, river, and farmland
- Cultural and ethnic communities
- Overall spirit of community
- Strength of strong volunteerism from elderly population
- Historical integrity of architectural past binds the Region's physical environment together

Weaknesses

- Difficulty in remaining connected as a community due to physical distance and geographic divides
- Lack of diversity (age, race, ethnicity, etc.) in some areas of the Region
- Limited housing diversity and high cost of housing
- Limited public utilities in large portions of the region, especially along the I-95 corridor
- Ratio of residential to industrial acreage
- Limited number of skilled workers and the need for technical job training

Opportunities

- Diversify housing stock to attract a younger demographic and retain seniors
- Provide more housing that is affordable to the Region's residents
- Develop sufficient affordable housing to retain more young people
- Improve connectivity between neighborhoods, rural areas, and village and town centers
- Potential schools and venues for technical job training

Threats

- Insufficient infrastructure and services to support aging population
- Population loss
- Prohibitive cost of housing/living
- Erosion of community organizations due to lack of participation, aging out of participants
- Failure to address issues surrounding equity and inclusion
- Contraction of civic and cultural institutions
- Resistance to challenge existing zoning regulations
- Resistance to change
- Lack of volunteers, particularly for volunteer emergency services
- Lack of participation of the younger population in civic institutions

Community Goals and Recommendations

The goals and recommendations below reflect and respond to the Region's key community-related issues identified throughout the planning process and summarized in the SWOT analysis. These goals are representative of the priorities of all communities across the Region concerning issues that are common to the Region. The recommendations that follow each goal summarize the actions necessary to support achievement of the goals. Working toward these goals will support the Region in enhancing and creating more vibrant communities.

1

Goal 1: Foster an environment of cultural exchange.

Recommendations

- Provide support for the arts, news, ethnic groups, clubs, religious institutions, food share programs, meals on wheels, and meeting spaces and places.
- Make government more inclusive, making sure that a diversity of voices and all voices are heard.

2

Goal 2: Create vibrant, equitable communities within established city, town, and village centers and in proximity of Shore Line East stations.

Recommendations

- Encourage infill development and redevelopment in city, town, and village centers and in proximity of Shore Line East stations.
- Support mixed-use development with a residential component in commercially zoned districts.
- Consider the use of Tax Increment Finance (TIF) districts to encourage redevelopment and infill development.
- Encourage higher density and multifamily housing in established centers to affirm those areas as the hub for community activity.
- Invest in transit corridors through higher density and mixed-use development. Encourage some combination of residential above commercial development, employment uses, commercial uses, and higher density residential development.
- Enhance all communities with placemaking and public spaces in designated centers to serve residents of all incomes, interests, ages, and cultures.
- Provide a variety of land uses within a community in order to offer opportunities for a diverse mix of uses and to help create a balance of land uses within a community.
- Recognize that various town centers or individual projects within town center areas may serve specific functions in the community and Region; some town centers may have an employment orientation while others may be major shopping destinations, tourist or cultural destinations, or primarily residential in nature.
- Provide equal access to public facilities and infrastructure for all community members.
- Promote location of healthcare facilities in areas accessible by multimodal transit.

3

Goal 3: Diversify housing stock to attract younger residents and retain seniors and provide more housing that is affordable to residents of all income levels.

Recommendations

- Assist towns in conducting affordable housing plans as mandated by CGS Section 8-30j.
- Encourage towns to review their zoning regulations to identify opportunities for expanding opportunities for the development of a more diverse housing stock.
- Concentrate new housing in city, town, and village centers where infrastructure and services are located.
- Support state policies to provide more affordable housing such as the Connecticut HOME Investment Partnership program for affordable housing development.
- Consider creation of a regional land bank to support housing development where infrastructure and multimodal transportation access is available.
- Foster neighborhoods that include a diversity of housing types, especially affordable, senior, age-friendly, accessible, and family housing.
- Ensure that new housing fosters a sense of community through development regulations that address building orientation and architectural design features that promote interaction and active lifestyles/communities.
- Investigate and encourage municipal programs that can help seniors age in place without leaving town.
- Ensure that each town in the Region has housing available for essential workers, especially low wage workers.

4

Goal 4: Improve access to housing and remove or reduce barriers to homeownership.

Recommendations

- Encourage renewed commitment to municipal fair housing resolutions, policies or plans, or the adoption of such policies and plans where they do not currently exist.
- Cooperate with Regional and state agencies committed to increasing understanding of and/ or enforcing fair housing law, including: the Housing Education Resource Center, Inc., the Connecticut Fair Housing Center, and the Connecticut Commission on Human Rights and Opportunities.

5

Goal 5: Improve connectivity between and within neighborhoods, rural areas, and village and town centers.

Recommendations

- Improve and expand transit services.
- Implement bike and scooter share.
- Expand local sidewalk and bicycle route networks.
- Work with local and state officials to develop new, dedicated bicycle and pedestrian paths and connect existing paths to form regional and interregional routes.
- Enhance streets and other public rights of way with amenities such as streets trees, benches, plazas, and public art.
- Plan an interconnected street network within and between communities which includes pedestrian and bicycle access while minimizing community impacts.
- Emphasize the movement of people rather than vehicles especially in village and town centers.
- Emphasize pedestrian and bicycle-friendly design, accessibility to transit, and provision of amenities that are supportive and conducive to implementing transportation demand management strategies such as car sharing vehicles and parking spaces, bike lockers, preferred rideshare parking, showers and lockers, on-site food service, and child care, where appropriate.

6

Goal 6: Strengthen the role of the Region's major institutions in the community.

Recommendations

- Actively engage with the Region's major employers and institutions such as Pratt & Whitney, Wesleyan University, and Middlesex Community College to ensure that they remain active members of the community.
- Work with universities and colleges in and proximate to the Region to engage students and faculty in community projects and initiatives.

7

Goal 7: Foster an environment that is supportive of collaboration and partnerships.

Recommendations

- Support business, trade, and agricultural organizations and their mission in the community.
- Provide forums that allow for "cross-pollination" of organizations and missions between municipalities.

8

Goal 8: Support the Region's farm communities.

Recommendations

- Ensure that the Region's farmers and farm communities have access to needed resources.
- Encourage the growth of agriculture based tourism (agritourism) and assist local communities with revising zoning regulations to fully support agritourism businesses.
- Seek ways to partner with Regional community supported agriculture (CSA) programs as an alternative source of fresh and healthy fruits and vegetables for the Region's residents, particularly those with limited mobility, limited income, or those furthest from existing grocery stores.

9

Goal 9: Support the protection of the Region's historic villages and town centers and promote those places as tourist attractions.

Recommendations

- Ensure that local communities have adequate protections in place for their historic villages, town, and city centers.
- Work with local communities to encourage redevelopment and infill development in historic villages and town centers that is compatible with and complementary to those communities.
- Assist local communities with promoting historic villages and town centers as tourist attractions.
- Promote early conflict resolution between the preservation of historical resources and alternative land uses.
- Encourage the consideration of historical and cultural resources early in the development review process by promoting early consultation with property owners, community and historic preservation groups, and land developers.
- Encourage the preservation and/or adaptive reuse of historic sites, structures, and landscapes as a means of protecting important historic resources and encourage the preservation of historic structures.
- Encourage and promote the development of educational and interpretive programs that focus on the rich heritage of the Region.
- Encourage use of State Historic Preservation grants and tax credits to make historic preservation economically feasible.
- Support events and programs in the Region's historic centers to support their vitality and liveliness.

Future Land Use Map

Purpose of the Regional Future Land Use Map

The Future Land Use map is intended to link the RPOCD, its themes, vision, goals, and recommendations with the geography of the Region. This Regional Future Land Use map builds upon, but does not replace, the future land use maps of individual municipal plans of conservation and development. Instead, it provides a cohesive vision that can assist in guiding investment, development, and conservation across the Region, transcending municipal boundaries. The map serves only as a guide for priorities across the Region, it does not prohibit land uses and investment that are not consistent with the theme identified for that geography.

Priority Themes

The Future Land Use map is comprised of the four themes of this plan. The themes, as expressed on the map, reflect the priority for the corresponding geography. This does not imply that land uses that are more closely aligned with the other themes of this plan are not appropriate to a location within the Region. Many areas may have multiple priorities with respect to these themes, the Future Land Use map merely identifies the top land use priority for an area of the Region.



Sustainable

Land uses within areas identified as sustainable should prioritize conservation, preservation, low impact practices, and mitigation of land uses that are not sustainable.



Connected

The priority land use for these areas (mostly corridors) is to support connectivity within communities and across the Region.



Innovative

These areas benefit from the infrastructure and access needed to support innovation in commercial, cultural, institutional, and industrial practices and enterprises.



Community

Places that are most suitable to the expansion of residential development and expansion of the services and infrastructure needed for residential development are identified in this theme.

Sustainable



While the theme of Sustainable refers to environment, equity, and economy, the Sustainable map is focused specifically on environmental sustainability. The visual aspects of equity and economy overlap with, and are addressed by, the other three themes. Identifying areas within the Region that should be prioritized for Sustainability requires an understanding of the environmental features that are most valuable to promoting sustainability and the location and extent of those features. Much of this work was conducted through the Lower CT River and Coastal Region Land Trust Exchange 2014 Natural Resource Based Strategic Conservation Plan, which established a large landscape scale prioritized strategic conservation plan for the Region that allows for local conservation organizations to work across municipal boundaries towards common conservation goals. The Plan identifies important Regional natural resource areas to provide wildlife habitat, to protect water quality and quantity, and to protect working and scenic lands. Two maps produced through that planning effort establish the foundation for the “Sustainable” areas of this plan. They include the Primary Regional Wildlife Habitat and Natural Resource Protection Corridors and the Connecting Regional Wildlife Habitat and Natural Resource Protection Corridors. Both are described in detail below. Additionally, other environmental and landscape features were considered in identifying Sustainable areas, these include Protected Open Space Areas, Public Water Supply Watershed Areas, and Flood Zones (all are described below and on the following pages).

Primary Regional Wildlife Habitat and Natural Resource Protection Corridors

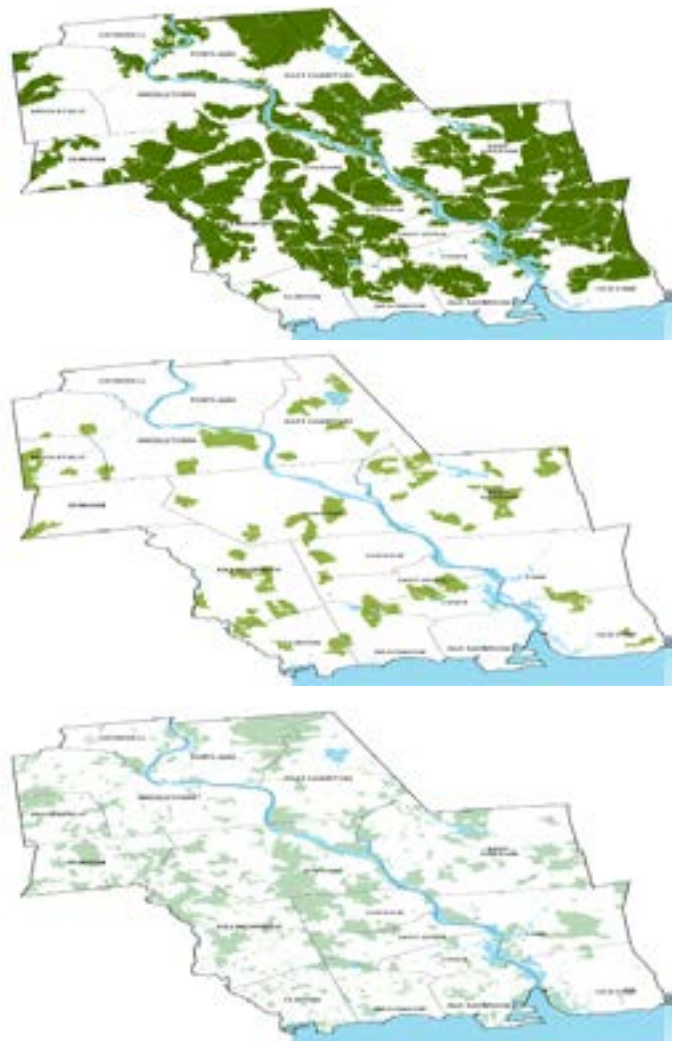
This map identifies areas in the Region that are a priority for wildlife habitat and natural resource protection due to attributes such as core forest areas, wetland soils, and hydrologic features. The areas represented by this map scored highest in those features.

Connecting Regional Wildlife Habitat and Natural Resource Protection Corridors

This map identifies areas in the Region that scored lower than the primary areas but are valuable in connecting the primary areas in for the benefit of wildlife habitat and natural resource protection.

Protected Open Space

Areas mapped as open space are considered for identification as Sustainable areas due to their value to the landscape. Connecticut’s 2016 Comprehensive Open Space Acquisition Strategy (Green Plan) establishes a goal of 21% protected open space statewide by 2023. This target is intended to be met through State, municipal, and private acquisitions. The Green Plan provides a strict definition of “protected” open space as “any area of land with a restriction that would limit its use to open space”. This includes lands subject to conservation restrictions, deed restrictions, or certain reserved rights. The Plan defines “preserved open space” as “any area of land that has been acquired and is used for open space purposes”. This includes State parks, forests, and wildlife areas and Class I and II watershed lands. Most of the protected open space in the Region overlaps with Primary and Connecting Regional Wildlife Habitat and Natural Resource Protection Corridors.



Maps displayed above are shown in an oblique view to illustrate how the map information is layered to create the composite maps. These maps are for illustration purposes only.

Public Water Supply Watershed Areas and Aquifer Protection Areas

Drinking water is critical to the sustainability of the Region and areas that contribute to the public water supply provide a valuable function in the protection and quality of that water. The areas shown on the map at right are public water supply watershed areas or within an aquifer protection area. Many of these areas have a diversity of land uses within them, but the protection of water quality within these areas remains a priority regardless of whether those areas are developed or undeveloped.

Flood Zones

Flooding, whether inland, along the Connecticut River, or along the shore is a challenge to the sustainability of development and land uses that are vulnerable to flooding. The map at right indicates areas within the Region that are located in the 100-year floodplain or are vulnerable to coastal storm surge flooding. While many of these areas are highly developed, the sustainability of that development remains a top priority.



- Public Water Supply Watershed Area
- Aquifer Protection Areas



- 100-year Flood Zone
- Wave Action Flood Zone

Maps displayed above are shown in an oblique view to illustrate how the map information is layered to create the composite maps. These maps are for illustration purposes only.



Sustainable Composite Map



The map below represents a composite of areas that are important to the environmental sustainability of the region. It demonstrates areas that have a high correlation of features such as Primary and Connecting Regional Wildlife Habitat and Natural Resource Protection Corridors, Protected Open Space, Public Water Supply Watersheds and Flood Zones. The designation of these areas is also influenced by the land use classes described on the following pages (Innovative and Community). The identification of these areas as Sustainable does not preclude land use or policies within these areas that would be considered Innovative or Community based, rather it recommends that Sustainable land uses and policies be a high priority for these areas to ensure the protection and preservation of natural resources for future generations.



Connected

While the theme of Connected refers to social, cultural, physical, environmental, and digital connections, the Connected map reflects the vision for physical transportation connections in the Region. The following figures illustrate the inputs considered in identifying areas for the Region's key micro and macro connections.



Highways and River Crossings

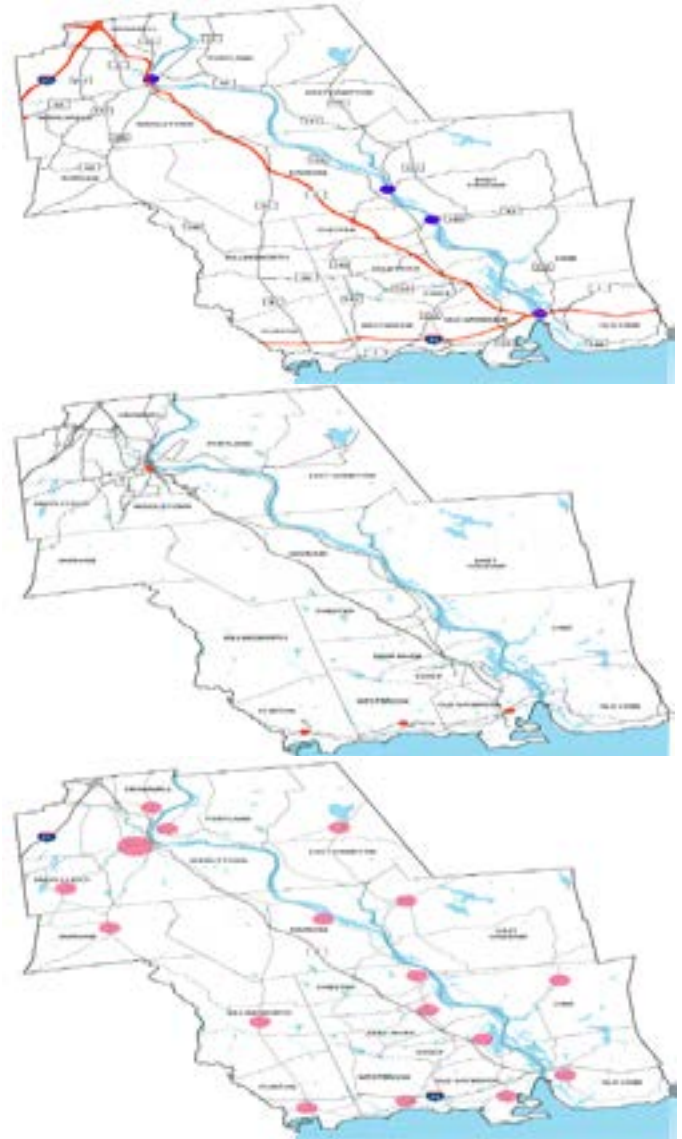
The Region is connected by Interstate highways such as I-91 and I-95, a State expressway (Route 9), and multiple other State roadways that weave through and connect the towns in the Region to one another and to neighboring Regions. Within this system, the Region's four Connecticut River crossings (three bridge and one ferry) are critical to the Region's ability to function as collective geography.

Transit and Rail

Transit service within the Region is comprised of both commuter rail and bus services. Shore Line East operates commuter rail service that parallels Route 1 and I-95 with stations in Clinton, Westbrook, and Old Saybrook. Bus service is provided by Middletown Area Transit, 9-Town Transit, and CTTransit. Most of the Region's transit routes are concentrated along the shore and in the Middletown area.

Town and Village Centers

The Region's town and village centers are areas that have potential to support multimodal transportation including bicycle and pedestrian trips. Town and village centers include historic centers and locations where municipal buildings such as town halls and libraries are located in proximity to other features such as a town green and commercial activity.

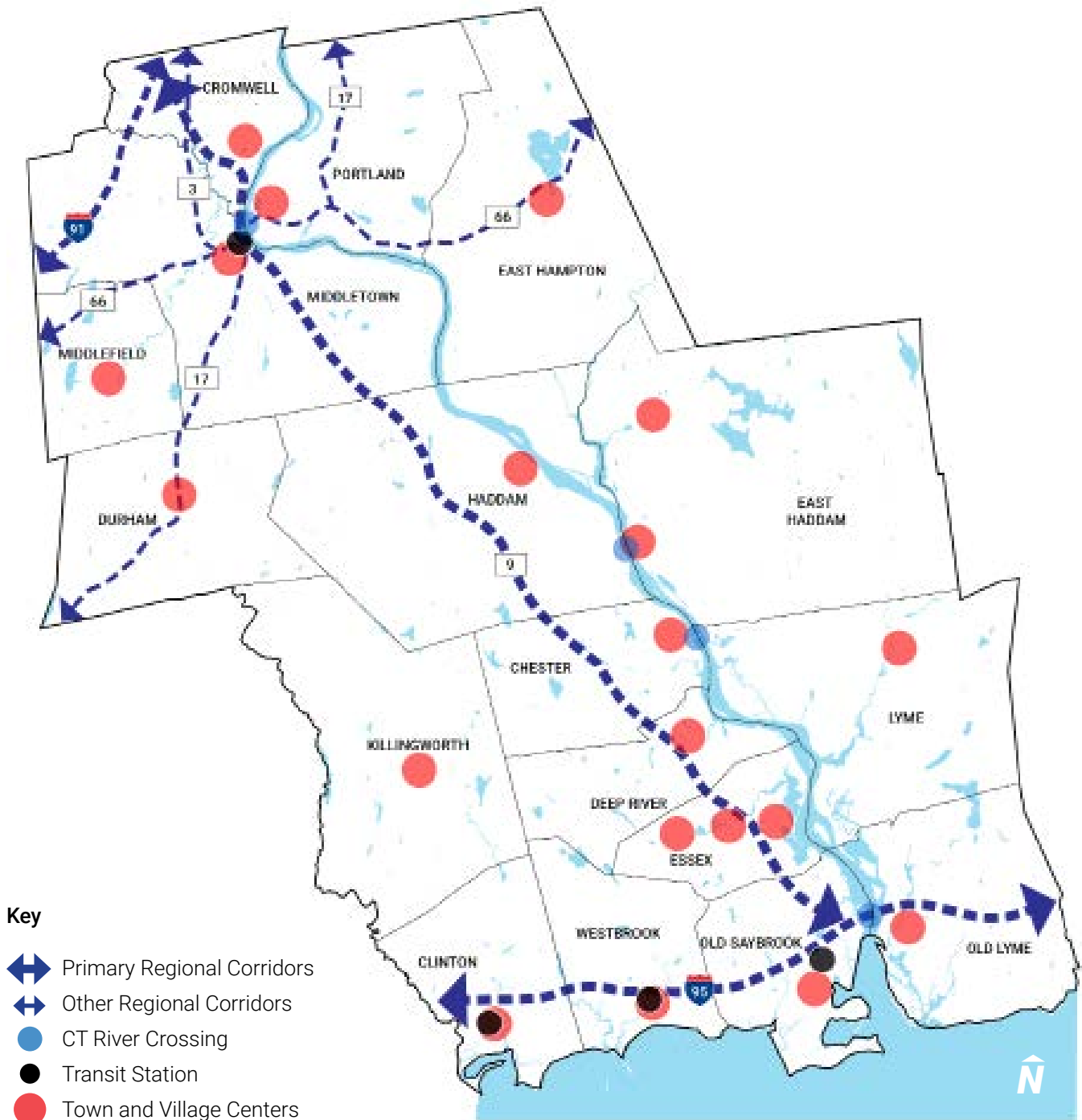


Maps displayed above are shown in an oblique view to illustrate how the map information is layered to create the composite maps. These maps are for illustration purposes only.

Connected Composite Map



The Connected composite map below represents the nodes and corridors that are most valuable to the Region's micro- and macro- connectivity. The nodes around transit stations and town and village centers indicate areas that would benefit most from greater micro-connectivity, such as pedestrian and bicycle orientation. This would support more active transportation to meet daily needs. The large corridors indicate connections between major residential and employment destinations which would benefit from greater macro-connectivity, such as enhanced reliability and frequency of public transportation and comprehensive bicycle and pedestrian routes. This would allow alternatives for commuting and offer greater flexibility for tourists visiting the region.



Innovative

Multiple features were used to identify areas that are most supportive of or have the potential to support innovation. While the idea of innovation can lend itself to a wide ranging discussion about what innovation is and where it occurs, this Plan links innovation with areas of work, learning, and civic engagement.



Job Centers

The Region's jobs are located across its member towns and its city with those jobs clustered in multiple areas. The greatest concentration of jobs are found in downtown Middletown and along the I-95 corridor. The location of jobs in the Region points to areas of commerce and education, environments that act as incubators of innovation.



Public Water Infrastructure

Population concentration over certain densities requires public water infrastructure to support development and existence. As such, public water infrastructure represents a commitment towards the establishment and maintenance of communities in those areas. Most of the Region's public water infrastructure is located in the Middletown area, along the shore, and in a cluster spanning Chester, Deep River and Essex.



Sewer Infrastructure

As with public water infrastructure, population concentration over certain densities requires sewer infrastructure to support development and existence. Sewer infrastructure therefor represents a commitment towards the establishment and maintenance of communities in those areas. Most of the Region's sewer infrastructure is located in the Middletown area, and in smaller clusters in towns such as East Hampton and Deep River.



Zoning

Areas zoned for commercial, industrial, institutional, and mixed-use land uses are well positioned to accommodate innovative enterprises and institutions. These are areas of both active and potential innovation and economic development.

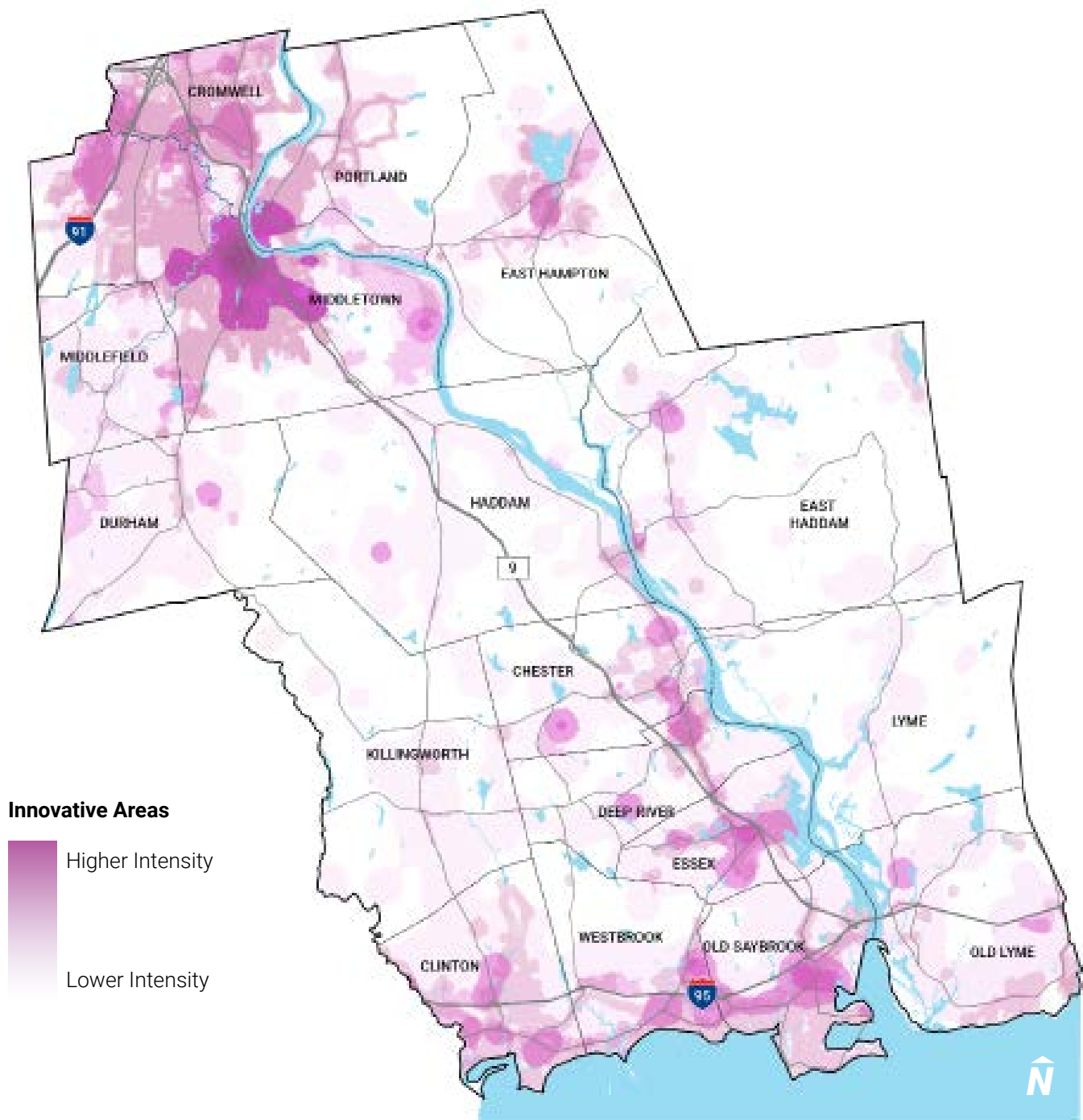


Maps displayed above are shown in an oblique view to illustrate how the map information is layered to create the composite maps. These maps are for illustration purposes only.

Innovative Composite Map



The map below represents a composite of the features described on the preceding page. It demonstrates areas that have a high concentration of job locations, areas with supportive infrastructure, and areas zoned to allow for commercial, industrial, institutional, and mixed-use land uses. The identification of these areas as Innovative does not preclude land use and policies within these areas that would be considered Sustainable or Community based, rather it recommends that land uses and policies that support innovation be a priority for these areas. Innovative places and development can take a number of forms and differs from community to community. By example, the scale of a land use that supports innovation in downtown Middletown would differ vastly from an innovative enterprise or land use in Old Lyme.



Community

The Region is comprised of many communities at neighborhood, municipal, district, institutional, and cultural scales. Community is present throughout the Region and it is the fabric of the Region. For the purposes of the Future Land Use map, Community is correlated most strongly with where people live and where they live in the greatest concentrations. As such, the preservation and strengthening of community is the top priority for these areas.



Population Density

Population density is a strong (but not the only) indicator of where communities are present and most concentrated. The map at right shows population density (darker shades are associated with denser populations). As might be expected, population density is highest in and around Middletown and nearest the shore. Population density also correlates with areas that are well served by transportation infrastructure and services.

Developed Land

There is a strong correlation between developed land and the presence of community. While developed land has a wide range of uses, residential development is the most typical use of developed land. Even in areas that are not residential, there is a strong association between built places and the presence of communities.

Public Water Infrastructure

Population concentration over certain densities requires public water infrastructure to support development and existence. As such, public water infrastructure represents a commitment towards the establishment and maintenance of communities in those areas. Most of the Region's public water infrastructure is located in the Middletown area, along the shore, and in a cluster spanning Chester, Deep River and Essex.

Sewer Infrastructure

As with public water infrastructure, population concentration over certain densities requires sewer infrastructure to support development and existence. Sewer infrastructure therefore represents a commitment towards the establishment and maintenance of communities in those areas. Most of the Region's sewer infrastructure is located in the Middletown area, and in smaller clusters in towns such as East Hampton and Deep River.

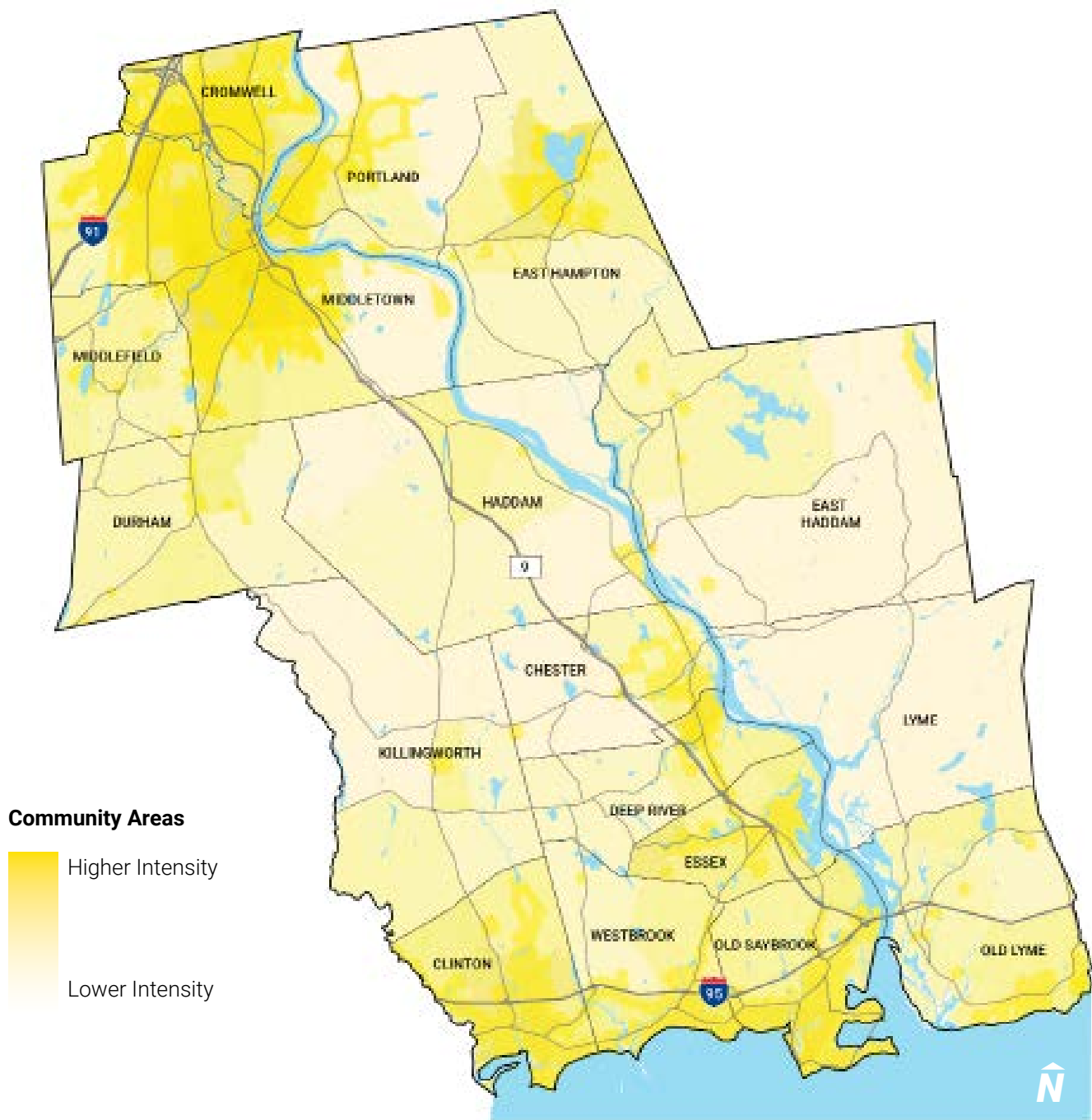


Maps displayed above are shown in an oblique view to illustrate how the map information is layered to create the composite maps. These maps are for illustration purposes only.

Community Composite Map



The map below represents a composite of the features described above and on the preceding pages. It is not a summary of all features but demonstrates areas that are most strongly correlated with the Community land use category. The identification of these areas as Community does not preclude land use and policies within these areas that would be considered Sustainable or Innovative, rather it recommends that land uses and policies that support Community be a priority for these areas. Future development oriented towards improving and expanding communities will differ significantly from one community to another within the Region based upon the character of that community and the infrastructure in place to support such development.



Building the LCRV Future Land Use Map

The Future Land Use map conveys ideas about what the Region's land use priorities are, how growth can best be directed, and what the aspirations are for the Region's future. The map seeks to express these ideas and equitably reflect the values of the Region's residents. The development of this RPOCD and of the maps on this page and on the following pages was guided by hundreds of residents and stakeholders. Their ideas and concerns and the information they shared was gathered, summarized, and incorporated to the greatest degree possible in this RPOCD.

Like the maps presented on the preceding pages, the Future Land Use Map is a composite of many features of the Region. It is comprised of geographic "layers" that embody the four themes of this plan: Sustainable, Connected, Innovative, Community. Each of these themes and its representative geography is expressed in the Future Land Use Map. The Community map establishes the foundation of the Future Land Use map and the Innovative map overlays the Community map. The Sustainable map overlays of the Community and Innovative maps. The Connected map overlays the Community, Innovative, and Sustainable maps and its features link the Region's land uses.

Connected



The Region's highways, rail corridors, Connecticut River crossings, and transit stations play a vital role in connecting the Region's communities at a regional scale. These facilities are vital to linking seventeen municipalities as one region. The Connected theme, expressed as a geography, overlays land uses such as Sustainable, Innovative, and Community.



Sustainable



Sustainability is, and deserves to be, present throughout the Region. While the theme of Sustainable refers to environment, equity, and economy, the Sustainable map is focused specifically on environmental sustainability. Sustainability extends to our communities, into our homes, businesses, and institutions. Sustainability is most evident, and is of the greatest priority in the Region's most ecologically valuable and environmentally vulnerable geographies. Whether a tidal wetland, forest, or floodplain, Sustainable areas establish much of the Region's identity and overlay and take precedence over Community and Innovative areas.



Innovative



Innovative places are found where there is intense activity and exchange of ideas. Whether commerce, education, or social exchange, these places foster innovation. Innovative areas overlap with communities and are almost inextricable, but they glow brightly. As such, Innovative places are found within Community areas and overlay those areas.



Community



Community is present throughout the Region but is found in high concentrations where population is densest and where homes are clustered. Community is the underlying canvas for the Region and expresses itself strongly in areas that are not dominated by other land uses such as commercial or protected open space.

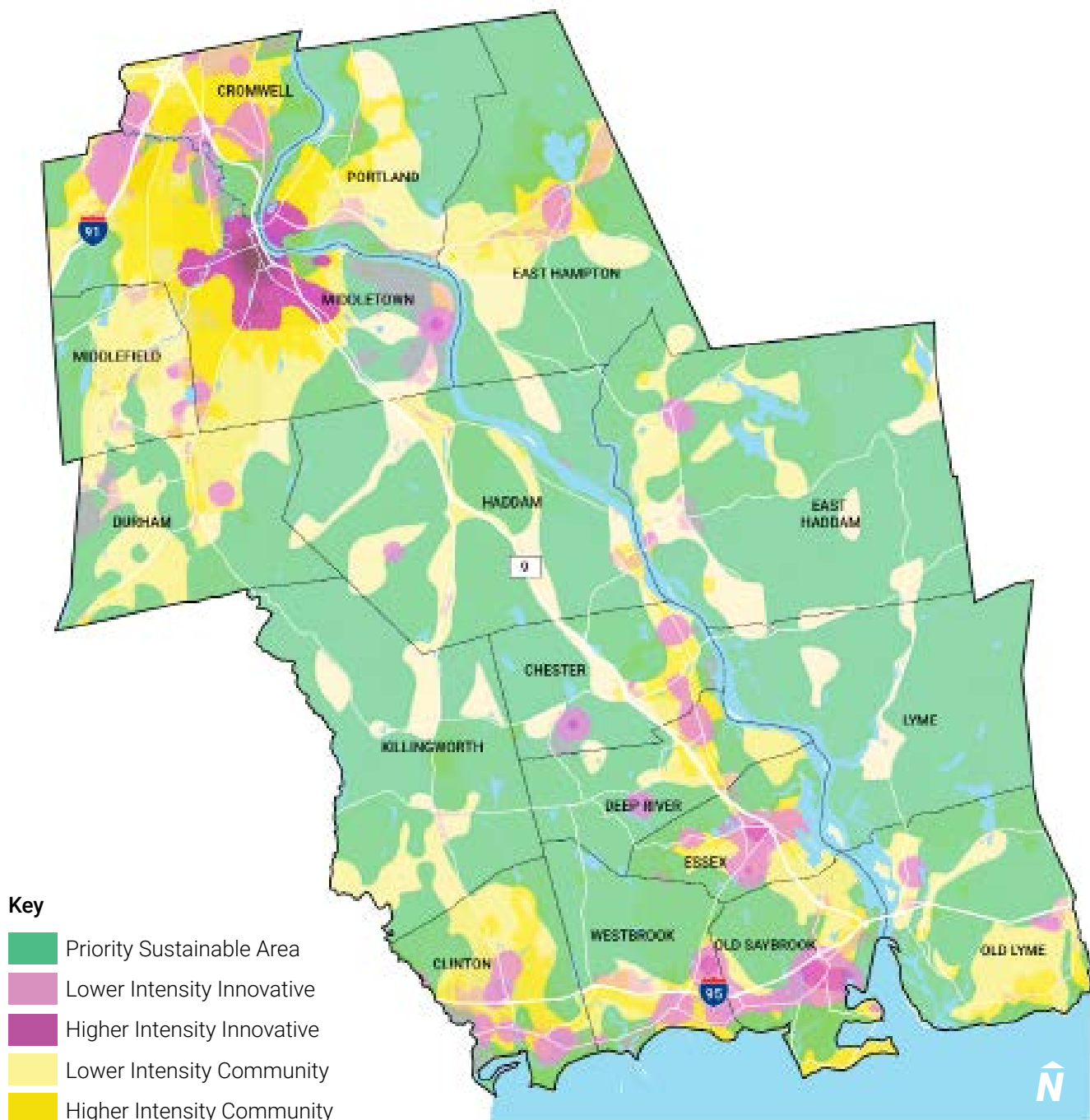


Maps displayed above are shown in an oblique view to illustrate how the map information is layered to create the Future Land Use Map. These maps are for illustration purposes only.

The LCRV Future Land Use Map: Sustainable, Innovative and Community Themes

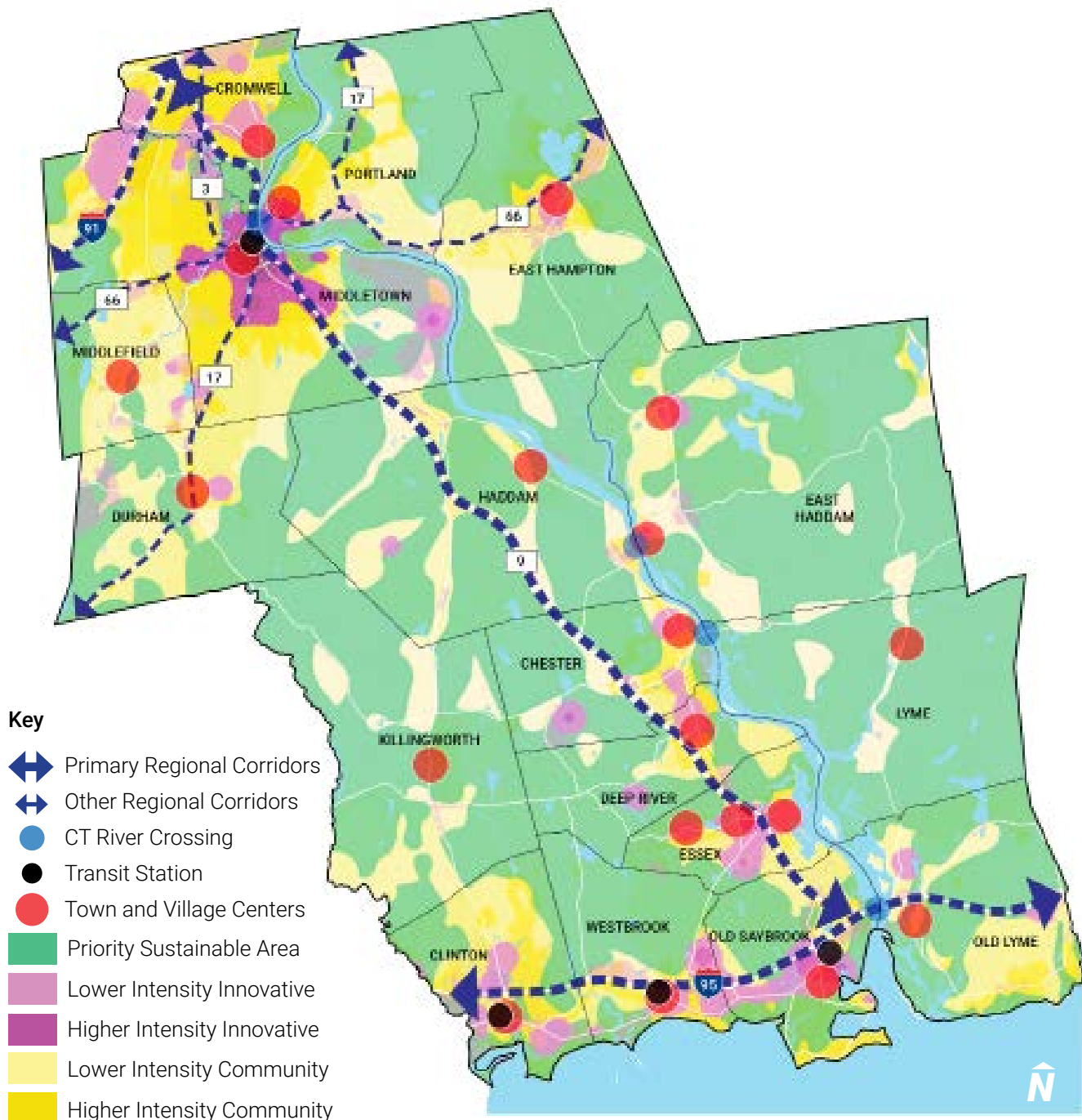
The Future Land Use map below is intended to link this Plan, its themes, vision, goals, and recommendations with the geography of the Region. This map builds upon, but does not replace, the future land use maps and plans of individual communities. Instead, it provides a unified vision for the Region that can assist in guiding investment, development, and conservation across the Region, transcending municipal boundaries. The map serves only as a guide for priorities across the Region, it does not prohibit or discourage land uses and investment that are not consistent with the theme identified for that geography.

The Future Land Use map is comprised of the three of the four themes of this Plan. These themes, as expressed on the map, reflect the priority for the corresponding geography. This does not imply that land uses that are more closely aligned with the other themes of this plan are not appropriate to a location within the Region. Many areas may have multiple priorities with respect to this plan's themes; the Future Land Use map merely identifies the top land use and policy priority for a given area of the Region.



The LCRV Future Land Use Map: Connected Theme

The connected theme overlays the Future Land Use map and threads the Region together. The features displayed in dark blue below represent the Region's vital connections, which include highways, rail corridors, rail stations, bus routes, Connecticut River crossings, and the Connecticut River. This map highlights major corridors that are, and will continue to be, vital to the Region with respect to mobility. The Region is comprised of many other corridors and roadways that are valuable to local connectivity that are not expressed on this map. This map does not preclude connectivity related improvements to, or investment in, areas not shown on the map. The map is intended to identify the corridors that are a priority for policies and investment related to connectivity and mobility across the Region.



Implementation

Implementing the Plan

Implementing the recommendations of this Plan requires a full engagement of the resources within the LCRV Region. RiverCOG, as the Region's Council of Governments, will act as a coordinator, resource, and driver of many of this plan's recommendations. The success of this plan, however, will require the participation of its member communities and their governing bodies, departments, boards, commissions, and committees. Additionally, partnerships are needed with private organizations including major institutions, non-for profit organizations, businesses, and advocacy groups and organizations. Likewise, collaboration with State agencies and other regional entities will be required throughout the implementation process.

How the Implementation Section is Organized

The pages that follow contain summary tables of the plan's goals and recommendations as found in the preceding pages of this plan. Each recommendation is accompanied by three implementation elements (presented within columns) as follows:

- ▲ Urgency: This identifies how quickly the Region should move to take action on a recommendation based upon how pressing the issue is today and how beneficial action could be if taken in the near future. It is rated High, Moderate, or Low.
- ▲ Lead: This identifies the entity or organization that should take responsibility for action. The following entities are identified:
 - ▲ RiverCOG
 - ▲ State Agencies
 - ▲ Local: This includes municipal government in all of its capacities: governing bodies, departments, boards, commissions, and committees.
 - ▲ Partners: This includes major institutions, non-profit organizations, businesses, and advocacy groups and organizations. Specific partners identified in this section include the Lower Connecticut River Land Trust (LCRLT).
- ▲ Collaborative Potential: This identifies the degree of collaboration that is required, or there is opportunity for, in taking action towards a recommendation. It is rated High, Moderate, or Low.



Sustainable

Goal 1: Continue to protect air, water, and land in the Region.	Urgency Level	Lead	Collaborative Potential
1.1 Promote and expand natural resource stewardship.	Moderate	Partners	High
1.2 Increase the area of land classified as protected open space.	Low	Local	Moderate
1.3 Expand and protect open space along the Connecticut River.	Moderate	Local	High
1.4 Coordinate and prioritize open space preservation throughout the Region.	Moderate	LCRLT	High
1.5 Protect the biodiversity of the Region and control invasive species by investing in invasive species removal and education and conducting outreach along rivers to make visitors and residents aware of the threat of invasive species.	High	Local & State	High
1.6 Maximize opportunities to link open space land and create an inter-connected system of protected habitat in the Region.	Low	Local & State	High
1.7 Support shoreline towns in complying with the recommendations and requirements of the Long Island Sound Blue Plan and the Coastal Zone Management Act.	Moderate	RiveCOG & Local	High
1.8 Restore shell fish beds in the Long Island Sound consistent with the recommendations of the Long Island Sound Habitat Restoration Initiative recommendations for coastal habitat restoration.	High	State & Partners	Moderate

Goal 2: Improve water quality and protect water supply.	Urgency Level	Lead	Collaborative Potential
2.1 Ensure an adequate and high-quality water supply.	High	Local & State	Low
2.2 Encourage preservation of water supply watershed lands.	Moderate	Partners	Low
2.3 Reduce environmental impacts of sewage discharge.	High	Local	Low
2.4 Reduce impervious surface and stormwater runoff.	Moderate	Local	Moderate
2.5 Discourage development in floodways and floodplains.	Low	Local	Moderate
2.6 Ensure that wetlands are restored, enhanced, and protected.	High	Partners	High

Goal 3: Prepare for potential impacts of climate change.	Urgency Level	Lead	Collaborative Potential
3.1 Connect communities with tools and resources to address climate change.	Moderate	RiverCOG	Moderate
3.2 Strengthen and broaden network of partnerships to address climate change.	Low	Partners	High
3.3 Bolster a regional approach to climate change planning.	Low	RiverCOG	High
3.4 Assist shore communities with resiliency planning.	High	RiverCOG	Moderate
3.5 Promote renewable energy sources.	Low	State	Low
3.6 Prepare and implement pre-disaster mitigation plans.	Moderate	RiverCOG & Local	Moderate
3.7 Discourage and avoid high-density development in areas vulnerable to sea-level rise.	Moderate	Local	Low
3.8 Conduct and produce a regional coastal resiliency study and plan	Low	RiverCOG	High

Goal 4: Preserve farmland and agriculture.	Urgency Level	Lead	Collaborative Potential
4.1 Support the use of and access to locally grown food supplies.	Low	Partners	High
4.2 Identify vulnerable and potentially transitional agricultural properties and proactively work to keep those properties actively farmed.	Moderate	RiverCOG	Moderate
4.3 Support a viable and long-term agricultural industry and sustainable agricultural land uses that serve as a beneficial resource to the Region.	Low	Local	Moderate
4.4 Support right-to-farm ordinances.	Low	Local	Low
4.5 Support the economic competitiveness of regional agriculture and encourage the diversification of potential sources of farm income, including value added products, agricultural tourism, roadside stands, organic farming, and farmers markets.	High	Partners	High
4.6 Encourage best management practices in agriculture and animal operations to protect watersheds from contamination and erosion, reduce greenhouse gas emissions, conserve energy and water, and utilize alternative energy sources, including wind and solar power.	Moderate	Partners	Moderate
Goal 5: Support transportation and mobility systems and land use development that contribute to environmental and human sustainability while minimizing adverse environmental impacts.	Urgency Level	Lead	Collaborative Potential
5.1 Improve and expand transit services with a focus on areas with low vehicular ownership rates as a means of improving equity in transit access.	Moderate	Partners	Low
5.2 Support transportation management programs that reduce the use of single-occupancy vehicles.	Low	RiverCOG	Moderate
5.3 Encourage development that is located and designed to reduce vehicular trips and associated air pollution by utilizing compact development patterns in town centers and near major transit facilities.	Low	Local	Moderate
5.4 Incorporate a mixture of uses within town centers and near major transit facilities that encourage people to walk, bicycle, or use public transit.	Moderate	Local	High
5.5 Encourage incentives for developers that maximize use of sustainable and low impact land development practices.	Low	Local	Low
5.6 Promote greater access to walkable neighborhoods—with healthy food, parks, shops, transportation options, and other amenities.	Moderate	Local	Moderate
Goal 6: Take measures necessary to support a sustainable and resilient economy.	Urgency Level	Lead	Collaborative Potential
6.1 Ensure that local regulations support business models that can adapt to changing economic climate whether retail, office, industrial, or home-based businesses and online/remote work.	Low	Local	Low

Goal 7: Ensure diverse and balanced neighborhoods and communities with housing available for households of all income levels.	Urgency Level	Lead	Collaborative Potential
7.1 Reinvest in historically under-served communities.	High	Local, State, & Partners	High
7.2 Promote affordable alternative forms of housing, including those that offer opportunities for economies of scale and shared supporting facilities.	High	Partners	Moderate
7.3 Encourage mixed-income developments accessible to lower income residents, especially in high opportunity and resource-rich areas.	Moderate	Local	Moderate
7.4 Take affirmative actions to further fair housing choice in the Region.	High	Local	High
7.5 Emphasize the need for affordable housing options for seniors, people with disabilities, and people with special needs near transit, healthcare services, shopping, and other amenities.	Moderate	Local	High
7.6 Encourage and work with organizations serving populations with special needs to provide housing opportunities and or housing support for their service population.	Moderate	Partners	High
7.7 Encourage the development of resources to help struggling households avoid evictions or foreclosures.	High	Partners	Moderate
7.8 Monitor and support federal and state research, legislation, and funding for housing and housing related programs and services.	Low	RiverCOG	Low
7.9 Ensure an equitable distribution of supportive housing and facilities for people experiencing homelessness throughout the Region, especially sites that are collocated with support services for health, mental health, and workforce development and that are located near transit.	High	Partners	High
7.10 Create a Regional Housing Plan that would encourage the development of affordable housing near transit, employment centers, opportunity areas, and resource-rich areas.	Low	RiverCOG & Local	High
7.11 Implement development policies to protect the public health, safety, and welfare equitably among all segments of the population and reduce the number of people who are disenfranchised by the process.	Low	Local	Low
7.12 Support access to high quality early childhood education facilities for all residents and worker in the region.	Moderate	Partners	Moderate

Goal 8: Balance growth with natural resource protection.	Urgency Level	Lead	Collaborative Potential
8.1 Work with shoreline communities to address environmental concerns and protection for existing development in a balanced way.	Low	RiverCOG & Local	High
8.2 Guide growth to Regional centers and areas of established infrastructure.	Low	RiverCOG	Moderate
8.3 Increase redevelopment and infill development efforts.	Low	Local	Moderate
8.4 Encourage the Region's towns to review zoning district designations, boundaries, and allowed uses to ensure that zoning regulations are adequately protective of natural resources.	Moderate	Local	Low
8.5 Revise zoning and subdivision regulations to ensure that the environmental impact of new development is minimized.	Moderate	Local	Low
8.6 Guide growth towards areas of existing water and sewer infrastructure or areas where soils are suitable for sub-surface wastewater disposal.	Low	Local	Moderate
8.7 Support towns in facilitating the use of engineered wastewater disposal systems to enable development at appropriate densities where desired.	Low	RiverCOG & Partners	Moderate
8.8 Ensure equal access to benefits of a strong economy for all groups through job training to facilitate entry into the job market.	Low	Partners	High
8.9 Support the development of green infrastructure (low impact, environmentally friendly) in new projects and to replace existing infrastructure.	High	Local	Moderate
8.10 Work with local institutions to expand job training in sustainable industries such as the green infrastructure construction and renewable energy sectors.	Low	Partners	High
8.11 Balance the need for renewable energy infrastructure with the need to minimize environmental and adverse land impacts.	Low	Local	Low
8.12 Protect the quality and quantity of regional supply of drinking water.	High	State & Local	High



Connected

Goal 1: Expand pedestrian transportation options.	Urgency Level	Lead	Collaborative Potential
1.1 Work toward achieving a complete, functional, and interconnected pedestrian network.	Moderate	Local	Moderate
1.2 Encourage a mix of uses in town centers and transit corridors so that it is possible for a greater number of short trips to be made by walking.	Low	Local	High
1.3 Improve walkability by encouraging pedestrian-oriented design of public and private projects in areas where higher levels of pedestrian activity are present or desired.	High	State & Local	High
1.4 Link sidewalks, pedestrian paths, and multi-purpose trails into a continuous Region-wide network.	Moderate	RiverCOG & Local	Moderate
1.5 Ensure that the pedestrian network is accessible to pedestrians of all abilities.	High	Local	Moderate
1.6 Provide an extension of the Shore Line Greenway from Hammanasset Beach to Clinton.	Low	RiverCOG	Moderate
1.7 Encourage active transportation routes, where safe and appropriate, for children to get to school.	Low	State & Local	Low
Goal 2: Expand bicycle transportation options.	Urgency Level	Lead	Collaborative Potential
2.1 Establish a safe and comprehensive local and Regional bikeway network.	High	RiverCOG	High
2.2 Develop a bikeway network that is continuous, closes gaps in the existing system, improves safety and serves important destinations.	High	RiverCOG	High
2.3 Promote safe, convenient, and adequate short- and long-term bicycle parking facilities and other bicycle amenities for employment, retail, multifamily housing, schools, colleges, and transit facilities.	Low	Partners	High
2.4 Coordinate with transit agencies to provide safe routes to transit stops and stations, to provide secure bicycle parking facilities, and to accommodate bicycles on transit vehicles.	Moderate	RiverCOG	Low
2.5 Create goals and recommendations for Complete Streets across the Region.	Moderate	RiverCOG	Moderate
2.6 Support bicycle-based tourism.	Low	Partners	High
2.7 Provide a trail connection between the Air Line Trail and Farmington Canal Trail.	Low	RiverCOG	Moderate

Goal 3: Expand transit serving the Region.	Urgency Level	Lead	Collaborative Potential
3.1 Work toward achieving reliable transit systems that serve as a viable alternative to single occupancy vehicle trips.	Moderate	Partners	Moderate
3.2 Make transit planning an integral component of long range planning and the development review process.	Low	RiverCOG	Low
3.3 Plan for transit support in town centers, transit corridors, and other higher-intensity uses in areas that are served by existing or planned higher-quality transit services.	Moderate	RiverCOG	Moderate
3.4 Design for walkability as pedestrian supportive design also helps create a transit supportive environment.	Moderate	Local	High
3.5 Achieve a transit system that is accessible to persons with disabilities.	High	Partners	Low
3.6 Take a leadership role in efforts to increase transportation funding to benefit areas that have the strongest commitment to locating or maintaining higher densities/intensities in areas served by existing or planned transit.	Low	RiverCOG	Moderate
3.7 Implement the recommendations of the LCRV Transit Study to support a merger of Middletown Area Transit and 9 Town Transit with a new shared maintenance facility in Middletown and a new bus facility along the shoreline.	High	Partners & State	Moderate

Goal 4: Expand access to high-speed internet.	Urgency Level	Lead	Collaborative Potential
4.1 Support the expansion of 5G wireless service and infrastructure.	High	Local, State, & Partners	Low
4.2 Advocate for the expansion of fiber-optic network possibly using municipal gain on utility poles.	High	Local, State, & Partners	Low
4.3 Achieve “gigabit to the home” in the most economical way possible.	High	Local, State, & Partners	Low

Goal 5: Adequately maintain transportation infrastructure and services.	Urgency Level	Lead	Collaborative Potential
5.1 Ensure that the Region's bridges are adequately maintained and that replacements and rehabilitations, as necessary, are funded and conducted. Ensure that bridge rehabilitations include bike and pedestrian access where appropriate.	High	Local & State	Moderate
5.2 Maintain the Region's highways and roadways in a state of good repair.	Moderate	Local & State	Moderate
5.3 Provide station area improvements at Shore Line East stations as needed.	Low	State	Low
5.4 Encourage maintenance and preservation of rail freight service throughout the Region.	Low	Partners & State	Low
5.5 Maintain operation of the Chester-Hadlyme Ferry.	High	State	Low

Goal 6: Proactively manage Regional traffic issues.	Urgency Level	Lead	Collaborative Potential
6.1 Coordinate local, regional, and state efforts to improve traffic flow in key corridors and ensure continued investment in coordinated and adaptive traffic signal systems.	Moderate	RiverCOG	High
6.2 Support the implementation of intelligent transportation systems that will make timely information on transit service more widely available, enhancing the user experience and helping potential passengers to utilize transit.	Low	State	Moderate
6.3 Work with large employers, with support from CTrides and Connecticut DOT to encourage greater implementation of transportation demand management strategies, including flexible work hours, employer provided transit benefits, telecommuting, and bike commuting.	High	RiverCOG	High
6.4 Support cooperation between CTDOT and City of Middletown in addressing safety and traffic congestion on Route 9 while ensuring public access to the riverfront.	Moderate	State & Local	Moderate
6.5 Work with Connecticut DOT and other stakeholders to identify options for improving highway segments and interchange bottlenecks within the Region.	Low	RiverCOG	Moderate

Goal 7: Anticipate and plan for future transportation needs.	Urgency Level	Lead	Collaborative Potential
7.1 Track Regional demographic, development, and commuting trends and identify transportation improvements necessary to support desirable trends.	Low	RiverCOG	Low
7.2 Encourage local officials to plan transportation projects for anticipated growth and to direct growth towards areas where transportation infrastructure can adequately serve development.	Moderate	RiverCOG	Moderate
7.3 Pursue funding sources at Regional and local levels for transportation projects that will support future transportation needs.	High	RiverCOG	Low
7.4 Support proactive policies that set priorities for future transportation options and networks.	Moderate	RiverCOG	Moderate

Goal 8: Improve connections and expand access to open space resources.	Urgency Level	Lead	Collaborative Potential
8.1 Conduct a comprehensive study of trails in the Region with the aim of assessing assets and needs and identifying opportunities for improving and expanding the Region's trail system.	Low	RiverCOG	High
8.2 Improve and expand greenways to improve connections to the Region's parks and open space resources.	Low	RiverCOG	Moderate
8.3 Expand or improve transit service as needed to provide connections to the Region's parks and open spaces.	Low	Partners	Low
8.4 Support and expand existing trails networks and improve trail head amenities.	Low	Partners	Moderate
8.5 Connect public parks to trails and pathways and other pedestrian or bicycle networks where feasible to provide linkages and connectivity between recreational uses.	Moderate	Local & Partners	Moderate
8.6 Conduct a study of public access along the shoreline and Connecticut riverfront to inventory public access locations, the capacity and condition of those locations, and potential for expanding or providing new public access locations.	Low	RiverCOG	High
8.7 Expand public access to the western shore of the Connecticut River, with shoreline trails parks, picnic areas and canoe & boat launch sites.	Low	State & Local	High



Innovative

Goal 1: Establish the Region as a unique enclave that provides a high quality of life combined with an environment that is supportive of innovation.	Urgency Level	Lead	Collaborative Potential
1.1 Support public relations and media campaigns to promote the Region as a home of innovation.	Moderate	Partners	High
1.2 Support increased business development efforts and efforts to raise the Region's profile among corporate site selection specialists as an innovation friendly environment and a place that is welcoming to families.	Moderate	Partners & Local	High
1.3 Consider creation of a Regional development entity.	Low	RiverCOG	Moderate
1.4 Facilitate retention, expansion, attraction, and incubation of businesses that meet the Region's economic development objectives.	Moderate	Partners	High
1.5 Promote business outreach and collaborative initiatives among business leaders and economic stakeholders in the Region. Such outreach and collaboration should include partnering with local businesses and economic development and employment organizations, such as chambers of commerce, to identify strategies for local business retention and expansion, talent attraction, and Regional branding.	High	Partners	High
1.6 Establish a user-friendly computerized central information system to be linked with development permitting and GIS to provide prospective businesses and developers with easy access to information, such as potential development sites and municipal requirements.	Low	RiverCOG & Local	Moderate
1.7 Establish and maintain a consistent database of long-range economic data factors and update trend forecasts on an ongoing basis to enable policies and strategies to be proactive and timed to market change.	Low	RiverCOG	Low
1.8 Encourage the attraction of remote workers with supportive services, infrastructure, and transportation connections such as Amtrak to Boston and New York City.	High	Partners	High
Goal 2: Establish one or more "Innovation Districts" in the Region, where appropriate.	Urgency Level	Lead	Collaborative Potential
2.1 Cluster and connect innovative anchor institutions and companies with supporting and spin-off companies, business incubators, mixed-use housing, office and retail, and modern amenities and transportation.	Low	Local	High
2.2 Reuse and repurpose vacant, underutilized, and unmarketable properties and buildings to support the emergence of innovative businesses and industries.	Moderate	Partners	High
2.3 Support the development of an "Agriculture Innovation" district or districts that could be home to agricultural products suppliers and distributors, local food processing facilities, and a farmers market.	Low	Local	High

Goal 3: Support the development of environments that foster innovation.	Urgency Level	Lead	Collaborative Potential
3.1 Encourage mixed-used development to foster an environment of live-work-play.	Low	Local	High
3.2 Support the development of business incubators in the Region.	High	Partners	High
3.3 Encourage and support major institutions and businesses to foster and invest in an innovative practices.	High	Partners	High
3.4 Establish agricultural innovation education/trade programs at the Region's high school and trade schools.	Moderate	Partners	Moderate
3.5 Introduce and/or grow the concept of innovation in the Region's school districts.	Moderate	Partners	Moderate
3.6 Encourage innovation in municipal government.	Moderate	Local	Moderate
3.7 Coordinate efforts among municipalities to determine best types of innovation hubs for different locations throughout the Region to ensure that the Region's communities are working collaboratively instead of competing for opportunities.	Moderate	RiverCOG	Moderate
3.8 Improve access to and collaboration with the Region's community colleges and technical schools.	Low	Partners	Moderate
3.9 Encourage, via legislative initiatives and/or financial incentives, the development of a modern high-quality digital communication network, with true 5G cellular coverage throughout the area, and broadband download speeds greater than 1Gbps.	Moderate	State & Partners	Moderate

Goal 4: Provide the Region's businesses and start-ups with good access to capital.	Urgency Level	Lead	Collaborative Potential
4.1 Work with the State, local, and national financial institutions to develop, expand, or promote financing for start-ups, innovative businesses, and research and development.	High	Partners	High
4.2 Promote those resources within the business community.	High	Partners	Moderate
4.3 Strengthen partnerships with venture capital firms such as Connecticut Innovations.	Moderate	Partners	Moderate
4.4 Create and integrate as necessary a full continuum of business creation, launch and bridge services to support a new generation of entrepreneurs and business owners in the Region.	Moderate	Partners	High
4.5 Work on recapitalizing and expanding the effectiveness of the Middlesex Revitalization Commission in supporting the growth of local business.	Low	Partners	Moderate

Goal 5: Promote State and/or Federal funding to support innovation.	Urgency Level	Lead	Collaborative Potential
5.1 Encourage and support applications to the State's Manufacturing Innovation Fund.	High	RiverCOG	Moderate
5.2 Encourage and support applications to the State's Bioscience Innovation Fund.	High	RiverCOG	Moderate
5.3 Apply for grants through the US Economic Development Administration Regional Innovation Strategies Program.	High	RiverCOG	Moderate
5.4 Support the creation of the Comprehensive Economic Development Strategy for the region.	Moderate	RiverCOG	High



Community

	Urgency Level	Lead	Collaborative Potential
Goal 1: Foster an environment of cultural exchange.			
1.1 Provide support for the arts, news, ethnic groups, clubs, religious institutions, food share programs, meals on wheels, and meeting spaces and places.	Moderate	Partners	High
1.2 Make government more inclusive, making sure that a diversity of voices and all voices are heard.	High	Local	Moderate
Goal 2: Create vibrant, equitable communities within established city, town, and village centers and in proximity of Shore Line East stations.			
2.1 Encourage infill development and redevelopment in city, town, and village centers and in proximity of Shore Line East stations.	Moderate	Local	High
2.2 Support mixed-use development with a residential component in commercially zoned districts.	Moderate	Local	High
2.3 Consider the use of Tax Increment Finance (TIF) districts to encourage redevelopment and infill development.	Low	Local	Low
2.4 Encourage higher density and multifamily housing in established centers to affirm those areas as the hub for community activity.	Moderate	Local	High
2.5 Invest in transit corridors through higher density and mixed-use development. Encourage some combination of residential above commercial development, employment uses, commercial uses, and higher density residential development.	Moderate	Partners & Local	High
2.6 Enhance all communities with placemaking and public spaces in designated centers to serve residents of all incomes, interests, ages, and cultures.	Moderate	Local	High
2.7 Provide a variety of land uses within a community in order to offer opportunities for a diverse mix of uses and to help create a balance of land uses within a community.	Moderate	Local	High
2.8 Recognize that various town centers or individual projects within town center areas may serve specific functions in the community and Region; some town centers may have an employment orientation while others may be major shopping destinations, tourist or cultural destinations, or primarily residential in nature.	High	RiverCOG	Low
2.9 Provide equal access to public facilities and infrastructure for all community members.	High	Local	Moderate
2.10 Promote location of healthcare facilities in areas accessible by multimodal transit.			
Goal 3: Diversify housing stock to attract a younger residents and retain seniors and provide more housing that is affordable to residents of all income levels.			
3.1 Assist towns in conducting affordable housing plans as mandated by CGS Sect. 8-30j.	High	RiverCOG	High
3.2 Encourage towns to review their zoning regulations to identify opportunities for expanding opportunities for the development of a more diverse housing stock.	Moderate	RiverCOG	Low
3.3 Concentrate new housing in city, town, and village centers where infrastructure and services are located.	Low	Local	Moderate
3.4 Support state policies to provide more affordable housing such as the Connecticut HOME Investment Partnership program for affordable housing development.	Moderate	RiverCOG	Low
3.5 Consider creation of a Regional land bank to support housing development where infrastructure and multimodal transportation access is available.	Low	Partners	Moderate
3.6 Foster neighborhoods that include a diversity of housing types, especially affordable, senior, age-friendly, accessible, and family housing.	Moderate	Local	Moderate
3.7 Ensure that new housing fosters a sense of community through development regulations that address building orientation and architectural design features that promote interaction and active lifestyles/communities.	Low	Local	Low
3.8 Investigate and encourage municipal programs that can help seniors age in place without leaving town.	High	Local	Low
3.9 Ensure that each town in the Region has housing available for essential workers, especially low wage workers.	Moderate	Local & Partners	Moderate

Goal 4: Improve access to housing and remove or reduce barriers to homeownership.	Urgency Level	Lead	Collaborative Potential
4.1 Encourage renewed commitment to municipal fair housing resolutions, policies or plans, or the adoption of such policies and plans where they do not currently exist.	High	Local	Moderate
4.2 Cooperate with Regional and state agencies committed to increasing understanding of and/ or enforcing fair housing law, including: the Housing Education Resource Center, Inc., the Connecticut Fair Housing Center, and the Connecticut Commission on Human Rights and Opportunities.	High	RiverCOG	High
Goal 5: Improve connectivity between and within neighborhoods, rural areas, and village and town centers.	Urgency Level	Lead	Collaborative Potential
5.1 Improve and expand transit services.	Moderate	State	Low
5.2 Implement bike and scooter share.	Moderate	Partners	Moderate
5.3 Expand local sidewalk and bicycle route networks.	Moderate	Local	Moderate
5.4 Work with local and state officials to develop new, dedicated bicycle and pedestrian paths and connect existing paths to form regional and interregional routes.	Moderate	RiverCOG	Moderate
5.5 Enhance streets and other public rights of way with amenities such as streets trees, benches, plazas, and public art.	Low	Local	Moderate
5.6 Plan an interconnected street network within and between communities which includes pedestrian and bicycle access while minimizing community impacts.	Moderate	Local	Moderate
5.7 Emphasize the movement of people rather than vehicles especially in village and town centers.	Low	RiverCOG	High
5.8 Emphasize pedestrian and bicycle-friendly design, accessibility to transit, and provision of amenities that are supportive and conducive to implementing transportation demand management strategies such as car sharing vehicles and parking spaces, bike lockers, preferred rideshare parking, showers and lockers, on-site food service, and child care, where appropriate.	Moderate	Partners	High
Goal 6: Strengthen the role of the Region's major institutions in the community.	Urgency Level	Lead	Collaborative Potential
6.1 Actively engage with the Region's major employers and institutions such as Pratt & Whitney, Wesleyan University, and Middlesex Community College to ensure that they remain active members of the community.	Low	Partners	Moderate
6.2 Work with universities and colleges in and proximate to the Region to engage students and faculty in community projects and initiatives.	Low	Partners	Moderate
Goal 7: Foster an environment that is supportive of collaboration and partnerships.	Urgency Level	Lead	Collaborative Potential
7.1 Support business, trade, and agricultural organizations and their mission in the community.	Moderate	RiverCOG	High
7.2 Provide forums that allow for "cross-pollination" of organizations and missions between municipalities.	Low	Partners	High

Goal 8: Support the Region's farm communities.	Urgency Level	Lead	Collaborative Potential
8.1 Ensure that the Region's farmers and farm communities have access to needed resources.	High	Partners	Moderate
8.2 Encourage the growth of agriculture based tourism (agritourism) and assist local communities with revising zoning regulations to fully support agritourism businesses.	Moderate	Partners	Moderate
8.3 Seek ways to partner with Regional community supported agriculture (CSA) programs as an alternative source of fresh and healthy fruits and vegetables for the Region's residents, particularly those with limited mobility, limited income, or those furthest from existing grocery stores.	Low	Partners	High
Goal 9: Support the protection of the Region's historic villages and town centers and promote those places as tourist attractions.	Urgency Level	Lead	Collaborative Potential
9.1 Ensure that local communities have adequate protections in place for their historic villages, town, and city centers.	Moderate	RiverCOG	Low
9.2 Work with local communities to encourage redevelopment and infill development in historic villages and town centers that is compatible with and complementary to those communities.	Low	RiverCOG	Moderate
9.3 Assist local communities with promoting historic villages and town centers as tourist attractions.	Low	RiverCOG	High
9.4 Promote early conflict resolution between the preservation of historical resources and alternative land uses.	Moderate	Local	Low
9.5 Encourage the consideration of historical and cultural resources early in the development review process by promoting early consultation with property owners, community and historic preservation groups, and land developers.	Moderate	Local	Moderate
9.6 Encourage the preservation and/or adaptive reuse of historic sites, structures, and landscapes as a means of protecting important historic resources and encourage the preservation of historic structures.	High	Local	Moderate
9.7 Encourage and promote the development of educational and interpretive programs that focus on the rich heritage of the Region.	Low	Partners	High
9.8 Encourage use of State Historic Preservation grants and tax credits to make historic preservation economically feasible.	High	Local	Low
9.9 Support events and programs in the Region's historic centers to support their vitality and liveliness.	Low	Partners	High



Realizing the Plan

As noted, implementing the recommendations of this Plan requires a full engagement of the resources within the LCRV Region. While the Plan provides a blueprint for a Regional vision, it is incumbent upon every municipality to invest in its success as we plan for the years ahead. It is the hope of RiverCOG that each municipality in the Region partners with us over the coming decade as we work to make this vision a reality. This plan captures the highest priority ideas, issues, and needs relevant to regional planning for the LCRV that were uncovered during the planning process. We know that there are additional needs that will need to be addressed within the Region over the next decade. This plan is intended to act as a framework for how to understand and approach those needs.

Appendix

- ▲ Appendix A: Existing Conditions Report
- ▲ Appendix B: Future Land Use Data Input Maps
- ▲ Appendix C: Connecticut General Statutes Relevant to Regional Plans
- ▲ Appendix D: Official RiverCOG Adoption Resolution
- ▲ Appendix E: Office of Policy and Management Review Letter