



SRPC FISCAL YEAR DATA SNAPSHOT '22

ACCEPTED:

STRAFFORD
Regional Planning Commission

THE ROLE OF THE COMMISSION

Strafford Regional Planning Commission works with municipalities, statewide organizations and other partners to provide technical assistance with planning documents, outreach, projects and regulations. We create a space for our stakeholders to connect and share information, and we provide information to the public, offering opportunities for engagement with important planning initiatives.

We serve our communities in two additional designated roles, as a Metropolitan Planning Organization, and as an Economic Development District. We work closely with the NH Department of Transportation to implement data collection programs, assist and advocate for local transit agencies and municipal projects, and create long-range plans which address safety and quality of life. With guidance from our partners, we maintain a regional economic development strategy that includes economic trends and local priority projects. We also assist local communities with economic development strategies and facilitate regional discussion.

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MUNICIPALITIES

Barrington	New Durham
Brookfield	Newmarket
Dover	Northwood
Durham	Nottingham
Farmington	Rochester
Lee	Rollinsford
Madbury	Somersworth
Middleton	Strafford
Milton	Wakefield

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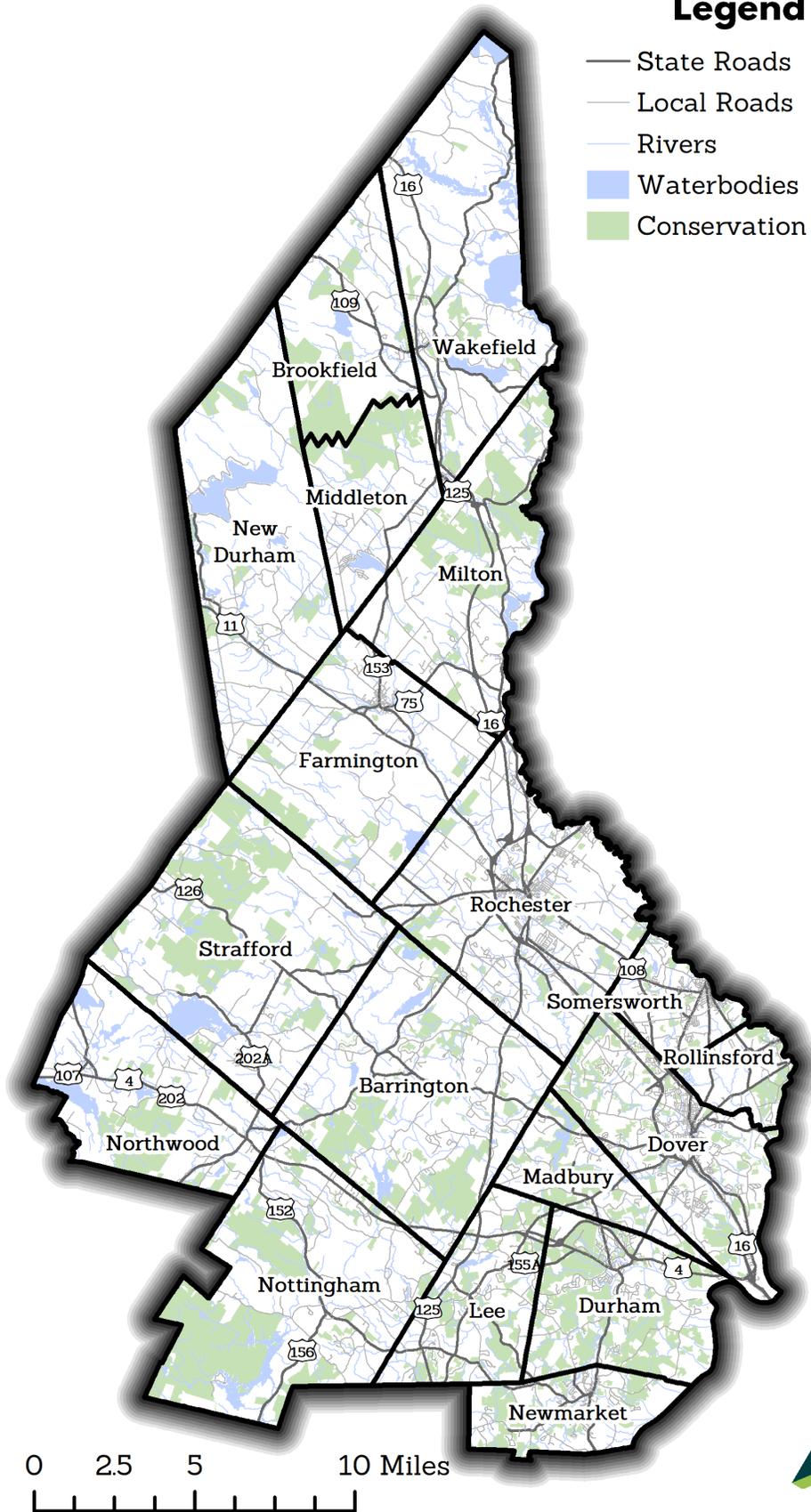
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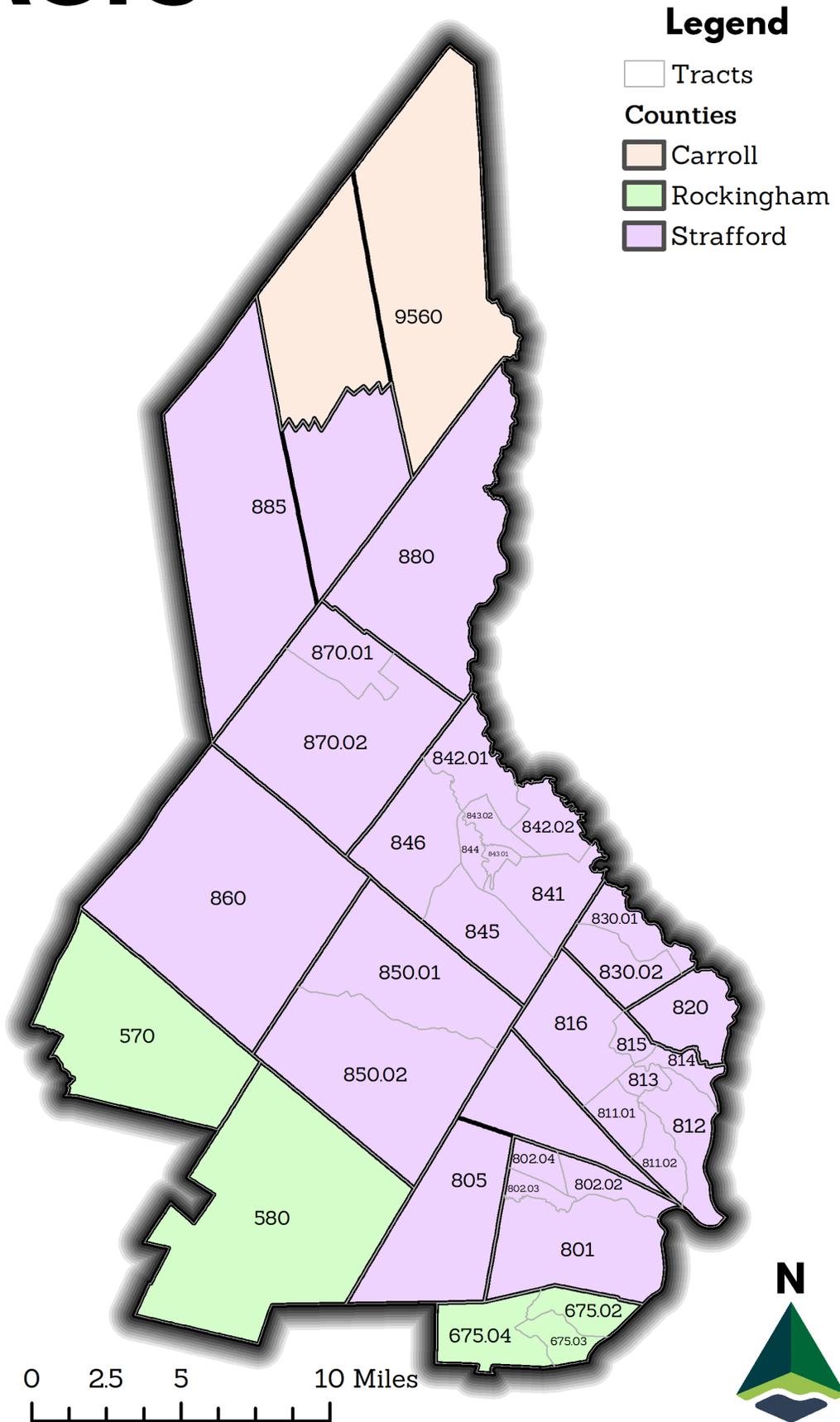
REFERENCE MAP - MUNICIPAL

Legend

- State Roads
- Local Roads
- Rivers
- Waterbodies
- Conservation Lands



REFERENCE MAP – TRACTS



INTRODUCTION

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View all the GIS data in our interactive map viewer here:
<https://strafford.org/maps/regional-data-snapshot-map-viewer/>

General Data Disclaimer

Data in this document are generally from ESRI, NH GRANIT, NHDOT, NHDES, NHOSI, NHES, US Census, USFWS, USGS, the 18 municipalities represented by SRPC, and other state, federal, or local entities. These agencies and organizations have derived this data using a variety of cited source materials, at different time frames, through different methodologies, with varying levels of accuracy. As such, errors are often inherent in data and should be used for planning purposes only. The presented data is sometimes only a subset of the original data. Please visit the original location of the data, contact the original host source, or contact SRPC for information on the full data set.

See the full data source list for information about each data source.

Data Collected by SRPC

Several data sets in this document are collected by SRPC staff on recurring basis. These data sets are collected and verified by staff before publication but may still be subject to error. Please contact SRPC if you notice any errors in data that was collected by staff.

Data from the US Census Bureau

Please see the Census Data Disclaimer for a detailed disclaimer for data obtained from the US Census Bureau.

Census ACS Data Disclaimer

Much of the following demographic data comes from the US Census Bureau's American Community Survey (ACS). The ACS surveys a random selection of roughly 10,000 households in New Hampshire each year. The data is then made available for 1-year estimates (just the 10,000 households) and 5-year estimates (averages based on 5 years of data). All estimates in this document rely on the 5-year estimates and are thoroughly analyzed to ensure that the data is as reliable as possible.

In addition to ACS data, this year there is also limited data from the 2020 Decennial Census. The Decennial Census strives to count every person, and so the data is far more reliable than the ACS data. Only a few of the Decennial Census data tables have been released so far, so much of the Census data is still from the ACS.

Each of the tables and trend lines on the following pages are based on municipal, county, or state level data. The margin of error on ACS data at the larger geographic levels tends to be smaller and the data more reliable.

Each of the following maps are estimated percentages, averages, or medians based on the Census tract or municipal levels. **Census tracts** are areas with populations between 1,200 and 8,000 people. The Census Bureau ideally aims for tracts to be around 4,000 people.

Two tests are performed to assess the validity and reliability of ACS data estimates for each geographic level:

1. Instances where an estimate's margin of error is larger than the estimate (i.e. an estimate of 429 people, with a margin of error of ± 430) are removed because they are unreliable. This applies to both estimates expressed as a number or percentage.
2. The statistical significance of the sample size is determined as prescribed by the US Census Bureau. This test looks at whether the estimate is likely based on random chance. If the sample is determined to be statistically significant, then we are 90% confident that it is accurate. A lack of statistical significant does not mean that the data is inaccurate, so we do not discard the data if it fails this test unless the current year data seems to be inaccurate compared to the historic trend data.

If the data passes both checks, then we assume that it is accurate.

If the data passes the first check, but not the second, then we do not remove the data because it may be representative of the real-life situation.

Select data items are further analyzed to identify whether a geographic concentration exists. A tract has a concentration of a given population if the percent of people or households is more than one standard deviation from the regional percent.

Since this data is collected by the Census Bureau on an ongoing 5 year rolling basis, it is possible that not enough people were surveyed to truly represent the actual population and households in the tract.

In the maps, if a tract is marked as "Yes" for having a concentration then the data passed checks 1 and 2. If a tract is marked as "Maybe" tract passed check 1 but not 2.

Mapping Disclaimer

Many of the pages in this document include maps to help visualize the data being presented. These maps display a variety of data from a variety of sources. Please view the General Data Disclaimer and Census ACS Data Disclaimer pages for more information.

Several of the maps that contain ACS data display highlighted concentrations. A census tract has a concentration of a given population if the percent of people or households is more than one standard deviation from the regional percent. In the maps, if a tract is marked as “Yes” for having a concentration then the data passed checks 1 and 2 on the previous page. If a tract is marked as “Maybe”, the tract passed check 1 but not 2.

GIS data in this document are generally from ESRI, NH GRANIT, NHDOT, NHDES, NHOSI, NHES, US Census, USFWS, USGS, the 18 municipalities represented by SRPC, and other state, federal, or local entities. These agencies and organizations have derived this data using a variety of cited source materials, at different time frames, through different methodologies, with varying levels of accuracy. As such, errors are often inherent in data and should be used for planning purposes only. The presented data is sometimes only a subset of the original data. Please visit the original location of the data, contact the original host source, or contact SRPC for information on the full data set.

View all the GIS data in our interactive map viewer here:

<https://strafford.org/maps/regional-data-snapshot-map-viewer/>

Data Sources

SRPC uses a variety of state, local, national and other data sources in the data snapshot. Each page of data includes a short line of text in the bottom left corner indicating the organization that provides the data used, the years of data used, and the granularity or coverage of the data. In addition, some pages include links directly to reports or more details. The full list of data sources can be found at the end of the document.

Transportation Performance Measures

Federal Mandated Measures

In 2012, the [Moving Ahead for Progress in the 21st Century Act \(MAP-21\)](#) required that transportation planning shift to a performance-based approach. It mandated that all Metropolitan Planning Organizations (MPO) and state Departments of Transportation (DOT) use performance measures to work towards specific goals and targets. There are several [mandated measures](#) that Strafford MPO is required to set targets for and [seven regional performance measures](#) that were developed collaboratively and adopted by the four MPOs in New Hampshire. More information about the performance measures can be found at www.partneringforperformancen.org.

The snapshot contains the following mandated federal measures:

Safety

- Number of Fatalities
- Rate of Fatalities
- Number of Serious Injuries
- Rate of Serious Injuries
- Number of Non-Motorized Fatalities and Non-motorized Serious Injuries

Transit Asset Management

- Percent of revenue vehicles that have met or exceeded their Useful Life Benchmark (ULB), by vehicle class
- Percent of non-revenue vehicles that have met or exceeded their Useful Life Benchmark (ULB)
- Percent of facilities with a condition rating below 3.0 on the FTA TERM Scale

Infrastructure Conditions

- Percentage of the Non-interstate NHS in Good condition
- Percentage of the Non-interstate NHS in Poor condition
- Percentage of NHS bridges in Good condition
- Percentage of NHS bridges in Poor condition

Travel Time Reliability

- Percent of person-miles traveled on the non-Interstate NHS that are reliable

Transit Safety Measures

- Total number of reportable fatalities and rate per total vehicle revenue miles by mode
- Total number of reportable⁸ injuries and rate per total vehicle revenue miles by mode
- Total number of reportable events and rate per total vehicle revenue miles by mode

DEMOGRAPHICS

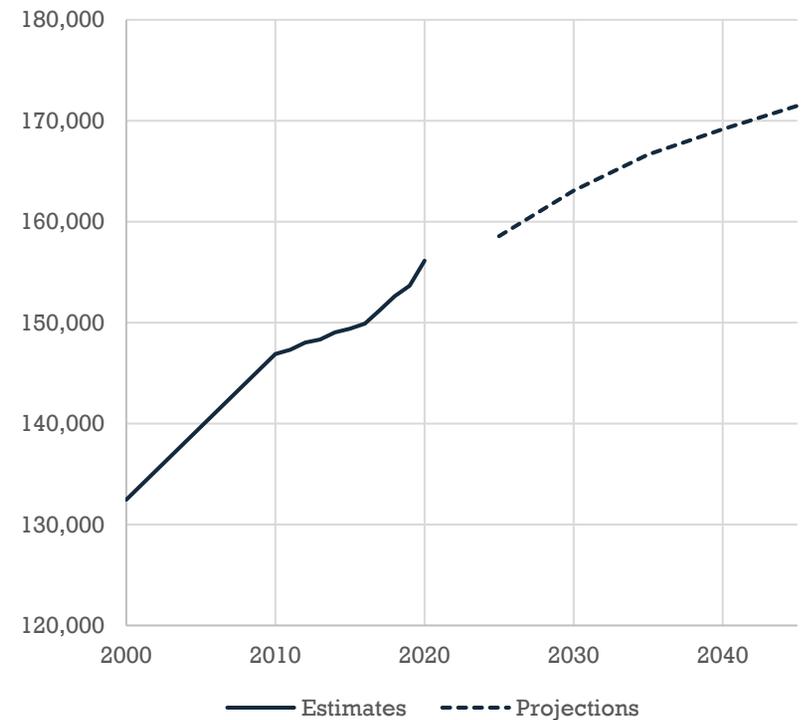
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Population Estimates and Projections

The data center of the New Hampshire Office of Planning & Development (OPD, formerly Office of Strategic Initiatives or OSI) provides annual population estimates and 5-year population projections based on the US Census Bureau's decennial data and its own statewide building permit records. More information about building permits is available in the Livability section of the Data Snapshot. In the chart and table below, the data from 2000, 2010, and 2020 comes from the full decennial census conducted by the US Census Bureau. The 2025 - 2045 data are projections by OPD based on the 2010 Census and 2015 OPD estimates and are available in 5-year increments (2025, 2030, 2035, 2040). SRPC uses the 2015, 2025, 2035, and 2045 for the Travel Demand Model, so we have extended the projections out an additional 5 years.

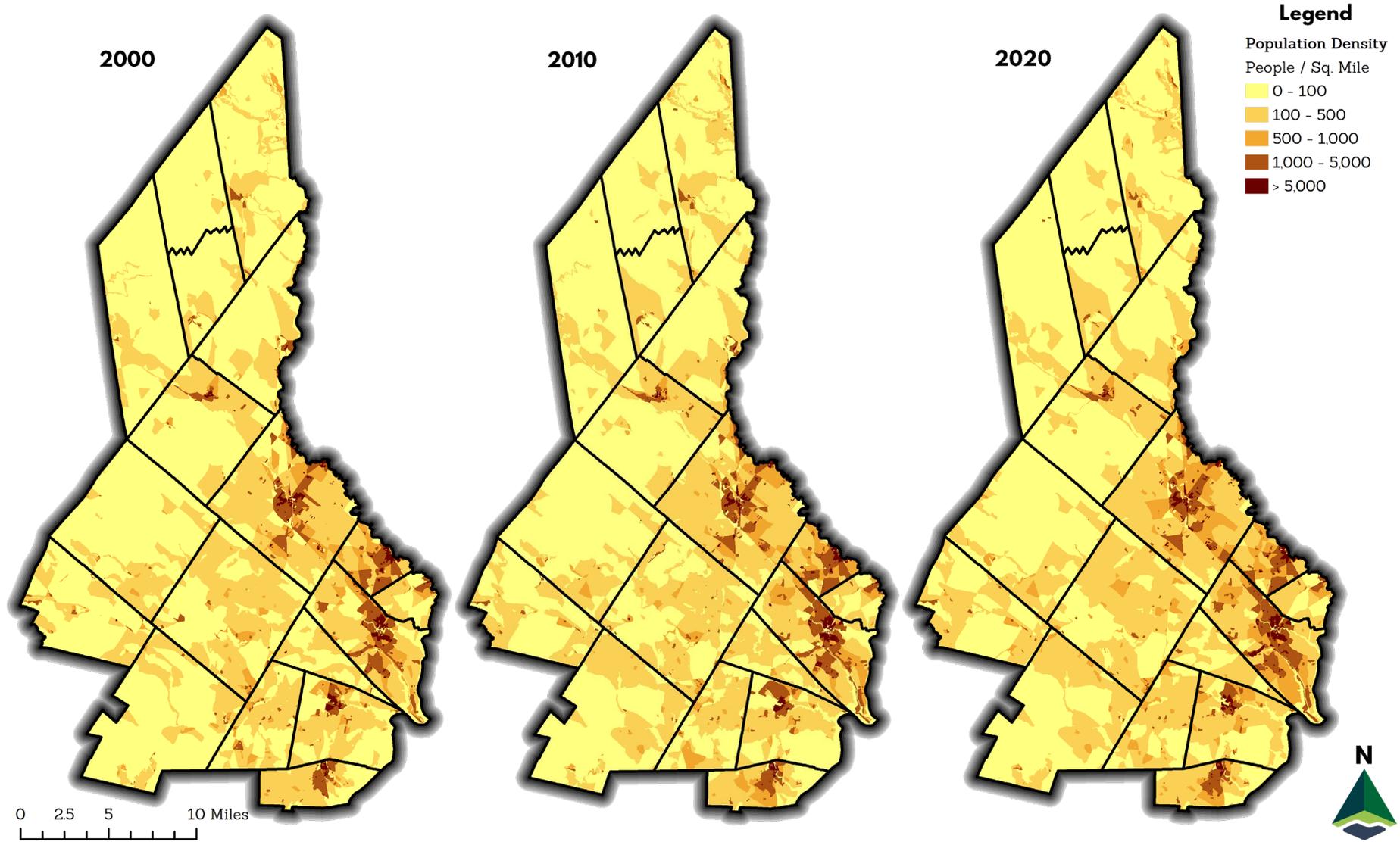
Municipality	Census			OPD Projections		
	2000	2010	2020	2025	2035	2045
Barrington	7,475	8,576	9,326	9,592	10,115	10,465
Brookfield	604	712	755	738	759	758
Dover	26,884	29,987	32,741	32,535	34,309	35,494
Durham	12,664	14,638	15,490	18,498	19,506	20,180
Farmington	5,774	6,786	6,722	7,333	7,733	8,000
Lee	4,145	4,330	4,520	4,389	4,629	4,788
Madbury	1,509	1,771	1,918	1,943	2,049	2,120
Middleton	1,440	1,783	1,823	1,937	2,043	2,113
Milton	3,910	4,598	4,482	4,849	5,113	5,290
New Durham	2,220	2,638	2,693	2,776	2,927	3,028
Newmarket	8,027	8,936	9,430	9,877	10,224	10,229
Northwood	3,640	4,241	4,641	4,495	4,653	4,655
Nottingham	3,701	4,785	5,229	5,614	5,812	5,814
Rochester	28,461	29,752	32,492	30,359	32,014	33,119
Rollinsford	2,648	2,527	2,597	2,405	2,537	2,624
Somersworth	11,477	11,766	11,855	11,628	12,262	12,686
Strafford	3,626	3,991	4,230	4,267	4,500	4,655
Wakefield	4,252	5,078	5,201	5,329	5,480	5,469
Total RPC	132,457	146,895	156,145	158,566	166,666	171,487
Total EDD	117,089	128,933	136,845	138,580	145,977	150,789



Trends - Source: US Decennial Census. Year: 2000 - 2020. Granularity: Municipalities.

Projections - Source: NHOPD. Year: 2000 - 2020. Granularity: Municipalities.

Population Density



Source: US Decennial Census. Year: 2000 - 2020. Granularity: Census Blocks.

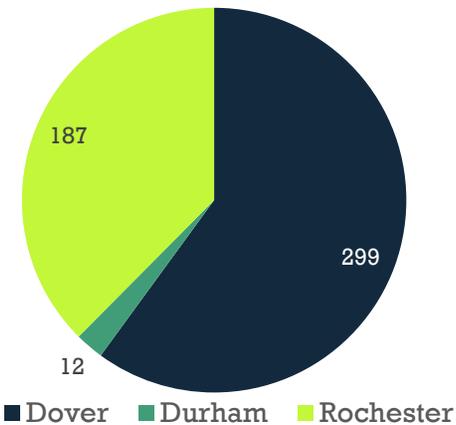
Group Quarters Population

“Group quarters” refers to the population residing in institutional and other non-household living arrangements. This includes, but is not limited to, nursing homes, college dormitories, prisons, and group homes.

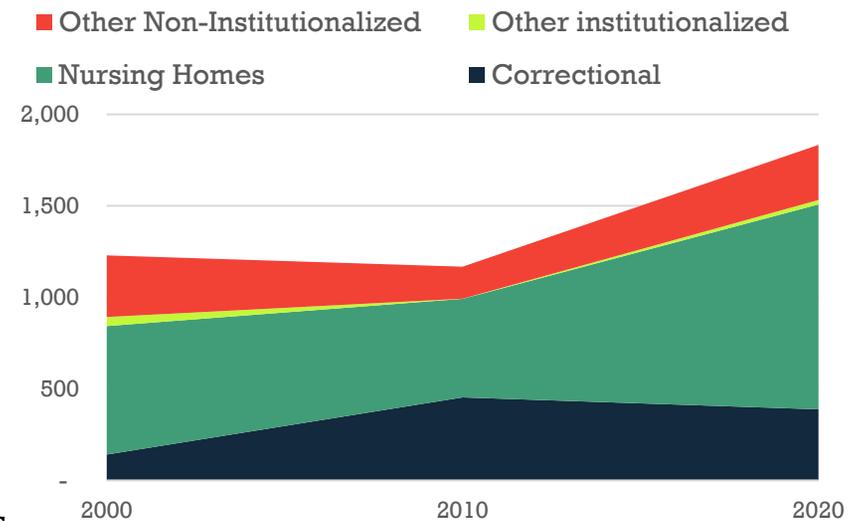
Nearly 80% of the group quarters population in the SRPC region resides in on-campus housing of the University of New Hampshire in Durham.

As part of the Regional Housing Needs Assessment (SRPC) taking place throughout 2022, SRPC will be monitoring these and other special housing arrangements to make determinations about needed capacity for these groups.

Registered Nursing Home Beds in the SRPC region



Non-UNH Group Quarters



Type	2010 SRPC Residents	2020 SRPC Residents	Location(s)
College/university student housing	7,265	6,794	Durham
Nursing facilities/dedicated residential care	539	1,120	Dover, Durham, Rochester
Correctional facilities for adults	410	333	Dover
All others	219	380	(various)
Total	8,433	8,627	

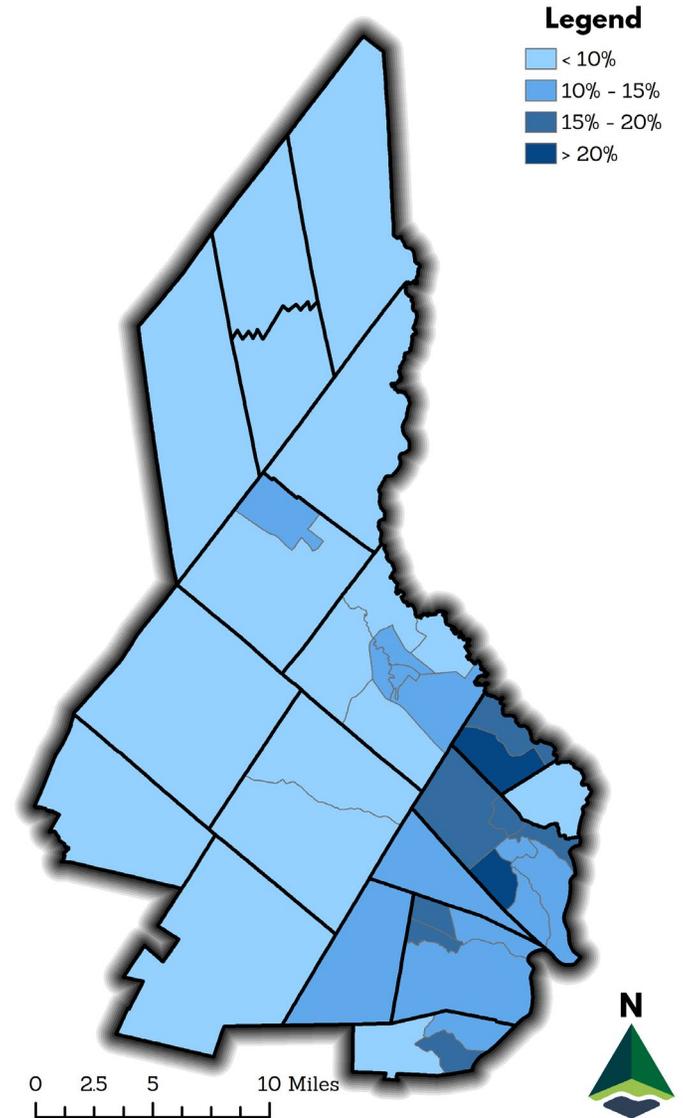
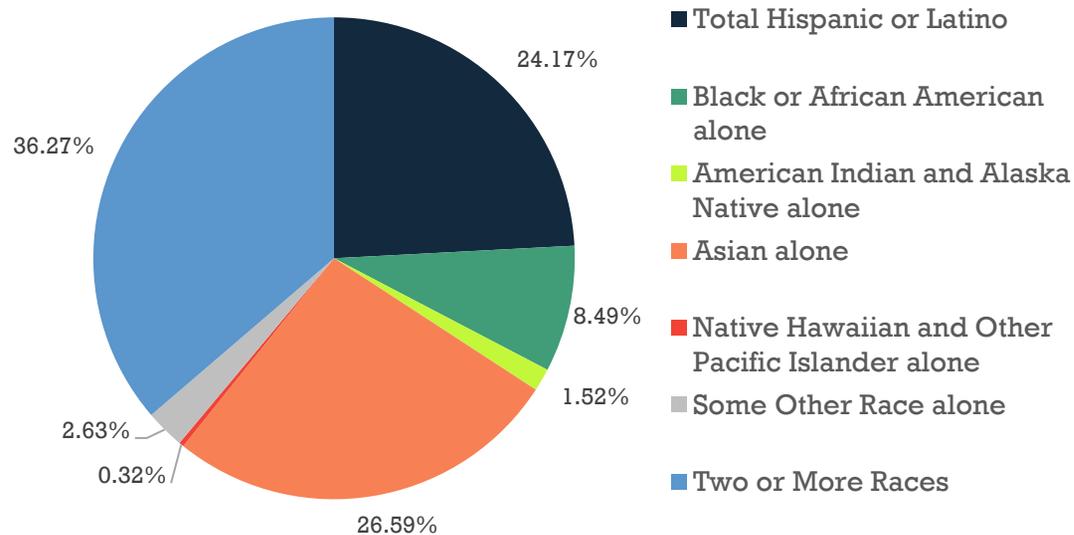
Source: US Decennial Census. Year: 2000 - 2020. Granularity: Census Blocks.

Race and Ethnicity

While New Hampshire currently has one of the smallest concentrations of racial and ethnic minorities in the country, diversity within the SRPC region is increasing. Minority populations appear to be primarily concentrated in the three cities (Dover, Rochester, Somersworth) and Durham.

Notable known minority populations in the region include the Indonesian population in and around Somersworth and non-white UNH students (approximately 2,000 students¹).

Race and Ethnicity of the Non-White Population



[1] <https://www.unh.edu/institutional-research/student-data>

Source: US Decennial Census. Year: 2020. Granularity: Census Tracts.

Population by Race and Ethnicity

Geography	Total Population	Non-Hispanic White Alone	Total Racial and Ethnic Minority	Total Hispanic or Latino	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some Other Race alone	Two or More Races
Barrington	9,326	8,567	759	175	39	8	106	0	24	407
Brookfield	755	723	32	7	0	1	0	0	0	24
Dover	32,741	27,783	4,958	1,047	520	39	1,793	5	134	1,420
Durham	15,490	13,046	2,444	653	207	51	825	10	14	684
Farmington	6,722	6,113	609	118	46	33	48	4	25	335
Lee	4,520	3,988	532	123	25	4	160	2	19	199
Madbury	1,918	1,738	180	26	6	2	71	1	11	63
Middleton	1,823	1,714	109	15	8	4	7	0	3	72
Milton	4,482	4,138	344	62	18	13	35	1	17	198
New Durham	2,693	2,533	160	31	8	5	11	0	6	99
Newmarket	9,430	8,309	1,121	301	84	8	339	13	21	355
Northwood	4,641	4,302	339	86	16	10	39	3	9	176
Nottingham	5,229	4,810	419	103	20	1	47	1	33	214
Rochester	32,492	29,004	3,488	1,016	327	57	518	10	70	1,490
Rollinsford	2,597	2,392	205	74	19	6	13	1	3	89
Somersworth	11,855	9,631	2,224	509	198	26	866	6	59	560
Strafford	4,230	3,952	278	65	13	3	20	2	18	157
Wakefield	5,201	4,881	320	65	19	11	27	1	21	176
SRPC	156,145	137,624	18,521	4,476	1,573	282	4,925	60	487	6,718
SEDD	136,845	120,203	16,642	3,986	1,453	263	4,500	43	424	5,973

Source: US Decennial Census. Year: 2020. Granularity: Municipalities.

Age

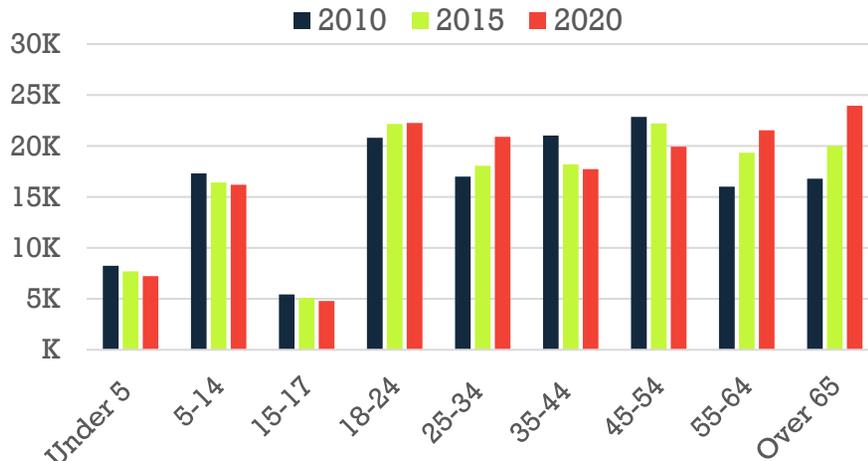
The SRPC region is aging. Median ages are climbing in 15 of the 18 municipalities in the region (See Median Age page) as the number of children decreases and the number of people over 55 increases.

The 18-24 age group is historically the largest group in the region. UNH students are a major driver of this high number of young adults, with about 10,000 of them living in Durham. By looking at the 2010 data for 5-14-year-olds in Durham and subtracting 2020's 15-17-year-olds (2010's 5-7-year-olds), we can estimate that approximately 500 of Durham's 10,000 young adults are Durham residents and not UNH students.

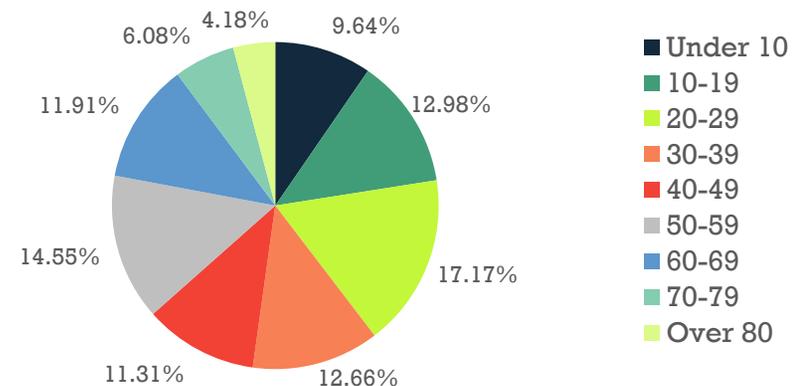
The population over 65 is the fastest growing age group, followed closely by 55-64. This will continue as the remainder of the Baby Boomers (56+ in 2020) reach 65 over the next 8 years.

Town	Median Age (2020)	Life Expectancy (2015)	% Under 18 (2020)	% over 65 (2020)
Barrington	39.2	83.9	23.18%	11.89%
Brookfield	47.9	83	14.31%	18.27%
Dover	35.7	75.5 - 80.9	17.83%	16.29%
Durham	20.8	83.6	9.07%	7.57%
Farmington	42.6	76.5	21.69%	12.70%
Lee	48.3	81.2	16.84%	20.11%
Madbury	37.8	81.2	28.20%	9.53%
Middleton	43.3	82.9	19.05%	13.41%
Milton	43.2	83.9	20.57%	15.83%
New Durham	41.4	82.9	21.82%	15.42%
Newmarket	38.1	79.4 - 80.2	16.22%	14.86%
Northwood	44.5	78.6	17.93%	21.50%
Nottingham	44.3	81.8	22.53%	19.36%
Rochester	43.3	75.6 - 79.3	20.57%	18.74%
Rollinsford	43.0	82.1	15.86%	18.34%
Somersworth	39.2	78.1 - 79.1	18.82%	12.96%
Strafford	48.7	81.2	19.83%	20.57%
Wakefield	50.3	83	14.62%	17.63%

Population by Age



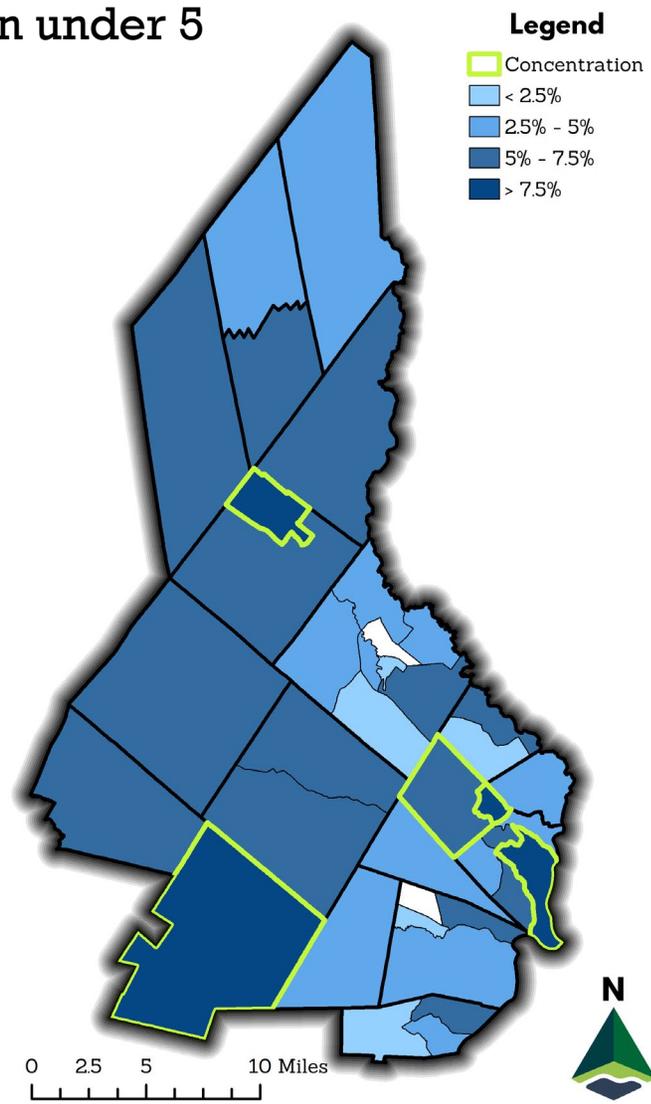
Population by Age Group



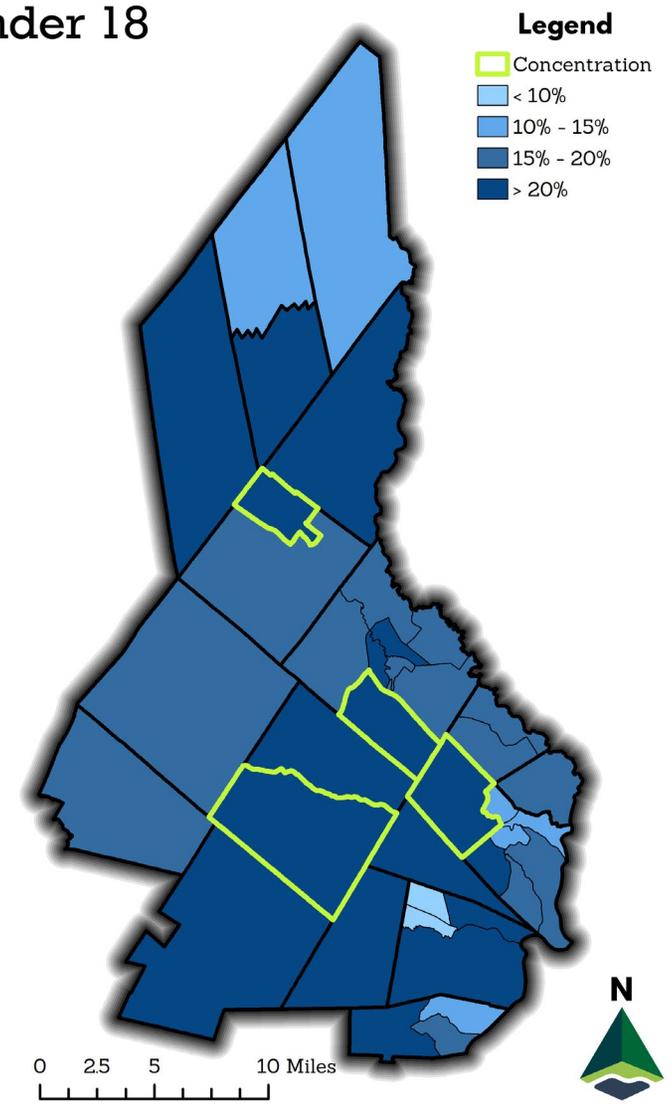
Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Municipalities, Census Tracts.

Age

Children under 5



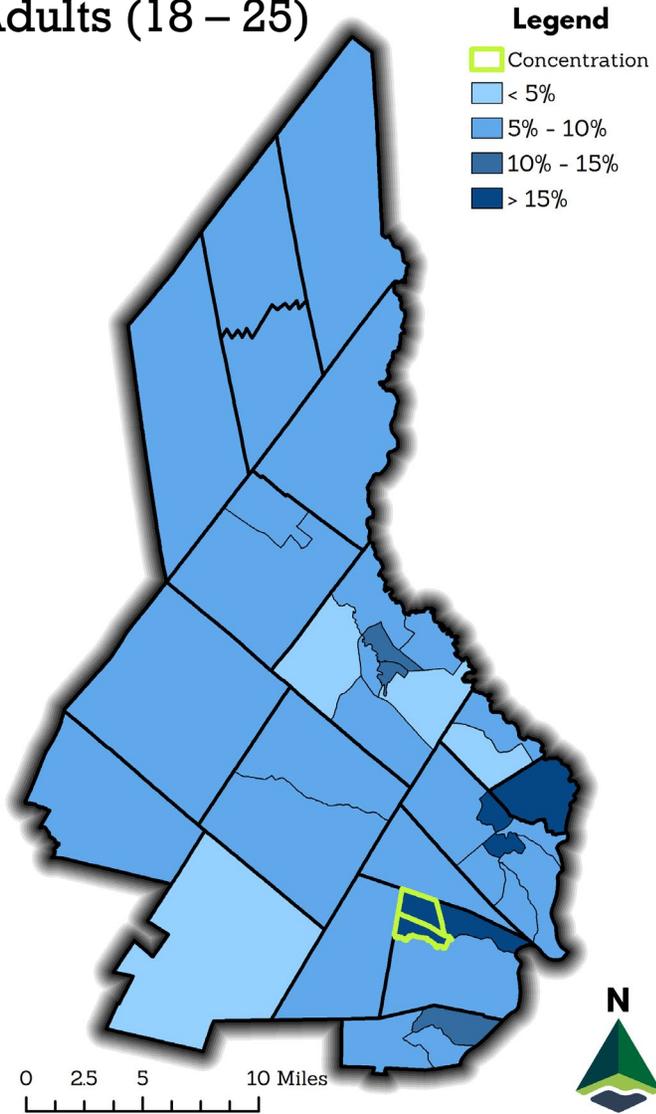
Children under 18



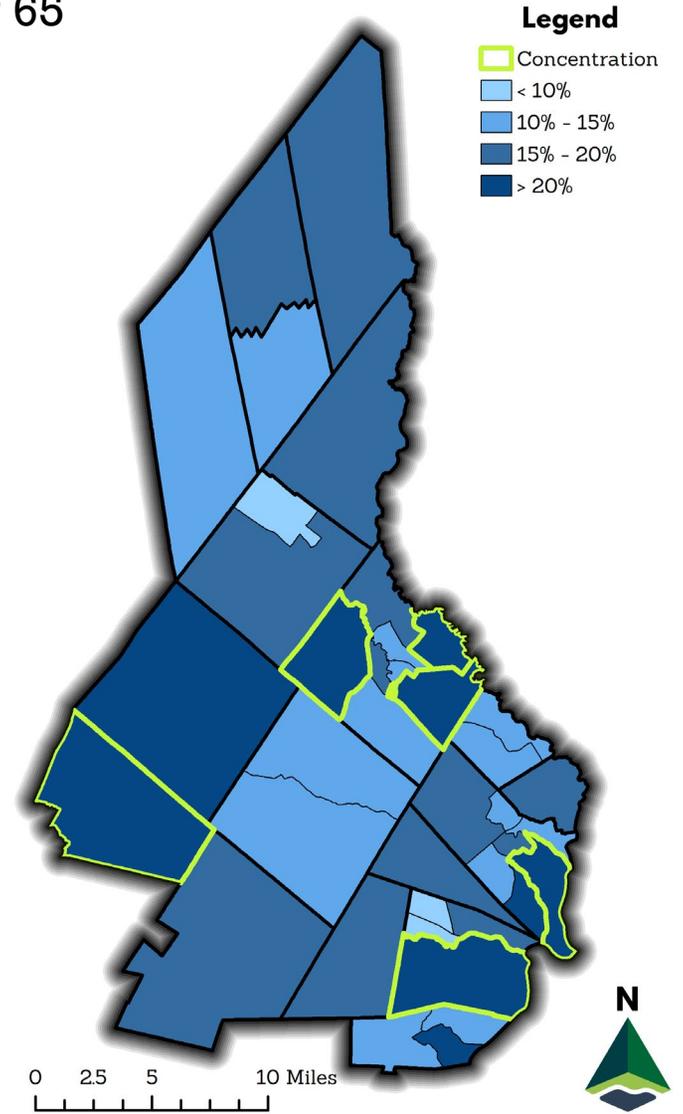
Source: US Census Bureau ACS. Year: 2020. Granularity: Census Tracts.

Age

Young Adults (18 – 25)



Adults over 65



Source: US Census Bureau ACS. Year: 2020. Granularity: Census Tracts.

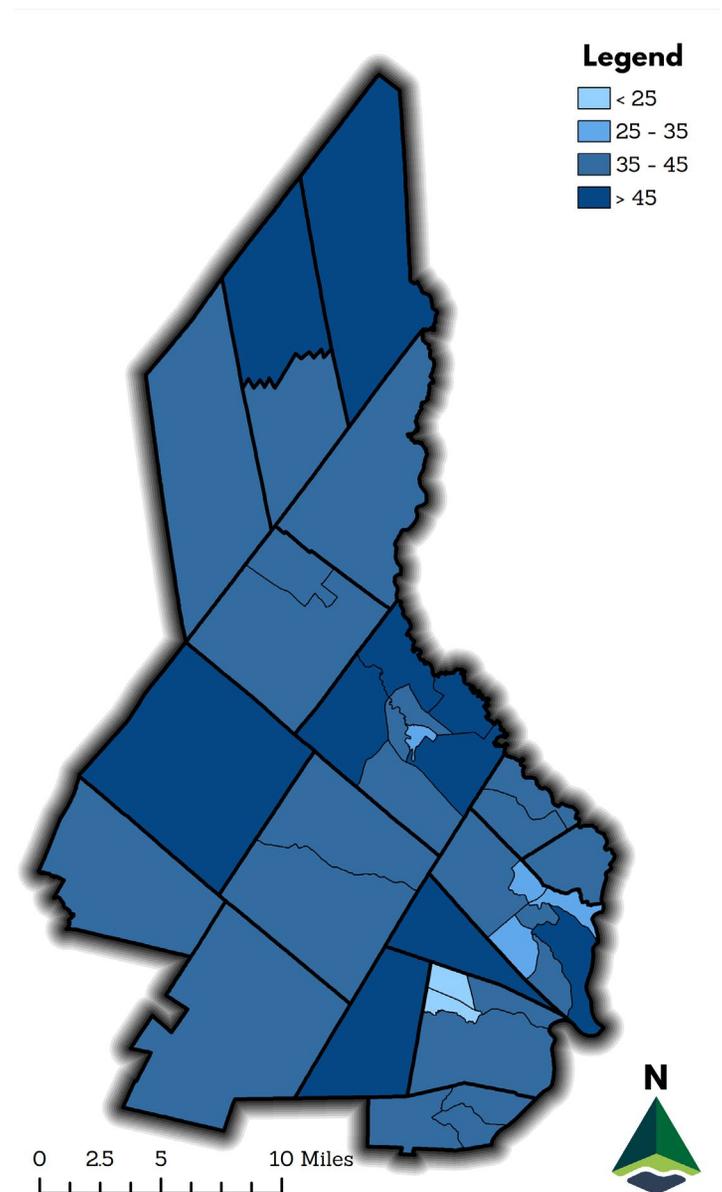
Median Age

The median age in SRPC's communities is increasing in all but three municipalities. The most significant changes are increases of 10 years in Strafford, 6.3 in Nottingham, and 6.2 in Wakefield.

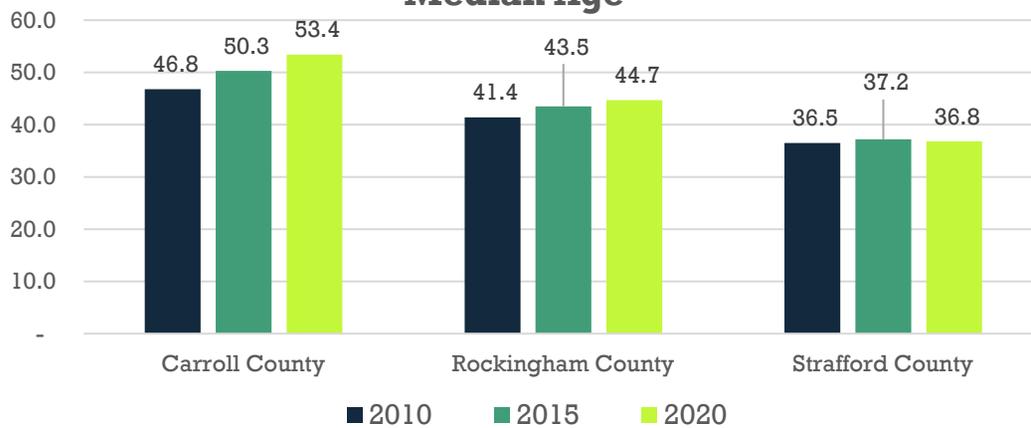
The large student population in Durham makes the town decisively the youngest in the region with a median age of 20.8. The next youngest community is Dover at 35.7, owing to a successful school district popular with young families and some overlap of the student rental market of UNH. Wakefield is the oldest community in the region with a median age of 50.3.

The median age in Strafford County remains constant, only increasing 0.3 year over a decade. Carroll and Rockingham counties have aged at more accelerated rates of 6.6 and 3.3 years, respectively.

Town	Median Age		
	2010	2020	Change
Barrington	37	39.2	2.2
Brookfield	51.4	47.9	-3.5
Dover	36.6	35.7	-0.9
Durham	20.7	20.8	0.1
Farmington	38.3	42.6	4.3
Lee	44	48.3	4.3
Madbury	34.6	37.8	3.2
Middleton	41.9	43.3	1.4
Milton	39.5	43.2	3.7
New Durham	42.8	41.4	-1.4
Newmarket	35.2	38.1	2.9
Northwood	40.8	44.5	3.7
Nottingham	38	44.3	6.3
Rochester	41.5	43.3	1.8
Rollinsford	41.7	43	1.3
Somersworth	36.5	39.2	2.7
Strafford	38.7	48.7	10
Wakefield	44.1	50.3	6.2



Median Age



Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Municipalities, Census Tracts.

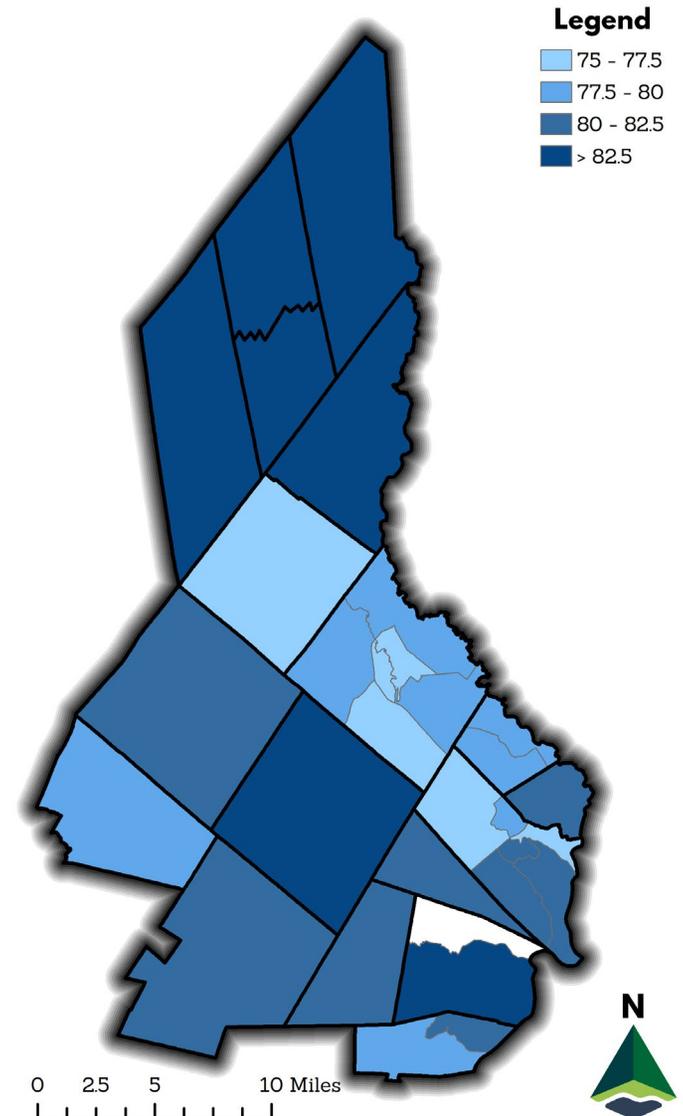
Life Expectancy

Life expectancy is the average number of years of life remaining at a given age. For the purposes of this page, SRPC assumes life expectancy at birth. Life expectancy is an important indicator for assessing public health at the local and regional levels.

Life expectancy has been increasing nationwide for at least 50 years. Projections published by the US Census Bureau in February 2020 predicted that the average life expectancy at birth would increase to 85.6 by 2060. The COVID-19 pandemic has caused the first significant drop in life expectancy in this 50-year period.

Local data is only available for 2015, therefore it may be difficult to realize the implications of life expectancy projections in the SRPC region. The map shown here displays these 2015 estimates. However, the United States as a whole saw a dip of 1.8 years to the average life expectancy in 2020 alone. Deaths overall increased 19% between 2019 and 2020, the largest spike in mortality in 100 years. See “Excess Deaths” for more information. Further study will be required when 2021 numbers and projections become available, as these will include the Delta and Omicron variant “spikes” in COVID-19 transmissions.

US Life Expectancy (Years)



Map - Source: CDC. Year: 2015. Granularity: Tracts.
 Chart - Source: CDC. Year: 2020. Granularity: United States.

Excess Deaths

Excess deaths are defined as the difference between observed deaths in a specific time period and the existing expected deaths for the same period. This metric is useful in looking at deaths over time. In the US Excess Deaths chart, you can see spikes in particularly bad flu seasons (the 2016-2017 and 2017-2018 flu seasons had over 38,000 and 52,000 deaths respectively). For 2020 and beyond, it can provide proof of mortality directly or indirectly related to COVID-19. Since the beginning of the pandemic, you can see spikes in excess deaths that correspond with each wave. In New Hampshire, COVID-19 was the third highest cause of death in 2020, and the main driver of excess deaths.

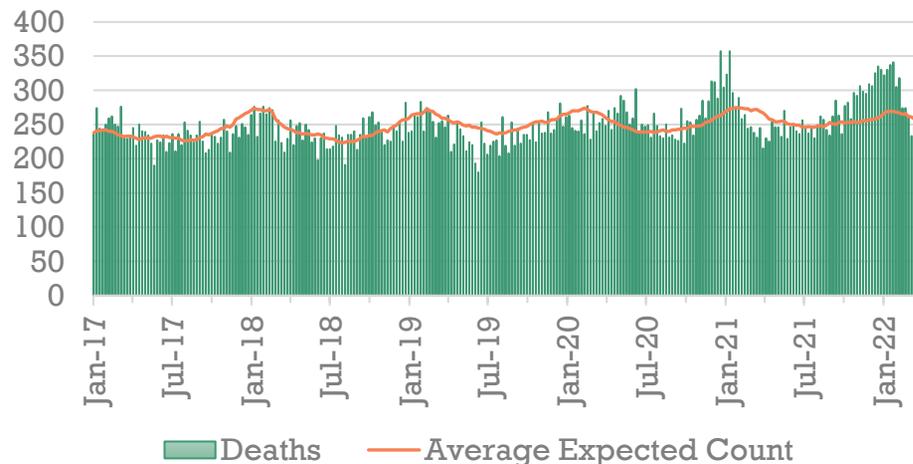
Reporting of deaths associated with COVID-19 may not be precise due to inconsistencies in testing. These charts instead reflect total deaths in a week, compared to the same week in the three previous years. This is a useful metric in looking at the overall impact of COVID-19 on mortality because it looks at deaths across all causes. In addition to deaths that were directly caused by the virus, the chart includes deaths caused by drug overdoses, supply chain disruptions making medical supplies or specific dietary needs harder to access, and delays in medical care due to hospitals operating at capacity or patients not seeking care in an effort to avoid the hospitals.

Due to low population density, New Hampshire did not suffer as many excess deaths as high-population states such as Texas, California, or Florida. However, the state still followed a similar trendline as the whole United States. Throughout the pandemic, the United States has totaled over one million excess deaths since 2020. New Hampshire has recorded 2,000 of these.

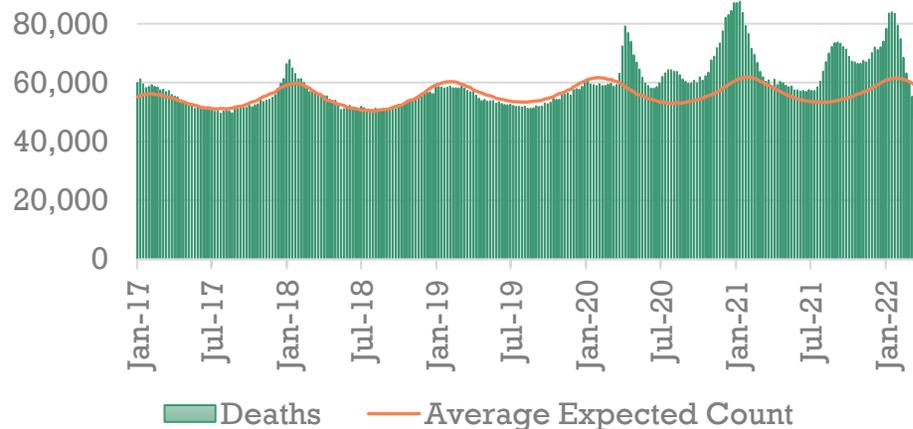
These numbers are current through the week ending April 9, 2022.

Source: CDC. Year: 2017-2022. Granularity: New Hampshire, United States.

NH Excess Deaths Per Week



US Excess Deaths Per Week



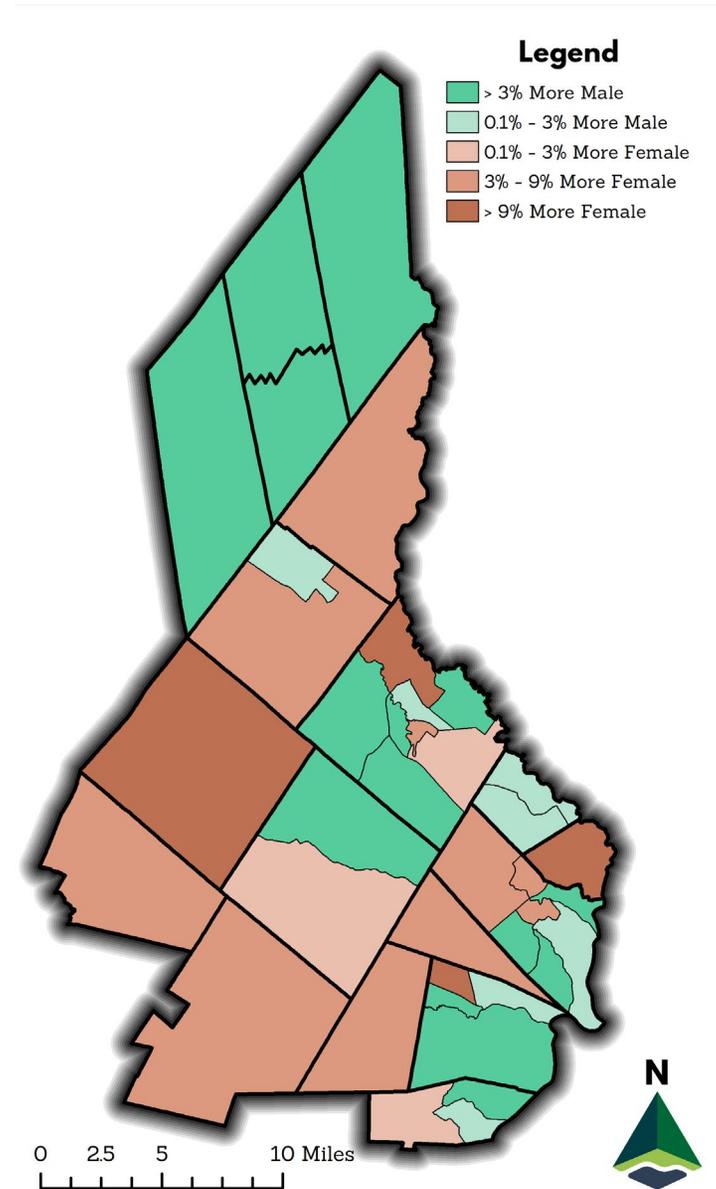
Sex

Disclaimer: The ACS survey only supplies two options for the choice of sex in its questionnaire. ACS data is reflective of sex as reported by respondents and not necessarily of gender identity.

ACS only surveys a small sample of housing units each year. As a result, data may be skewed by the housing units selected. As expected, the vast majority of SRPC tracts cluster around 50% male and female and the variance in data is consistent with random population distribution or minor variation due to sample size.

One of the four Census tracts in Durham is an outlier from this typical variation. The tract north of Main St and west of Madbury Rd appears to be 25% more female than male (i.e. 62% of tract residents are female and 38% are male). About 4,500 of the roughly 5,100 residents of that tract are between the ages of 18 and 24. Of those 4,500 residents, about 63% were female.

This trend is generally consistent with enrollment data reported by UNH for the total student body (approximately 1,000 more female undergraduate students than male undergraduates). For this reason, it may be reasonable to assume that this census tract does have more female residents than male. It could be true that over 60% of the students on this side of Main St and Madbury Rd are in fact female. Several dorms and sorority houses are present, so it is possible. It could also be that ACS sampling methods are artificially inflating the female population of this tract if a couple of sorority houses were surveyed. Once the Age and Sex data from the 2020 Decennial Census becomes available, it can be used to further analyze this trend.



Map - Source: US Census Bureau ACS. Year: 2020. Granularity: Census Tracts.
UNH Enrollment - Source: UNH. Year: 2020. Granularity: Durham.

Disability

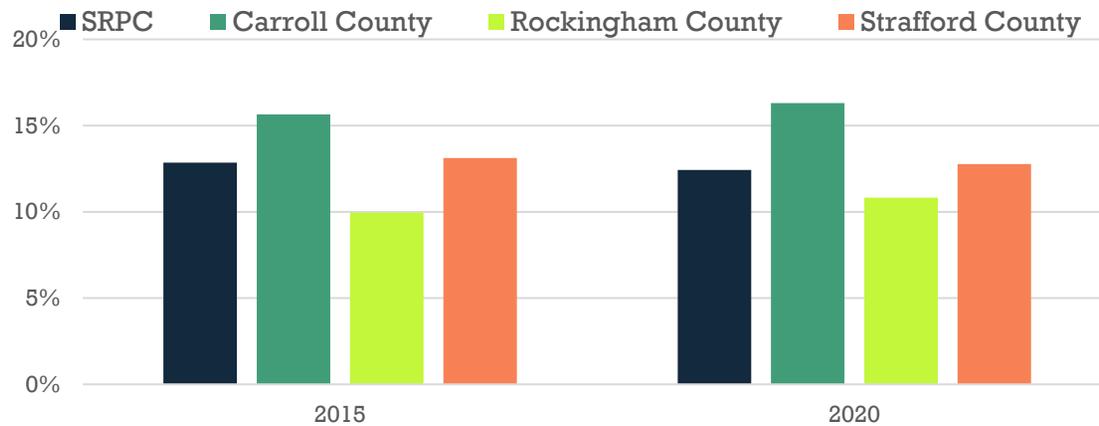
The percent of the population with a disability is calculated as the total population reporting any disability in a Census Bureau survey. While these rates are roughly the same for 2015 (12.9%) and 2020 (12.4%), the disabled population is still expected to increase with the rising median age in the SRPC region, particularly in municipalities in the northern half of the region. This will also become apparent as the age-dependent population in both the SRPC region and all of New Hampshire is weighed more heavily by the 65+ population than minor populations.

The following types of disabilities are captured by the ACS:

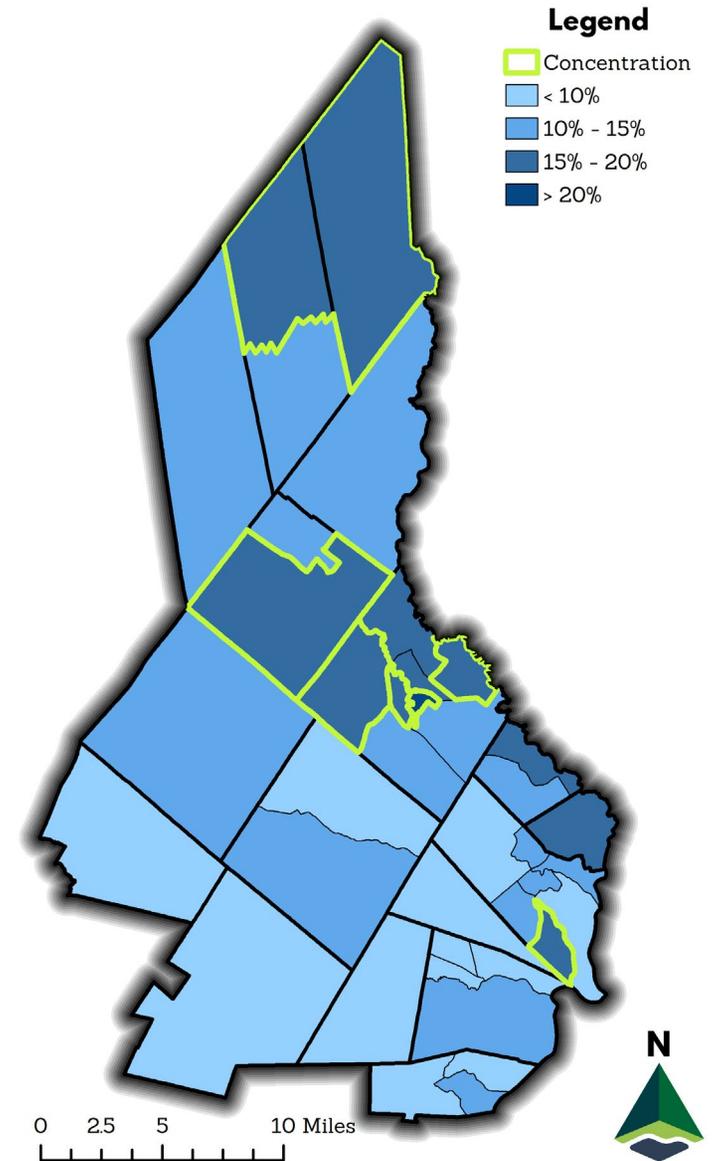
- Hearing difficulty
- Vision difficulty
- Cognitive difficulty
- Ambulatory
- Self-care difficulty
- Independent living difficulty

As the sample size in the ACS is very small, the chart and map of disabled populations reflects only the total population experiencing a disability, rather than particular types of disabilities experienced.

Population Reporting a Disability



Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Census Tracts.

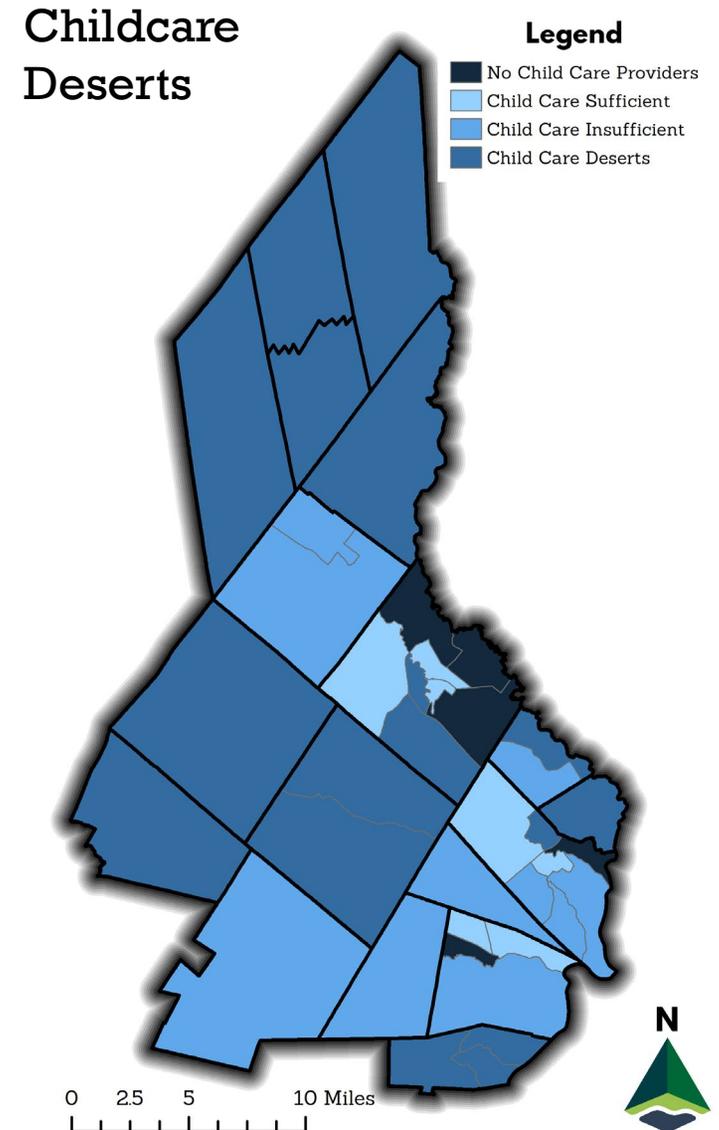


Childcare

The SRPC region has 59 operating childcare programs of any type as of 2019. Out of the fifty states and the District of Columbia, New Hampshire ranked thirteenth for populations residing in “**child care deserts**,” census tracts with “more than 50 children under age five that [contain] either no childcare providers or so few options that there are more than three times as many children as licensed childcare slots.” Forty-six percent of New Hampshire families resided in areas of this nature in 2018, a figure that climbed to 57 percent in rural areas. Neighboring Maine ranked fifty-first, with only 22 percent of its population residing in childcare deserts.

The map to the right looks at the capacity of the licensed childcare providers and divides this by the number of children under the age of 5 years old in each tract.

- **No Child Care Providers** indicates that there are no licensed child care providers.
- **Child Care Sufficient** indicates that the capacity is greater than or equal to the number of children residing in the area. This does not mean that there are any open spots available, as these “extra” spots are likely filled by children from other tracts.
- **Child Care Insufficient** indicates that the child care capacity is less than the number of children, but does not meet the threshold for child care deserts outlined above.
- **Child Care Deserts** are areas where the number of children under 5 is three times the capacity of the licensed providers.

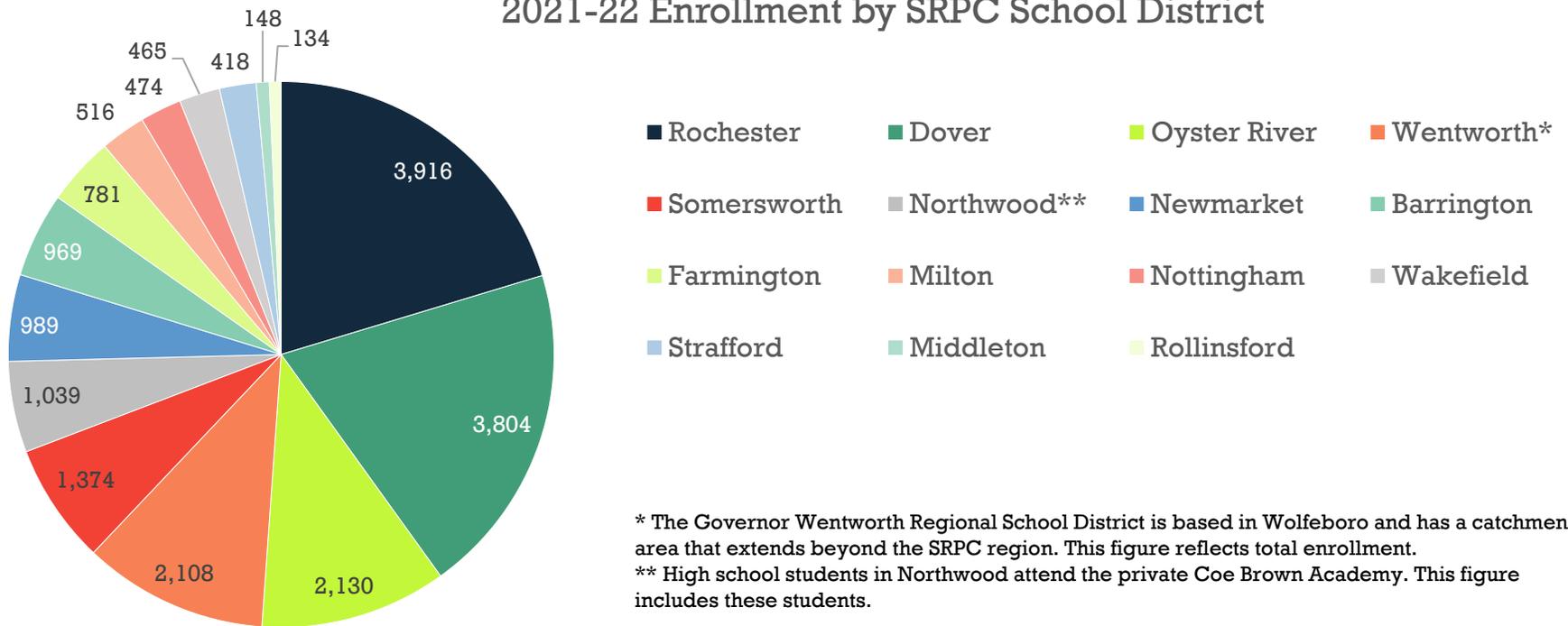


Map - Source: Center for American Progress. Year: 2018. Granularity: Census Tracts.
Numbers in Text - Source: NH Connections. Year: 2019, 2020. Granularity: Census Tracts.

School Enrollment

There are fifteen school districts in the SRPC region, with 19,265* students (PreK – 12) enrolled in the 2021-22 school year. Some SRPC school districts operate only elementary schools and record enrollment numbers that reflect this. Middle and High school students from these districts attend school in neighboring districts.

2021-22 Enrollment by SRPC School District



* The Governor Wentworth Regional School District is based in Wolfeboro and has a catchment area that extends beyond the SRPC region. This figure reflects total enrollment.
 ** High school students in Northwood attend the private Coe Brown Academy. This figure includes these students.

Source: NHDOE. Year: 2021. Granularity: SRPC.

Educational Attainment for the Population Over 25

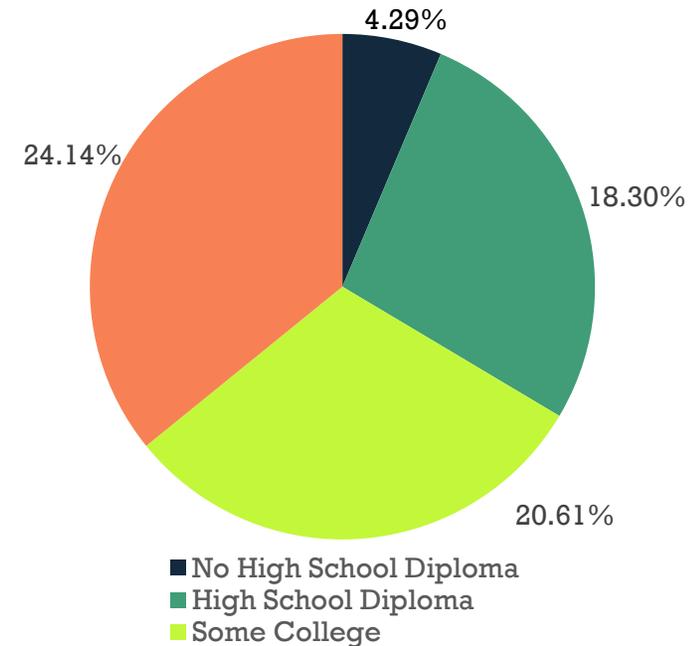
Educational attainment metrics are reported for populations over 25 years old. This captures the population that the Census Bureau has assumed to be old enough to have completed a four-year degree.

Each of these metrics represent the percent of the population by the **highest** level of educational attainment achieved.

- “No High School Diploma” includes all the education attainment categories from “no schooling completed” to “12th grade, no diploma.”
- “High School Diploma or GED” includes high school graduates or those who have obtained a GED or equivalent.
- “Some College” includes anyone who has attended any college or vocational program for some duration but has not completed a 4-year degree. Those who have obtained an associates degrees and/or other certificates are included here.
- “College Degree” includes all 4+ year degrees, Masters, and Doctorates.

The following Educational Attainment chart and respective maps may not include all University of New Hampshire undergraduate students, as many are under the age of 25. While the majority of the 18-24 year-old population of Durham is pursuing a college degree, they are not captured in this section. In the Age section of this Snapshot, there is information about the high percentage of young adults aged 18-24, which highlights where most UNH undergraduate students live.

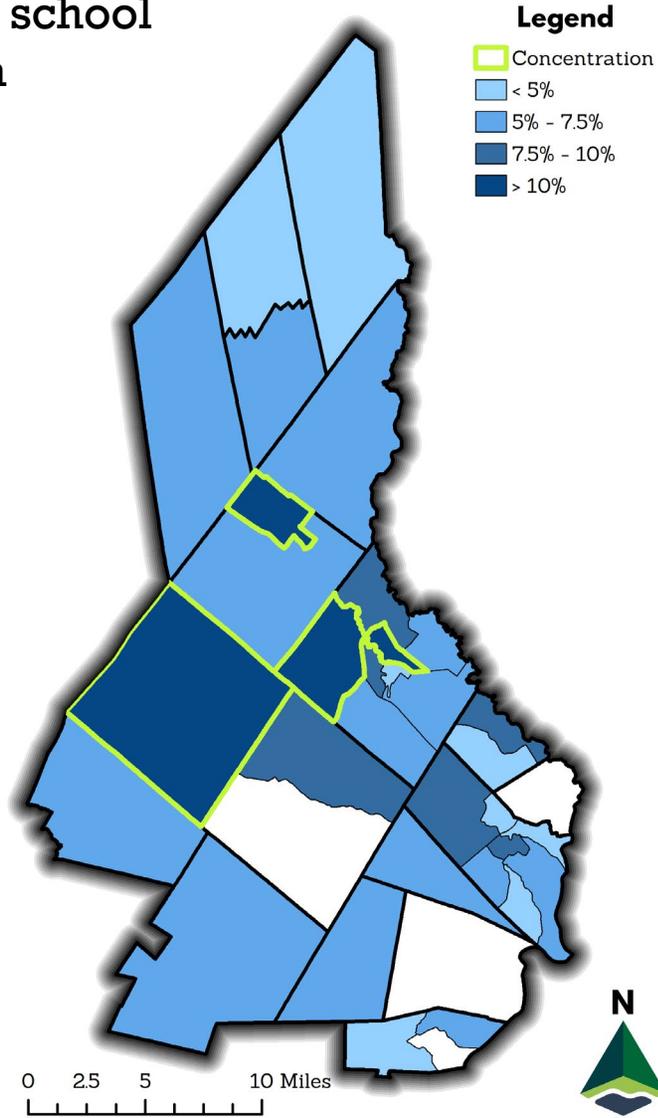
Education Attainment of Population Over 25



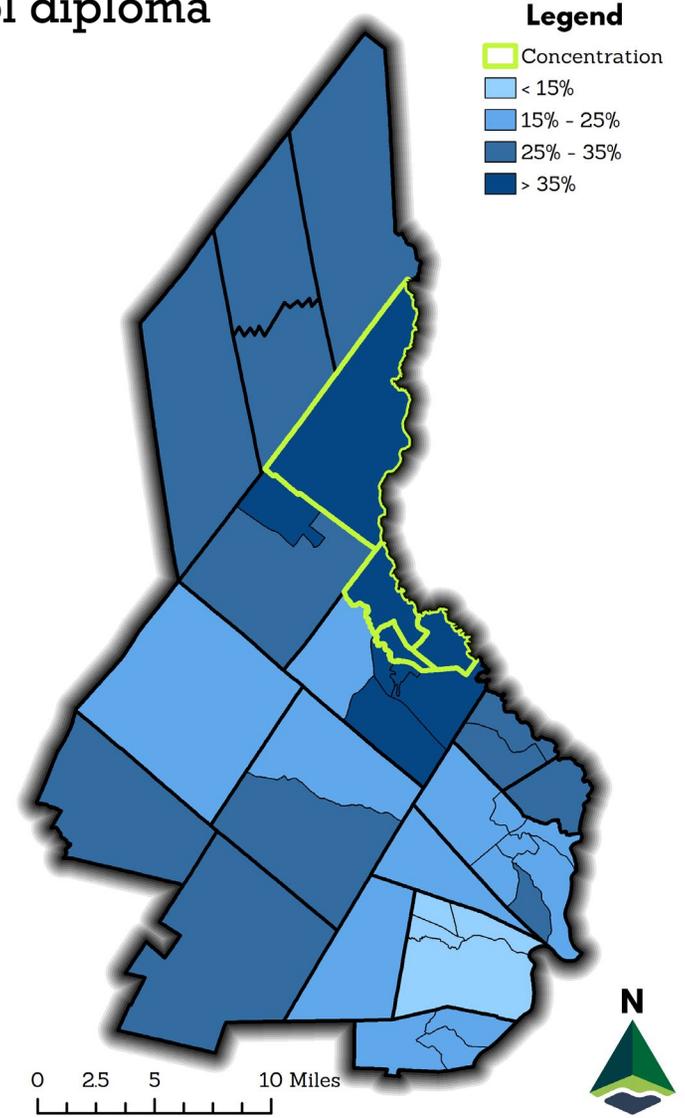
Source: US Census Bureau ACS. Year: 2020. Granularity: Municipalities, Census Tracts.

Educational Attainment of the Population Over 25 Years Old

No high school diploma



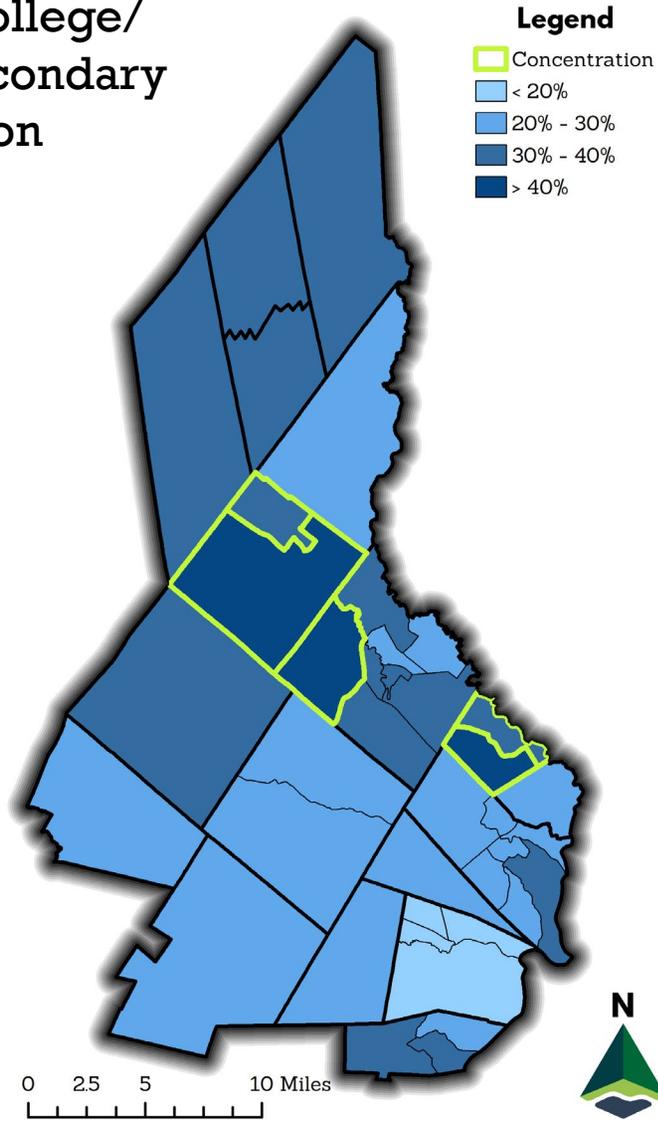
High school diploma



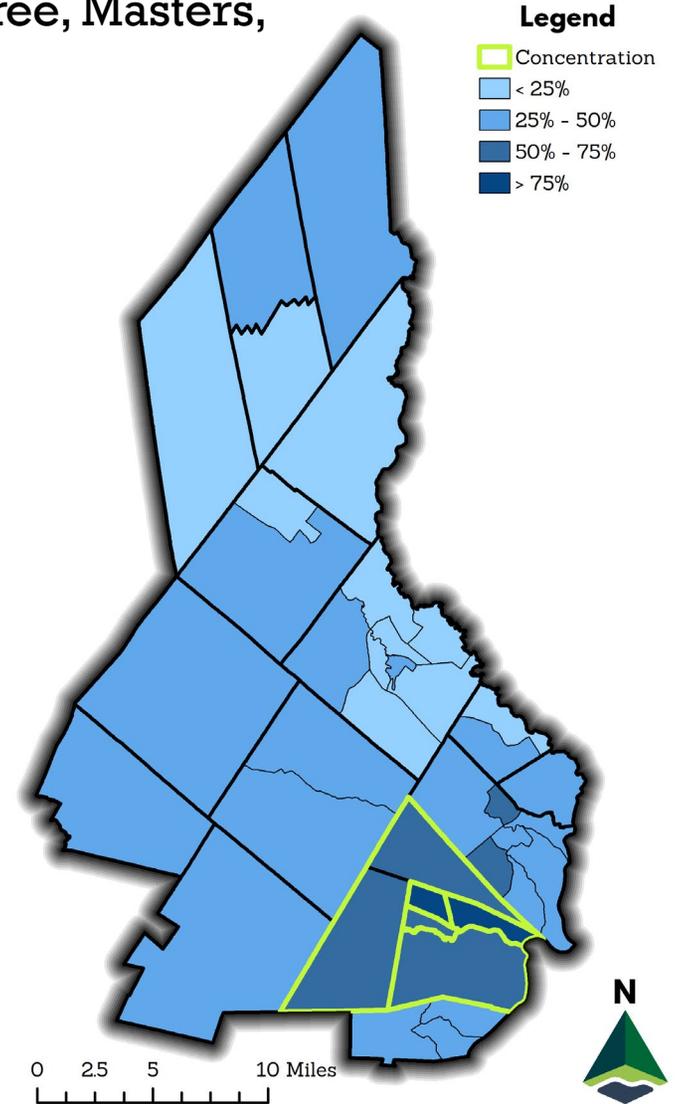
Source: US Census Bureau ACS. Year: 2020. Granularity: Municipalities, Census Tracts.

Educational Attainment of the Population Over 25 Years Old

Some college/
post-secondary
education



4-year degree, Masters,
PhD



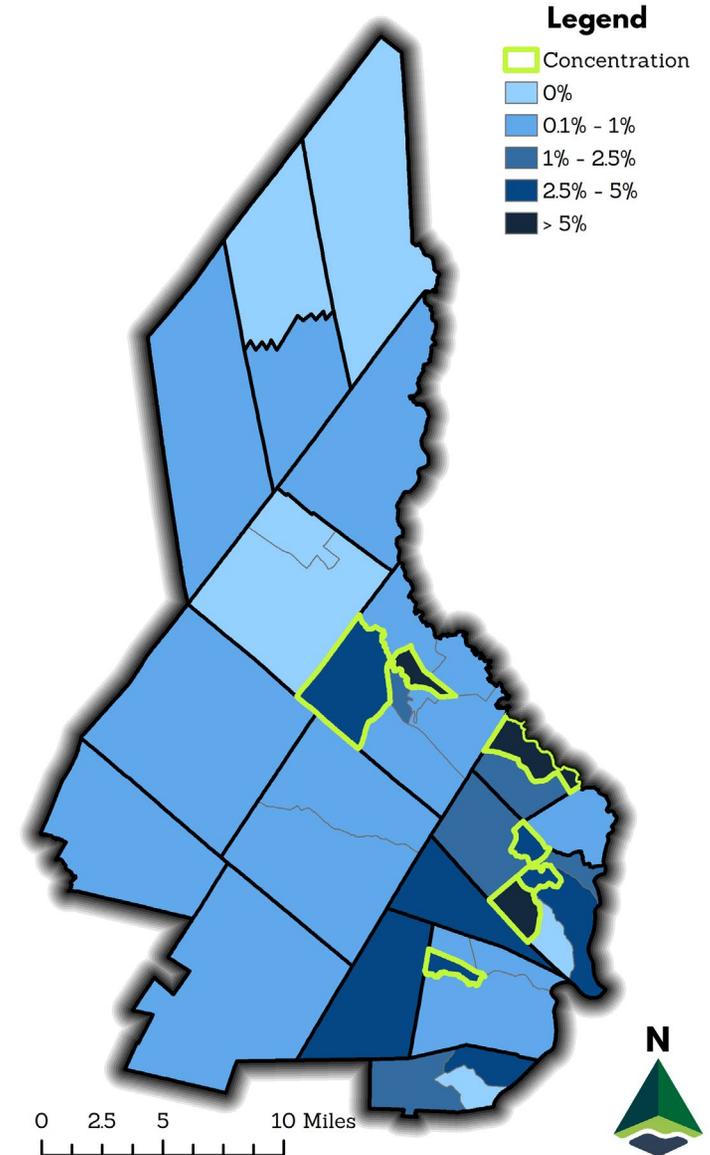
Source: US Census Bureau ACS. Year: 2020. Granularity: Municipalities, Census Tracts.

Individuals with Limited English Proficiency

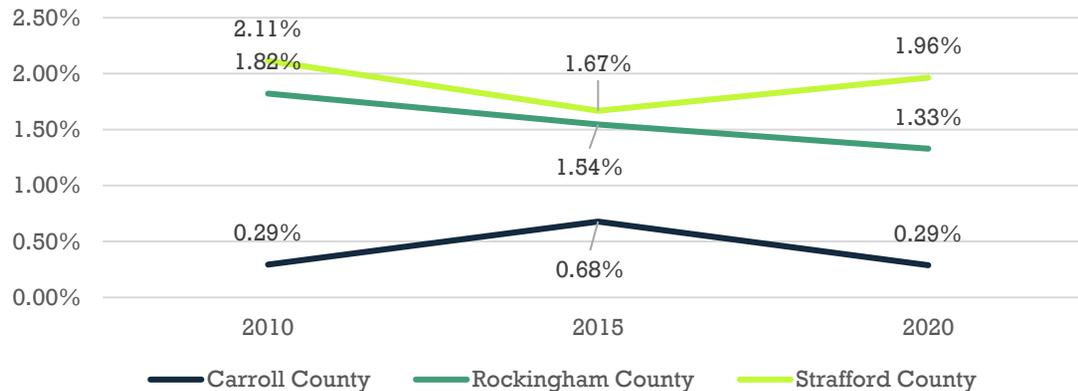
Individuals with Limited English Proficiency (LEP) are people over the age of 5 who do not speak English at least “Very Well”.

Census municipal ACS¹ data indicates that there are LEP Individuals in Dover, Durham, Rochester, and Somersworth. There may also be some LEP Individuals in Lee and Newmarket, although the data quality is very poor in those communities, so it is unclear if this is an accurate estimate.

Data for this particular metric is very limited. The data was removed (as described in the Census Data Disclaimer) for almost all of the municipalities and tracts in the region. As a result, data for counties are available in the chart below.



Individuals with Limited English Proficiency



¹ This assumption is based on the presence of two or more non-overlapping 5-year estimates (2006-2010, 2011-2015, and 2016-2020) that have estimates for with the margin of error does not exceed the estimate.

Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Census Tracts.

Linguistically Isolated Households

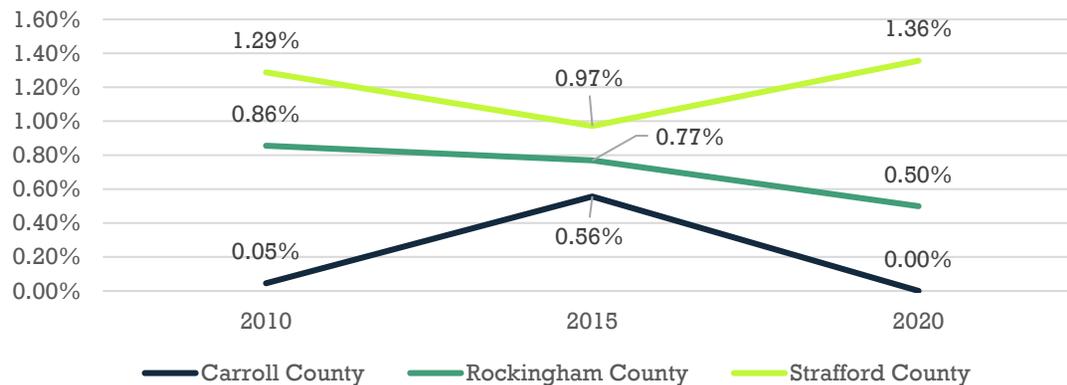
A household in which there are no residents over the age of 14 who can speak English at least "Very Well" is considered linguistically isolated. This is a different determination than individuals with Limited English Proficiency (LEP), as households without any adults who can speak English often struggle with receiving social services, accessing medical attention, and employment opportunities. For families, this may place a burden on a child to communicate on behalf of a parent or guardian.

While there are 2,500 LEP individuals in the region, there are approximately 650 linguistically isolated households (these numbers have been rounded due to the variability in the data).

Census municipal ACS¹ data indicates that there are limited-English households in Dover, Durham, Rochester, and Somersworth. There may also be some limited-English households in Lee and Newmarket.

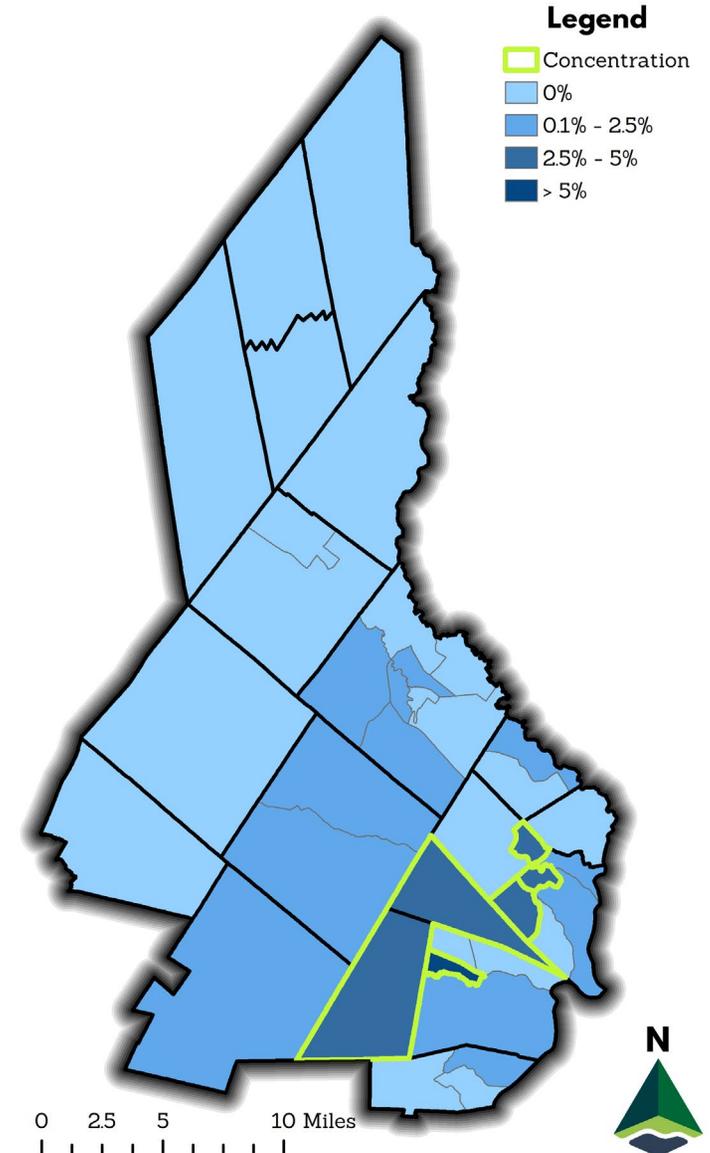
The data for this particular metric is very limited. The data was removed (as described in the Census Data Disclaimer) for almost all of the municipalities and tracts in the region. As a result, data for counties are available in the chart below.

Linguistically Isolated Households



¹ This assumption is based on the presence of two or more non-overlapping 5-year estimates (2006-2010, 2011-2015, and 2016-2020) that have estimates for which the margin of error does not exceed the estimate.

Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Census Tracts.



ECONOMIC VITALITY

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Employment and the Labor Force

Within the SRPC region, there were over 54,000 jobs before the COVID-19 pandemic. The most common industry was the service sector (77%) which includes educational services, retail, healthcare and social assistance, and food service. Health care was projected to see the most growth by 2028. The municipalities projected to see the most employment growth by 2045 were Dover and Madbury (26% more jobs in each), Newmarket (24% more jobs), and Rochester (22% more jobs). More information about industries can be found under “Employment by Industry.”

In 2018, 55.7% of the SRPC region's employees lived in the region, 29.2% lived in other parts of New Hampshire, 10.4% lived in Maine, and 3.2% lived in Massachusetts. Conversely, only 40% of the region's employed residents were working inside of the region, with about 47.5% commuting to other parts of New Hampshire and the remainder working in other states. More information about commuting patterns is found under “In-Area Labor Force Efficiency.”

The region had also observed growth in its labor force participation, which includes residents who are actively employed and residents who are unemployed but were looking for work prior to the COVID-19 pandemic (for classification of “discouraged workers” see page 29). Since 2010, the overall number of people employed in the SRPC region was increasing as the number of job-seeking unemployed people decreased.

This subsection has information about:

- Employment trends and projections by industry and geography.
- In-area labor force efficiency.
- Labor force participation.
- Employment of workers under the age of 18.
- Employment of workers over the age of 64.

The COVID-19 pandemic has notably affected all of the metrics in this section. Workplace and business closures, quarantine regulations, and childcare needs all influenced regionwide and statewide employment trends. State authorities, RPCs (like SRPC), and local governments continue to monitor the effects of the pandemic.

Entering the third year of the COVID-19 pandemic, the labor force is still not back to where it was pre-pandemic. In contrast, unemployment rates and the number of claims files are both lower than pre-pandemic levels. New challenges have also emerged as businesses struggle to keep up the pace with the surge in consumer demand- including record-high inflation rates, strains on supply chains, increased cost of goods, and workforce shortages.

Throughout this section, there are some metrics that are based on the location of the job and some that are based on the people with the job.



This icon means that the metric is based on the number of jobs held. One person can have more than one job, so this will be greater than the number of employed people.



This icon means that the metric is based on the number of employed people. One person can have more than one job, so this will be less than the number as the number of jobs held.

Employment Projections to 2045



NH Employment Security (NHES) projects employment for ten years biennially. SRPC's Travel Demand Model relies on population and employment projections for each scenario year. The current scenario years are 2015, 2025, 2035, and 2045. Projections from NHES and the NH OPD are used for the model and extended out as needed for the scenario years. See the Demographics section for the Population Projections that are also used in the model.

These projections show an increase in the number of jobs in all the municipalities in the region. Additionally, the region is projected to grow or stay level in all industries except agriculture and communications.

Please note that these estimates and projections were developed prior to the COVID-19 pandemic and may not reflect current employment trends. These figures are still valuable, as they show regional pre-pandemic trends and may be indicative of the region's labor force skillset.

Industry (NAICS Sector)	2015	2025	2035	2045
Agriculture, Forestry, & Fishing (11)	136	133	129	126
Business, Legal, & Personal (54, 55, 56)	3,844	4,351	4,931	5,595
Communications (51)	997	963	932	906
Construction (23)	1,703	1,836	1,985	2,143
Eating & Drinking Establishments (72)	364	404	431	462
Educational Services (6)	8,331	8,718	9,124	9,551
Finance, Insurance, & Real Estate (52, 53)	4,298	4,569	4,861	5,170
Government (92)	2,218	2,314	2,416	2,524
Health Services (62)	2,923	3,351	3,851	4,424
Hotels & Lodging (72)	4,122	4,161	4,446	4,748
Manufacturing (31)	5,498	5,548	5,606	5,667
Mining (21)	32	33	33	37
Non-Classifiable (99)	3,046	3,270	3,516	3,776
Retail Trade (44)	6,952	7,338	7,743	8,174
Service (general) (71)	642	710	782	864
Social Services (62)	4,527	5,212	5,988	6,881
Transportation (48)	1,216	1,237	1,260	1,285
Utilities (22)	72	72	71	71
Wholesale Trade (42, 81)	2,832	3,034	3,249	3,478
Total (SRPC)	53,753	57,254	61,354	65,882

Municipality	2015	2025	2035	2045
Barrington	1,911	2,017	2,140	2,272
Brookfield	14	15	16	17
Dover	18,192	19,581	21,212	23,029
Durham	6,728	7,069	7,462	7,883
Farmington	1,041	1,100	1,166	1,239
Lee	1,302	1,381	1,476	1,581
Madbury	275	296	321	348
Middleton	140	148	156	165
Milton	651	680	714	753
New Durham	238	251	266	283
Newmarket	1,468	1,570	1,690	1,824
Northwood	1,055	1,123	1,198	1,281
Nottingham	343	361	385	411
Rochester	12,373	13,183	14,140	15,198
Rollinsford	527	546	573	599
Somersworth	6,150	6,515	6,935	7,400
Strafford	372	392	415	441
Wakefield	973	1,026	1,089	1,158
Total (EDD)	50,887	54,200	58,081	62,366
Total (SRPC)	53,753	57,254	61,354	65,882

EDD denotes the Strafford Economic Development District, which excludes municipalities in Rockingham County.

Source: NHES. Year: 2015. Granularity: Municipalities.

Employment by Industry

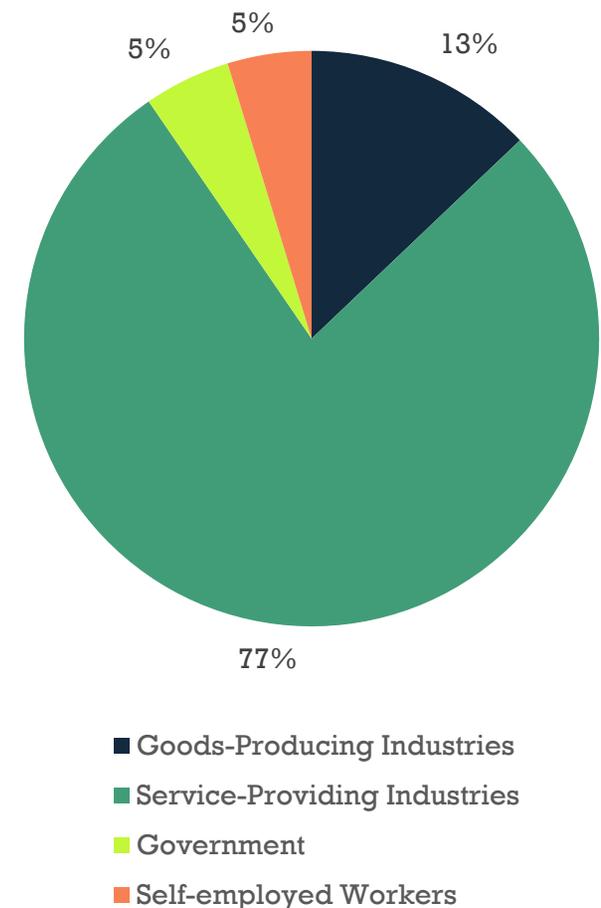


NH Employment Security provides ten-year employment forecasts by industry. The latest projections are based on 2018 estimated employment.

These estimates and projections were developed prior to the COVID-19 pandemic and may not reflect current employment trends.

Industry Projections, 2018 to 2028	2018	2028
Industry Title	Estimated	Projected
Total Employment	55,617	59,235
Goods-Producing Industries	7,541	7,755
Agriculture, Forestry, Fishing and Hunting	160	169
Mining	21	21
Construction	1,785	2,005
Manufacturing	5,575	5,560
Service-Providing Industries	45,317	48,492
Utilities	n	n
Wholesale Trade	1,202	1,200
Retail Trade	7,401	7,441
Transportation and Warehousing	1,188	1,210
Information	639	634
Finance and Insurance	2,694	2,783
Real Estate and Rental and Leasing	428	457
Professional, Scientific, and Technical Services	3,009	3,693
Management of Companies and Enterprises	156	158
Administrative and Support and Waste Management Services	2,353	2,604
Educational Services	8,244	8,508
Health Care and Social Assistance	7,638	8,701
Arts, Entertainment, and Recreation	683	734
Accommodation and Food Services	4,902	5,393
Other Services (Except Government)	1,876	1,987
Government	2,845	2,932
Self-employed Workers	2,759	2,988

2018 Employment by Industry



n = Employment data do not meet disclosure standards

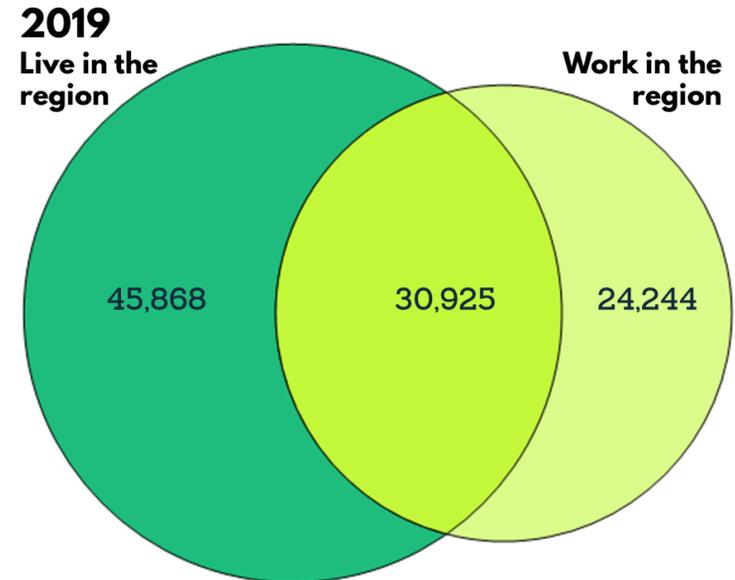
Source: NHES. Year: 2018. Granularity: SRPC.

In-Area Labor Force Efficiency



The Longitudinal Employer-Household Dynamics (LEHD) dataset is maintained by the US Census Bureau. LEHD is known for its origin-destination employment statistics data (LODES).

This data is based on jobs rather than workers, so the total labor force represented in this data may be larger than the labor force referenced in other metrics. One worker may hold multiple jobs at a time or within a reporting period such that the individual would be represented here more than once.



	2017	2018	2019
Living in the Region	45,624	45,698	45,868
Living and Employed in the Region	29,572	29,937	30,925
Employed in the Region but Living Outside	23,710	23,995	24,244

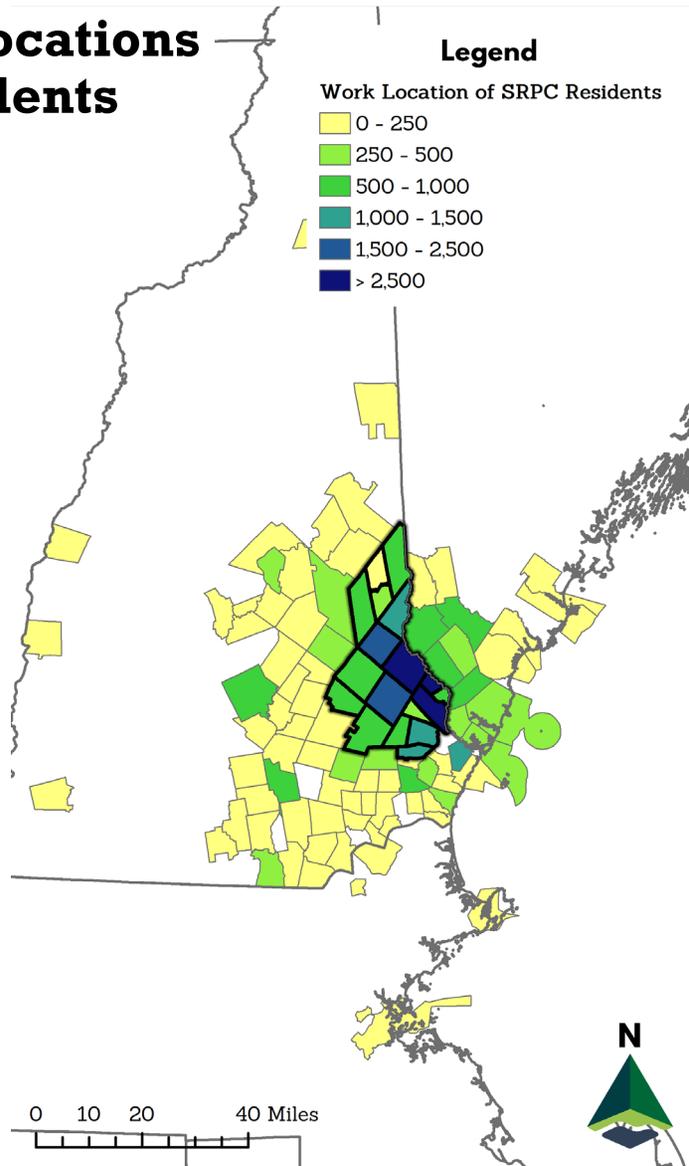
	Lives... ...and Works		
	here not here	here here	not here here
Total	45,868	30,925	24,244
Workers Aged 29 or younger	10,992	6,965	5,912
Workers Aged 30 to 54	23,304	15,545	11,795
Workers Aged 55 or older	11,572	8,415	6,537
Workers Earning \$1,250 per month or less	8,848	6,963	5,790
Workers Earning \$1,251 to \$3,333 per month	11,695	9,340	6,399
Workers Earning More than \$3,333 per month	25,325	14,622	12,055
Workers in the "Goods Producing" Industry Class	7,450	5,200	2,877
Workers in the "Trade, Transportation, and Utilities" Industry Class	10,114	4,411	5,664
Workers in the "All Other Services" Industry Class	28,304	21,314	15,703

Source: US Census Bureau LEHD. Year: 2019. Granularity: SRPC.

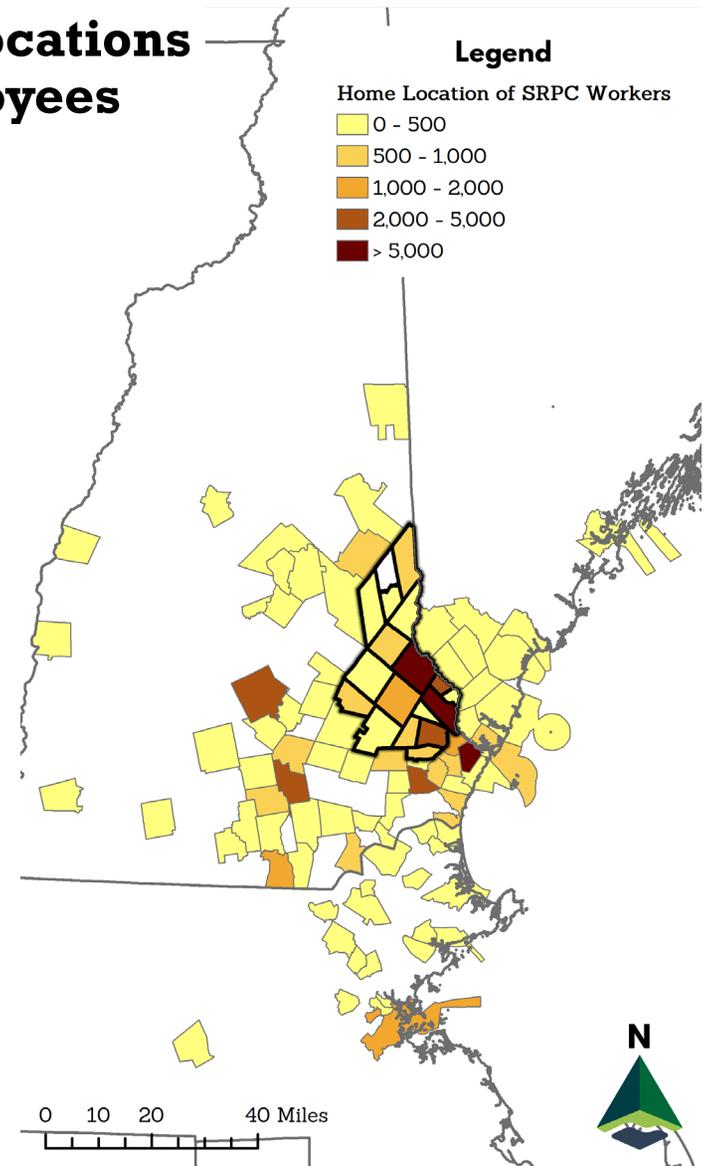
In-Area Labor Force Efficiency



Work Locations of Residents



Home Locations of Employees



Source: US Census Bureau LEHD. Year: 2019. Granularity: SRPC.

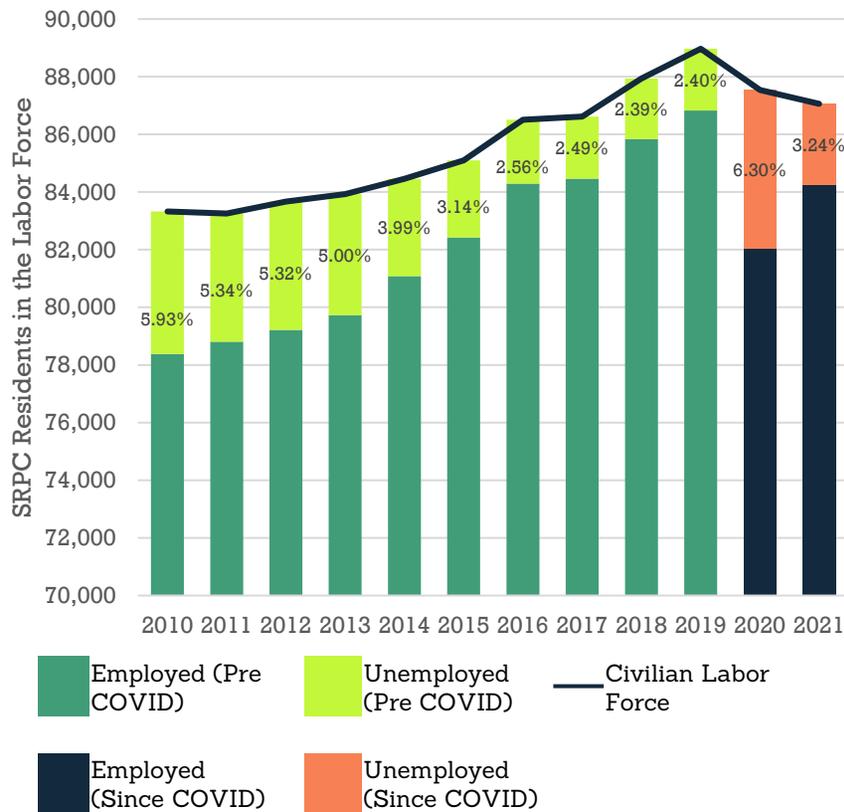
Labor Force Participation



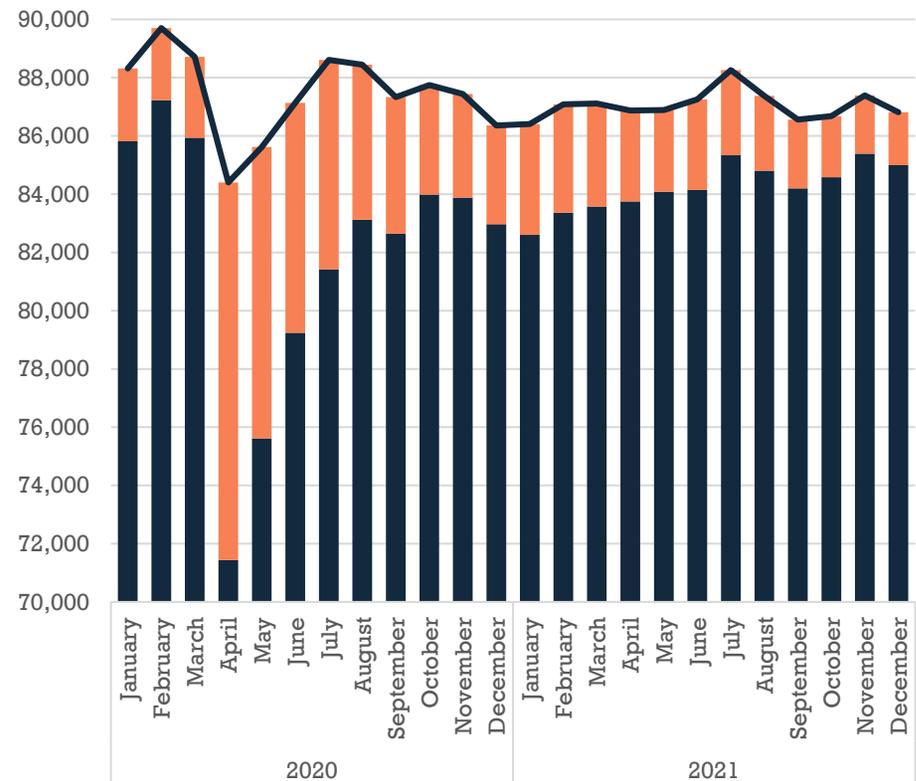
This data is a summary of the total labor force which consists of people who are actively employed, and those who are unemployed but actively looking for work. Local Area Unemployment Statistics (LAUS) from NHES does not include discouraged workers (i.e., people who are not employed but not actively looking for work) as unemployed.

Labor force participation is used directly to determine the unemployment rate of the region. Below, it is apparent that unemployment rose in the late 2000s financial crisis and was decreasing until the COVID-19 pandemic. Up to 2019, the labor force and the employed population grew at similar rates.

SRPC Regional Employment 2010-2021



SRPC Regional Employment 2020-2021



Source: NHES. Year: 2010 - 2021. Granularity: SRPC.

Percent of Employees Under Age 18

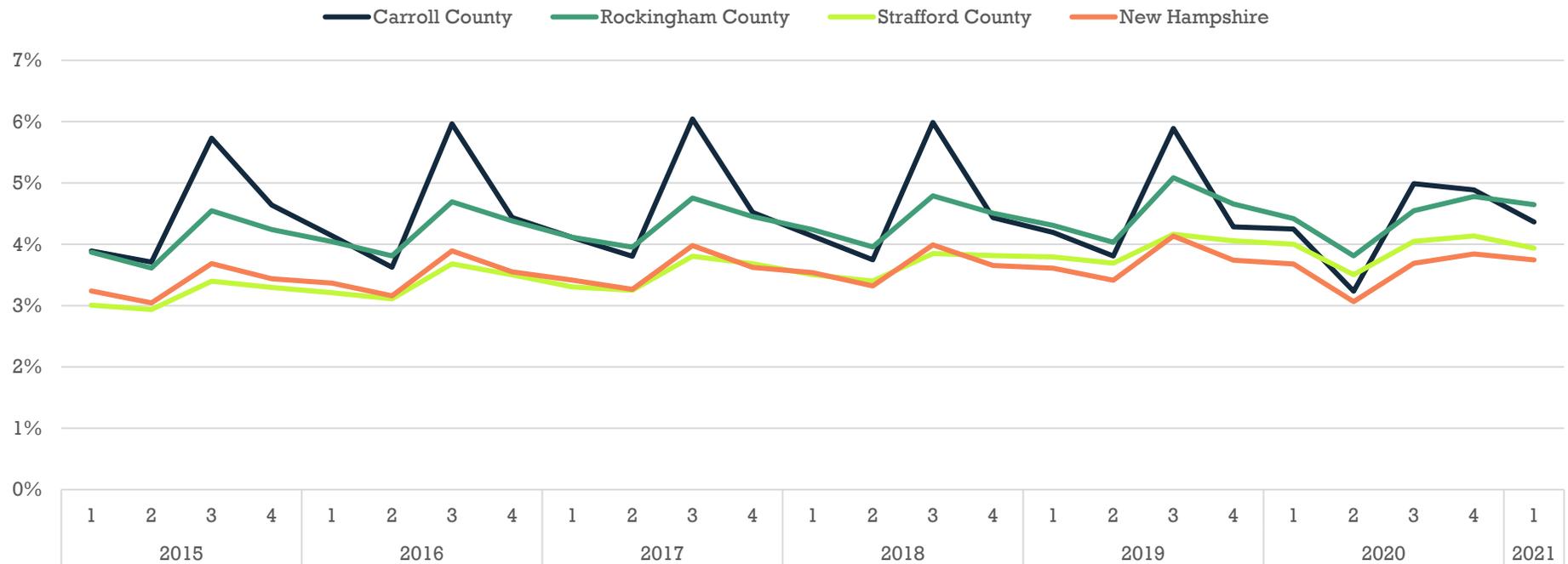


This data summarizes the percent of employed people who are under the age of 18 who earned a paycheck at the beginning of each quarter. For employees working between April and June (Q2), they would have to earn a paycheck at the beginning of April. Employees hired through the spring and early summer will not be counted until they receive a paycheck at the beginning of July. As a result, the workforce under the age of 18 spikes yearly in Q3 (July-September) due to summer break and seasonal positions becoming available.

This trend is most noticeable in Carroll County due to the tourism demand of the summer, especially around the lakes. Rockingham County has a similar, though less pronounced spike in young employees in the summer months.

COVID-19 caused a major drop in Q2 and Q3 of 2020 as many tourist destinations were closed in response to the pandemic. These jobs have not entirely recovered, however, the remainder of 2020 and early 2021 indicate a return to seasonal trends for this employed group.

Percent of Employees under age 18



Source: US Census Bureau LEHD QWI. Year: 2015 - 2021. Granularity: Counties, NH.

Percent of Employees Over Age 65



This data summarizes the percent of employed people who are over the age of 65 who were employed and earned a paycheck at the beginning of each quarter. For employees working between April and June (Q2), they would have to earn a paycheck at the beginning of April. Employees hired through the spring will not be counted until they receive a paycheck at the beginning of July.

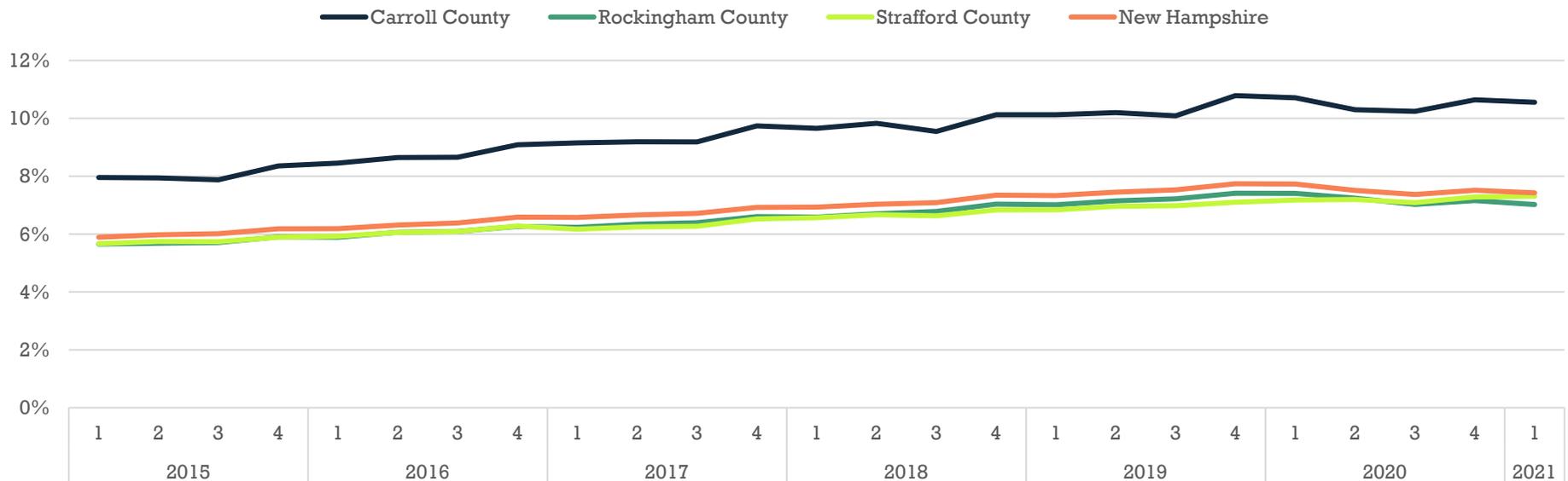
The percent of the workforce over the age of 65 is increasing statewide. Strafford and Rockingham Counties follow the state trend very closely, while Carroll county has a much higher percent of the workforce over the age of 65. This follows the trends in the age of the residents in the counties as well.

Carroll County has a larger percent of residents over 65 (26.7%) than the rest of the state (17.5%) and employment trends reflect this. See Demographics for more information.

An increasing retirement age has also influenced the employment of adults over 65 nationwide. The Social Security Administration is raising the retirement age to 67 for those born 1960 and later. For more information see the SSA's website:

<https://www.ssa.gov/pressoffice/IncRetAge.html>

Percent of Employees over age 65



Source: US Census Bureau LEHD QWI. Year: 2015 - 2021. Granularity: Counties, NH.

Workforce Numbers by Age



The raw number of workers in the high-school-age and retirement-age brackets shows similar trends to those displayed by their share of the total workforce.

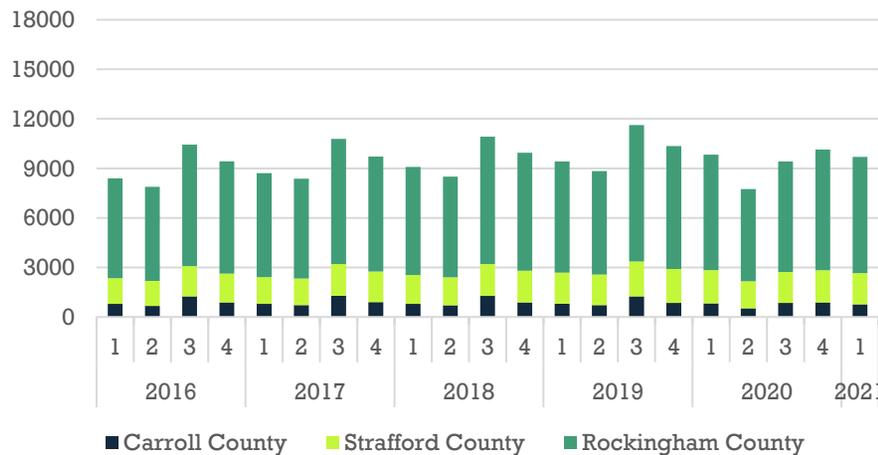
The workforce under 18 shows strong seasonal variability, but year-over-year comparisons of the same quarter show steady growth from 2016-2019. Total employment of workers under 18 shows significant recovery in 2020 Q4 and 2021 Q1, matching 2018 Q4 and 2019 Q1, though not quite to their full 2019 Q4 and 2020 Q1 levels.

Trends for workers over 65 show less seasonal variability and prior to 2020 showed continual growth, especially in Q3 and Q4 of each year, punctuated by small losses or stagnation in Q1 of the following year (possibly driven by workers who took supplemental holiday jobs before resigning in the new year). 2021 Q1 employment shows this cohort exceeding their 2018 equivalent, but not yet achieving their pre-pandemic 2020 totals.

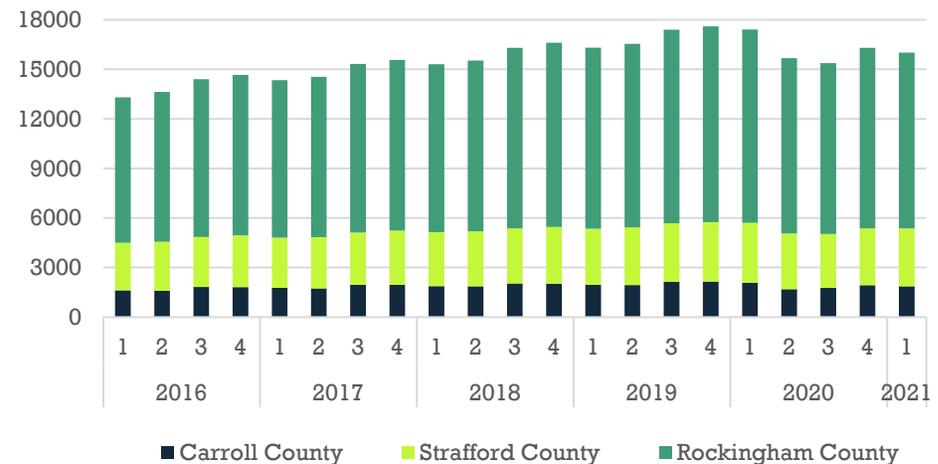
More time and data are necessary to gauge whether these recovery trends continue, as 2021 Q2-Q3 coincided with the emergency of the Delta variant, and Q4 2021 with the Omicron variant. While neither variant led to widespread shutdowns, the continued spread of COVID-19 forced many workers to isolate after exposures, and many businesses either shifted hours or were forced to close intermittently.

Decisions by workers under 18 or over 65 to return to work may continue to be impacted by the pandemic. Young workers may be less likely to return if they viewed their income as discretionary. Some older workers also seem to have retired earlier than previously planned. However, comparison of employment within these cohorts to the broader workforce indicates that these pandemic impacts do not appear to have caused these cohorts to exit the workforce at a notably higher rate than the population at large.

Employees Under 18



Employees Over 65



Source: US Census Bureau LEHD QWI. Year: 2015 - 2021. Granularity: Counties, NH.

Workforce Numbers by Age

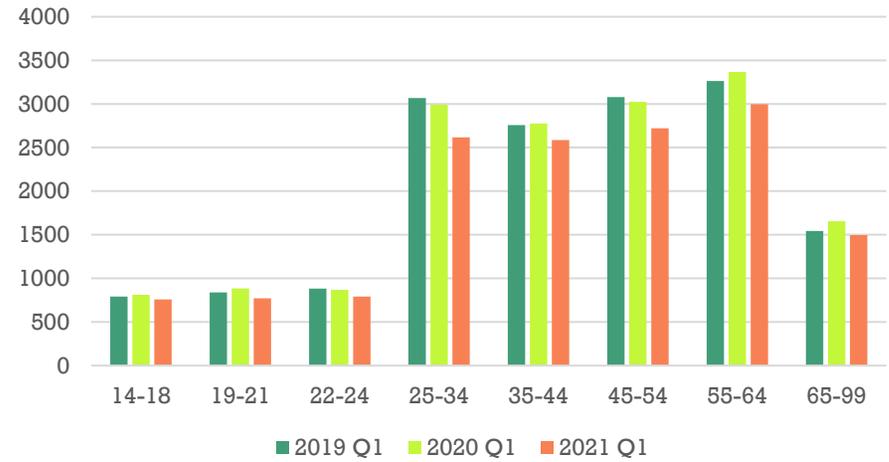


Strafford and Rockingham Counties have shown marked recovery even two years after the start of the COVID-19 pandemic, while Carroll County struggles somewhat.

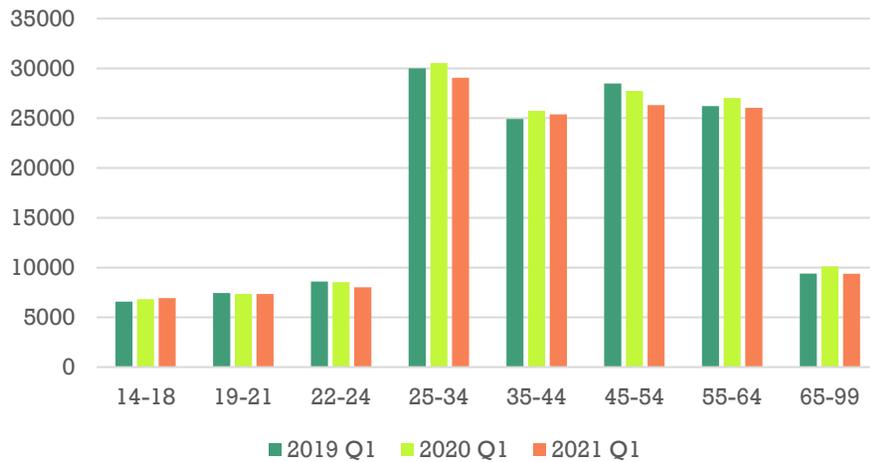
In all three counties, the number of high-school-age and retirement-age employees are recovering the fastest. These two age groups were trending up even before the onset of the pandemic.

The 22-24 and 45-54 age groups of workers were declining prior to the pandemic and are experiencing a slow recovery.

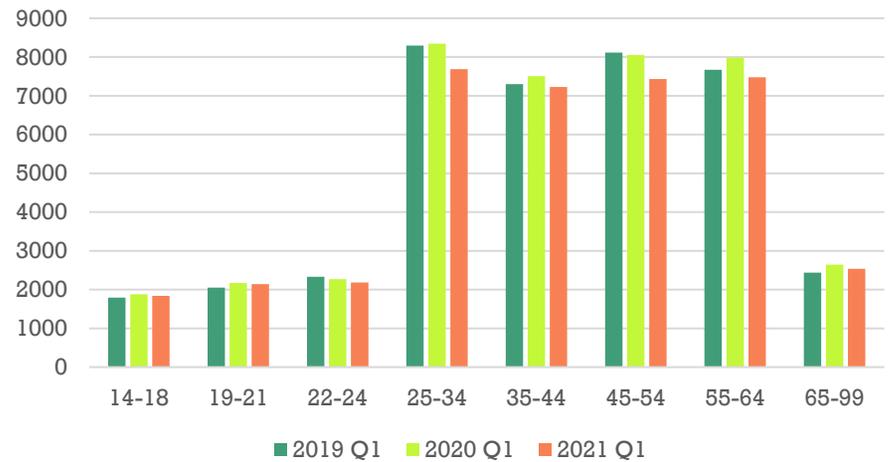
Carroll County



Rockingham County



Strafford County



Source: US Census Bureau LEHD QWI. Year: 2019 - 2021. Granularity: Counties, NH.

Income

ACS metrics are subject to variability based on the sample size and to the time of collection (Spring 2020).

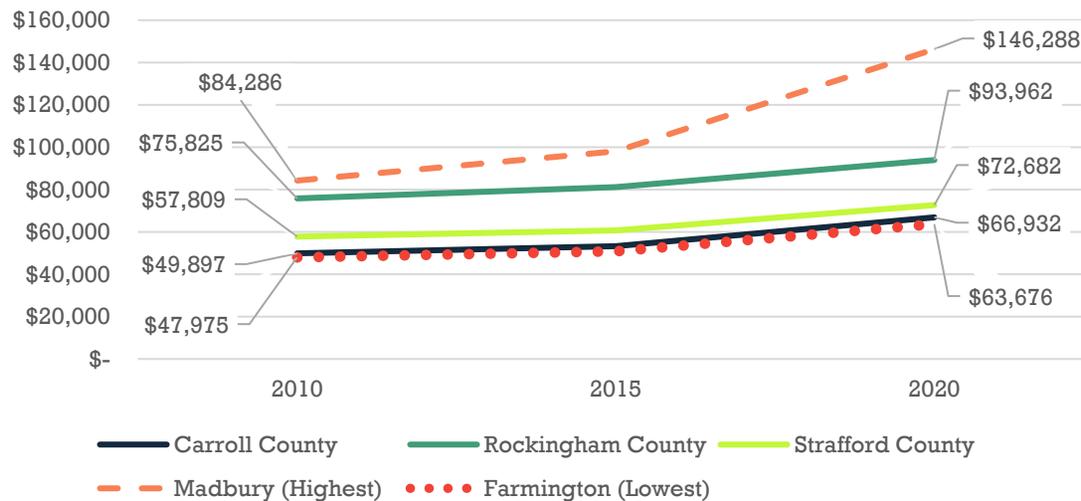
Metrics regarding income in this subsection include:

- Median household income.
- Low-income households.
- Percentage of households in defined income brackets.
- Income inequality.

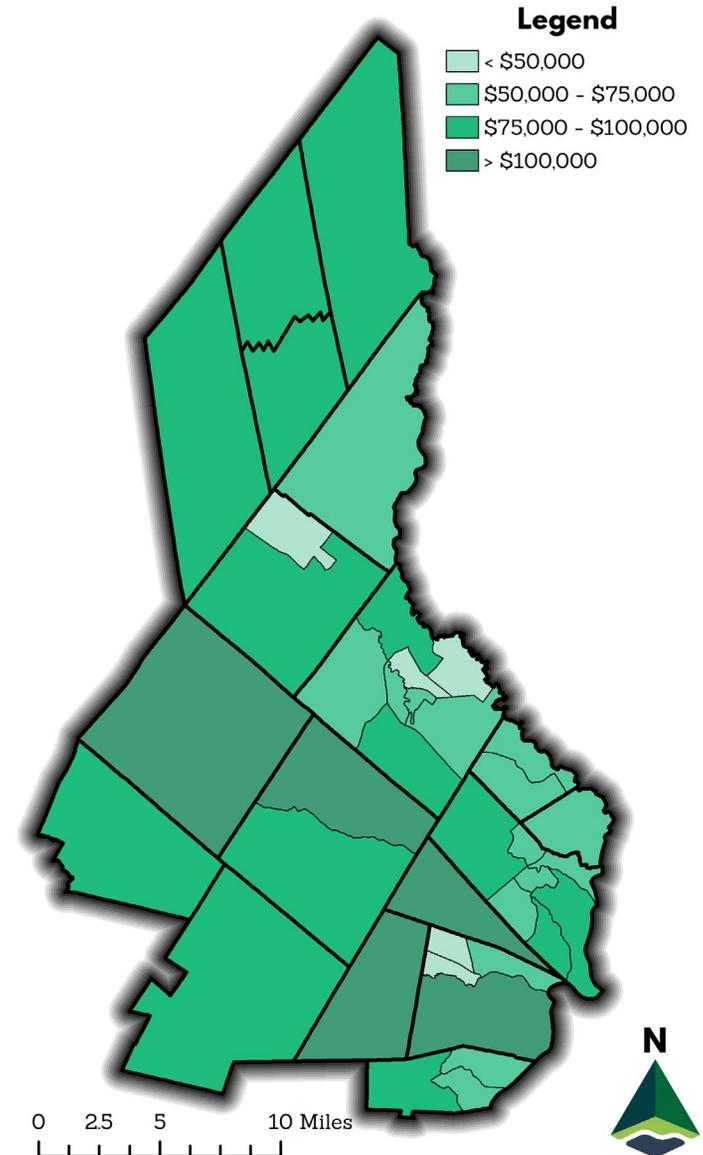
The median household incomes for the state of New Hampshire and all three counties with SRPC communities are increasing. The median income in Strafford County is increasing at a rate higher than the state. The median income in Rockingham County is over \$16K more than the state median and is also increasing at a higher rate. Carroll County's median income is about \$11K less than the state, although increasing at about the same rate.

Local governments and RPCs like SRPC will be monitoring this information as the workforce navigates the inclusion of remote work in its future.

SRPC Median Household Income



Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, NH, Census Tracts.

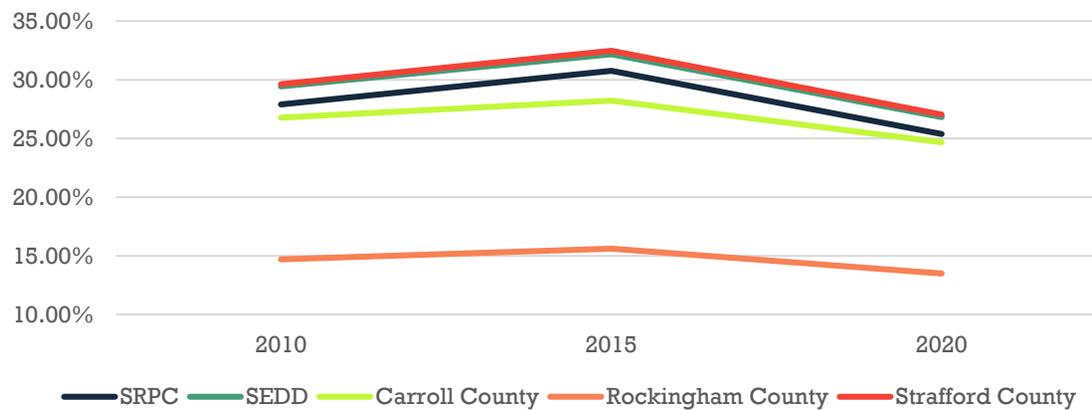


Poverty

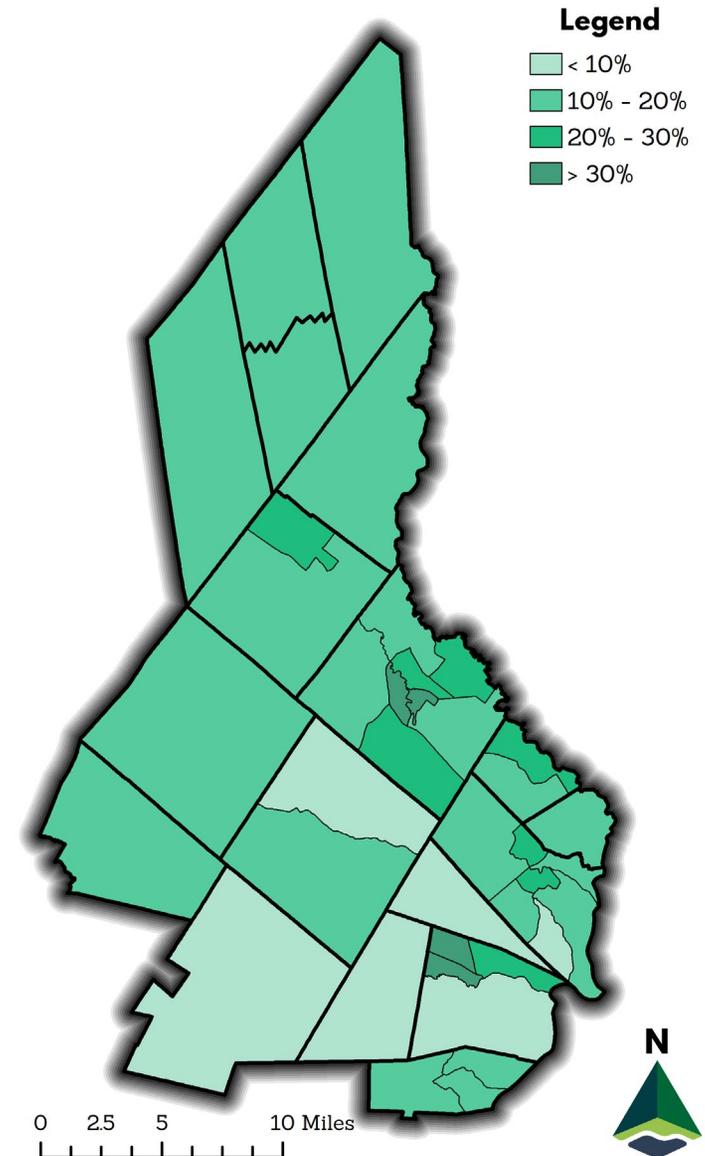
Each year the US Census Bureau calculates poverty thresholds based on a selection of household configurations. These assumptions are based on the age of the head of household and the presence of children. In addition to thresholds for each of the household configurations, they also develop a weighted threshold. The low-income population map in this section is based on the household configurations and household income. It is representative of the population living in households with incomes that are less than 2 times the poverty threshold for their household income configuration. The table below shows the weighted average poverty threshold for the specified household size.

Household Size	2017	2018	2019	2020	2021
1	\$ 12,488	\$ 12,784	\$ 13,011	\$ 13,171	\$ 14,097
2	\$ 15,877	\$ 16,247	\$ 16,521	\$ 16,733	\$ 18,145
3	\$ 19,515	\$ 19,985	\$ 20,335	\$ 20,591	\$ 21,196
4	\$ 25,094	\$ 25,701	\$ 26,172	\$ 26,496	\$ 27,949
5	\$ 29,714	\$ 30,459	\$ 31,021	\$ 31,417	\$ 33,705
6	\$ 33,618	\$ 34,533	\$ 35,129	\$ 35,499	\$ 38,767
7	\$ 38,173	\$ 39,194	\$ 40,016	\$ 40,406	\$ 44,606
8	\$ 42,684	\$ 43,602	\$ 44,461	\$ 44,755	\$ 49,888
9+	\$ 50,681	\$ 51,393	\$ 52,875	\$ 53,905	\$ 60,012

Low Income Population



Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, NH, Census Tracts.

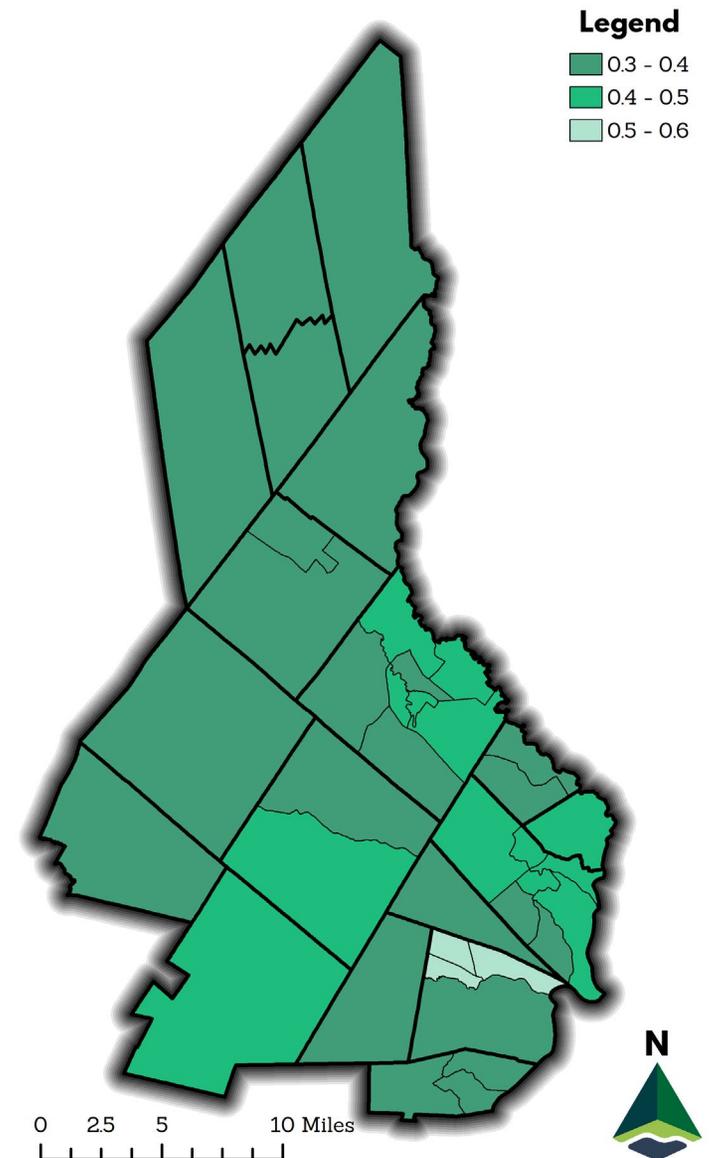


Income Inequality

The Gini Index is a measure of income inequality. It ranges from 0.0 to 1.0, where 0.0 is perfect equality and 1 is complete inequality. The map to the right shows low to high income inequality.

A low Gini Index alone does not positive or negative connotations for a community. Consider Madbury and Farmington, the towns with the highest and lowest median household incomes. Madbury has the lowest Gini Index in the region (tied), the lowest percent of low income residents, and the highest percent of households earning over \$200K. Meanwhile, Farmington also has a low Gini Index, but also a very high percentage of low income residents and the lowest percent of households earning over \$200K.

Town	Gini Index	Median Household Income	Low Income Population	Households Earning Over \$200K
Barrington	0.41	\$98,275	9.39%	18.10%
Brookfield	0.36	\$91,071	10.06%	5.80%
Dover	0.44	\$74,833	22.03%	7.80%
Durham	0.51	\$83,289	65.36%	17.20%
Farmington	0.39	\$63,676	26.42%	2.50%
Lee	0.36	\$97,438	10.92%	17.30%
Madbury	0.34	\$146,288	6.10%	25.20%
Middleton	0.38	\$79,167	18.64%	9.00%
Milton	0.35	\$74,848	20.34%	3.10%
New Durham	0.38	\$75,893	13.98%	8.50%
Newmarket	0.40	\$76,731	17.76%	8.60%
Northwood	0.34	\$94,141	13.58%	8.30%
Nottingham	0.41	\$82,229	10.61%	7.70%
Rochester	0.43	\$66,831	28.39%	3.10%
Rollinsford	0.40	\$71,366	14.85%	5.80%
Somersworth	0.36	\$67,209	19.52%	1.60%
Strafford	0.34	\$115,344	20.19%	10.50%
Wakefield	0.35	\$75,050	23.67%	4.10%
Carroll County	0.47	\$66,932	24.67%	6.60%
Rockingham County	0.43	\$93,962	13.50%	14.60%
Strafford County	0.43	\$72,682	27.03%	7.40%



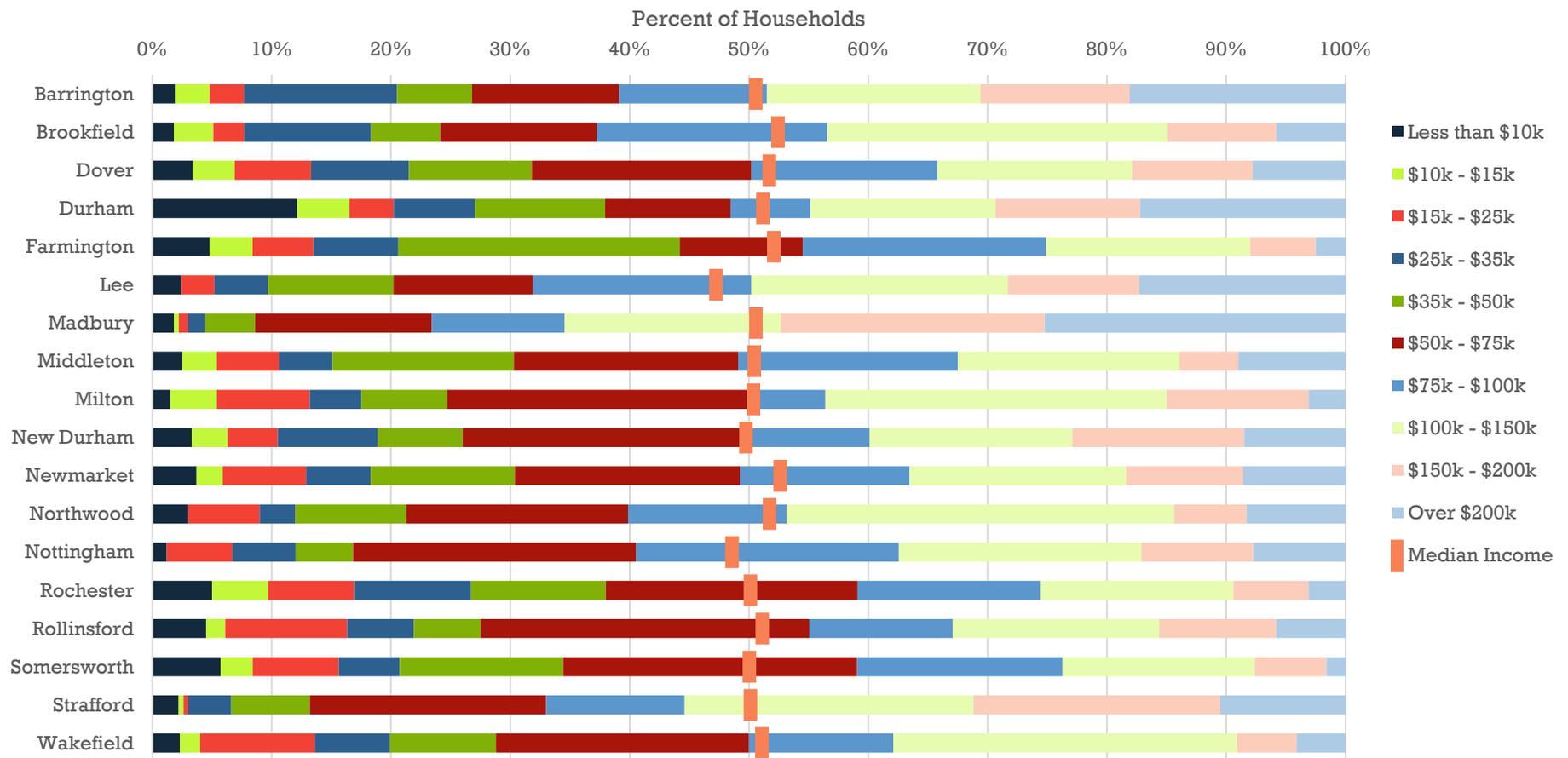
¹ <https://www.census.gov/topics/income-poverty/income-inequality/about/metrics/gini-index.html>
 Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, NH, Census Tracts.

Households in Defined Income Brackets

The chart below displays the percent of households within each income bracket for each municipality. In addition, the median household income is displayed proportionally within the corresponding income bracket. For example, in Durham the

median household income is \$81,995, which is about \$7K above the lower limit of the defined \$75K-\$100K income bracket.

Households in Defined Income Brackets



Source: US Census Bureau ACS. Year: 2020. Granularity: Municipalities.

Social Security, Disability, and Retirement

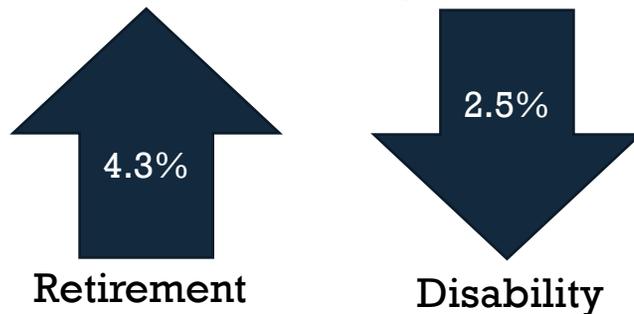
Social security benefits have provided a “safety net” for vulnerable populations for decades in the United States. However, there are two distinct benefit types that are commonly confused. Supplemental Security Income (SSI) is intended for the elderly and those experiencing disabilities who are unable to work, including children. This program was initiated in the 1970s and recipients of these benefits may be colloquially referred to as “collecting disability.” OASDI, or Old Age, Survivors, and Disability Insurance, is the traditional income-calculated benefit colloquially referred to as “retirement” or “social security.” Its inception has roots in the New Deal of the second Roosevelt administration.

It is possible for an individual to receive both types of assistance.

Recipients of OASDI benefits in the SRPC region account for around 10% of all New Hampshire beneficiaries across all categories. Although disbursement of all benefits to the SRPC region increased in 2020, retirement assistance grew while disability assistance shrunk. This is likely due to a nationwide phenomenon of workers nearing the end of their careers electing to retire earlier than expected during the onset of the COVID-19 pandemic. Economic hardship may have necessitated a return to work for disabled workers, a more vulnerable demographic.



Social Security Changes in 2020



OASDI (Old Age, Survivors, and Disability)	SRPC Recipients 12/31/20	% of NH Claims	Change from 2019
Total	32,524	10.2%	+ 2.1%
Retired workers	22,620	9.9%	+ 4.3%
Disabled workers	5,315	11.8%	- 2.5%
Other recipients	4,590	10.5%	- 2.0%

Source: SSA. Year: 2020. Granularity: SRPC, NH.

Cost of Living

“Cost of living” refers to a wide range of expenses including, but not limited to, transportation costs, housing costs, childcare, and healthcare that make up a typical household budget.

Cost of living calculations have been known to factor essential services and frequently exclude discretionary spending. However, a household’s ability to afford some “discretionary” expenses, such as accumulating savings or access to affordable credit, can have material impacts on the cost of living. Low- and lower-income families may not be able to afford higher quality housing, which results in higher costs for heating and cooling. Inability to purchase a newer-model vehicle frequently means driving a car that is less fuel-efficient and more likely to require repairs.

Choices that reduce costs within a single category can often have an inverse impact on other categories. For example, employment is often concentrated in urbanized areas where housing is more expensive, especially in New England. This often necessitates that low-income families live a greater distance from employment, increasing the cost of transportation. The long-term impacts of COVID-19 on childcare, housing, and other household costs are still being realized.

This subsection analyzes estimated costs of living in Strafford County as a proxy for the region by taking assumed income and expense estimates from the Living Wage Calculator, an ongoing research effort by MIT since 2004. The Living Wage Calculator estimates the salary required for each working adult in a household based on the number of children in the home and the basic needs of a household of that size. From these assumptions, the Living Wage Calculator produces two sets of salaries, a poverty salary which corresponds with the poverty thresholds defined by the Census Bureau, and a living salary which allows the household to afford all of the expenses estimated for that family composition.

Source: MIT. Year: 2021. Granularity: Strafford County.

MIT Living Wage Calculator Assumptions

Adults:

- **1 Adult households** – the adult works full time, 40 hours per week, 52 weeks per year
- **2 Adult household with one adult working** - the working adult works full time, 40 hours per week, 52 weeks per year. The other adult provides childcare for any children in the home.
- **2 Adult household with both working** – both adults work full time, 40 hours per week, 52 weeks per year.

Children:

- **1 Child households** – the child is 4 years old
- **2 Children households** – one child is 4 years old, and the other is 9 years old
- **3 Children households** – one child is 4 years old, one child is 9 years old, and the other is 15 years old.

Living Wages and Poverty Wages

The MIT Living Wage Calculator estimates the cost of living in a county and determines the necessary living wage and the poverty wage based on those costs. Strafford County is used as a proxy for the SRPC region.

The table below outlines the hourly wages and equivalent yearly salaries **per working adult** for various household types for the poverty wage and the living wage based on the following assumptions:

- An employed adult works 40-hour weeks, 52 weeks per year. In households with two adults, with one not employed, the adult who does not work provides childcare for any children in the home.
- For households with children, the first child present is assumed to be 4 years old, a second child is 9 years old, and a third child is 15 years old.

Household Type		Poverty Wage	Poverty Salary	Poverty Salary per month	Living Wage	Living Salary	Living Salary per month
1 Adult	0 Children	\$6.19	\$12,875	\$1,073	\$17.39	\$36,171	\$3,014
	1 Child	\$8.38	\$17,430	\$1,453	\$33.27	\$69,202	\$5,767
	2 Children	\$10.56	\$21,965	\$1,830	\$41.50	\$86,320	\$7,193
	3 Children	\$12.74	\$26,499	\$2,208	\$55.57	\$115,586	\$9,632
2 Adults (1 Working)	0 Children	\$8.38	\$17,430	\$1,453	\$25.69	\$53,435	\$4,453
	1 Child	\$10.56	\$21,965	\$1,830	\$31.16	\$64,813	\$5,401
	2 Children	\$12.74	\$26,499	\$2,208	\$36.64	\$76,211	\$6,351
	3 Children	\$14.92	\$31,034	\$2,586	\$40.51	\$84,261	\$7,022
2 Adults (Both Working)	0 Children	\$4.19	\$8,715	\$726	\$12.85	\$26,728	\$2,227
	1 Child	\$5.28	\$10,982	\$915	\$18.19	\$37,835	\$3,153
	2 Children	\$6.37	\$13,250	\$1,104	\$23.54	\$48,963	\$4,080
	3 Children	\$7.46	\$15,517	\$1,293	\$28.08	\$58,406	\$4,867

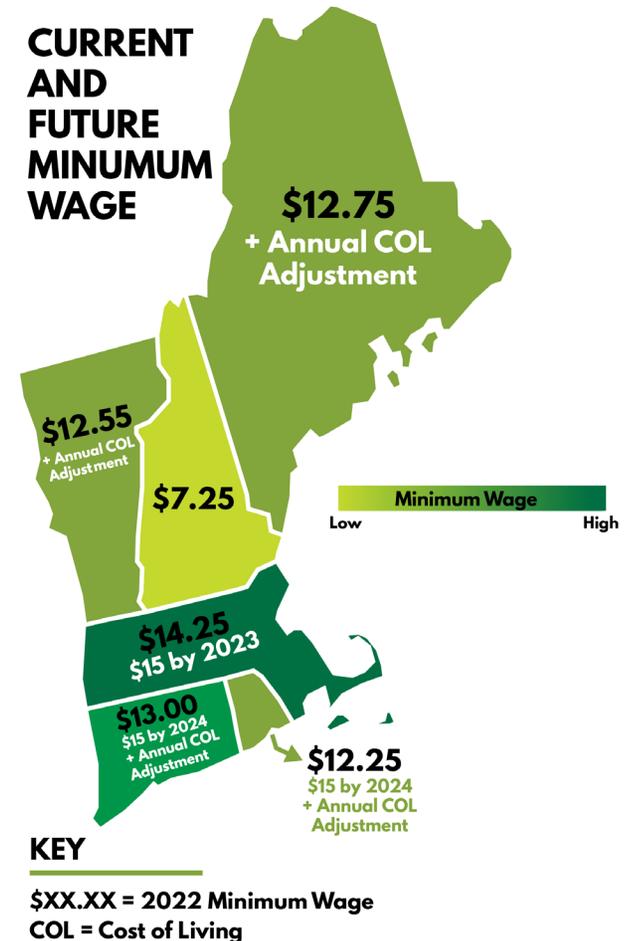


Table - Source: MIT. Year: 2021. Granularity: Strafford County.

Map - Source: Departments of Labor in each state shown. Year: 2022. Granularity: New England.

Typical Household Expenses

The MIT Living Wage Calculator estimates the cost of living in a county and determines the necessary living wage and the poverty wage based on those costs. Strafford County is used as a proxy for the SRPC region.

The expenses in the table below are based on a very small budget. The grocery budget is based on USDA's Low Cost Food Plan budget from June 2019. Rising inflation since 2019 means that the food costs alone in this table are lower than what is needed today.

The table below outlines the estimated cost for six primary living expenses and taxes based on the following assumptions:

- An employed adult works 40-hour weeks, 52 weeks per year. In households with two adults, with one not employed, the adult who does not work provides childcare for any children in the home.
- For households with children, the first child present is assumed to be 4 years old, a second child is 9 years old, and a third child is 15 years old.
- Tax assumptions are based on state and federal taxes and make certain assumptions for income and property taxes.

Household Type	Food	Childcare	Medical	Housing	Transportation	Other necessities and quality of life	Required annual income after taxes	Annual taxes	Required annual income before taxes	
1 Adult	0 Children	\$3,981	\$0	\$2,858	\$11,628	\$3,665	\$8,291	\$30,552	\$5,620	\$36,172
	1 Child	\$5,866	\$9,099	\$7,979	\$15,960	\$6,504	\$12,738	\$58,274	\$10,926	\$69,200
	2 Children	\$8,812	\$18,198	\$7,757	\$15,960	\$8,455	\$13,333	\$72,644	\$13,680	\$86,324
	3 Children	\$11,689	\$27,297	\$8,080	\$21,636	\$9,988	\$18,434	\$97,251	\$18,333	\$115,584
2 Adults (1 Working)	0 Children	\$7,298	\$0	\$6,082	\$12,396	\$6,504	\$12,738	\$45,146	\$8,291	\$53,437
	1 Child	\$9,083	\$0	\$7,757	\$15,960	\$8,455	\$13,333	\$54,717	\$10,100	\$64,817
	2 Children	\$11,710	\$0	\$8,080	\$15,960	\$9,988	\$18,434	\$64,299	\$11,916	\$76,215
	3 Children	\$14,256	\$0	\$7,859	\$21,636	\$10,847	\$16,372	\$71,099	\$13,163	\$84,262
2 Adults (both working)	0 Children	\$7,298	\$0	\$6,082	\$12,396	\$6,504	\$12,738	\$45,146	\$8,291	\$53,437
	1 Child	\$9,083	\$9,099	\$7,757	\$15,960	\$8,455	\$13,333	\$63,816	\$11,856	\$75,672
	2 Children	\$11,710	\$18,198	\$8,080	\$15,960	\$9,988	\$18,434	\$82,497	\$15,427	\$97,925
	3 Children	\$14,256	\$27,297	\$7,859	\$21,636	\$10,847	\$16,372	\$98,396	\$18,430	\$116,826

Source: MIT. Year: 2021. Granularity: Strafford County.

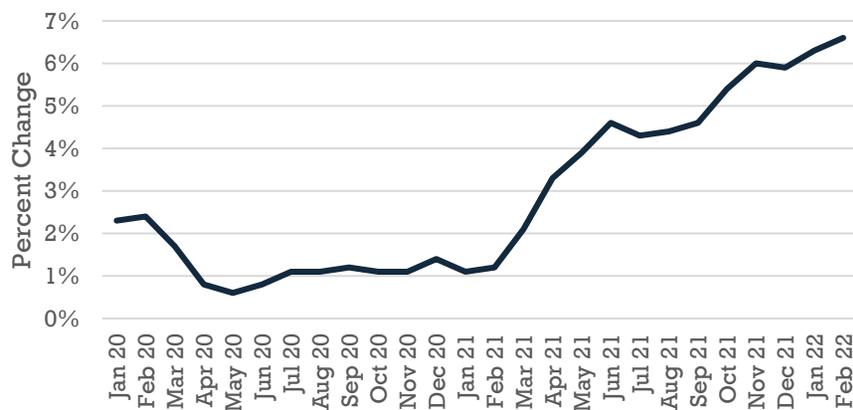
Inflation (Consumer Price Index)

Inflation is the rate at which overall price of goods and services increases. A common measurement of inflation is the consumer price index (CPI). The CPI is a weighted average of the price of a range of consumer goods and services purchased by households.

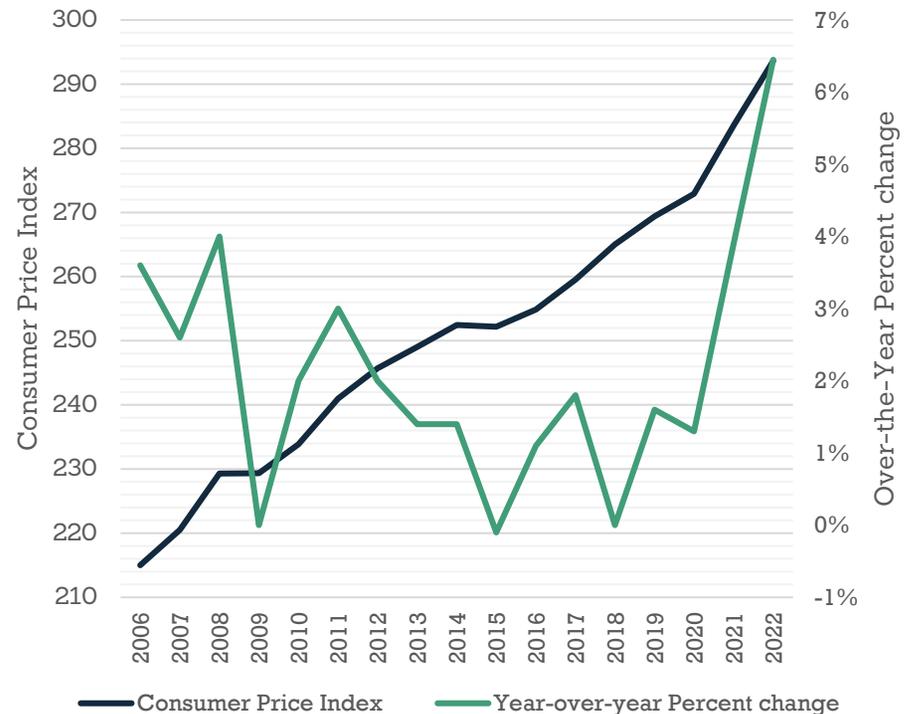
Inflation has been soaring over the past year. In March 2022, we saw the biggest month to month increase since 2005 and the biggest 12-month increase since the 1980's. This is in part due to increased demand from supply chain backlogs caused by the COVID-19 pandemic.

Additionally, at the time of publication, this data does not include any information since the invasion of Ukraine, which is impacting the economy worldwide. Rates of inflation are expected to continue to soar due to rising oil prices that affect markets across the world from gas to plastic costs. The gasoline index rose sharply in March 2022, increasing 18.3 percent after rising 6.6 percent in February.

Northeast Urban Monthly Over-the-Year CPI Percent Change



Average Over-the-Year Northeast Urban CPI



Recent data in the past 15 years shows this level of inflation is highly unprecedented in such a short period of time. In no period in the last 30 years, has average year-over-year inflation increased over 6 percent. Interest rates are anticipated to hike by the beginning of the government fiscal year to combat historical inflation.

Source: US Bureau of Labor Statistics. Year: 2006-2022. Granularity: Northeast Urban Labor Market Region.

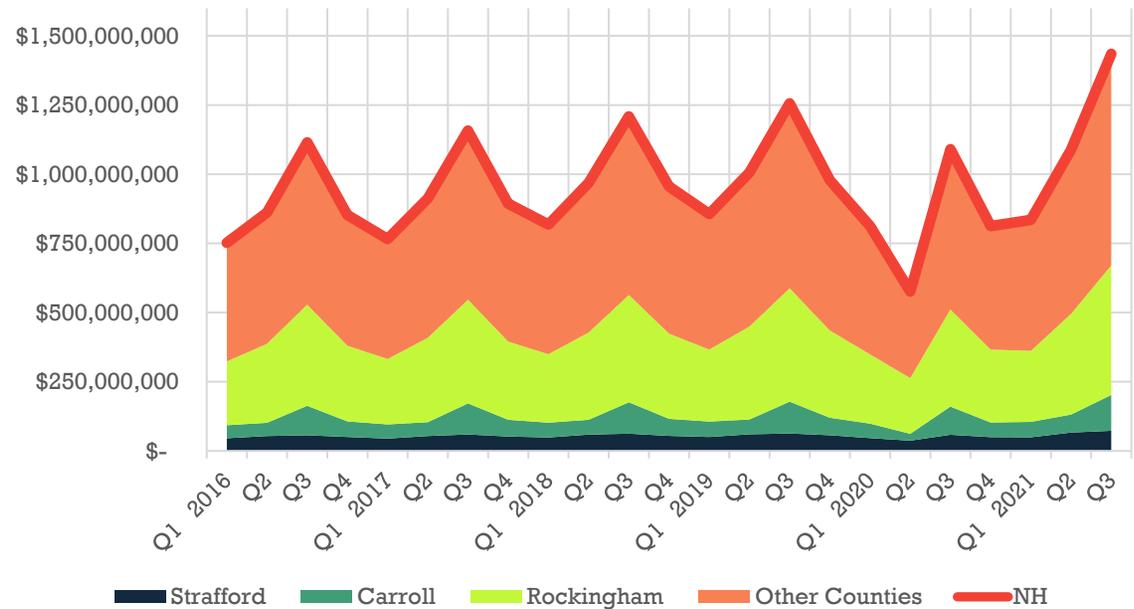
Meals and Rooms Tax Receipts

The Meals and Rooms (M&R) tax is an 8.5% (9% prior to October 2021) tax on rooms and meals paid by the consumer and collected by operators of hotels, restaurants, food service, room rental, and motor vehicle rentals.

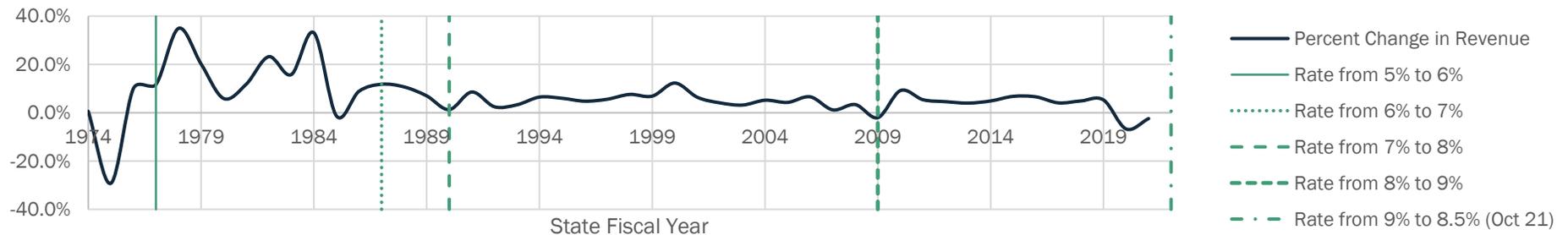
The New Hampshire Office Planning & Development (OPD, formerly the Office of Strategic Initiatives or OSI) compiles tax data from the Department of Revenue Administration's monthly M&R tax report. This data is an important indicator of the hospitality industry, and in particular, restaurants and hotels in the state.

M&R receipts represent the total value of purchases and rentals upon which the tax is assessed, and provides a direct measure of economic activity within the hospitality industry. M&R tax revenues refer to the funds generated from taxation for use by the state. These fluctuate annually due to fluctuations in total receipts and changes in the tax rate, which has been adjusted several times since the tax was first instituted in 1974.

Total Meals and Rooms Receipts by Quarter (Calendar Year)



NH Annual Percent Change in Meals & Rooms Tax



Source: NHDOR. Year: 2016-2021. Granularity: Counties, NH.

LIABILITY AND QUALITY OF LIFE

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Traffic Safety

The Federal Highway Administration (FHWA) implemented a final ruling on the Highway Safety Improvement Program (HSIP) effective April 14, 2016. This regulation (23 CFR 490) requires that five safety related performance targets must be set and published annually by state DOTs by August 31st and metropolitan planning organizations (MPO) like SRPC within 180 days after the state targets are established. The federally required targets assess and report five factors related to highway safety are:

1. **Number of Fatalities:** The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year.
2. **Rate of Fatalities:** The ratio of total number of fatalities to the number of vehicle miles traveled (VMT, in 100 Million VMT) in a calendar year.
3. **Number of Serious Injuries:** The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year.
4. **Rate of Serious Injuries:** The ratio of total number of serious injuries to the number of VMT (in 100 Million VMT) in a calendar year.
5. **Number of Non-Motorized Fatalities and Non-motorized Serious Injuries:** A subset of the above where the killed or injured party was not using a motor vehicle (pedestrians, bicyclists, skateboarders, etc.) during a calendar year.

In addition to these five measures, SRPC also records the **number of motorcycle fatalities**.

Data Impacts in 2020

The 2020 calendar year saw significant impacts from the COVID-19 pandemic, especially in transportation. Due to shutdowns in response to COVID-19, volumes were much lower in 2020 than in recent years. Despite the lower traffic volumes, the number of fatalities stayed consistent with 2019. If not for the reduction of traffic, the number of fatalities might have been higher in 2020. The ongoing pandemic may continue to have long-term impacts on highway safety trends.

Data for these measures is provided by three sources:

- **Fatality Analysis Reporting System (FARS):** FARS Annual Report File or Final data is utilized to provide information on fatal crashes in the state.
- **State Motor Vehicle Crash Database:** Data collected and maintained by the NH Department of Safety is utilized to determine the number of serious injuries in the state. This is based on the Federal Model Minimum Uniform Crash Criteria (MMUCC, 4th Edition).
- **Highway Performance Monitoring System (HPMS):** State Vehicle Miles Traveled (VMT) data is collected by the Department of Transportation and aggregated into a dataset for the state. VMT data can be calculated for MPO regions and individual communities. SRPC contributes roughly 9% of the statewide VMT.

NHDOT's Year-To-Date Fatality map can be found here:

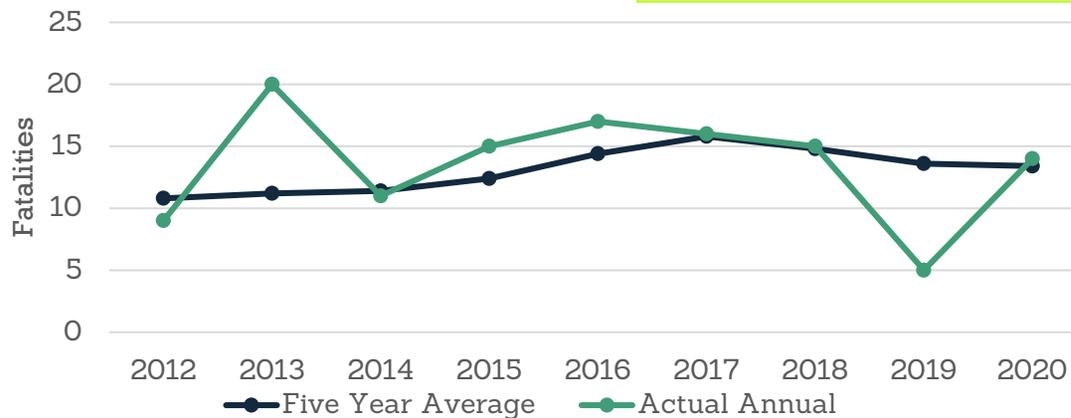
<https://www.nhtmc.com/Dashboard/Safety/>.

Traffic Fatalities

The number of fatalities is one of the FHWA mandated performance measures defined in 23 CFR 490. SRPC is required to set annual targets by the end of February each year. SRPC has assumed the state targets set by NHDOT each year for the region.

The table and chart show the number of deaths as a result of fatal crashes. The map shows the location of the crashes. Multiple deaths may occur in a single crash, so a point on the map may represent more than one lost life.

Year	Fatalities		5-Year Average	
	NH	SRPC	NH	SRPC
2012	108	9	114.8	10.8
2013	135	20	114.2	11.2
2014	95	11	111.2	11.4
2015	114	15	108.4	12.4
2016	136	17	117.6	14.4
2017	102	16	116.4	15.8
2018	147	15	118.8	14.8
2019	101	5	120	13.6
2020	104	14	118	13.4

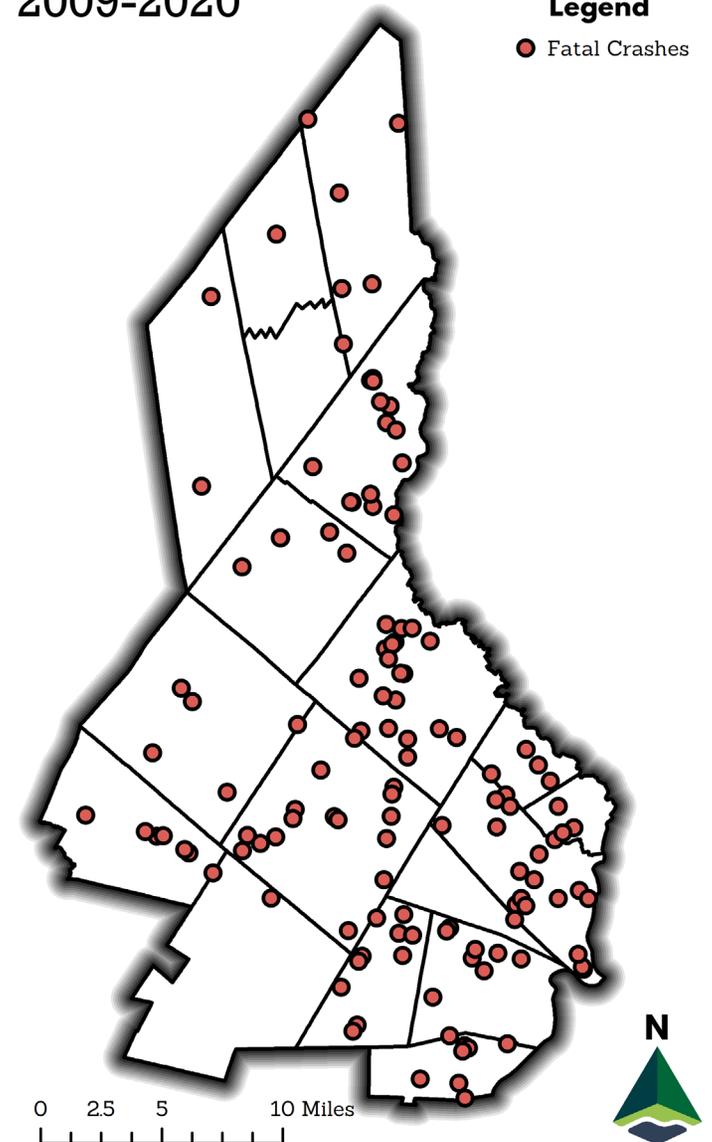


Source: National Highway Traffic Safety Administration. Year: 2009-2020. Granularity: SRPC, NH.

2009-2020

Legend

● Fatal Crashes

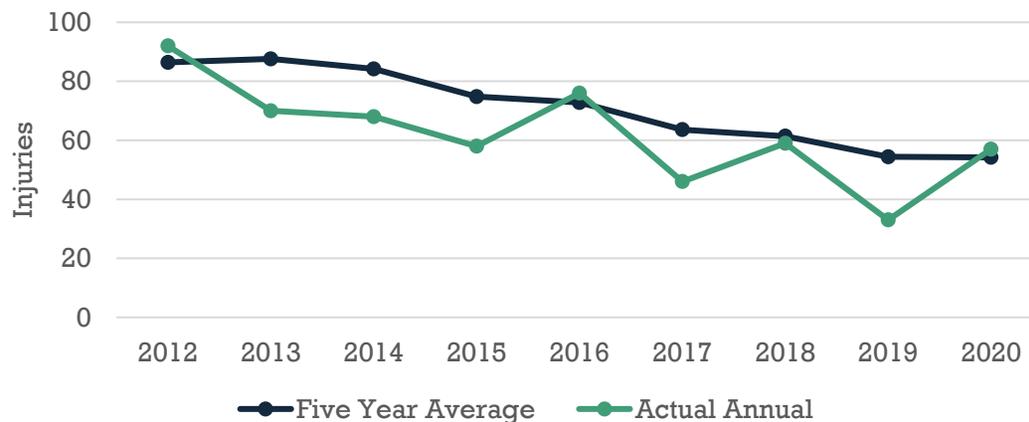


Serious Injuries

The number of serious injuries is one of the FHWA mandated performance measures defined in 23 CFR 490. SRPC is required to set annual targets by the end of February each year. SRPC has assumed the state targets set by NHDOT each year for the region.

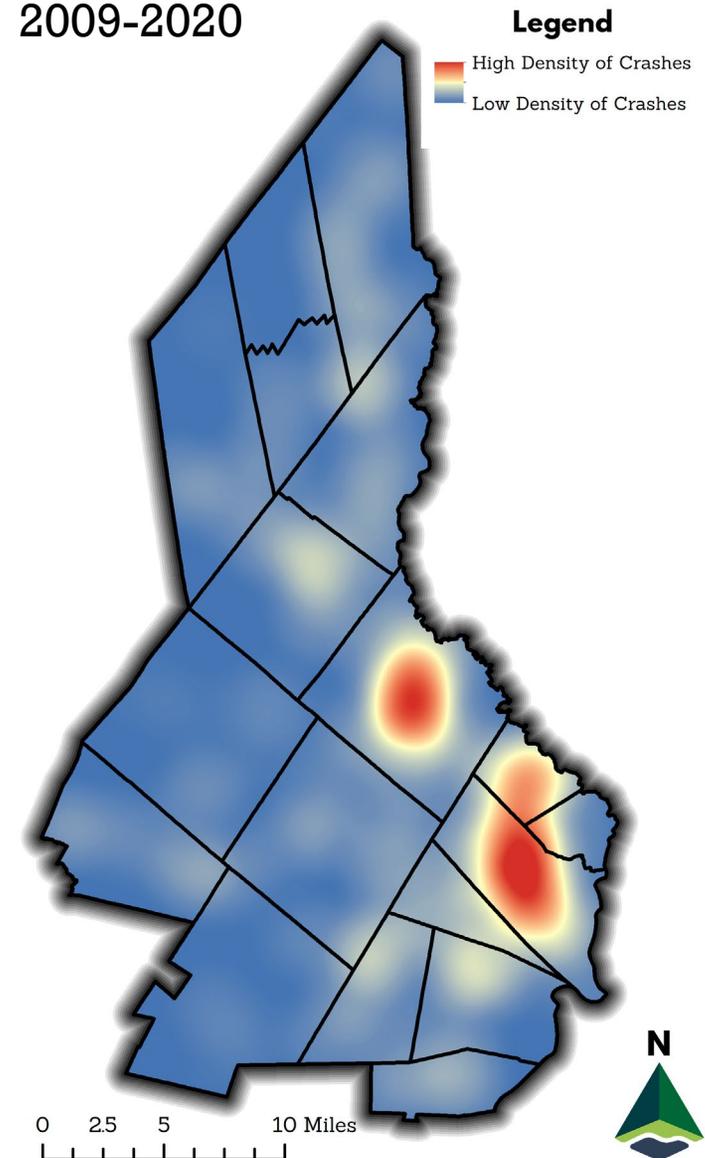
The New Hampshire Division of Motor Vehicles in the Department of Safety maintains a database of crashes in the state. This is the data source for the serious injury measures. A serious injury is one that is incapacitating. These include severe lacerations, broken or distorted limbs, skull fractures, crushed chest, internal injuries, unconsciousness, and any inability to leave the scene without assistance.

There is a history of consistency and accuracy concerns in this data set that has been improving in recent years. In 2017, the state launched a new crash database called VISION to house the crash data. The new database, along with training, has improved the data quality for the crash data. As a result, there is a notable decrease in the serious injury totals since 2017. It is assumed that this trend will continue. In turn, the SRPC trend is expected to decrease dramatically over the next 2-3 years as the 2016 data will no longer be in the five-year rolling average, and the trend line may plateau at a lower number.



Source: NH Division of Motor Vehicles. Year: 2009-2020. Granularity: SRPC.

2009-2020



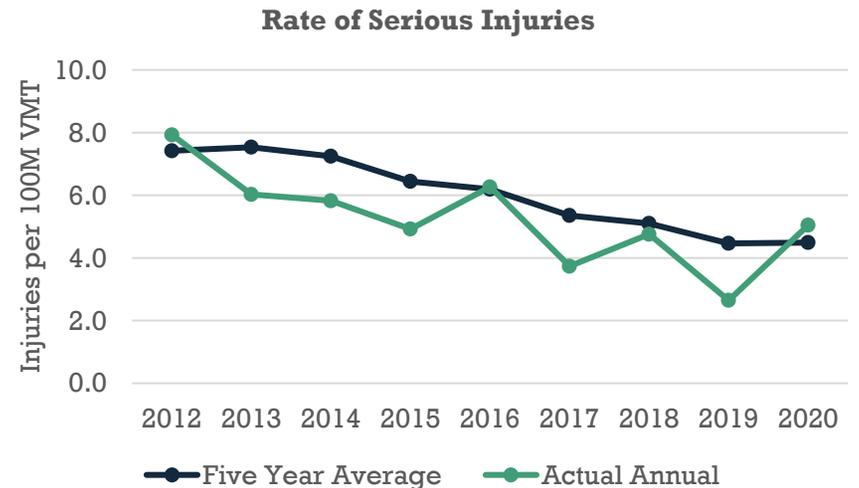
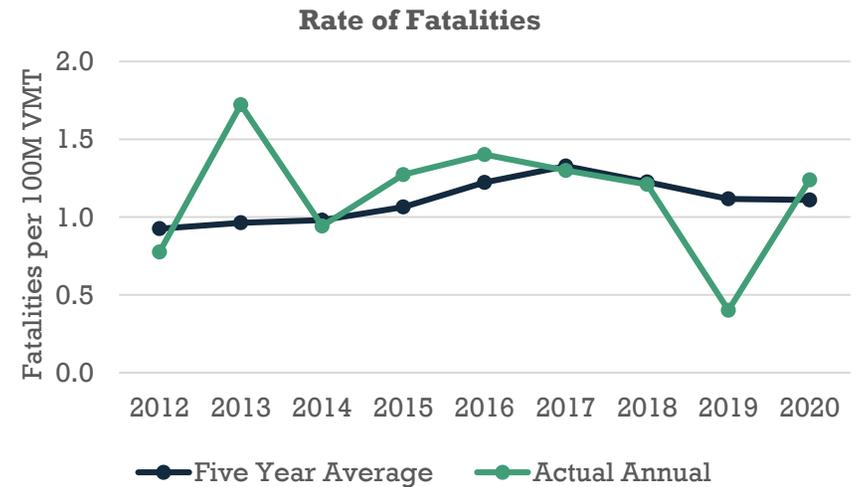
Rate of Fatalities and Serious Injuries

The rate of fatalities and the rate of serious injury measures combine their respective crash data with the vehicle miles traveled (VMT) data from the Highway Performance Monitoring System (HPMS). The NHDOT has calculated regional shares of VMT for the MPOs to use in these calculations.

The rate of fatalities is calculated by dividing the number of fatalities by the VMT. Similarly, the rate of serious injuries is calculated by dividing the serious injuries by the VMT. SRPC's rate of fatalities and rate of serious injuries are both generally a bit higher than the state rates. This is likely because the regional share of VMT is usually less than the regional share of fatalities and serious injuries. 2019 data showed a decrease in VMT but the number of serious injuries did not fall as dramatically. This will result in a higher rate of serious injuries during this reporting period.

SRPC Average Annual Shares		
Fatalities	Serious Injuries	VMT
11%	11%	9%

$$\text{SRPC Rate} = \frac{11\% \text{ of the serious injuries in the state}}{9\% \text{ of the VMT in the state}}$$



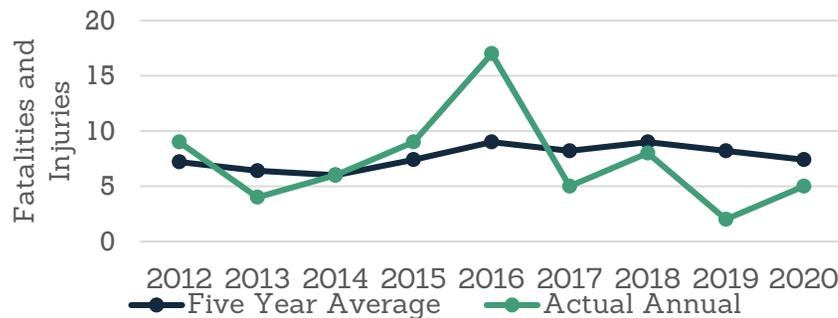
Source: National Highway Traffic Safety Administration. Year: 2009-2020. Granularity: SRPC, NH.
 Source: NH Division of Motor Vehicles. Year: 2009-2020. Granularity: SRPC.

Non-Motorized Fatalities and Serious Injuries

The non-motorized fatalities and serious injuries measure is the sum of the individuals who were killed or seriously injured while outside of a motor vehicle. This measure includes pedestrians and bicyclists.

As with most crashes, the locations for non-motorized crashes are random. SRPC has seen anywhere from 0-33% of the statewide non-motorized fatalities and anywhere from 6-37% of the serious injuries since 2007. In 2016, SRPC had 3 non-motorized fatalities (21% of the state total that year), and 6 serious injuries (12% of the state total). In 2019, SRPC had 0 non-motorized fatalities and 2 (of the 30 statewide) serious injuries.

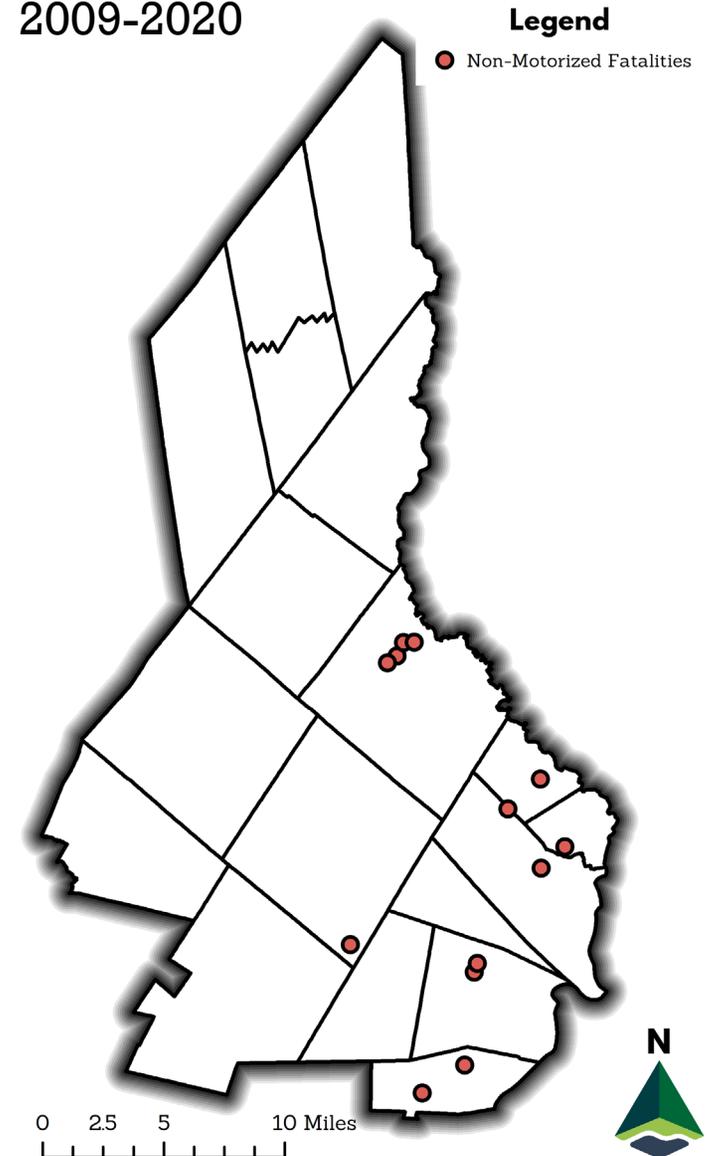
Year	Fatalities		Serious Injuries		Fatalities + Serious Injuries	
	State	SRPC	State	SRPC	State	SRPC
2012	10.2	1.8	40	5.4	50.2	7.2
2013	11.8	1.2	40.2	5.2	52	6.4
2014	13	1.2	40.4	4.8	53.4	6
2015	14	1.8	44.4	5.6	58.4	7.4
2016	16.2	2	43.4	7	59.6	9
2017	17.2	2.2	41.6	6	58.8	8.2
2018	16	2	40.4	7	56.4	9
2019	10	0	30	2	40	2
2020		2		3	34	5



Source: National Highway Traffic Safety Administration. Year: 2009-2020. Granularity: SRPC, NH.

Source: NH Division of Motor Vehicles. Year: 2009-2020. Granularity: SRPC.

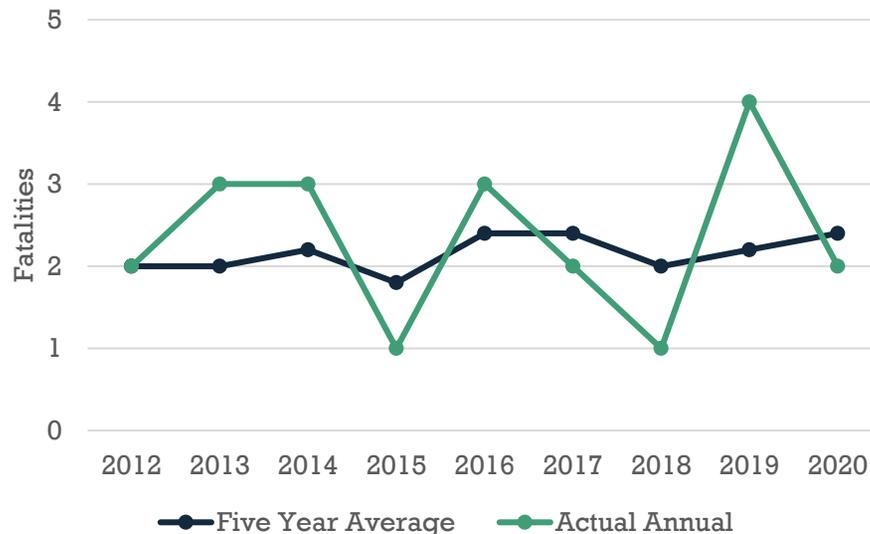
2009-2020



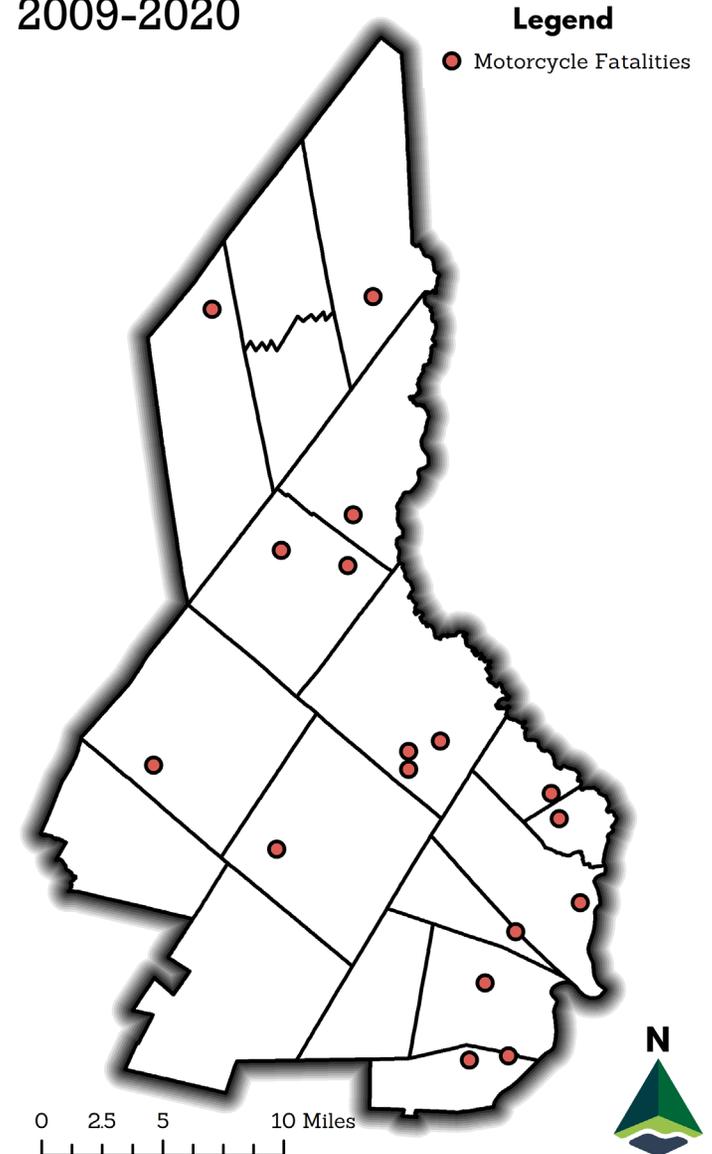
Motorcycle Fatalities

Because of the popularity of motorcycles in New Hampshire, their safety is an important component of highway safety planning. Home of Laconia's Motorcycle Week, the world's oldest motorcycle rally, New Hampshire is one of the only states that does not have a helmet law. A single crash in Randolph in 2019 left 7 motorcyclists dead and 3 injured. The locations of these crashes are largely random and behavior driven, so it is often difficult to predict where motorcycle incidents may occur.

The table and chart show the number of deaths as a result of fatal crashes. The map shows the location of the crashes. Multiple deaths may occur in a single crash, so a point on the map may represent more than one lost life.



2009-2020



Source: National Highway Safety Administration. Year: 2009-2020. Granularity: SRPC, NH.

Transit Safety Performance Measures

The Federal Transit Administration requires that transit agencies, states, and MPOs track the number of safety events that occur on transit vehicles and at transit facilities. Data includes safety events (reportable derailments, collisions, fires, and evacuations), fatalities (not including suicides or trespassers), and injuries (not including assaults or injuries due to crime. Since incidents include non-crash events, these data are not necessarily a subset of the fatality and serious injury metrics on prior pages.

The table below covers data for the fatalities, serious injuries, and other safety events occurring on COAST's fixed route and demand response buses.

Similar to the highway safety performance measures, these measures are presented as numbers and rates. The "rate" here is calculated as incidents per 500,000 revenue miles traveled.

"System reliability" is an approximation of miles traveled between major mechanical failures.

Fixed Route buses run regardless of the presence of passengers, while Demand Response vehicles only run if there is a requested trip. This may be impacting both the "rate" and "System reliability" performance.

	Performance Measure	FY 2019 Performance	FY 2020 Performance	FY 2021 Target
Fixed Route	Fatalities - Total	0	0	0
	Fatalities - Rate	0.00	0.00	0.00
	Injuries - Total	1	0	0
	Injuries - Rate	.17	0.00	0.00
	Safety Events – Total	0	1	0
	Safety Events – Rate	0.00	.17	0.00
	System Reliability	18,677	15,634	19,000
Demand Response	Fatalities - Total	0	0	0
	Fatalities - Rate	0.00	0.00	0.00
	Injuries - Total	2	0	0
	Injuries - Rate	.93	0.00	0.00
	Safety Events – Total	0	0	0
	Safety Events – Rate	0.00	0.00	0.00
	System Reliability	215,436	54,351	216,000

Source: COAST. Year: 2019-2021. Granularity: SRPC, RPC.

Housing Market

The availability, affordability, type, and quality of housing are significant factors for attracting and retaining a qualified workforce and attracting new businesses. Housing that sufficiently meets the above criteria – available both for purchase and rent – allows people to live and work in the same community, attracts a reliant workforce and skilled labor, and creates resilient and competitive communities.

The metrics in this subsection illustrate diversity and availability of housing in the region with information about:

- Vacancy.
- Occupancy of housing units, both by renters and owners.
- Costs to rent or own homes in the region.
- Building permits issued regionwide.

Communities in the southern SRPC region have a higher occurrence of rental units and renting populations. The SRPC region has seen an increase in demand for housing with an increasing population. With limited supply and other difficulties experienced, rent and sale prices have risen since the millennium and accelerated during 2020-21. The COVID-19 pandemic has had notable influence on these trends. Lower interest rates, inflated construction costs, and demand for homes across northern New England and other rural and semi-rural communities nationwide have affected the housing market in the SRPC region.

For the purposes of this document, unless it is explicitly stated otherwise, “house”, “housing unit”, and “household” are inclusive of all types of physical structure (single family house, each unit within a multi-family house, mobile homes, condominiums, apartment buildings, etc.).

New Hampshire’s nine regional planning commissions (RPCs) in partnership with the Office of Planning & Development are conducting regional housing needs assessments (RHNA) throughout 2022. This will be the first assessment of its kind since 2015 for SRPC. RPC staff will release surveys, research New England and nationwide housing trends, collaborate with community partners and advocates, and calculate the number of needed units for a growing region in order to fully realize the effects of the housing crisis. SRPC will publish housing-related data that arises from the RHNA process as it becomes available.

Vacant housing units in the region are largely seasonal homes. The municipalities with the highest percentages of vacant housing units are ones with a significant presence lake houses and other summer homes, not uncommon for New Hampshire. “Vacant” homes are recorded as such when owners are at a different permanent address on Census Day (April 1st).

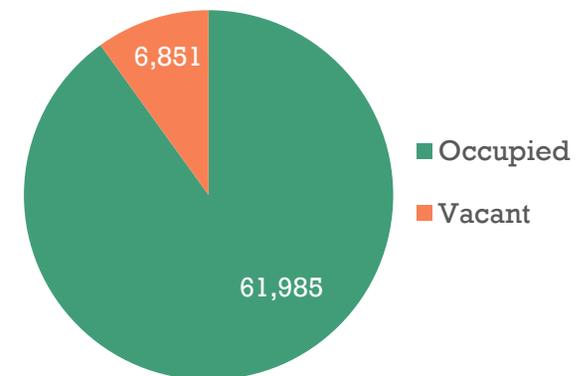
Most Vacant Housing

Wakefield	45%
New Durham	30%
Middleton	18.6%
Northwood	18.4%

Least Vacant Housing

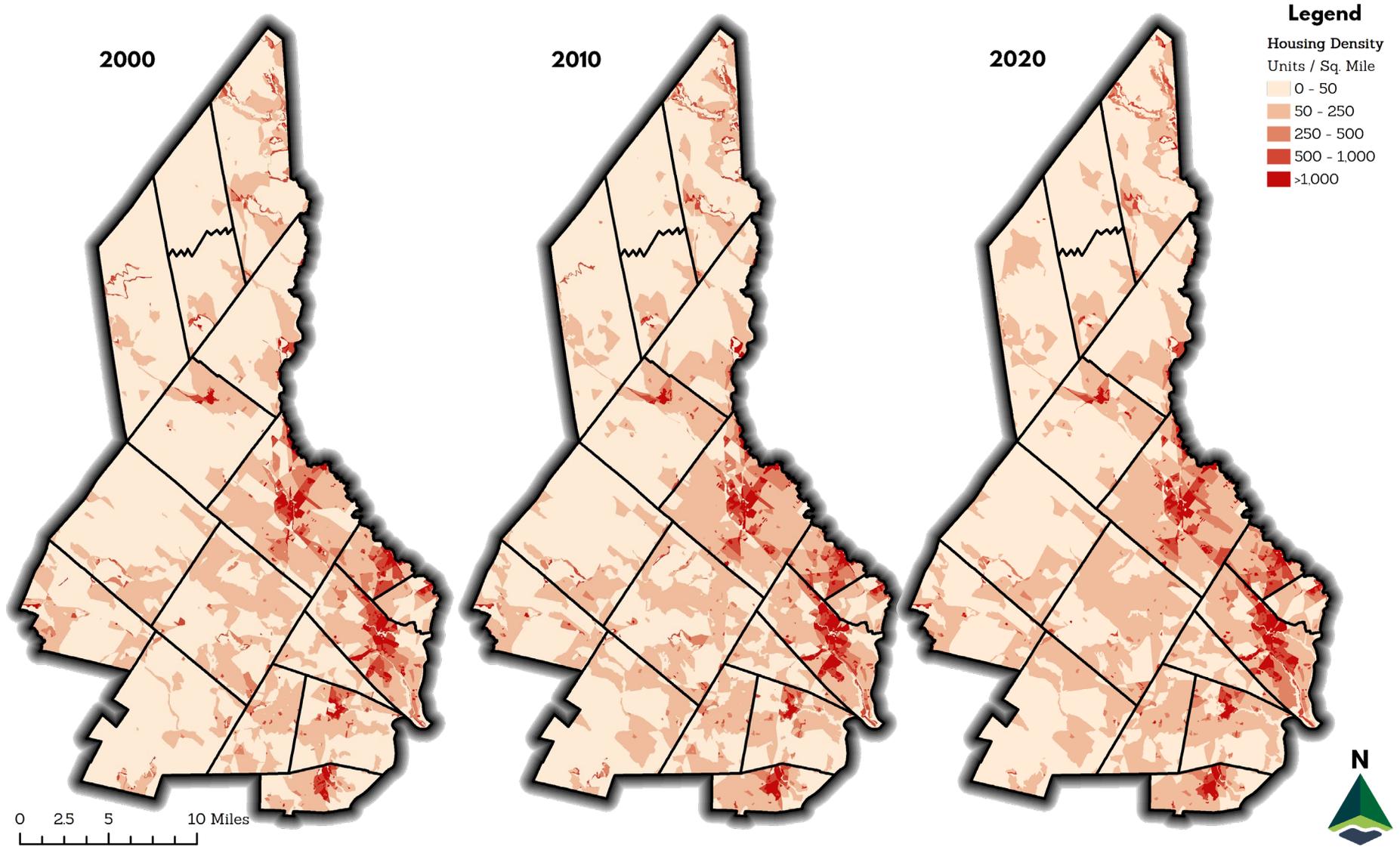
Dover	3.4%
Lee	3.9%
Madbury	4.4%
Somersworth	4.6%

Housing Units by Occupancy



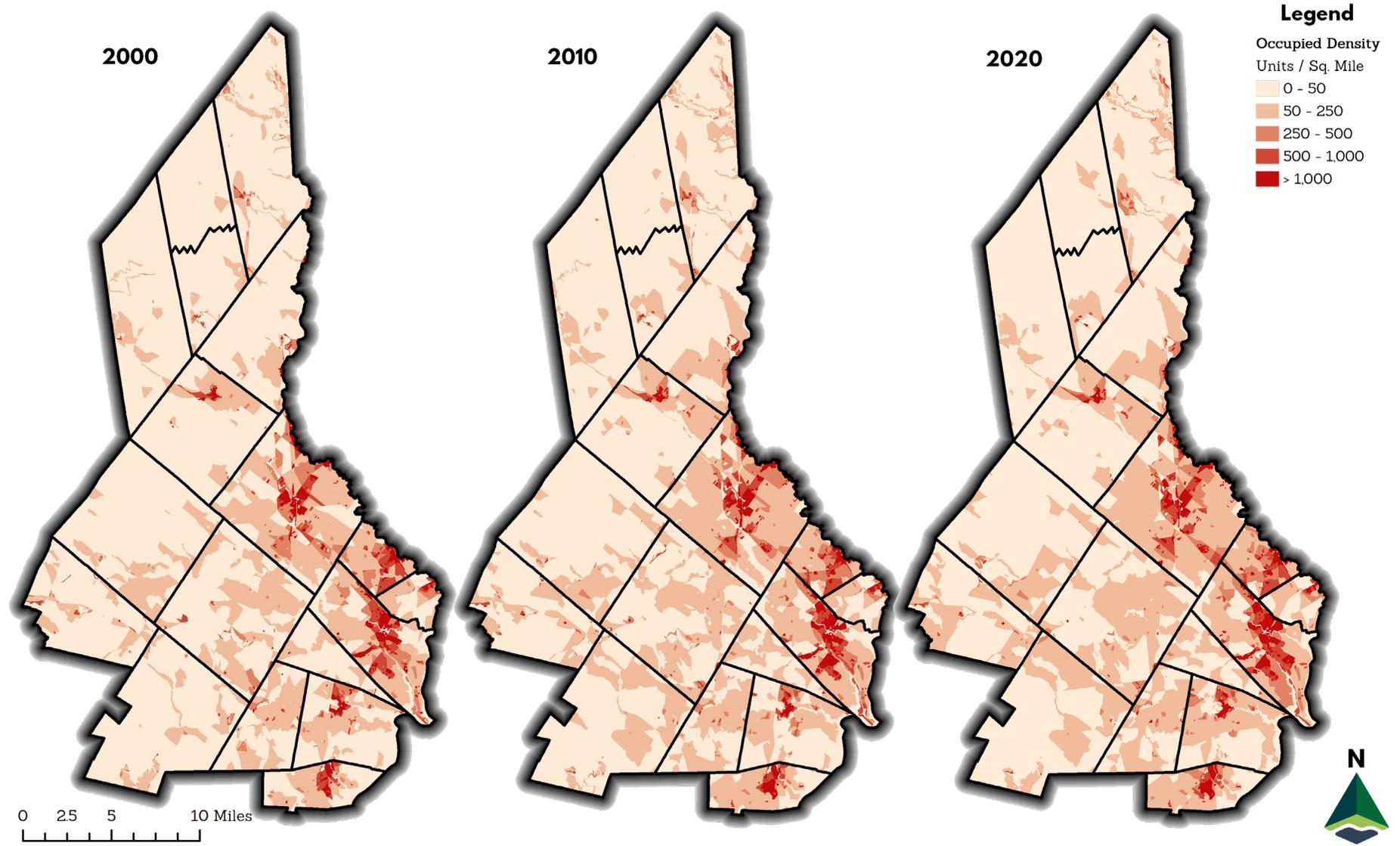
Source: US Decennial Census. Year: 2020. Granularity: Municipalities.

Housing Density



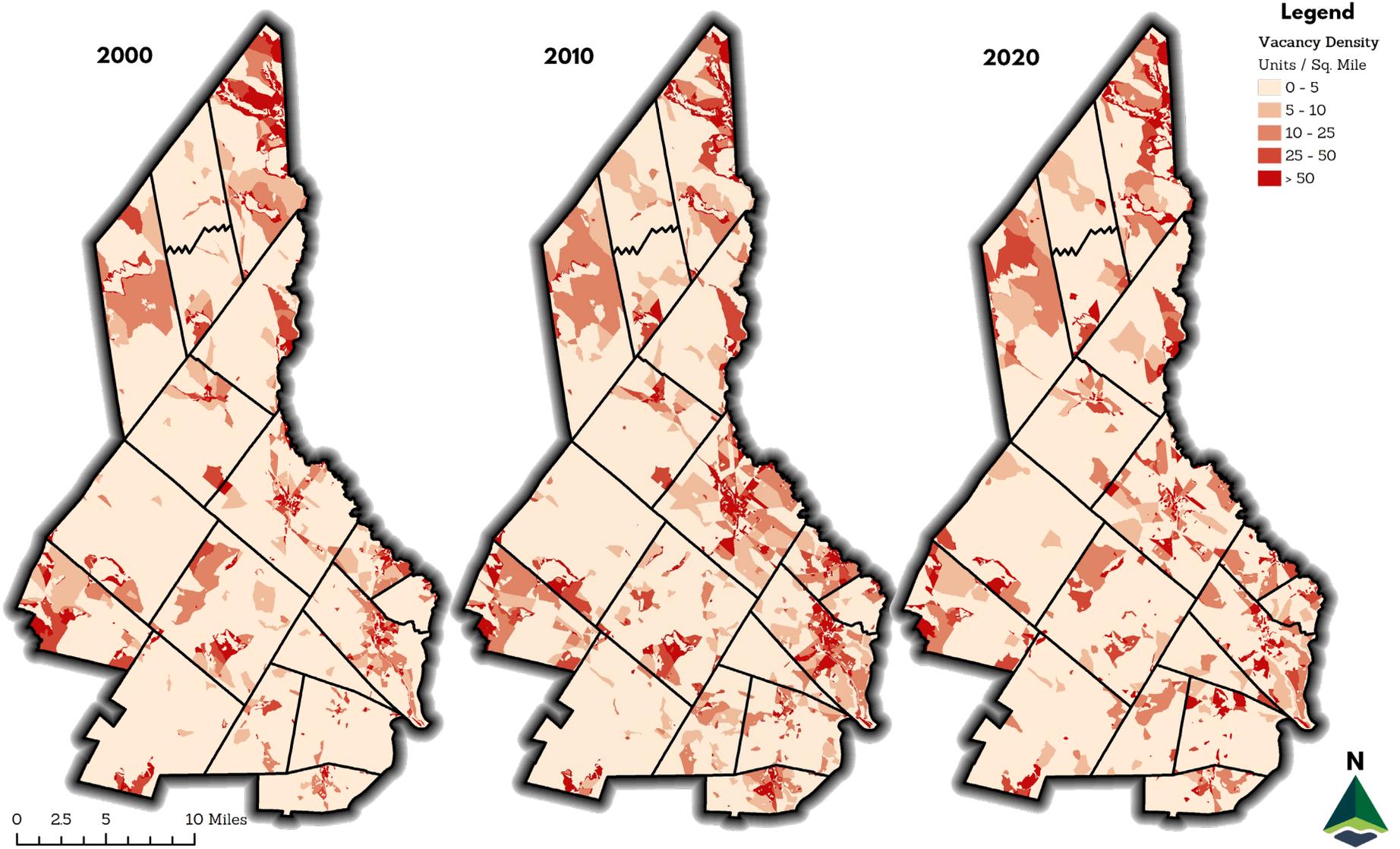
Source: US Decennial Census. Year: 2020. Granularity: Blocks.

Occupied Housing Density



Source: US Decennial Census. Year: 2020. Granularity: Blocks.

Vacant Housing Density



Source: US Decennial Census. Year: 2020. Granularity: Blocks.

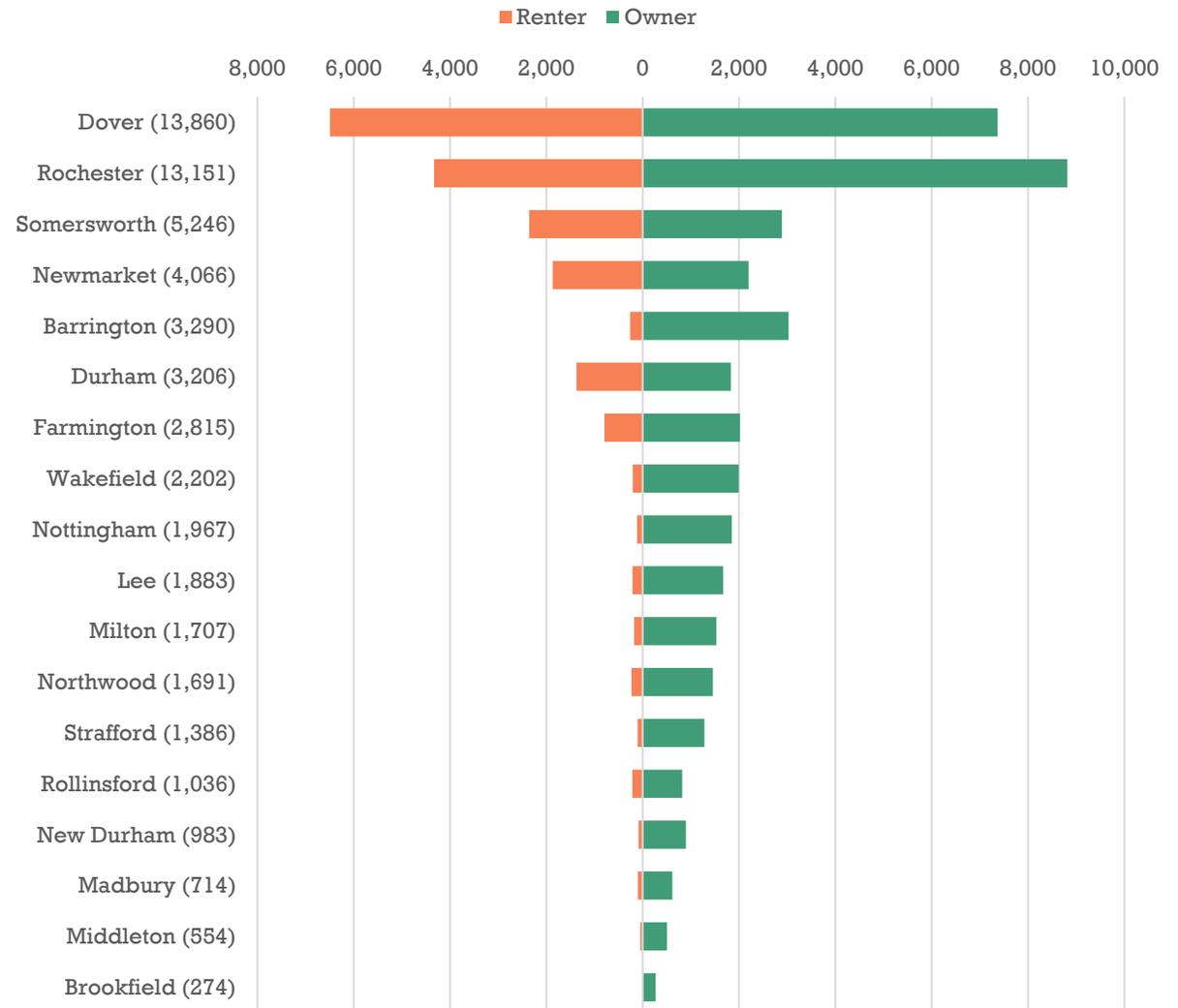
Owner vs Renter Households

Household occupancy has traditionally been identified by renter-occupancy and owner-occupancy. This data identifies occupied housing units and counts each unit in a multi-unit housing structure as a distinct household. University of New Hampshire students living in on-campus dorms are not included (see “Group Quarters”), but off-campus apartments in Durham and the surrounding areas are included.

In the graph to the right, the total width of the bar represents the total number of households in the municipality and the two colors on either side represent renter- and owner-occupied units, respectively.

The cities within our region have the highest number of renters while the rural areas are almost entirely owner-occupied homes. No municipalities have over 50% renter-occupied homes, however Dover, Newmarket, Somersworth, and Durham contain the closest to even distributions.

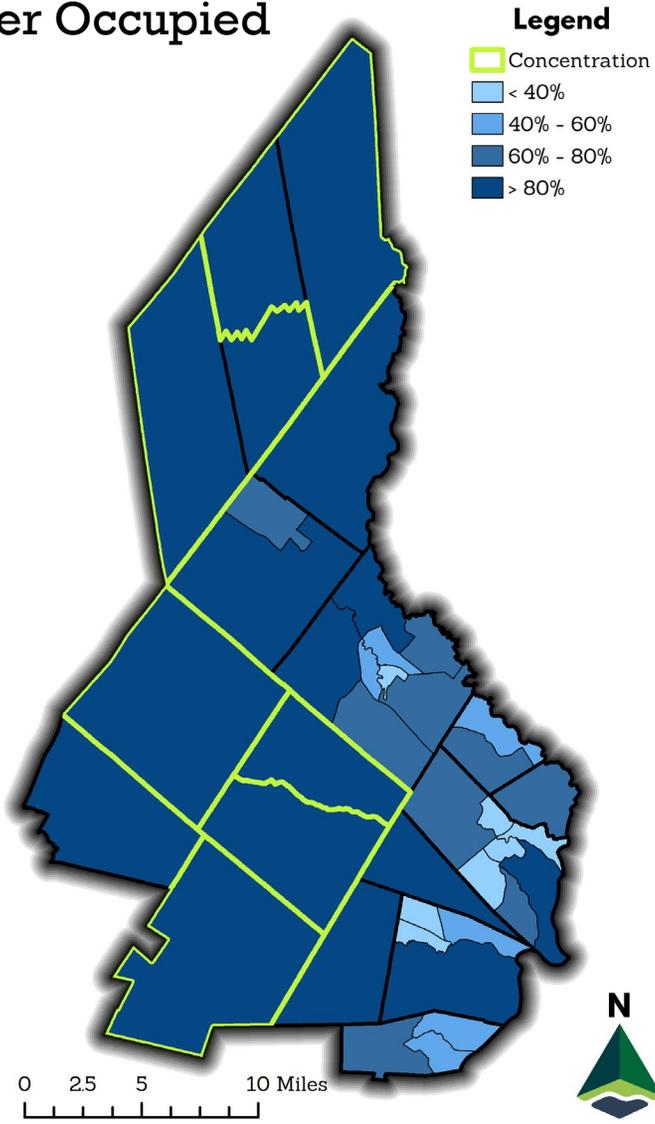
Households by Tenure



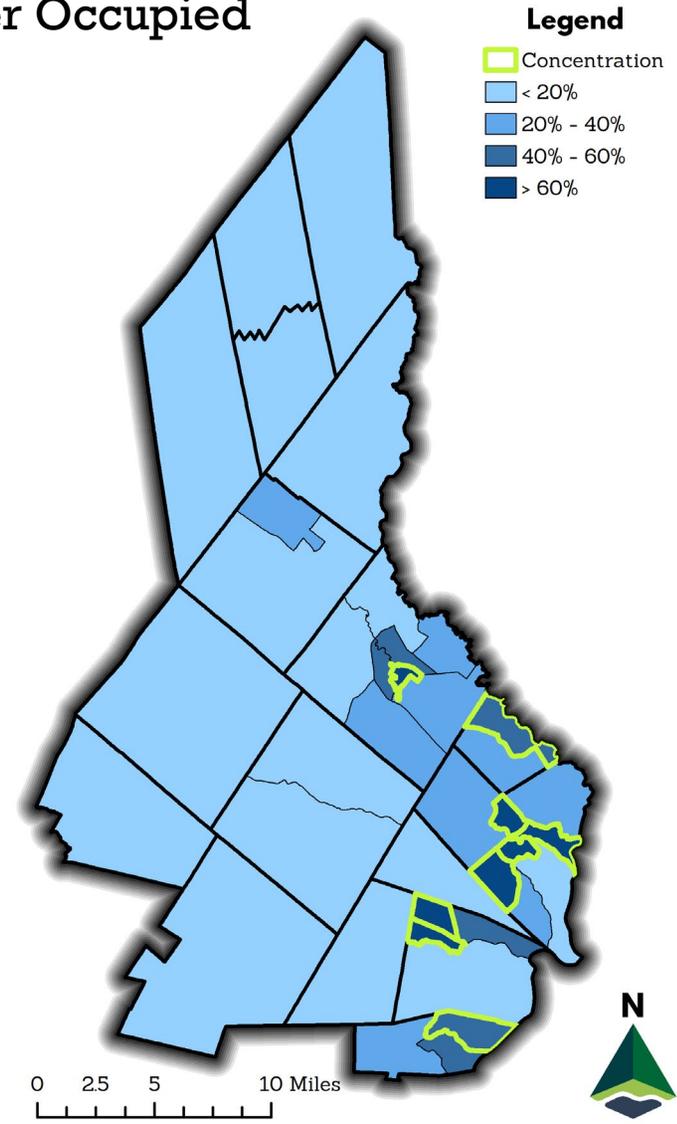
Source: US Census Bureau ACS. Year: 2020. Granularity: Municipalities, Census Tracts.

Owner vs Renter Households

Owner Occupied



Renter Occupied



Source: US Census Bureau ACS. Year: 2020. Granularity: Municipalities, Census Tracts.

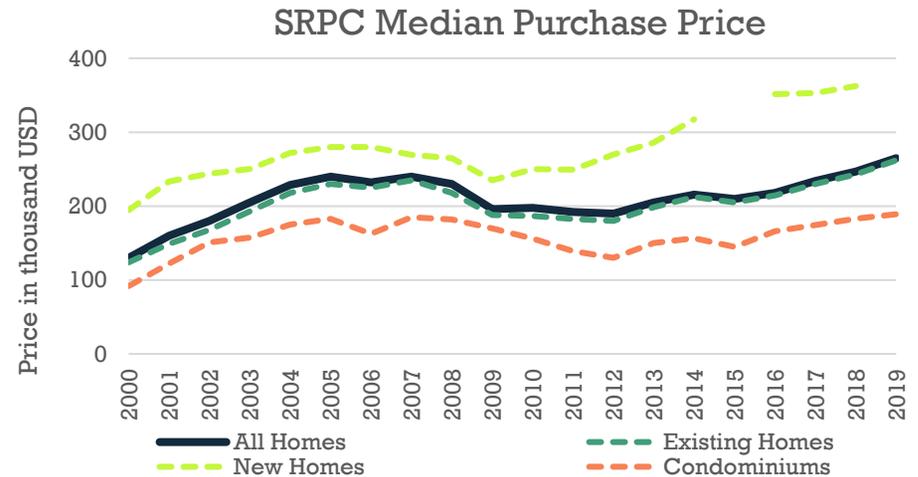
Purchase Price Trends

Housing patterns are changing dramatically in New Hampshire and northern New England. This data will be updated later this year as part of the 2022 RHNA process.

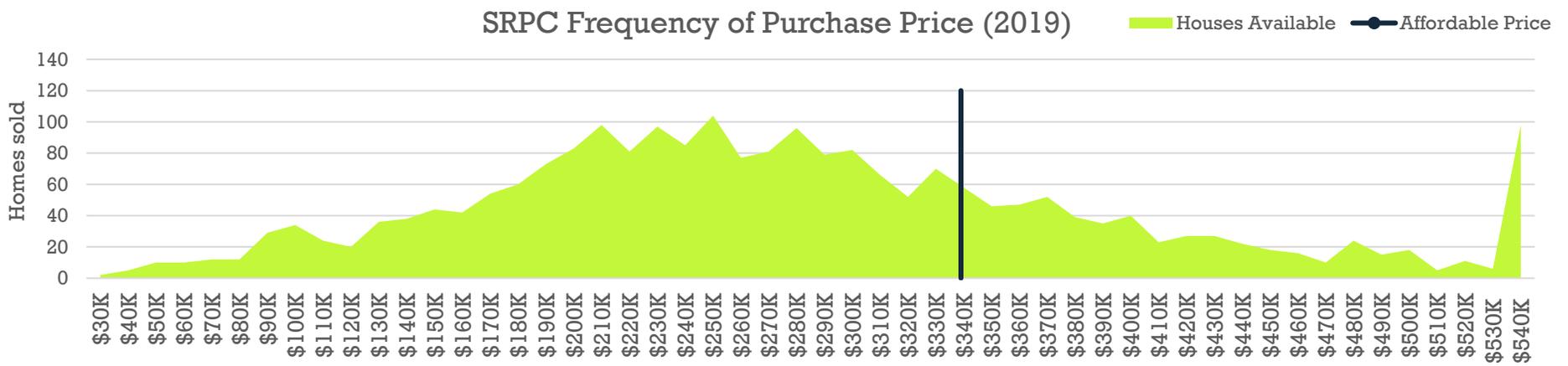
These charts represent the whole SRPC region in 2019, which is the most current data available at this time.

Durham's median purchase price for 2019 was about \$120k over the median for the whole of SRPC. Some gaps in data are apparent in years where sample sizes were not significant.

The frequency of a purchase price calculates the number of homes sold in recent years at a specified price point. In the chart below, the prices listed represent the homes sold **up to** that price. For example, homes recorded at the \$50k mark are homes sold for \$30k-50k, not exactly \$50k.



An affordable price is determined by NHHFA and is defined in NH RSA674:58-61. SRPC uses the Portsmouth-Rochester HUD Metropolitan Fair Market Area's 80% threshold for the affordable purchase price. In 2021, this price point is \$338,500 for a family of four, although NHHFA data is only updated as of 2019. The effects of in-migration in an already growing region prior to the pandemic and the transition to remote work since its onset are still being realized.



Source: NHHFA. Year: 2000-2019; 2021. Granularity: SRPC.

Rental Cost Trends

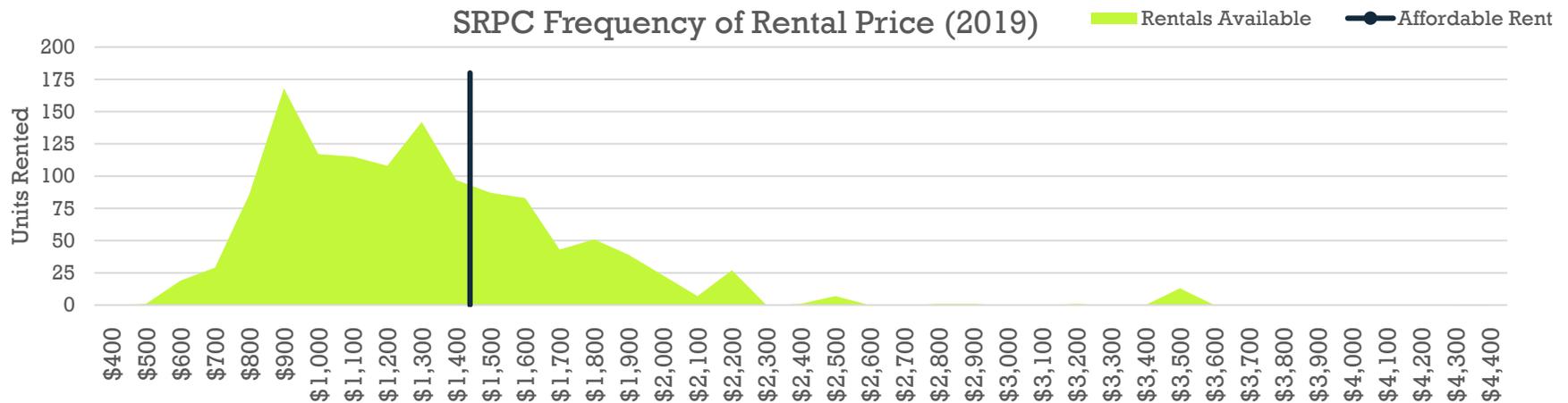
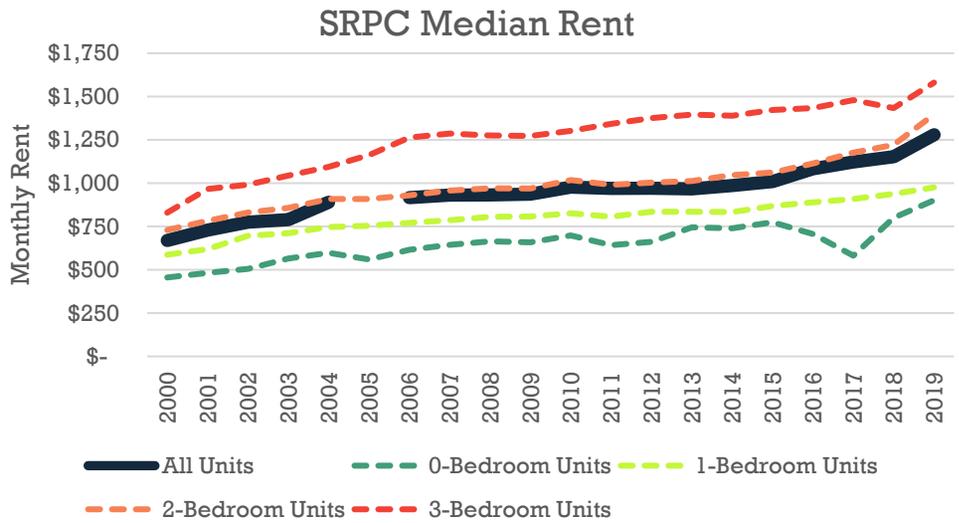
Housing patterns are changing dramatically in New Hampshire and northern New England. This data will be updated later this year as part of the 2022 RHNA process.

These charts represent the whole SRPC region in 2019, which is the most current data available at this time.

The younger population in the southern communities of the SRPC region has great influence on the rental market of the region. Some gaps in data are apparent in years where sample sizes were not significant.

The frequency of rental price calculates the number of units or homes rented in recent years at a specified price point. In the chart below, the prices listed represent the homes sold **up to** that price. For example, units recorded at the \$1,100 mark are homes rented for \$1,000 – 1,100, not exactly \$1,100.

An affordable rent is determined by NHHFA and is defined in NH RSA674:58-61. SRPC uses the Portsmouth-Rochester HUD Metropolitan Fair Market Area's 60% threshold for the affordable purchase price. In 2021, this price point is \$1,440 per month for a family of three, although NHHFA data is only updated as of 2019. A lack of new units may contribute to high rents in the region.



Source: NHHFA. Year: 2000-2019; 2021. Granularity: SRPC.

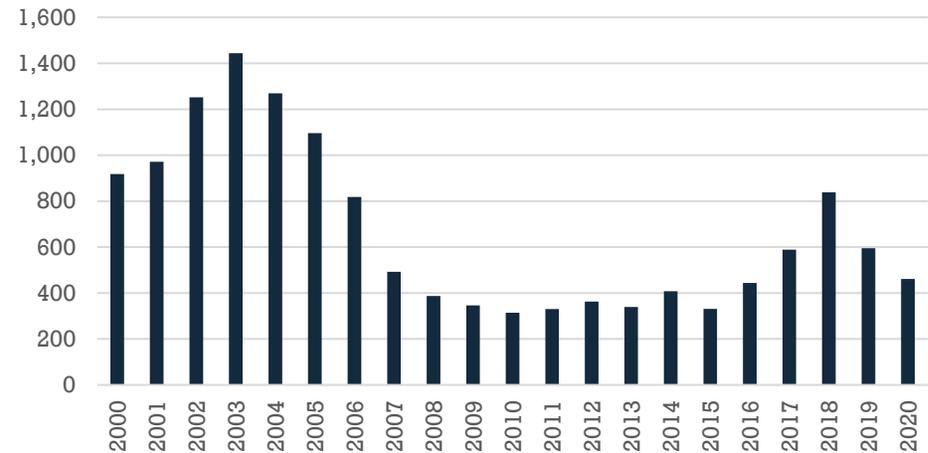
Building Permits

The New Hampshire Office of Planning & Development (OPD, formerly the Office of Strategic Initiatives or OSI) collects residential unit information annually to tax information for each municipality and to calculate population estimates. OPD records demolitions in addition to new units, so a net change of housing units each year is recorded. SRPC also collects this information on an annual basis directly from our 18 municipalities. Both OPD and SRPC measure the number of living units for residential permits including single family, multi-family, mixed use, and manufactured dwellings. However, SRPC additionally collects information about non-residential permits such as industrial or commercial structures. SRPC measures the number of non-residential permits because square foot data is not collected as a part of our data request. These are not calculated with demolitions as they are by OPD.

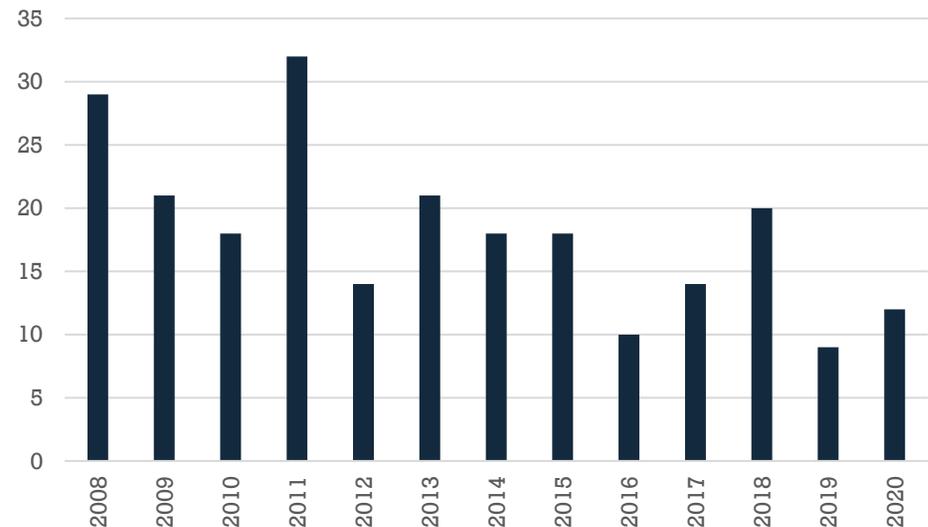
SRPC maintains an interactive dashboard, mapping permit locations on a yearly basis. The data can be manipulated by types of permit issued and town from 2008 to 2020 in the SRPC region.

<https://srpc.maps.arcgis.com/apps/dashboards/874cf8c1e8dd4714af17c8d530433605>

Residential Permits in the SRPC Region



Non-Residential Permits in the SRPC Region



Residential - Source: NHOPD. Year: 2000-2020. Granularity: SRPC.
Non-Residential - Source: SRPC. Year: 2008-2020. Granularity: SRPC.

Households

Household data provides a different lens through which citizens, planners, and decision makers can view the needs, livability, and efficacy of services provided to an area. This is in contrast to the granularity of data provided about individual residents, workers, and stakeholders. Data about households can provide information that is more fine-tuned to the nature of economic habits and resources available to families and children.

This subsection contains information about:

Household sizes.

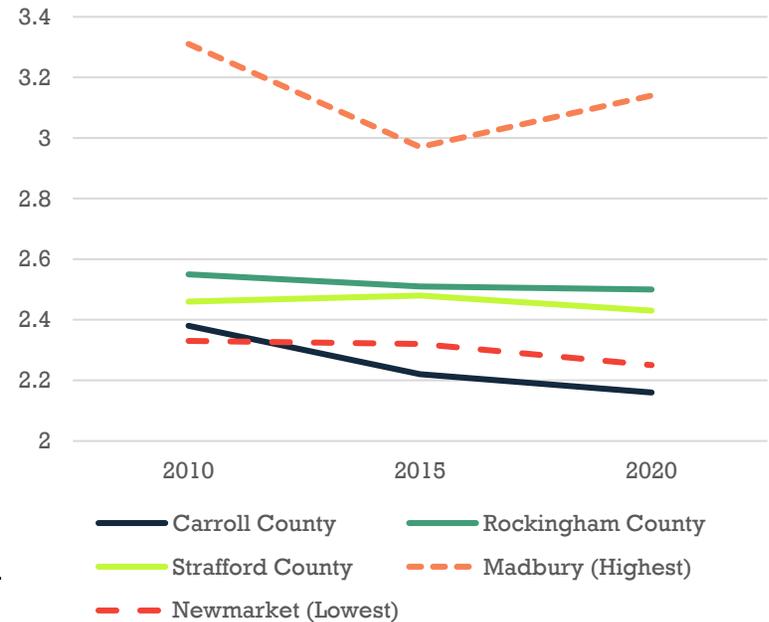
Dynamics of households with children.

Households and Household Size

Household size is a distinct metric from a simple “head count” of total population for an area. Household size can be indicative of housing climates, age dependency, and energy consumption. New Hampshire contains below-average size households than the whole United States, particularly in renter-occupied homes. This is likely due in part to the higher percentage of households comprised of older adults in northern New England.

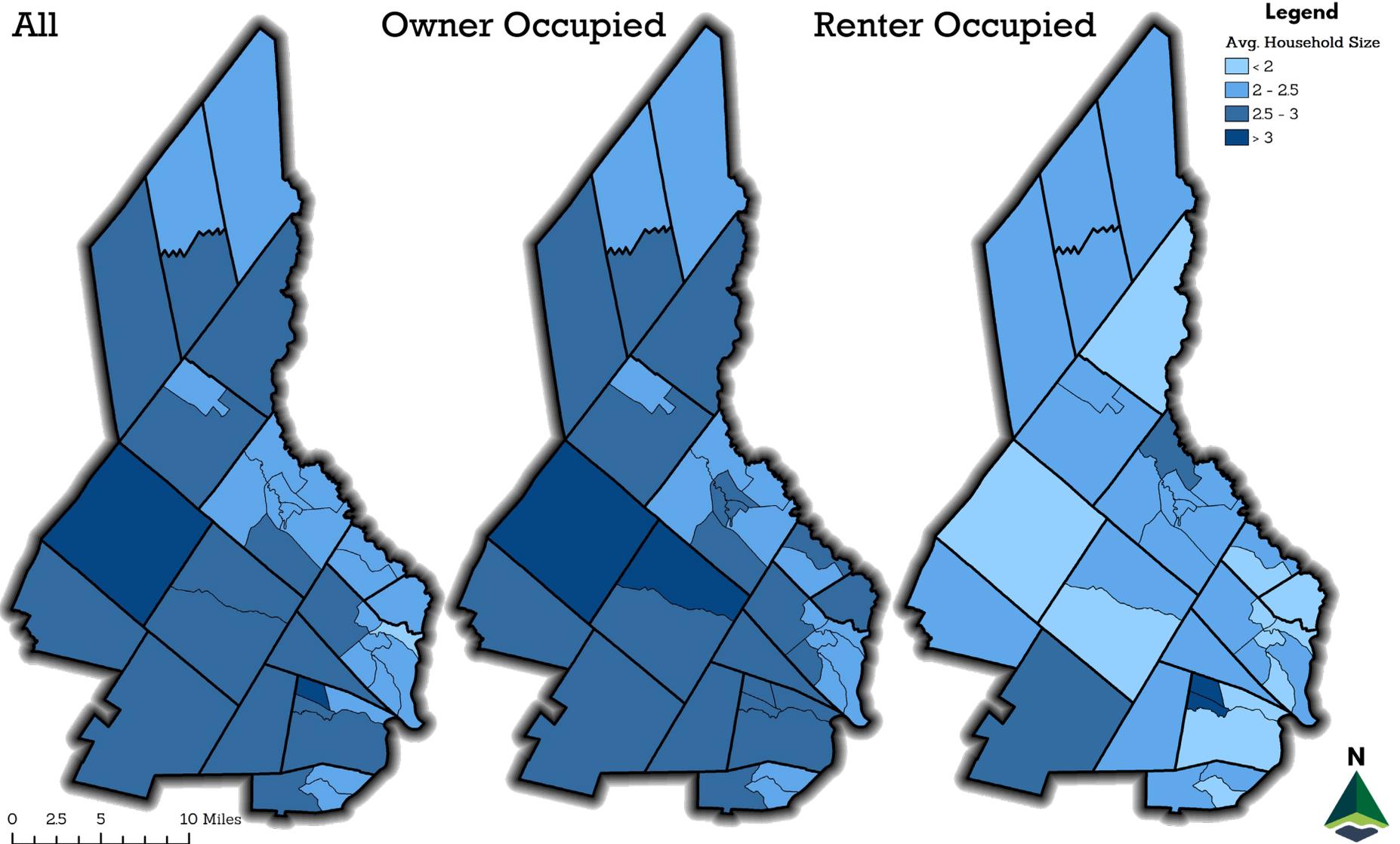
Town	Households	1 Person	2 People	3 People	4 People	5 People	6 People	7+ People
Barrington	3,290	17.60%	38.09%	15.02%	20.21%	6.72%	0.00%	2.37%
Brookfield	274	18.25%	46.35%	16.79%	10.58%	5.11%	2.55%	0.36%
Dover	13,860	30.12%	37.68%	15.12%	12.17%	4.37%	0.56%	0.00%
Durham	3,206	24.58%	31.25%	16.06%	21.21%	5.36%	1.37%	0.16%
Farmington	2,815	19.79%	45.36%	18.26%	11.69%	4.26%	0.64%	0.00%
Lee	1,883	28.41%	34.89%	13.75%	21.40%	0.00%	1.54%	0.00%
Madbury	714	6.86%	31.37%	20.73%	29.83%	5.60%	3.64%	1.96%
Middleton	554	17.87%	40.07%	18.59%	15.16%	4.51%	2.71%	1.08%
Milton	1,707	21.21%	35.97%	16.99%	14.18%	6.27%	4.92%	0.47%
New Durham	983	16.28%	38.56%	17.50%	13.22%	10.48%	3.97%	0.00%
Newmarket	4,066	29.96%	39.65%	17.27%	9.79%	0.81%	2.53%	0.00%
Northwood	1,691	15.38%	51.69%	14.25%	7.33%	8.22%	0.41%	2.72%
Nottingham	1,967	18.20%	38.54%	23.28%	13.83%	4.63%	1.17%	0.36%
Rochester	13,151	28.67%	41.24%	12.26%	8.39%	5.63%	2.78%	1.04%
Rollinsford	1,036	27.32%	34.27%	17.18%	17.66%	2.61%	0.00%	0.97%
Somersworth	5,246	30.44%	30.08%	22.61%	11.25%	4.56%	0.74%	0.32%
Strafford	1,386	8.15%	49.13%	14.29%	15.95%	8.44%	1.30%	2.74%
Wakefield	2,202	20.30%	51.95%	8.86%	14.76%	3.72%	0.18%	0.23%
SRPC	60,031	25.65%	38.98%	15.67%	12.79%	4.79%	1.50%	0.62%
SEDD	52,307	25.93%	38.54%	15.30%	13.16%	5.00%	1.46%	0.61%

Average Household Size



Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Municipalities.

Average Household Size



Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Municipalities.

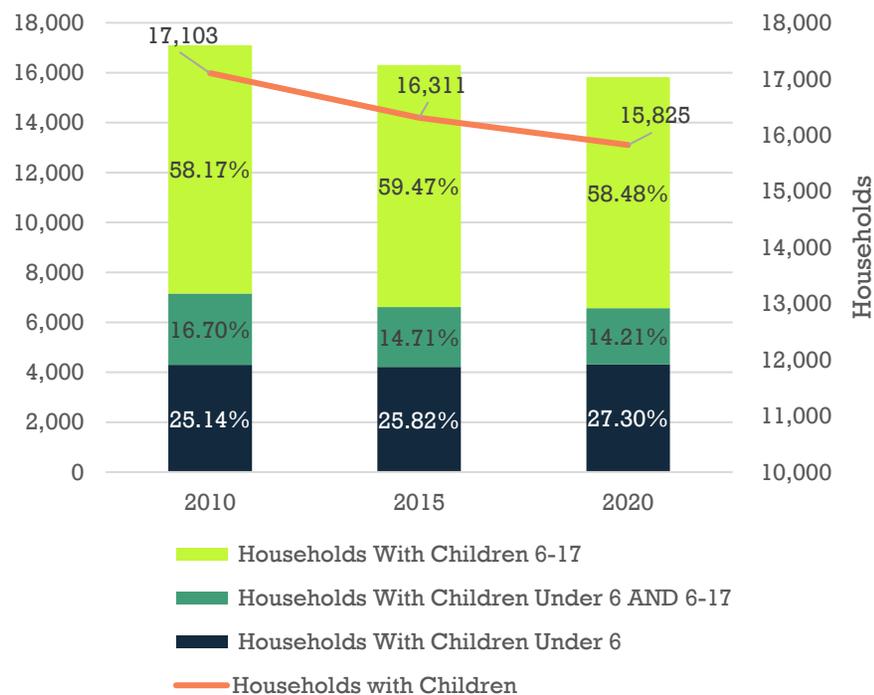
Households with Children

The number of households with children has decreased over the last decade from 31% to 26% of the region. While the total number of households with children in the region has decreased in recent years, the number of households with children under 6 has risen. Households with children over the age of 6 have declined slightly, maintaining a level percentage of households with children. Meanwhile households with multiple children (including at least one under 6 and one over 6) has seen the largest decrease.

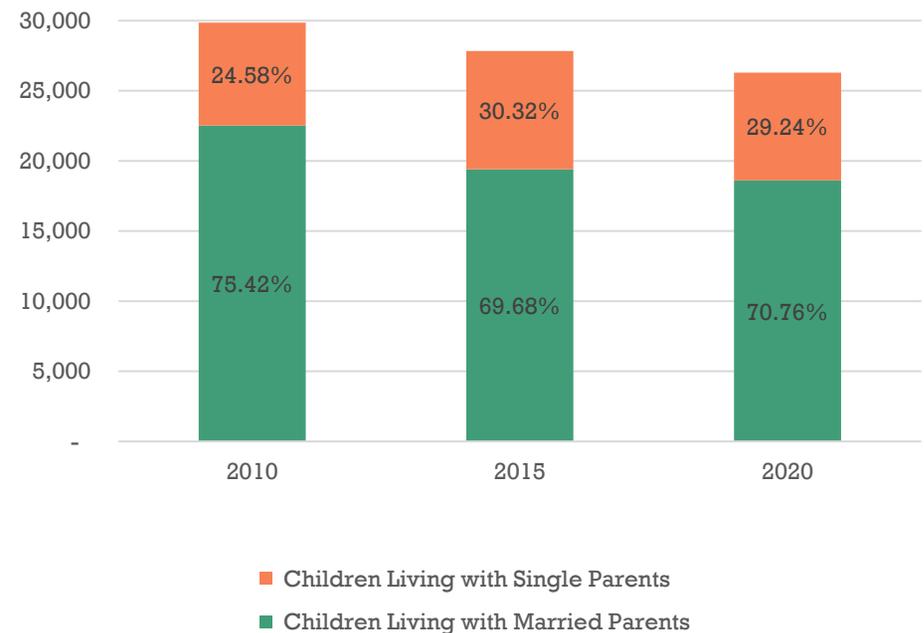
SRPC will continue to calculate and assess the presence of families and the respective age brackets of their children as the region continues to grow and attract workers from other areas of New England and the Northeast.

The data on this page looks at households where children live with at least one of their parents. It excludes households where children live with non-parent caretakers.

Households with Children by Age Group



Children by Marital Status of Parent They Live With



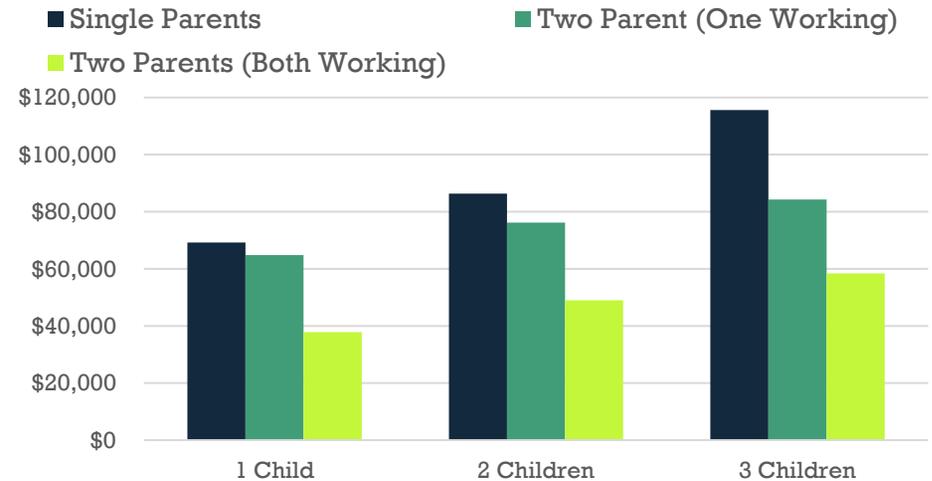
Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Municipalities.

Single Parent Households

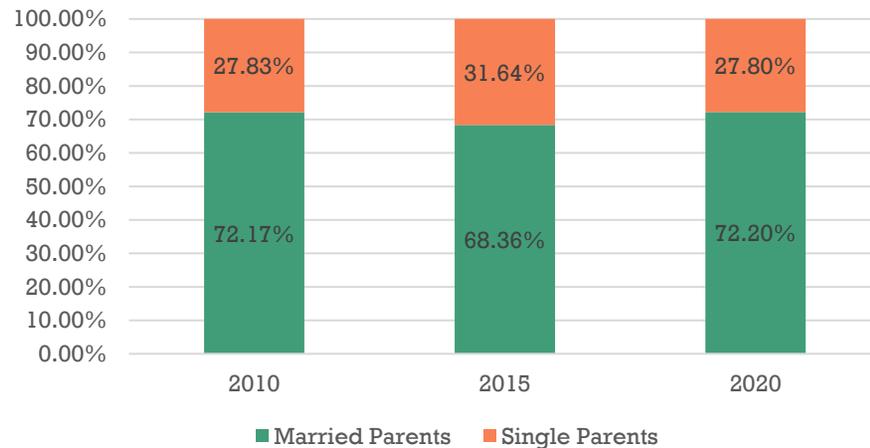
Single parents need to make significantly more money than parents with 2 adults earning an income. The MIT Living Wage Calculator estimates that a single parent of a child under 6 years old needs to make 82% more, and a single parent of three needs to make 96% more than each parent in a two adult household.

Single parent households account for about 28% of households where children live with at least one of their parents. This is slightly lower than the percent of children with single parents, indicating that more single parent households have multiple children.

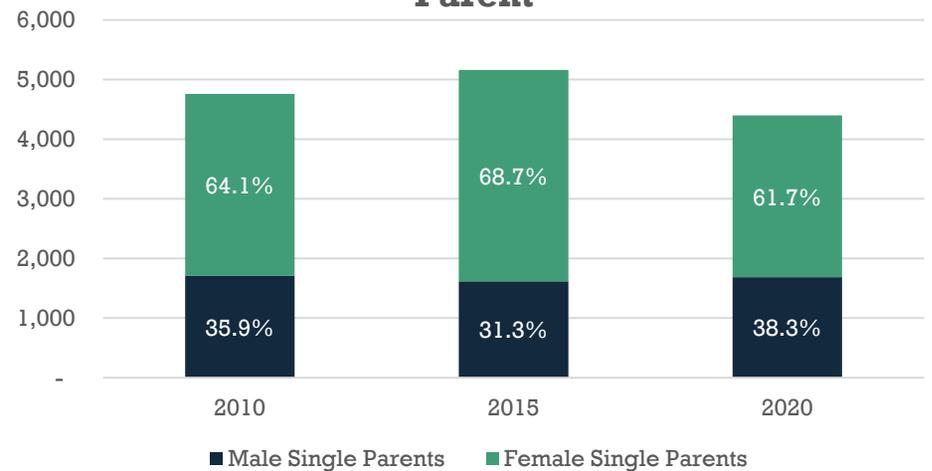
Living Wage Salary Per Adult



Households With Children By Marital Status of Parents



Single Parent Households by Sex of the Parent



Households - Source: US Census Bureau ACS. Year: 2020. Granularity: Counties, Municipalities.

Incomes - Source: MIT. Year: 2021. Granularity: Strafford County.

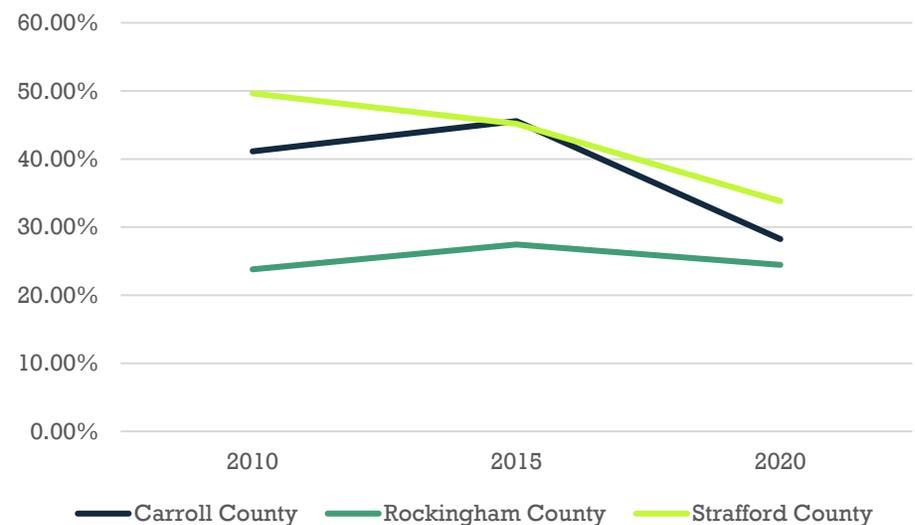
Grandparents Caring for Grandchildren

Dependent populations such as grandparents and grandchildren frequently are grouped together as they often do not work and may rely on others for goods and services they consume and receive. Grandparents may be able to provide childcare for young families, reducing at least one significant household cost for those families. This trend is not unique to the United States or any generation. Rising costs of living and a desire for security and closeness create cost-efficient yet rewarding childcare arrangements that can be beneficial to all three generations of a family.

Many families use one or more grandparents as an everyday childcare provider while a parent works, but some scenarios result in a dependent grandchild living with a grandparent or a grandparent ultimately stepping into a primary caregiver role. This may be as a result of incarceration, illness, demanding jobs, divorce, or other situations that may be temporary or permanent.

Although Carroll County generally has a higher median age within New Hampshire, grandparents of Strafford County are more likely to assume a primary caregiver role. While the full effects of the COVID-19 pandemic are still being realized, these figures did drop in 2020 for all three counties. Although not all grandparents are considered “older adults,” some of this population may not have felt secure in caring for a dependent grandchild during the volatile period of the onset of the pandemic for economic or health-related reasons.

Grandparents Responsible for Grandchildren



Source: US Census Bureau ACS. Year: 2020. Granularity: SRPC.

Recreation Sites

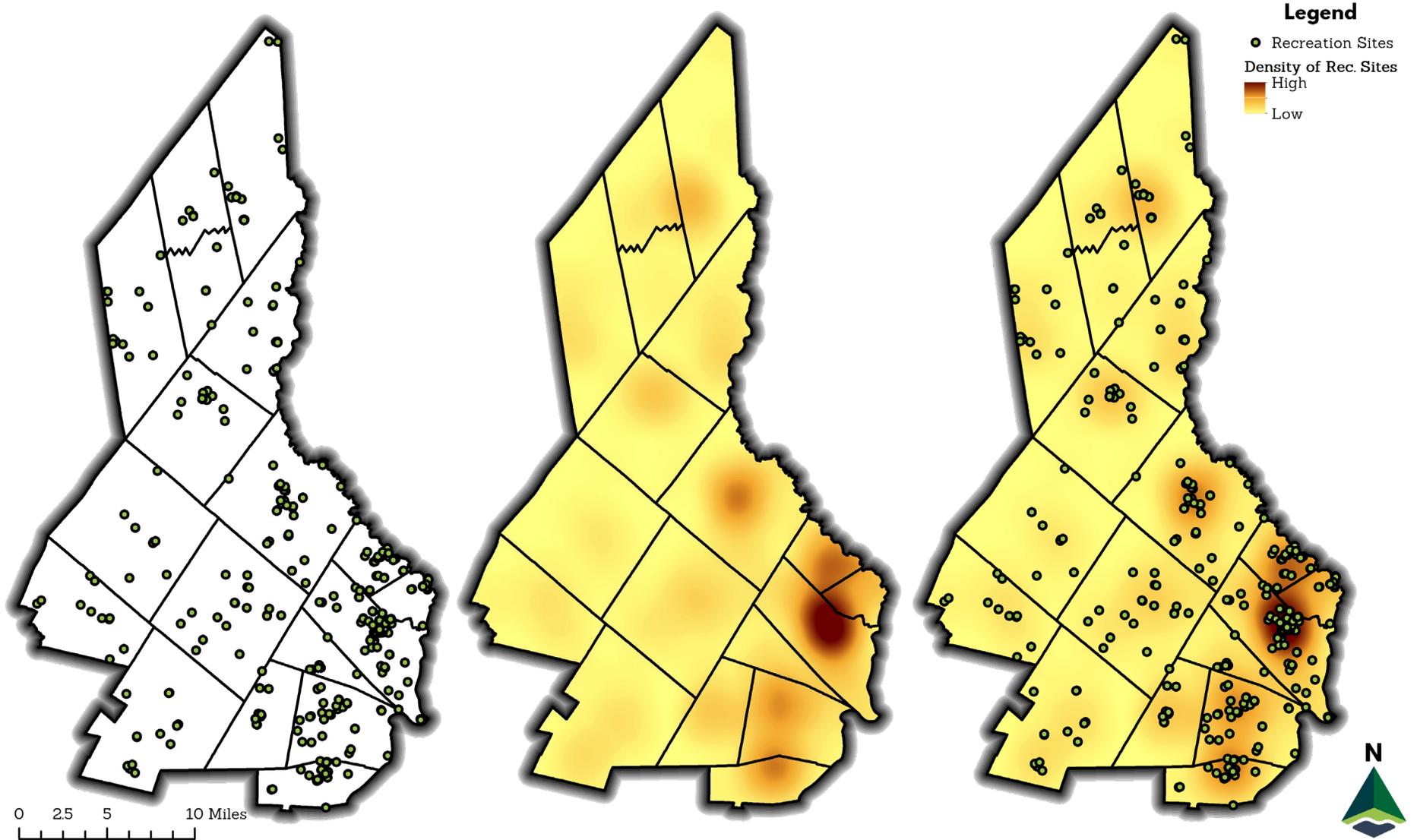
New Hampshire is characterized by its scenic nature and countless resulting recreation opportunities. There are opportunities for all types of outdoor enthusiasts, regardless of season. The SRPC region, much like the rest of New Hampshire, has dozens of lakes for boating, swimming, and fishing, and many hiking areas with views of Lake Winnepesaukee, Mount Washington, and other regional landmarks. SRPC municipalities provide and operate playgrounds, pools, and other recreation centers of their own.

In the spring of 2020, SRPC was awarded a second New Hampshire Children's Health Foundation (NHCHF) grant to implement a program complementary to the Pathways to Play program. Promoting Outdoor Play! (POP!) has enabled SRPC to expand the data available about publicly accessible recreation sites that was gathered in the Pathways to Play project, and to present this data in a more user-friendly and accessible tool for those who live, work, and recreate in the region.

Type	Barrington	Brookfield	Dover	Durham	Farmington	Lee	Madbury	Middleton	Milton	New Durham	Newmarket	Northwood	Nottingham	Rochester	Rollinsford	Somersworth	Strafford	Wakefield	Total
Playgrounds	2		13	2	2	3	1	1	2	2	2	1	3	9	1	5	1	4	54
Parks	1		10	4	3				3		2		1	3	3	3		2	35
Trails/open land	11	4	16	17	5	3	2	1	6	4	7	2	4	7	2	5	4	2	102
Sports	5	1	16	3	3	4	2	1	2	1	6	3	2	14	3	10	1	7	83
Beaches/pools			2					1	1	1	1	4	2	3				3	18
Boat launch/etc.	1		4	4			2		1	5	4	1	3	2	2	1	1	1	32
Winter	1		4	2							1			1		2			11
Other			2	1		1					1				1	1	1		8
Total	21	5	67	33	13	10	7	4	15	13	24	11	15	39	12	27	8	19	343

Source: SRPC. Year: 2021. Granularity: Municipalities.

Recreation Sites



Source: SRPC. Year: 2021. Granularity: Municipalities.

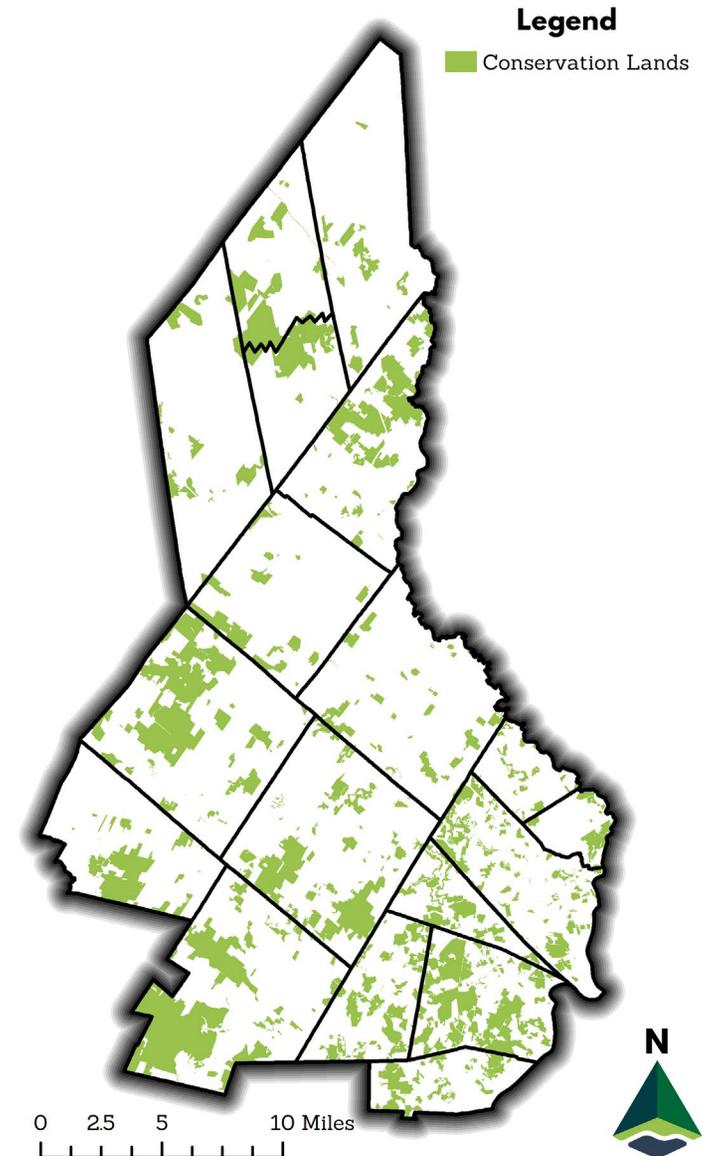
Conservation Lands

Conservation lands are properties that are generally undeveloped and protected from development by local land use regulations. These regulations are often put into place to protect features such as forestry, agriculture, wildlife habitats, watershed protections, and occasionally for recreational use.

Durham has the highest percentage of conservation land due to all of UNH's property. Nottingham comes in second place because of Pawtuckaway State Park.

The percent calculation in the table below is percent of land area only, and excludes waterbodies.

	Square Miles of Conservation	Percent of Municipality
Barrington	9.98	21%
Brookfield	5.47	24%
Dover	5.69	20%
Durham	10.32	42%
Farmington	3.87	10%
Lee	5.16	26%
Madbury	3.30	27%
Middleton	3.98	21%
Milton	8.21	24%
New Durham	3.27	7%
Newmarket	3.41	24%
Northwood	4.91	16%
Nottingham	15.54	32%
Rochester	3.51	8%
Rollinsford	1.37	18%
Somersworth	1.14	11%
Strafford	13.55	26%
Wakefield	2.18	5%
SRPC	104.86	19%



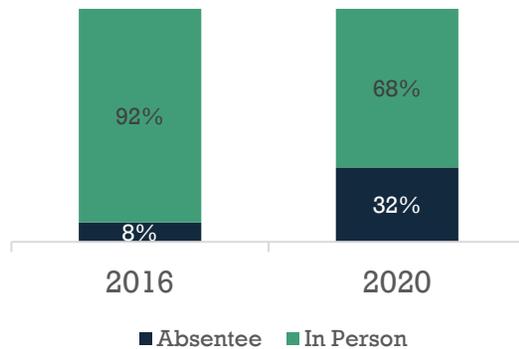
Source: UNH GRANIT. Year: 2021. Granularity: SRPC.

Voting

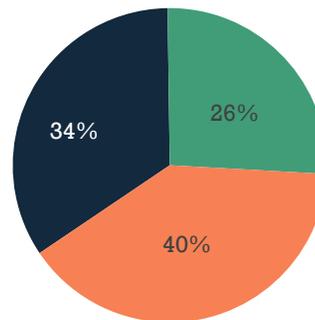
New Hampshire remains a top state for voter participation, and the SRPC region is no exception. In the 2020 **general** election, Brookfield recorded the highest participation at 85% and Somersworth recorded the second-lowest at 63%. Durham recorded significantly lower voter turnout at 42.7% as a result of UNH students who were registered in Durham but were not present to vote in Durham.

The region averaged out to roughly 69%, a similar rate found in the 2016 election. Voter participation here is calculated as the percent of registered voters who cast ballots.

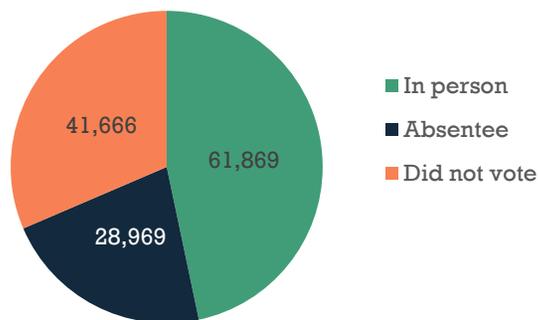
In Person vs Absentee



Party Affiliation



2020 SRPC Voter Participation



	Total 2020 Votes	Participation
Barrington	6,074	75.4%
Brookfield	549	85.2%
Dover	19,453	80.4%
Durham	7,901	42.7%
Farmington	3,470	68.4%
Lee	3,002	78.4%
Madbury	1,320	76.8%
Middleton	1,048	72.2%
Milton	2,563	67.7%
New Durham	1,878	78.5%
Newmarket	6,065	66.9%
Northwood	2,903	71.8%
Nottingham	3,542	76.8%
Rochester	17,016	69.0%
Rollinsford	1,833	72.7%
Somersworth	6,202	63.9%
Strafford	2,820	76.2%
Wakefield	3,199	70.1%
SRPC	90,838	68.6%
New Hampshire	814,499	72.2%

Source: New Hampshire Secretary of State. Year: 2016-2020. Granularity: Municipalities.

MOBILITY AND ACCESSIBILITY

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Infrastructure Conditions

Infrastructure can be categorized into two types: built infrastructure (structures such as roads, bridges, dams, railroads, utilities, etc.), and unbuilt infrastructure (facilities and systems such as emergency services, online systems used by government agencies and utility providers, social and economic systems, public health networks, etc.).

This section contains updated metrics that assess the condition and operation of a range of structures and facilities in the region.

This includes:

- Condition of pavements and bridges.
- Travel time reliability on National Highway System roads.
- Location and scale of dams.
- Availability of high speed (broadband) internet.

Future updates to this document will include additional information about non-transportation infrastructure.

The COVID-19 pandemic has exposed weaknesses in infrastructure systems of providing goods and accessibility to broadband internet. Schools, employment, and healthcare migrated services to online-only formats starting in 2020. Changes in wear-and-tear patterns of roads have also been observed as a result of a slight reduction in commuters and increased trucking as ecommerce has boomed.

Pavement in the National Highway System

This metric is one of the FHWA mandated performance measures defined in 23 CFR 490. The pavement condition on the National Highway System (NHS) is calculated as the percent of miles of NHS road by condition.

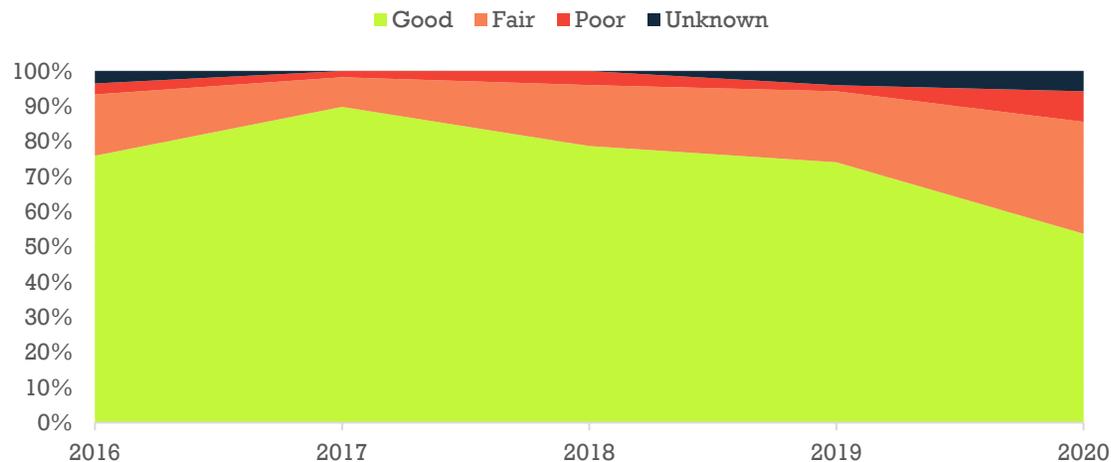
In the first iteration of target setting in 2018, the condition can be calculated by using the International Roughness Index (IRI), but starting in 2022, the pavement condition will also consider:

- Cracking.
- Rutting – where the wheel path is a visible indent in the pavement.
- Faulting – misalignment in sections of pavement, common on bridges and concrete roads.

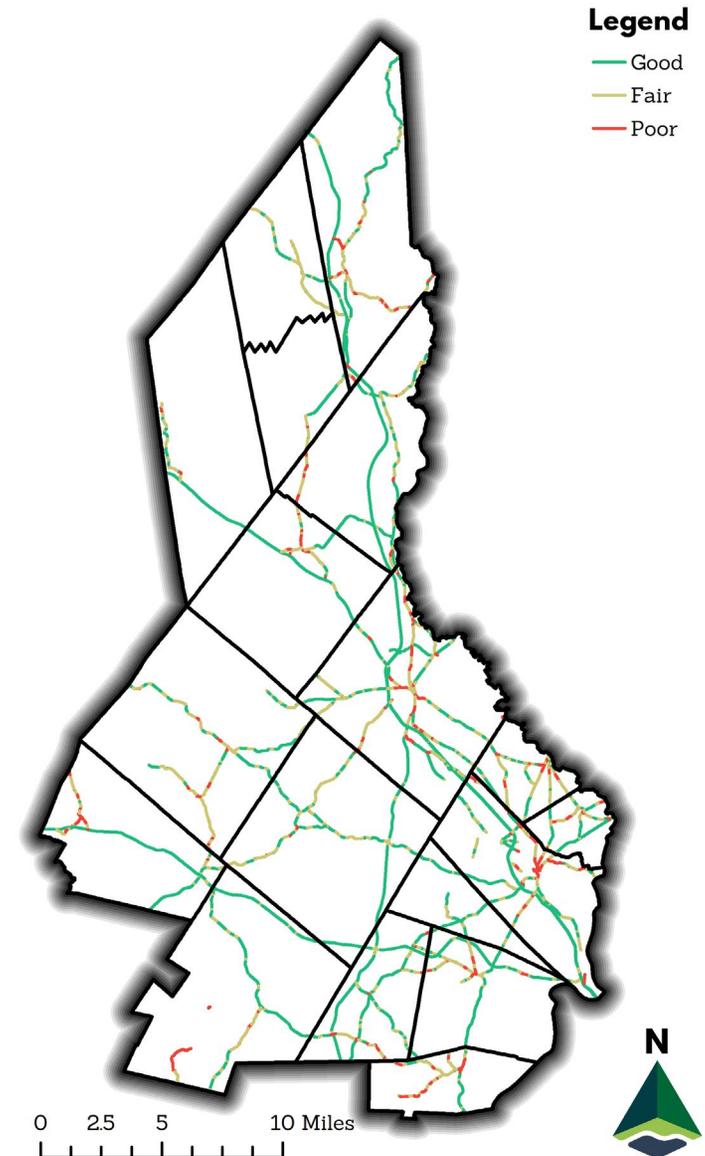
SRPC chose to assume the state targets in 2018 when these targets were initially set. Targets will be reevaluated in the fall of 2022.

The chart and map on this page use the IRI condition ratings for NHS roads. An IRI of less than 5 is considered good, and an IRI over 170 is considered poor. Some segments in 2016 and 2019 contained poor data quality not suitable for evaluation.

Pavement Condition on the NHS



Source: NHDOT. Year: 2016-2020. Granularity: SRPC.



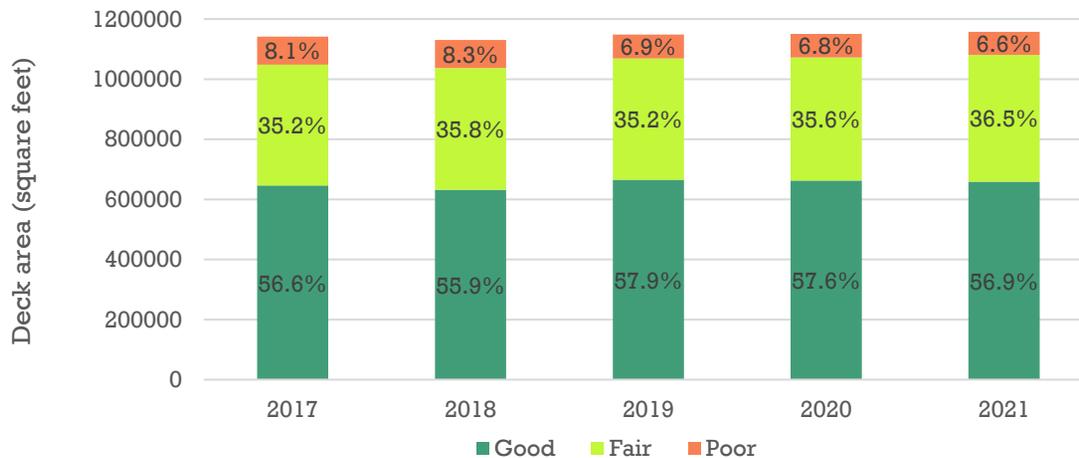
Bridge Condition

There are two main bridge condition methodologies used by SRPC. One is defined by FHWA in 23 CFR 490 as part of the federal transportation performance measures, and one is defined by NHDOT and is used to prioritize bridge repairs and replacements.

The FHWA Bridge condition performance measures identify the condition of bridges on National Highway System (NHS) roads. These bridges are scored on the condition of their deck, superstructure, substructure, and culvert (if applicable). The lowest scoring of these conditions determines the overall rating of the bridge.

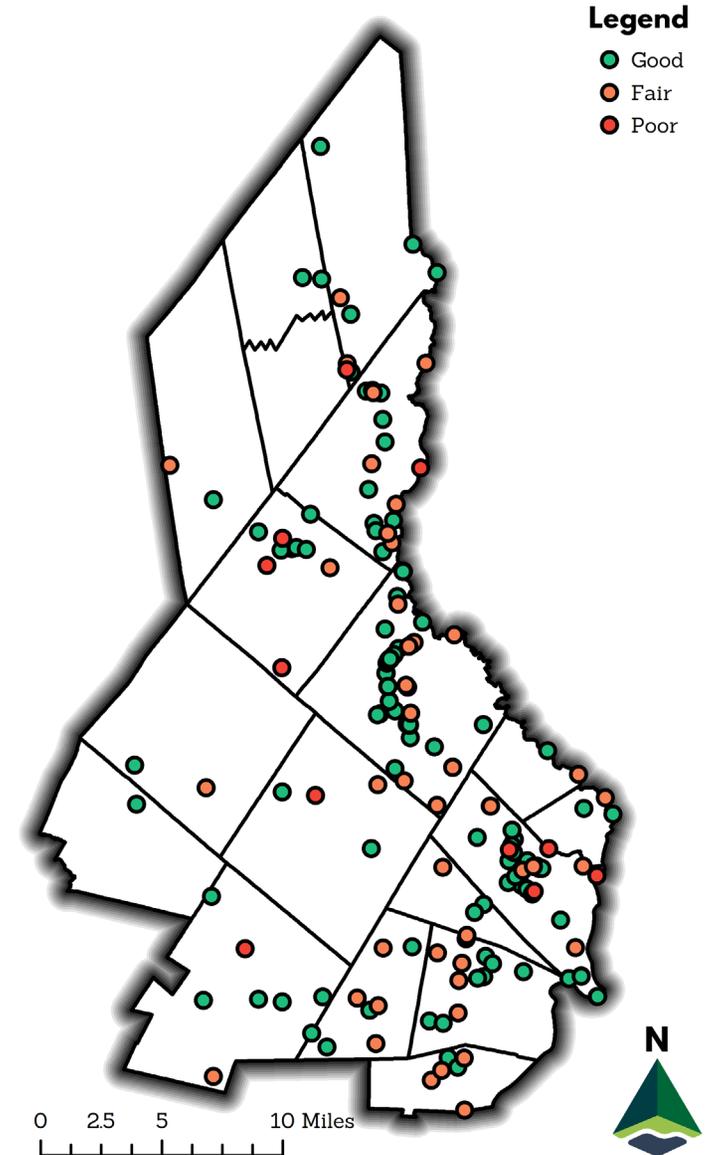
The chart below and map to the right use the FHWA bridge condition performance measures' analysis for all of the bridges¹ in the National Bridge Inventory in the region.

New Hampshire Bridge Conditions



¹ Bridges in the National Bridge Inventory are defined as bridges with a length of 20 feet or more. NHDOT uses a length of 10 feet for the state bridge inventory, so the Red List Bridge Metric may include bridges that are not included here.

Source: National Bridge Inventory. Year: 2017-2021. Granularity: New Hampshire.



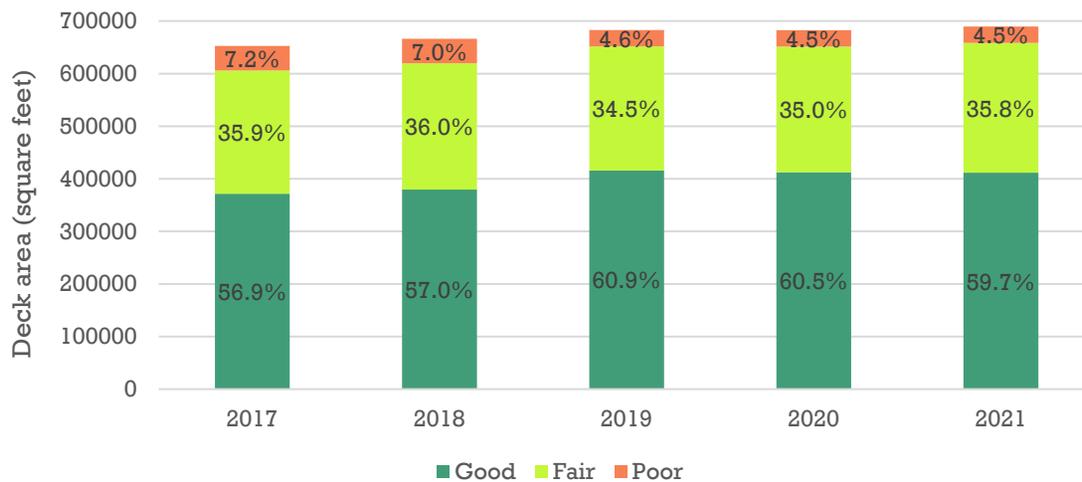
Bridge Condition in the National Highway System

The FHWA bridge condition performance measures determine the condition of bridges of roadways in the National Highway System. These bridges are scored on the conditions of their deck, superstructure, substructure, and culvert (if applicable). The lowest scoring of these conditions determines the overall rating of the bridge.

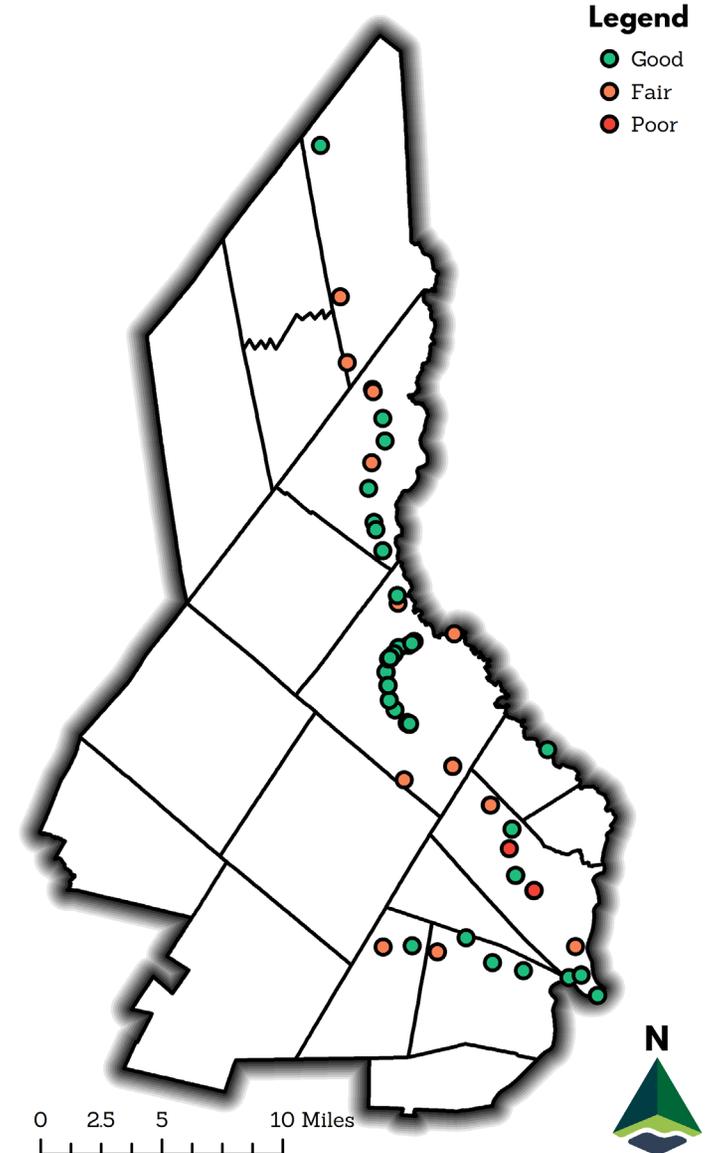
In 2018, SRPC set targets based on 2015-2017 bridge conditions. The SRPC region was performing better than the state (57% good condition statewide compared to 65.2% in the region). As of 2021, SRPC is on track to meet “good” and “poor” condition targets, although poor-condition bridges have increased slightly. SRPC will be evaluating the 2018 targets and setting new targets in the fall of 2022.

Condition	State Target	SRPC Target	2021 Status
Good	57.0%	Support State	On track
Poor	7.0%	Support State	On track

New Hampshire NHS Bridge Conditions



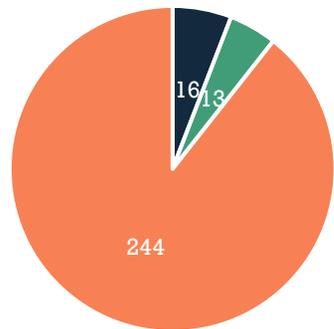
Source: National Bridge Inventory. Year: 2017-2021. Granularity: New Hampshire.



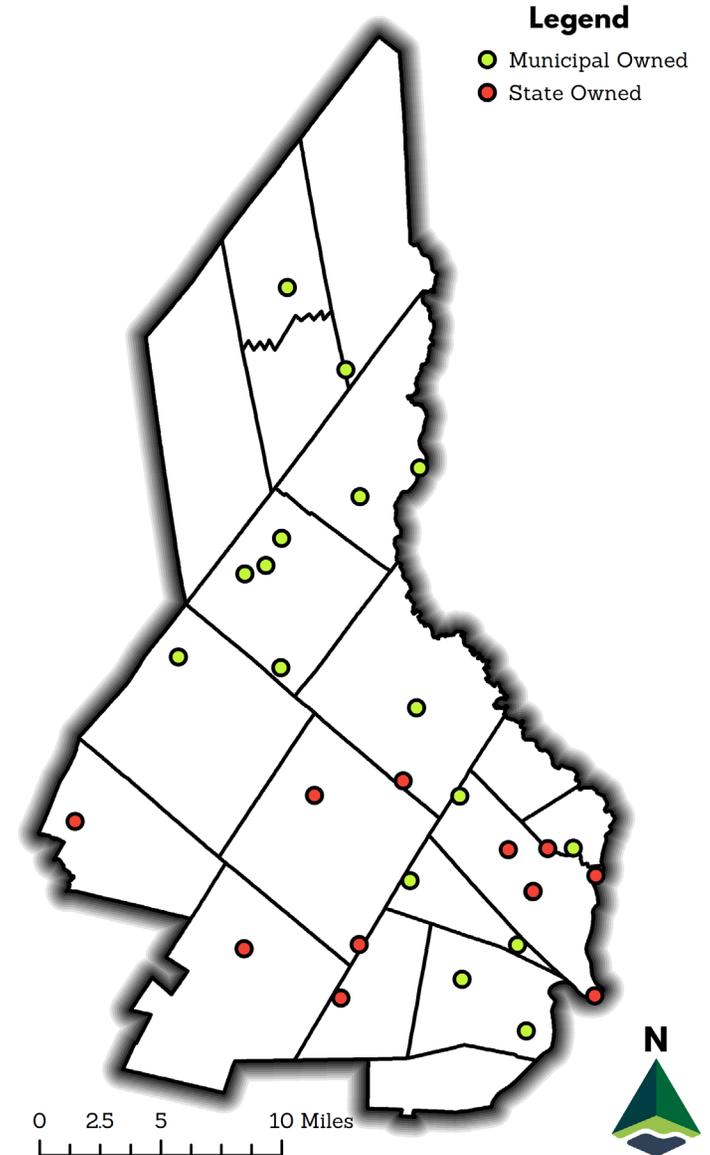
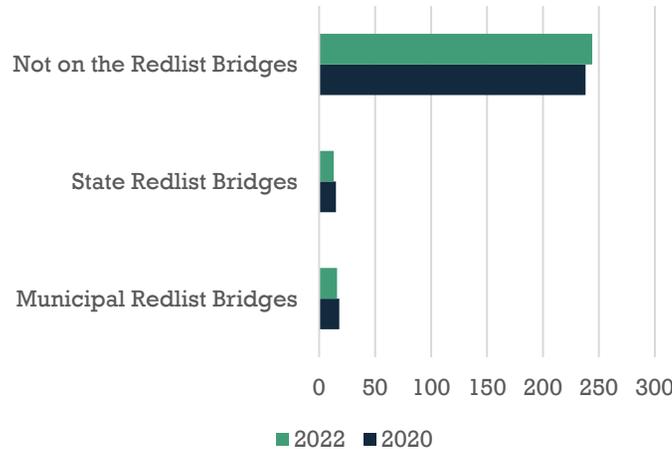
Red List Bridges

Red list bridges are designated by NHDOT and used to rank and prioritize bridge improvements. The red list instructs NHDOT on the frequency of inspections and the urgency of repairs. A state-owned red list bridge is inspected twice annually, a municipally-owned red list bridge is inspected annually, and non-red list bridges are inspected biennially (RSA 234.2). NH RSA 234.2 defines a bridge as any span 10 feet or more, which is 10 feet shorter than the federal definition of a bridge. As a result, the data for this metric will show more bridges than other bridge metrics in this document.

The chart below to the left displays the number of bridges on and off the red list, and all the municipalities in the region have bridges in the red list. The chart below to the right displays the progress in the region for repairing these red list bridges.



- Municipal Redlist Bridges
- State Redlist Bridges
- Not on the Redlist Bridges



Source: NHDOT. Year: 2020, 2022. Granularity: New Hampshire.

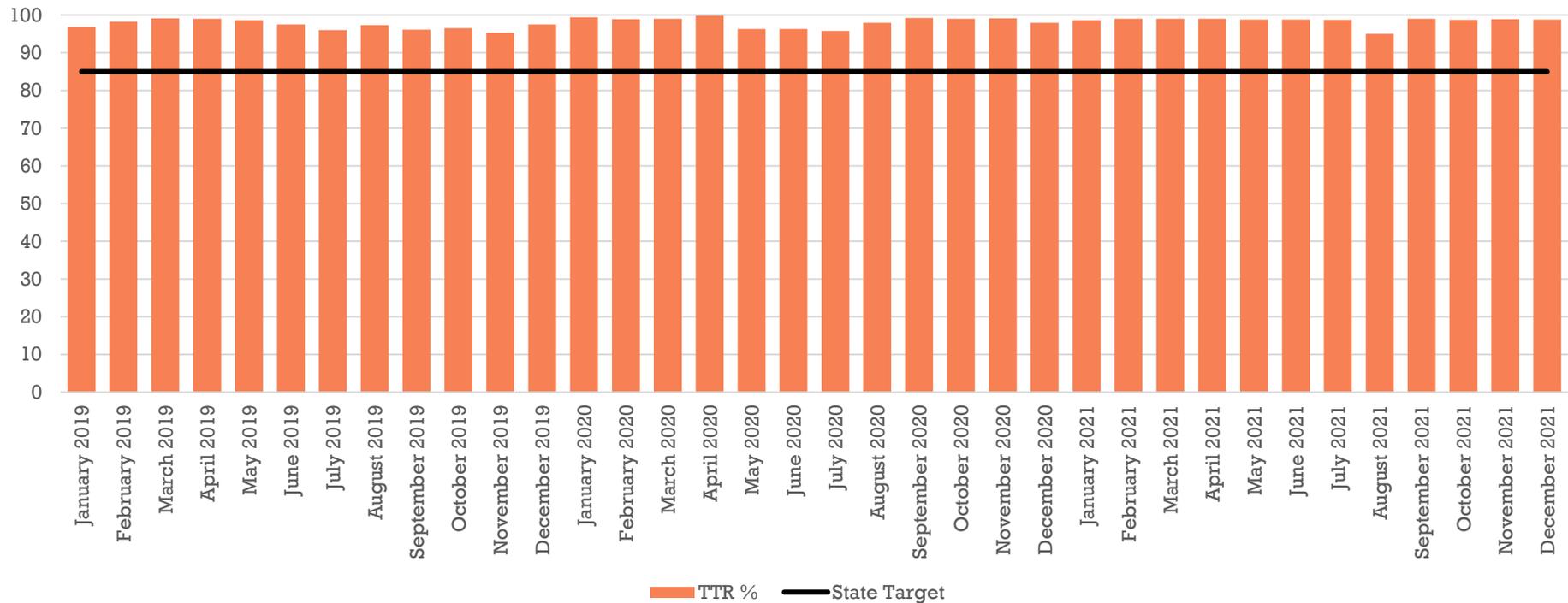
Travel Time Reliability on Non-Interstate National Highway System

The Travel Time Reliability measure is defined as the “Percent of person-miles traveled on the non-Interstate NHS that are reliable.” This is one of the performance measures required by FHWA in 23 CFR 490. SRPC set initial four-year targets in 2018 and will need to set new targets again in 2022.

In 2018, SRPC chose to assume the state target. The state target was 85% reliable travel. This target was based on 2017 baseline data. In the Strafford Region, 98.4% of travel was reliable in 2017.

Reliability is not a measure of whether there is congestion, but rather a measure of the predictability of any congestion that exists. A road can be congested for an hour each weekday and still be “reliable” as long as drivers can know what time to leave to account for the congestion. If the congestion is unpredictable, then the road is not reliable.

Travel Time Reliability (SRPC Non-Interstates)



Source: INRIX. Year: 2019-2021. Granularity: SRPC, NH.

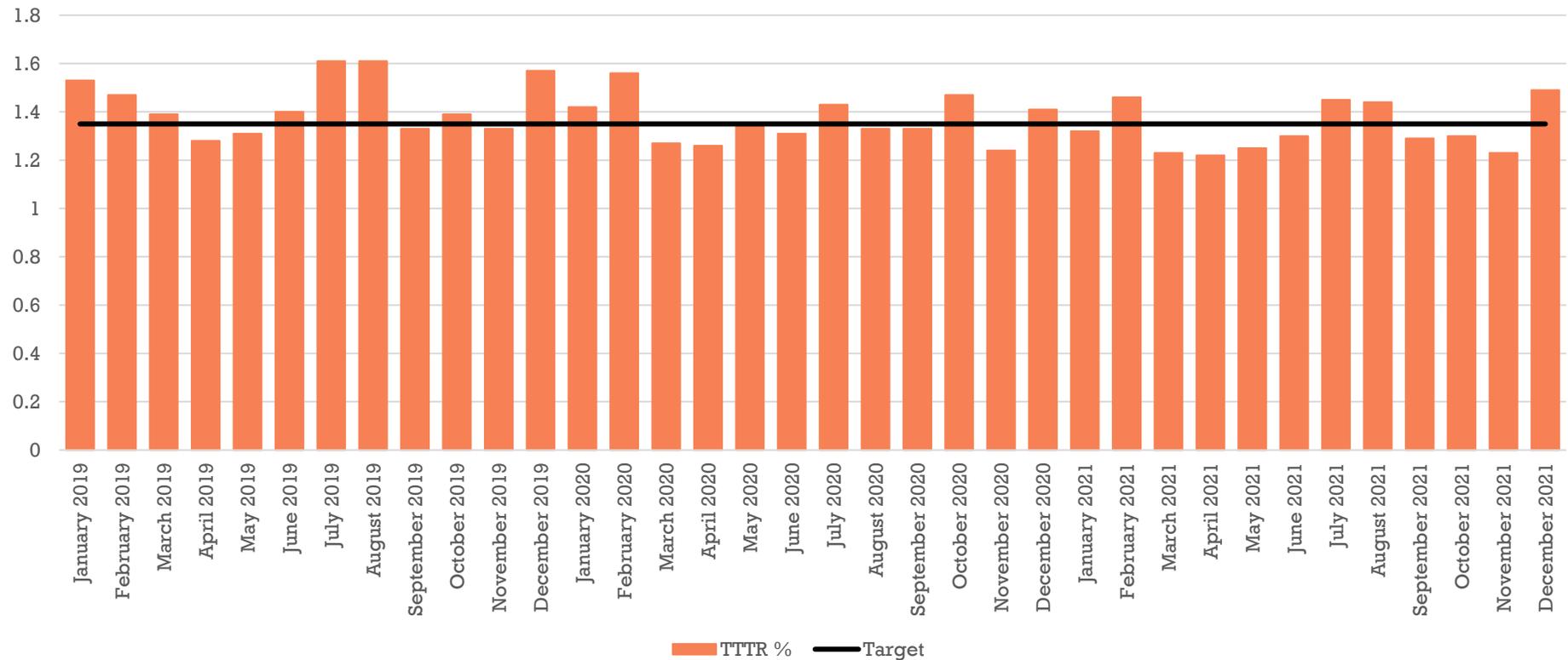
Truck Travel Time Reliability on Interstates

The Truck Travel Time Reliability measure is defined as the “Percent of truck-miles traveled on the Interstate that are reliable.” This is one of the performance measures required by FHWA in 23 CFR 490.

The performance measure looks at interstates. Since SRPC does not have any Interstate highways, targets are not set. SRPC still tracks statewide reliability as these conditions impact the region’s infrastructure, commuting patterns, and other needs.

Reliability is not a measure of whether there is congestion, but rather a measure of the predictability of any congestion that exists. A road can be congested for an hour each weekday and still be “reliable” as long as drivers can know what time to leave to account for the congestion. If the congestion is unpredictable, then the road is not reliable.

Truck Travel Time Reliability (New Hampshire Interstates)



Source: INRIX. Year: 2019-2021. Granularity: NH.

Active Dams

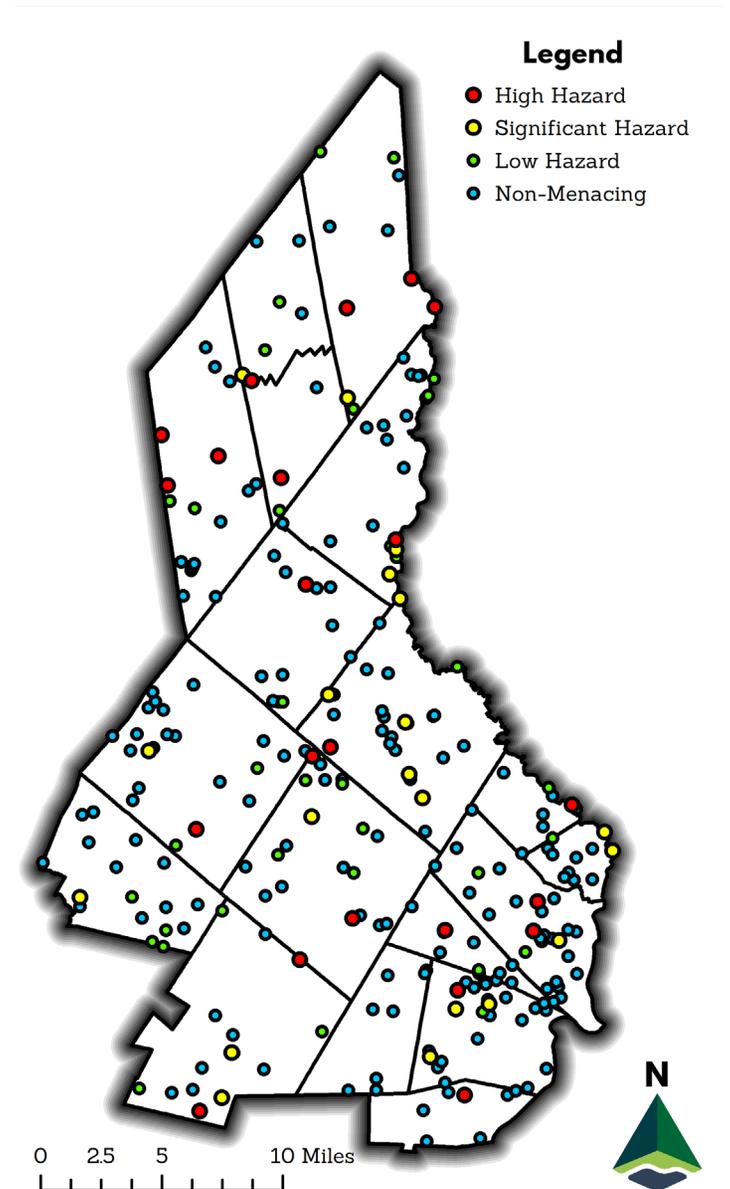
Dams are a critical component of the region's infrastructure. Dams are classified into four categories based on the estimated damage that could occur in the event of failure. Based on these classifications, 16% of the dams in the region are High Hazard or Significant Hazard Dams and would cause serious damage and potential loss of life if they were to fail. These dams are required to have Emergency Action Plans (RSA 482). In addition, these higher hazard dams are listed in their communities' Hazard Mitigation Plans.

More information about the classifications of dams can be found here: <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/db-15.pdf>

	Hazard Description	Dams
High Hazard	Failure of the dam would likely result in loss of human life, destruction or damage to houses or interstates, or release hazardous waste.	22
Significant Hazard	Failure of the dam would result in destruction or damage to Class I or II roads, property, or damage to public health or environmental sites.	20
Low Hazard	Failure of the dam may result in some destruction or damage to property, including local or private roads.	41
Non-Menacing	Failure of the dam would not result in any destruction due to the size or location of the dam.	183

Top 4 Rivers within SRPC Region by Number of Dams					
Streams/ Rivers	Total Dams	High Hazard	Significant Hazard	Low Hazard	Non-Menace
Salmon Falls River	15	4	4	5	2
Cochecho River	8	2	2	3	1
Bellamy River	6	3	0	0	3
Lamprey River	4	1	1	1	1

Source: NHDES. Year: 2021. Granularity: SRPC.



Broadband Access

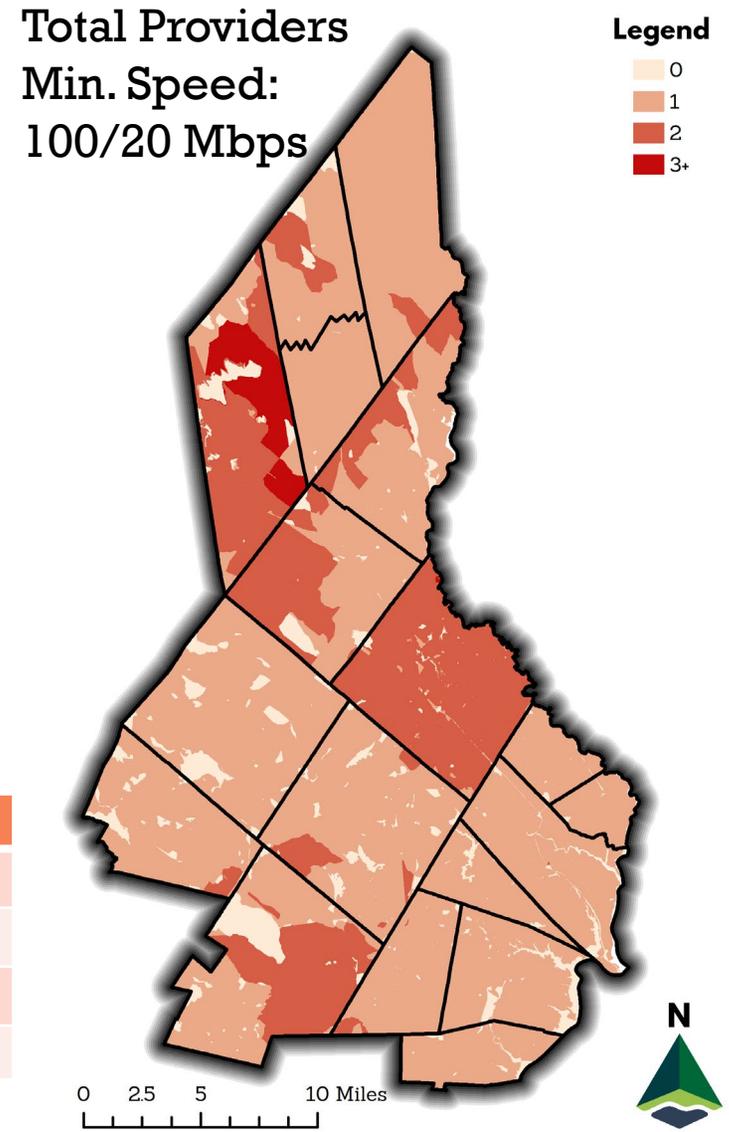
Broadband, also called “high-speed Internet,” is the umbrella term referring to Internet access that is always on and is significantly faster than dial-up Internet access. The importance of reliable high-speed internet became evident in 2020, as the COVID-19 pandemic resulted in remote work, education, medicine, and leisure. The internet is increasingly viewed as an indispensable utility like electricity and running water, and COVID-19 has shown that access to it is an equity issue. Infrastructure Investment and Jobs Act (IIJA) seeks to address this through over \$65 billion in investments in broadband focusing on unserved and underserved areas.

- Unserved Areas (where no one has access to 25/3 Mbps speeds).
- Underserved Areas (where no one has access to 100/20 Mbps speeds).

The broadband information contained in this document is a simplified overview of the subject as a whole and requires further analysis in the future. Future analyses may include more elaborate assessment of the percent of households with access to broadband and more information about the limitations of each technology. The maps to the right and on the next page shows the total number of providers advertising at least 100/20 Mbps.

High speed internet is available via four transmission types: DSL, Cable, fiber optic, and satellite. The table below compares these different technology types. DSL and Satellite providers in the region do not provide data fast enough to meet the updated definition of broadband.

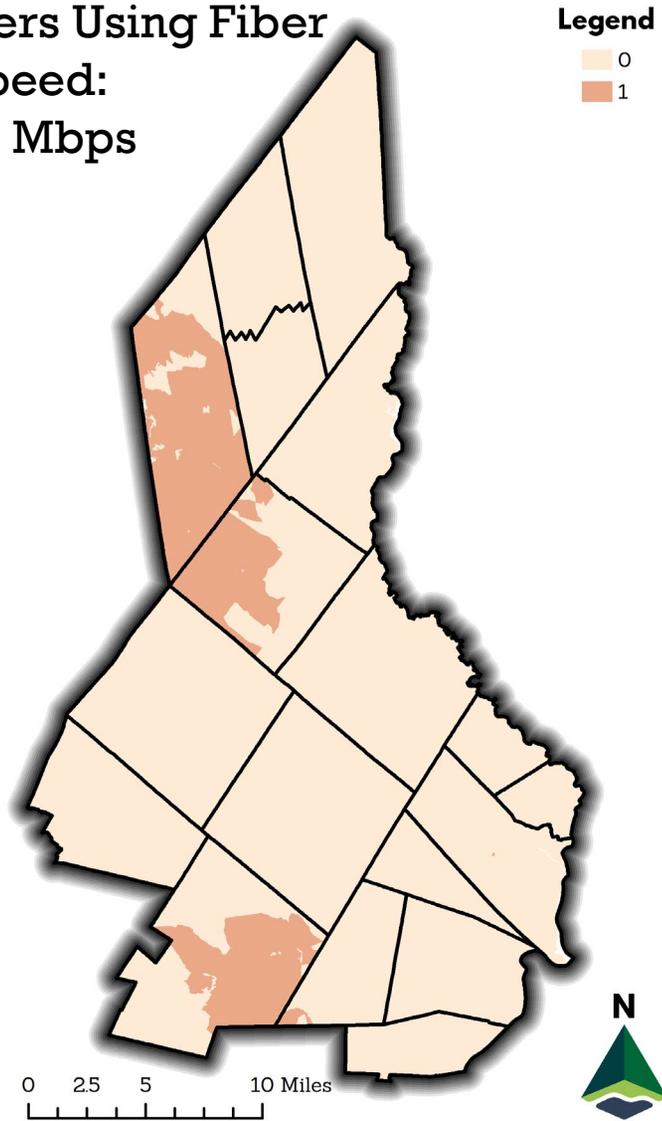
Type	Transmission by	Speed	Price
Fiber Optic	Fiber/Optic (glass) cables	Fastest	\$\$
Cable	Same as Cable TV	Faster than DSL and Satellite	\$\$
Satellite	Satellites	Slower than Cable and Fiber	\$\$\$\$
DSL	Same as phone lines	Slowest of these four	\$



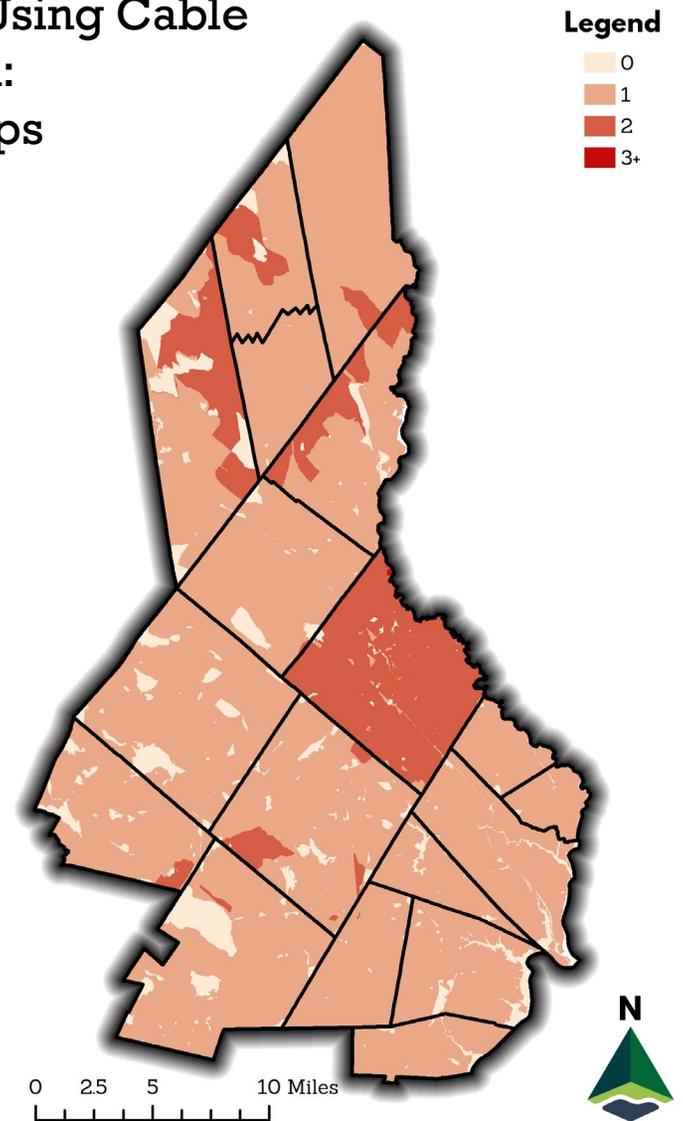
Source: FCC. Year: Dec 2020. Granularity: Census Blocks.

Broadband Access

Providers Using Fiber
Min. Speed:
100/20 Mbps



Providers Using Cable
Min. Speed:
100/20 Mbps



Source: FCC. Year: Dec 2020. Granularity: Census Blocks.

Passenger Rail & Airports

Railroads

Two major railroads are in use in the region. PanAm* currently owns the rail line traveling through Newmarket, Durham, Dover, and Rollinsford. This line is used by Amtrak to provide for its Downeaster line as well as by freight operators, including New Hampshire Northcoast (NHN). The Amtrak Downeaster provides passenger rail service that runs from Brunswick Station, Maine to Boston's North Station with stops at the Dover Transportation Center and Durham-UNH Station.

The other railroad in use is owned by NHN outright and connects the PanAm line to Ossipee via Somersworth, Rochester, Milton, and Wakefield. Information about rail freight can be found in the Freight section of this chapter.

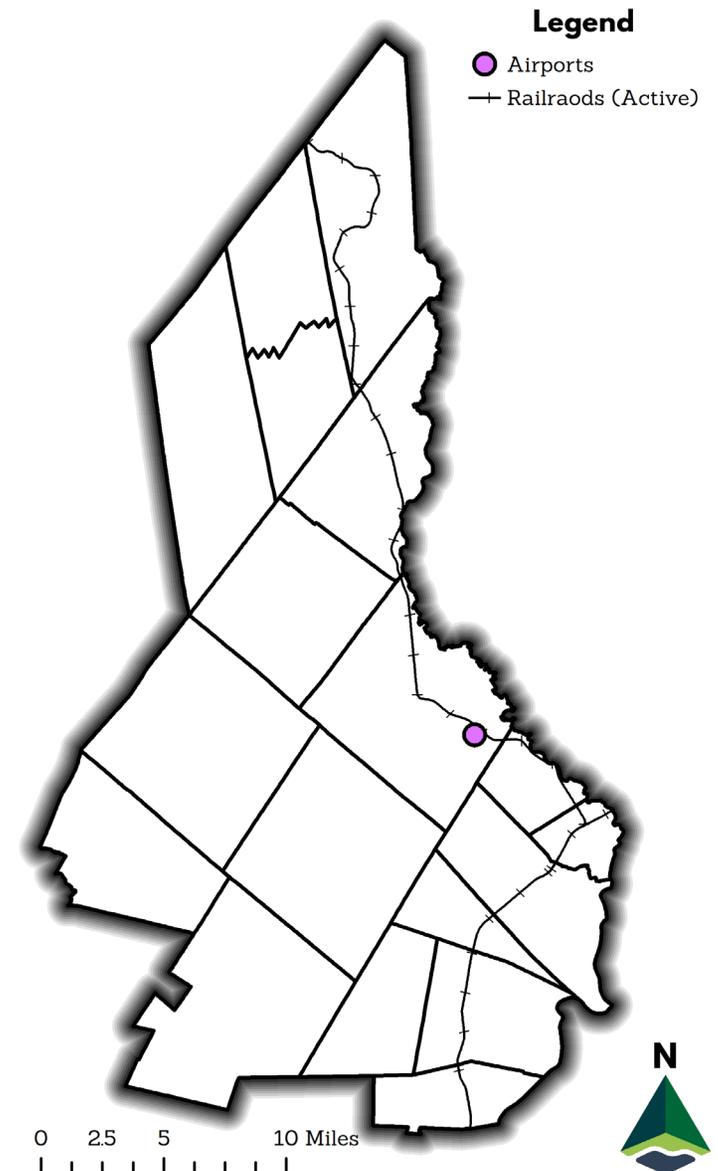
*At the time of publication, PanAm was in the process of being acquired by CSX.

Airports

Skyhaven Airport (DAW) in Rochester is a small regional airport. Runway expansion projects in recent years are intended to increase capacity for the facility. However, Skyhaven will likely not expand to a capacity in which commercial airlines or freight are feasible, but small charter planes may be possible.

Skyhaven is owned by Pease Development Authority which also owns nearby Portsmouth International Tradeport at Pease (PSM) in Portsmouth. Major airports accessible to the region are Manchester-Boston Regional Airport (MHT) in Manchester and Boston Logan International Airport (BOS) in Boston.

Source: UNH GRANIT. Year: 2020. Granularity: SRPC.



Passenger Rail Ridership

The Amtrak Downeaster is operated by the Northern New England Passenger Rail Authority (NNEPRA). The Downeaster runs between Brunswick, Maine and Boston, Massachusetts, with New Hampshire stops in Dover, Durham, and Exeter. Claremont, the fourth New Hampshire station, is along the Vermonter line.

The Downeaster, like other northeastern Amtrak lines, is popular, but ridership is restricted by current track capacity. The effects of COVID-19 on rail ridership of all types and in all regions is still being realized. Many users were commuters alongside tourists, but a transition to remote work could affect passenger trends.

Top New Hampshire Amtrak Trips by Ridership and Revenue (2019)

Dover ↔ Boston North MA

#2

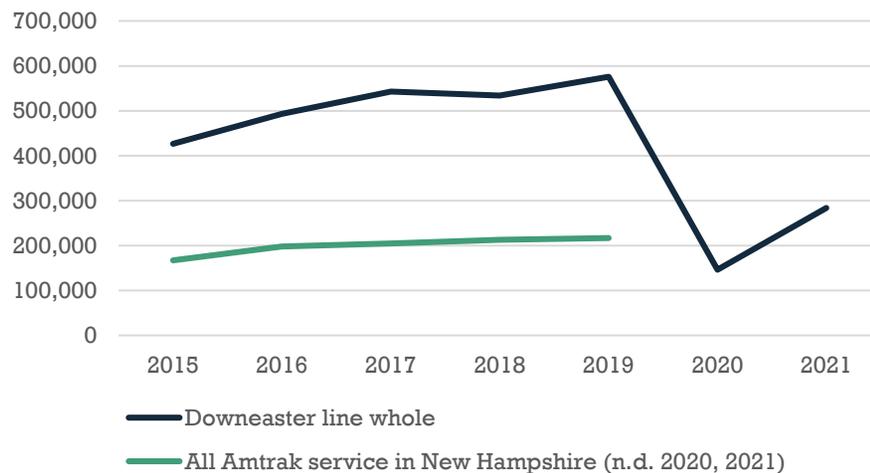
Durham ↔ Boston North MA

#3

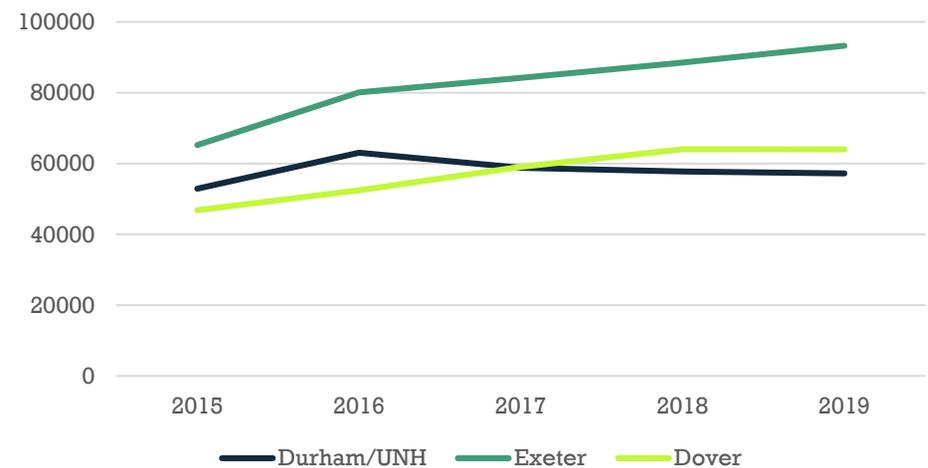
Dover ↔ Portland ME

#4

Amtrak Ridership in New Hampshire



Amtrak Ridership of New Hampshire Stations



Graphic - Source: Rail Passenger Association. Year: 2019. Granularity: SRPC.

Charts - Source: Northern New England Passenger Rail Authority. Year: 2015-2021. Granularity: New Hampshire.

Freight Commodities

The New Hampshire state freight plan was published in 2019 and identified several goals and objectives that MPOs strive to facilitate. As part of the plan development process, NHDOT and RPCs worked to identify candidates for critical freight corridors. The state plan divides these into critical urban and critical rural corridors. SRPC will be conducting corridor-based analysis of routes including, but not limited to, NH 125, US 4, NH 108, and NH 16, all major thoroughfares for freight traffic. Existing tools common for MPOs like SRPC, such as the travel demand model and travel time data, aid in this analysis.

This subsection contains metrics about:

- Rail Freight.
- Domestic Freight Value and Weight (Tonnage).
- Exports & Imports.

Rail Freight

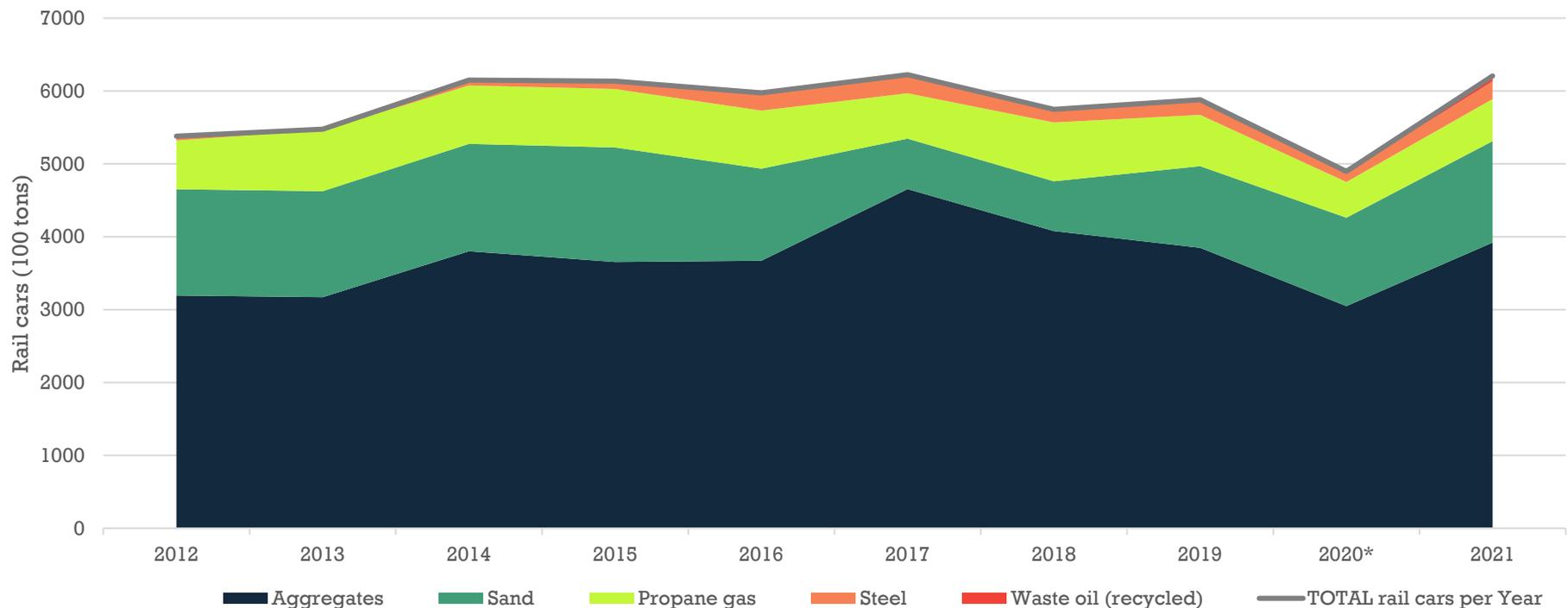
New Hampshire Northcoast (NHN) has been moving freight by rail through the SRPC region since 1986. Major commodities include aggregates for Boston Sand & Gravel and propane for Eastern Propane.

NHN has made several repairs and upgrades to the 43 miles of track and siding it owns, but any expansion is limited by the capacity of track through Dover that is owned and operated by CSX and shared with the Amtrak Downeaster. In September of 2020, NHN received a \$4.5 million grant to renovate and

modernize its network of track and siding. Volume data from NHN is not available for Q4 2020.

Between 2015 and 2018, NHN contributed almost 10% less to the total amount of rail freight moved within New Hampshire. More data about the early 2020s is expected to be published by the Bureau of Transportation Statistics in the years to come.

Rail Commodities Transported by New Hampshire Northcoast

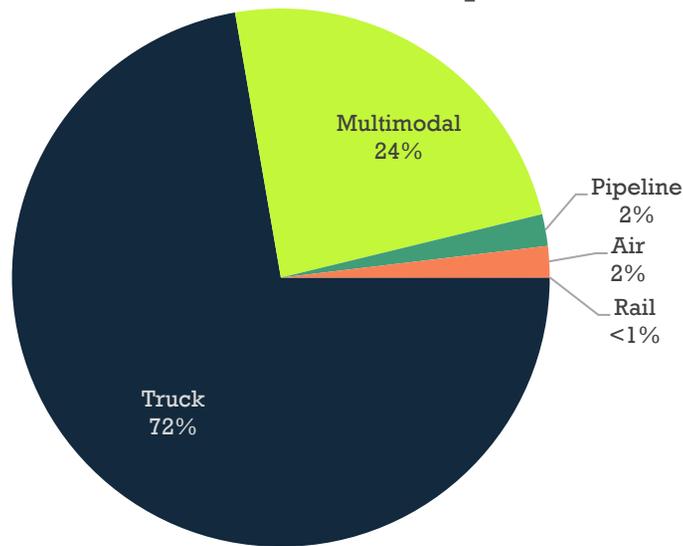


Source: New Hampshire Northcoast. Year: 2012-2021. Granularity: NHN Service area.

Domestic Freight Value

Much of the freight value in New Hampshire is freight that *passes through* the state. Rail transport of freight is limited in the SRPC region and trucks are the dominant mode for freight movement. The COVID-19 pandemic has had a considerable influence on the future of freight as demand for door-to-door shipments increased dramatically. The long-term implications are uncertain, but regional planning will need to consider the potential for continued demand for this kind of shipping and impacts to the transportation network.

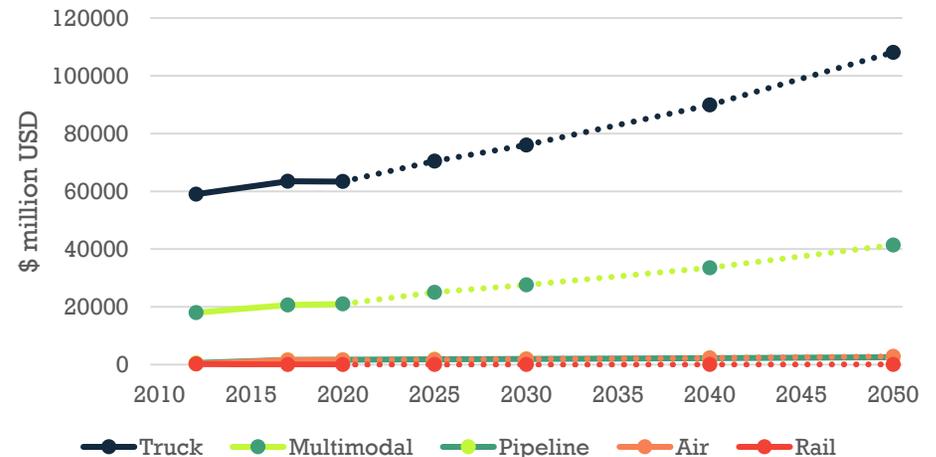
2020 Value of Freight Transport Modes in Southeastern New Hampshire



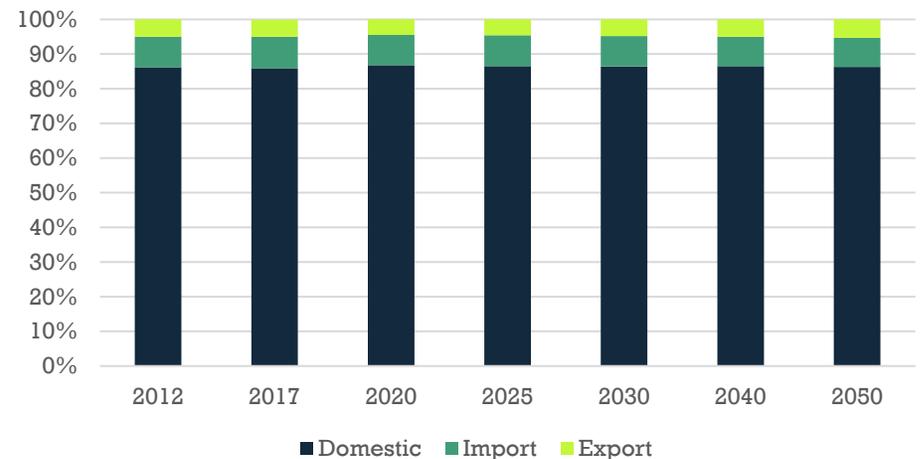
Southeastern New Hampshire in this definition includes Belknap, Hillsborough, Merrimack, Rockingham, and Strafford counties.

Source: Federal Highway Administration. Year: 2017, 2020, 2022-2050. Granularity: Seacoast and Merrimack Valley Regions.

Projected Value of Freight Movement in Southeastern New Hampshire



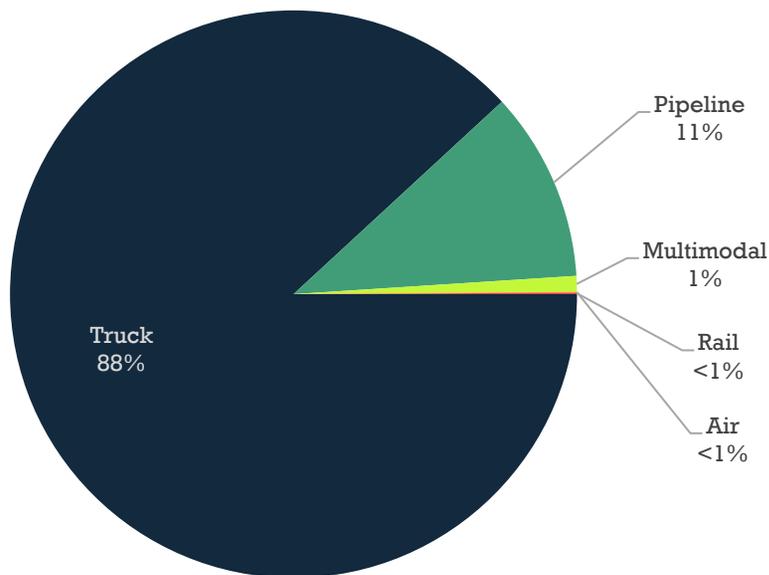
Freight Value by Transport Type in Southeastern New Hampshire



Domestic Freight Tonnage

Trucks carry nearly 90% of freight in New Hampshire. Heavier vehicles cause the greatest amount of damage to roadways and contribute to maintenance costs. Large trucks often begin their journeys on high-volume routes that are rated for heavy loads but also travel on secondary roads that can carry a limited capacity of these vehicles. Trucks that are diverted onto small local roads (due to road incidents and other events) can cause significant damage to pavement.

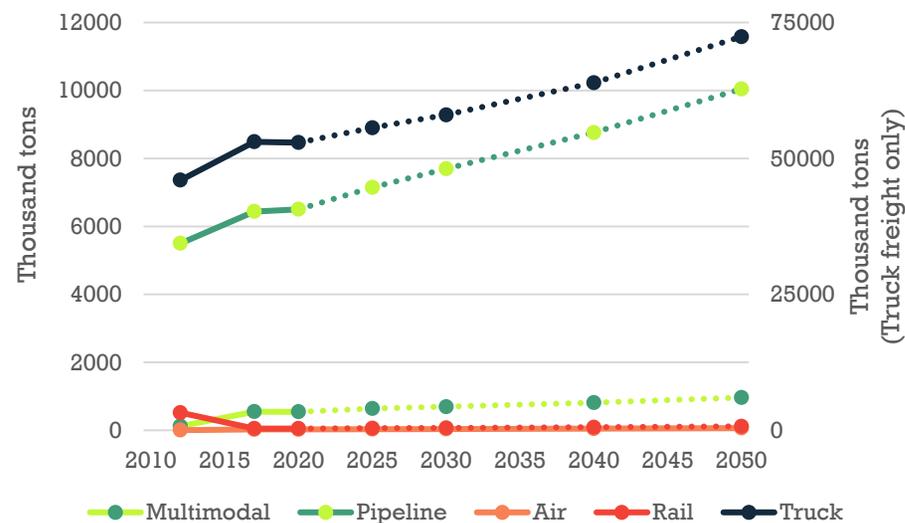
2020 Tonnage of Freight Transport Modes in Southeastern New Hampshire



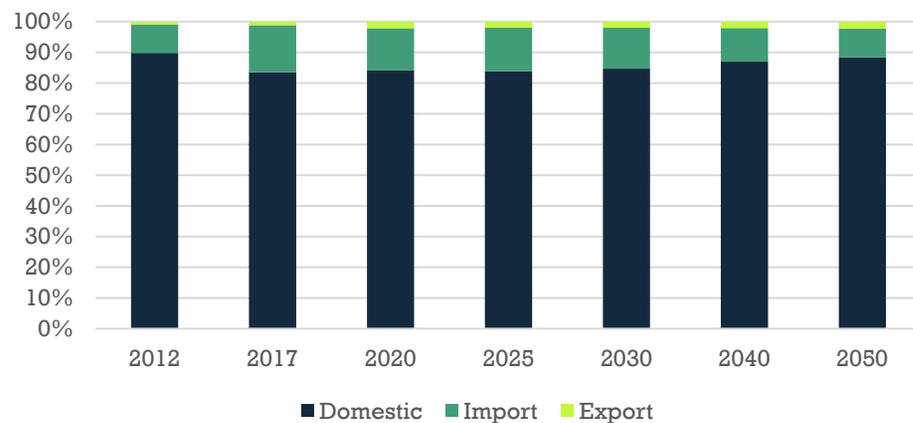
Southeastern New Hampshire in this definition includes Belknap, Hillsborough, Merrimack, Rockingham, and Strafford counties.

Source: Federal Highway Administration. Year: 2017, 2020, 2022-2050. Granularity: Seacoast and Merrimack Valley Regions.

Projected Tonnage of Freight Movement in Southeastern New Hampshire



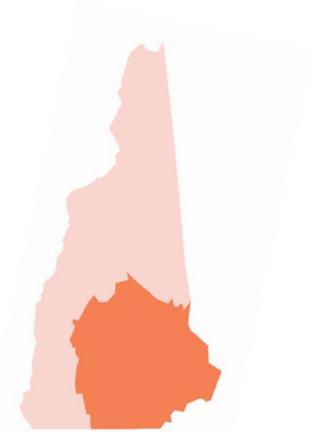
Freight Tonnage by Transport Type in Southeastern New Hampshire



Domestic Freight Origins

Much of the freight arriving in southeastern New Hampshire from other New England and northeastern regions is more industrial than what is sent from the region. There is trade of fuels and building materials such as sands and gravels, building stone, and wood products.

Fewer domestic consumables are received than sent. From outside the northeast, a large amount of motor vehicles arrive from rust belt regions such as Louisville, Fort Wayne, and other areas of the Midwest and South.



Top Origins by Volume	Thousand tons
Southeastern New Hampshire	28378
Boston metro	14913
Maine	6471
Remainder of New Hampshire	1488
Rhode Island	680
Top origins outside the northeast	
Nonmetro Virginia	110
Chicago metro	78.4
Nonmetro South Carolina	71.0
Nonmetro Indiana	59.6
Los Angeles metro	53.8



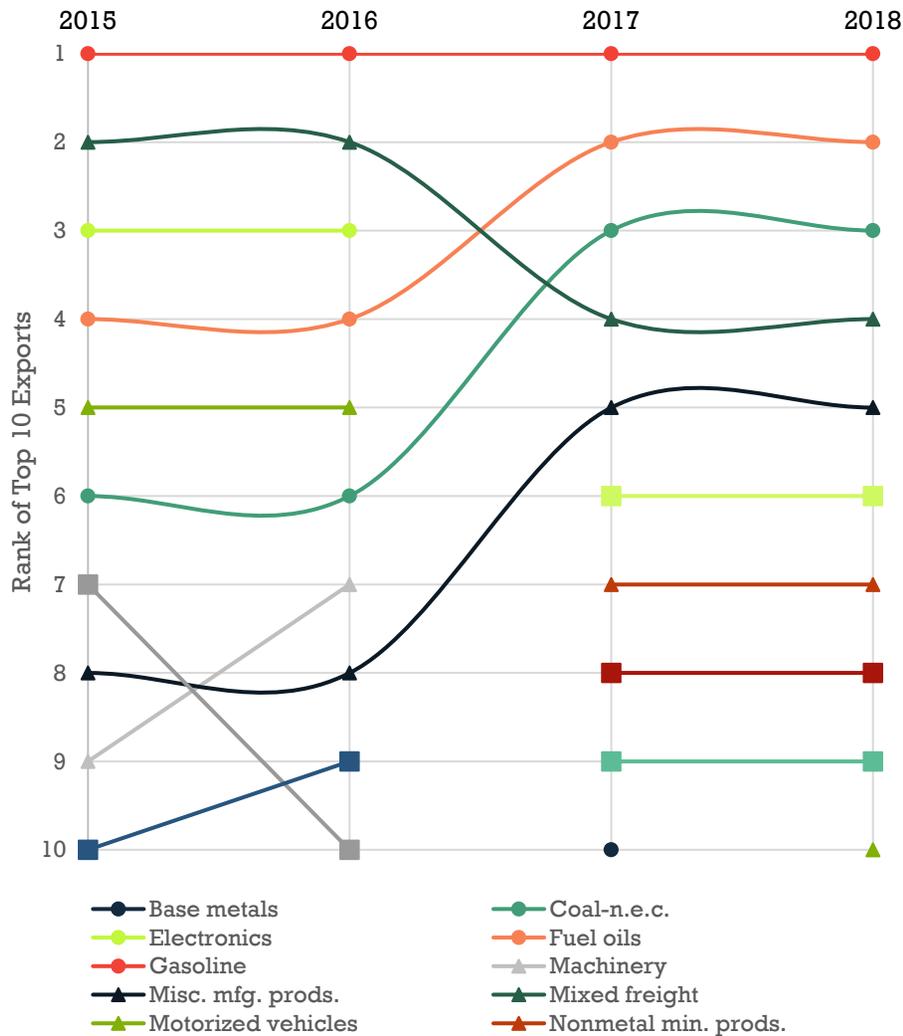
Top Origins by Value	2017 million USD
Boston metro	\$19,828
Southeastern New Hampshire	\$12,872
Maine	\$3,831
New Jersey share of NYC metro	\$2,500
New York share of NYC metro	\$2,219
Top origins outside the northeast	
Los Angeles metro	\$1,464
Chicago metro	\$1,336
San Diego metro	\$737
Atlanta metro	\$660
Louisville metro	\$521

Source: Federal Highway Administration. Year: 2017. Granularity: United States

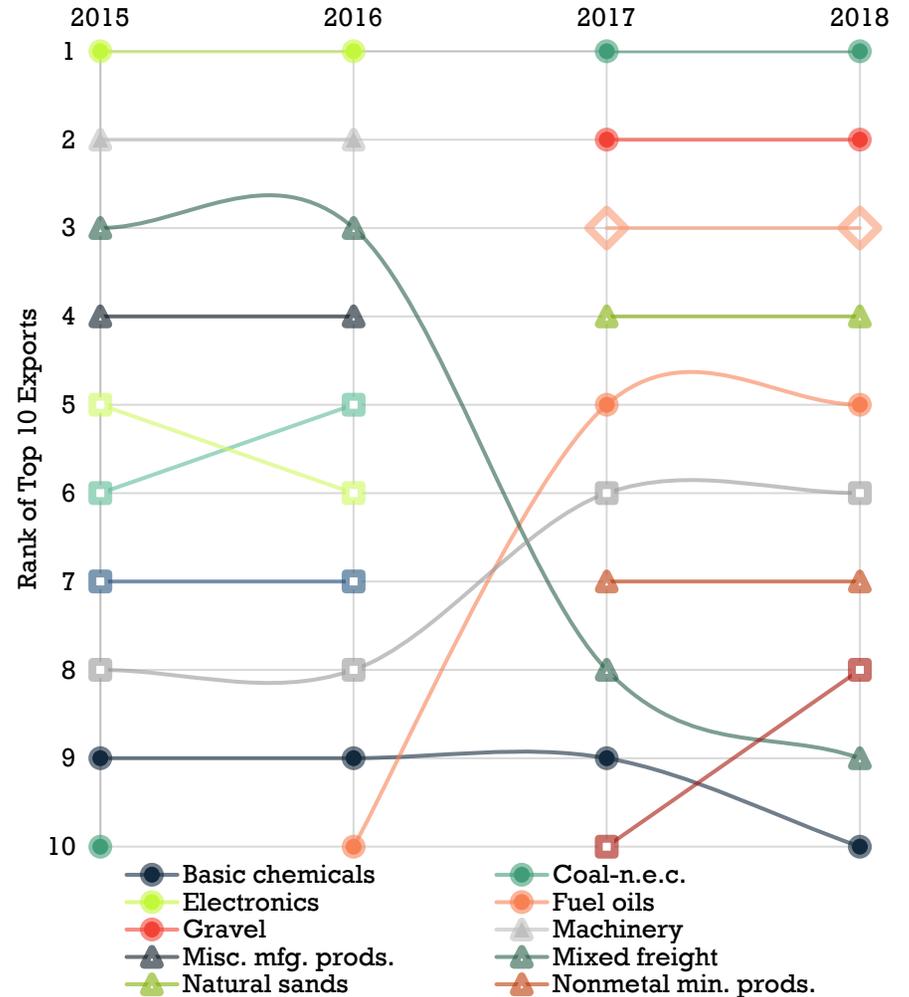
Southeastern New Hampshire in this definition includes Belknap, Hillsborough, Merrimack, Rockingham, and Strafford counties.

NH's Top Imports and Exports

Imports



Exports



Source: Federal Highway Administration. Year: 2015-2018. Granularity: NH.

Public Transit

Public transit is a critical component of the transportation system. The Strafford and Rockingham regions have the richest multi-modal mix in the state: fixed route and demand response bus service, inter-city passenger rail, inter-city bus, and a small regional airport. Public transit is imperative workforce mobility, reducing congestion on roads, and ensuring mobility for a wide range of residents.

This section describes fixed route and demand response bus service. Fixed route service is transit service available on a consistent and recurring schedule with stops at consistent locations along defined routes. Fixed route service is provided by the Cooperative Alliance for Seacoast Transportation (COAST) and the University of New Hampshire's Wildcat Transit. Wildcat Transit is purposed for transportation for UNH students, faculty, and staff, but is ultimately open to the public. COAST riders generally do so for employment, healthcare, and shopping.

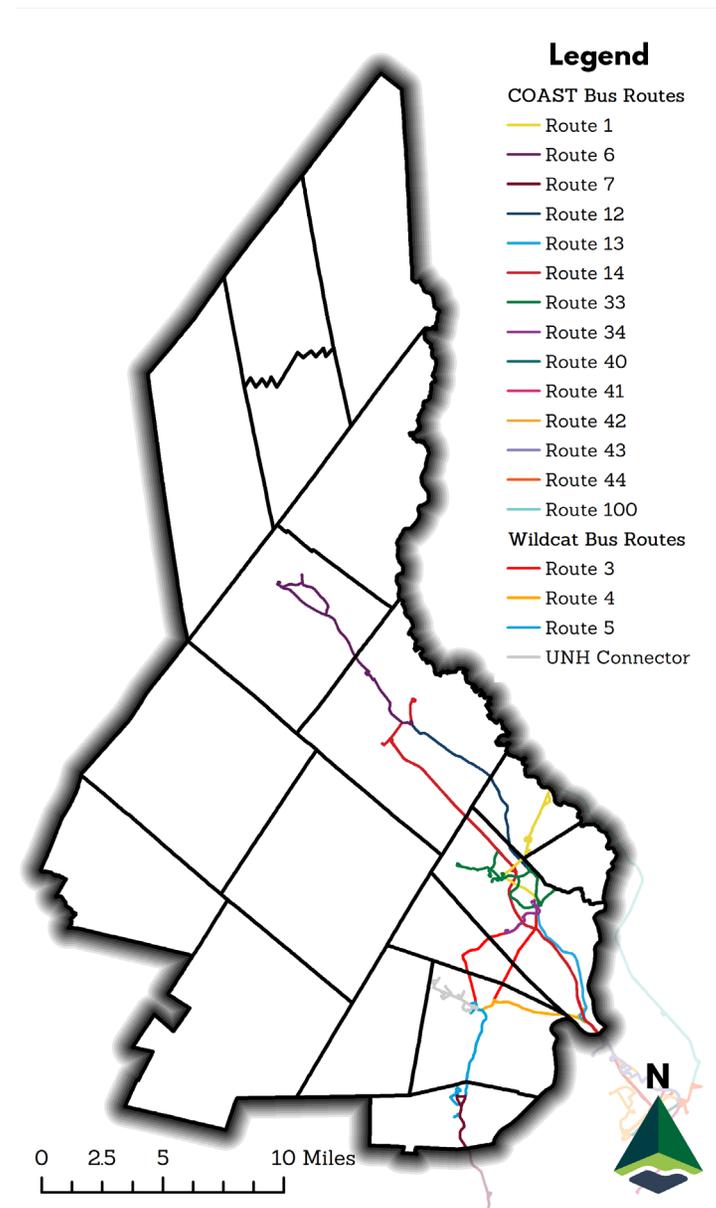
Demand response service serves older adults and people experiencing disabilities, and thus plays a critical role as a pillar of public health infrastructure as the median age of New Hampshire continues to rise. Demand response services are provided by COAST and several individual transportation providers in southeastern New Hampshire. These agencies may provide transportation for non-emergency medical appointments, while others target nutritional, social, and mental health needs, such as Meals on Wheels. In the Seacoast region, many of these services are coordinated through the Alliance for Community Transportation (ACT).

In New Hampshire, the extent and frequency of public transit service is limited by a lack of state funding for the operation of public transit, which is the most expensive part of a transit agency's budget.

This subsection contains data about:

- Transit routes and ridership.
- Access to fixed route and demand response (ADA) transit.
- Condition of transit fleet vehicles and their compliance with energy efficiency goals.

Source: COAST. Year: 2022. Granularity: SRPC, RPC.

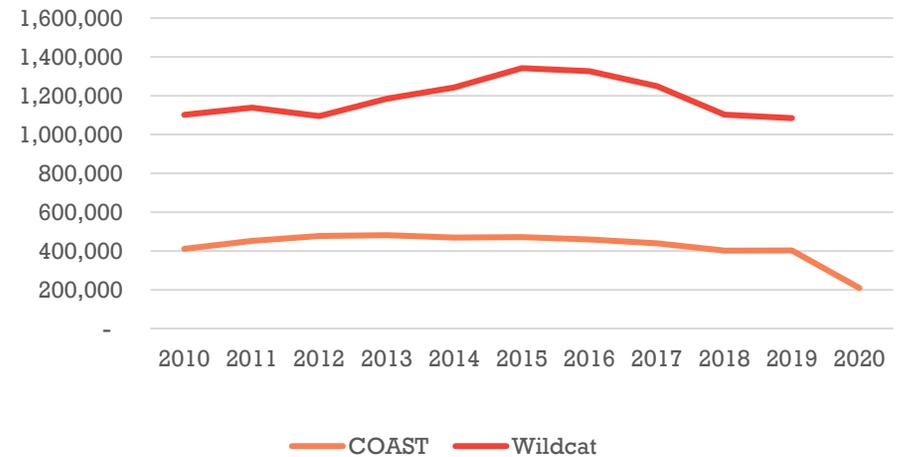


Fixed Route Transit Ridership

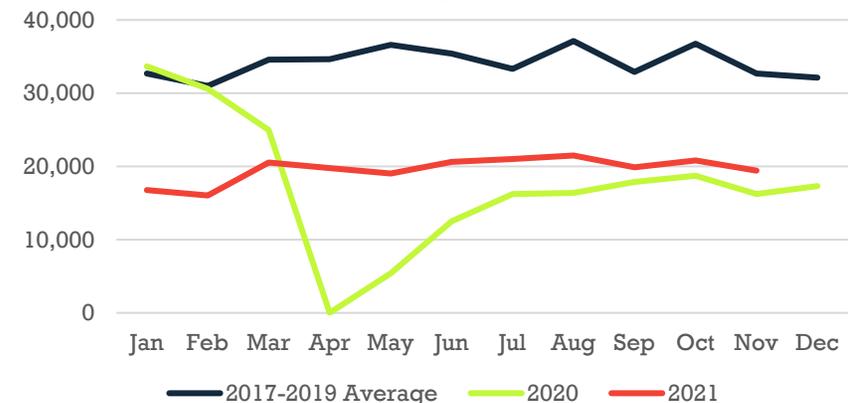
Fixed route service is transit service available on a consistent and recurring schedule with stops at consistent locations along defined routes. The Cooperative Alliance for Seacoast Transportation – COAST – is the public transportation provider for parts of Rockingham, Strafford, and York (Maine) counties. COAST had maintained consistent and predictable ridership leading up to the onset of the COVID-19 pandemic. The other major transit provider is Wildcat Transit, operated by the University of New Hampshire. Prior to the pandemic, ridership was beginning to waver as more student housing was built closer to the core of Durham and the campus of UNH. COAST and Wildcat Transit retain reciprocal agreements for the general public to use Wildcat service with purchase of a COAST fare, and COAST to likewise allow free boarding for students, faculty, and others with a UNH ID.

COAST ceased operation for several weeks early in the COVID-19 pandemic. Ridership has increased but has yet to return to pre-pandemic levels. In June of 2020, COAST launched a new route system that increased the efficiency of routes and made better use of the Spaulding Turnpike.

Public Transit Ridership by Provider



COAST Ridership (Fixed Route)
2017-19 Average vs 2020, 2021



Source: FTA. Year: 2010-2021. Granularity: SRPC, RPC.

Demand Response Transit Ridership

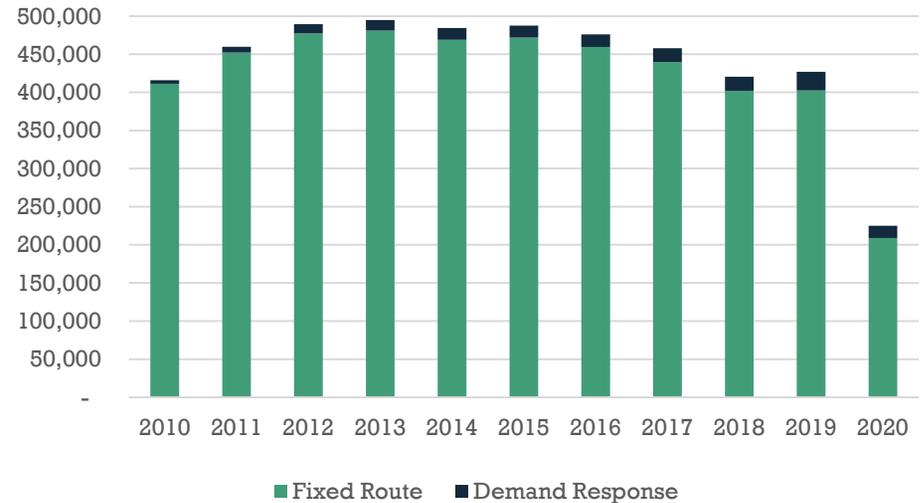
Demand response, also known as “paratransit,” is a special type of door-to-door service offered by public transit agencies for individuals with disabilities and/or limited mobility who experience difficulty reaching transit access points. Vehicles used for this purpose are also intended to be more compatible with the use of walkers, wheelchairs, or service animals. Demand response service may be free or subsidized for the user, although this is not the case for COAST in the SRPC region.

COAST’s paratransit is available to eligible users who have an origin and destination within ¼ mile of a COAST bus stop, with some exceptions. The fare is twice the base cash fare of the equivalent trip on the fixed route bus network. Use of COAST paratransit requires advance reservation, not uncommon for paratransit networks of any size.

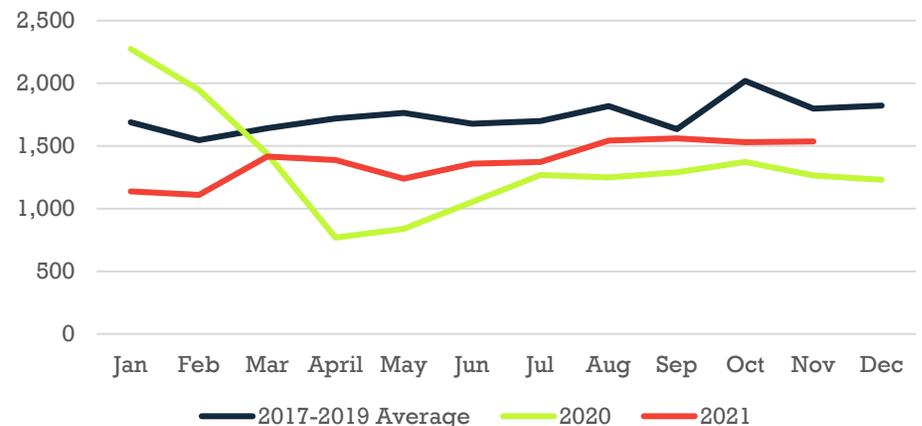
COAST demand response ridership was rising prior to the COVID-19 pandemic, reaching a peak of nearly 25,000 trips in 2019. Demand response ridership has recovered faster than traditional fixed route ridership within COAST. Demand response ridership in 2021 is expected to be 68% of its 2019 ridership, while 2021 fixed route ridership is expected to be 59% of 2019 ridership.

COAST can expect its demand response ridership to continue to increase with New Hampshire’s aging population following full pandemic recovery.

COAST Ridership



COAST Ridership (Demand Response)
2017-19 Average vs 2020, 2021



Source: FTA. Year: 2010-2021. Granularity: SRPC, RPC.

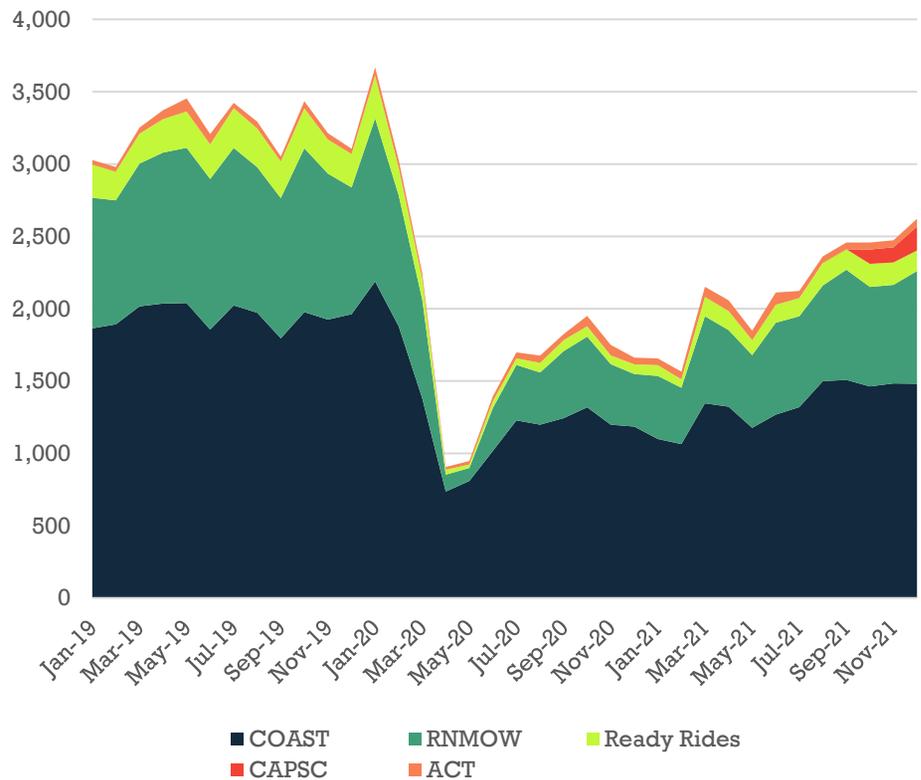
ACT Ridership and Services

The Alliance for Community Transportation (ACT) is a state-designated Regional Coordination Council (RCC) organizing community transportation services for older adults and individuals with disabilities in southeastern New Hampshire. ACT operates a regional call center to schedule rides with various transportation providers according to clients' needs.

Several providers operate transportation capabilities and serve communities in the SRPC and RPC regions. Not all rides recorded in the chart (right) occurred in the SRPC region. The chart displays ridership by owner of the vehicle providing the ride.

The most recent coordinated transit plan is found on the SRPC website at <http://strafford.org/plans/coordinated-transit-plan/>.

Ridership by Owner
January 2019 – November 2021



COAST = COAST paratransit/demand response only

RNMOW = Rockingham Nutrition Meals on Wheels

CAPSC = Community Action Partners of Strafford County

Source: ACT. Year: 2019-2021. Granularity: SRPC, RPC.

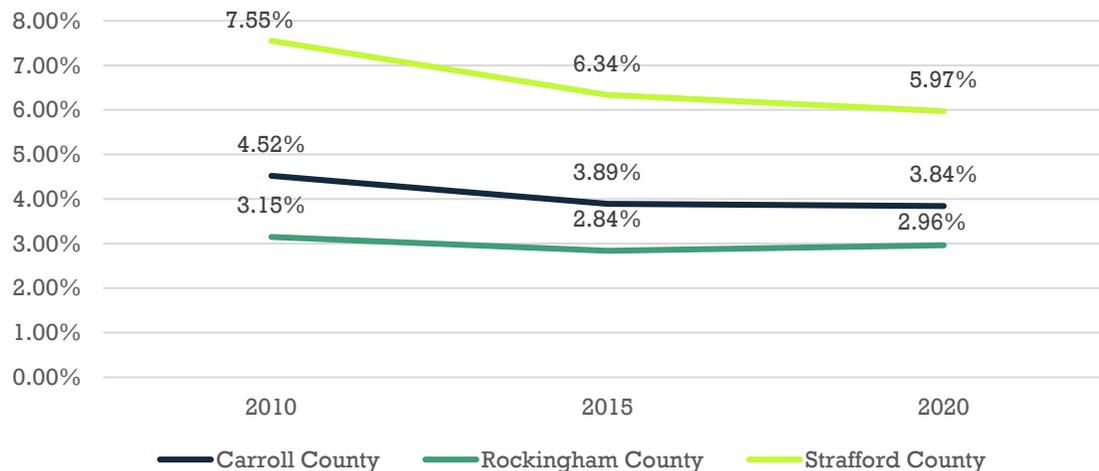
Access to Vehicles

In rural areas, personal vehicles are a dominant form of transportation and transportation systems nationwide have historically been implemented with an assumption that most residents have access to a personal vehicle. The cost of housing in New Hampshire forces many to live outside urbanized areas where employment is concentrated. This often results in increased personal transportation costs and makes transit service more expensive and less efficient. When public transportation is not available, inconsistent access to a vehicle can still create difficulty in accessing housing, healthy food (including fresh produce), employment, education, and healthcare.

The data for this particular metric is very limited. The data was removed (as described in the Census Data Disclaimer) for almost all of the municipalities and tracts in the region. As a result, data for counties are available in the chart below and municipalities are in the table to the right.

Town	Households	Households with No Vehicles
Barrington	3,290	4.95%
Brookfield	274	1.82%
Dover	13,860	6.22%
Durham	3,206	6.92%
Farmington	2,815	4.69%
Lee	1,883	0.85%
Madbury	714	0.00%
Middleton	554	5.60%
Milton	1,707	4.04%
New Durham	983	1.93%
Newmarket	4,066	4.13%
Northwood	1,691	2.42%
Nottingham	1,967	1.93%
Rochester	13,151	6.36%
Rollinsford	1,036	10.14%
Somersworth	5,246	9.80%
Strafford	1,386	0.51%
Wakefield	2,202	1.23%
SRPC	60,031	5.42%
SEDD	52,307	5.75%
Carroll County	22,235	3.84%
Rockingham County	122,520	2.96%
Strafford County	49,831	5.97%

Households with No Vehicles



Source: US Census Bureau ACS. Year: 2010, 2015, 2020. Granularity: Counties, Municipalities, Census Tracts.

Transit Vehicles Beyond Their Useful Life

This is a performance measure defined by FTA in 49 USC 625 Subpart D. Transit Agencies are required to set targets every year and MPOs are required to set targets when updating the Metropolitan Transportation Plan. Since transit agencies manage their own asset procurement, SRPC sets targets that correspond to the targets set by COAST and UNH.

COAST and UNH report their asset inventories to the FTA. Note that transit fleets require replacement throughout the year so annual targets may not be representative of the current fleet makeup.

A Useful Life Benchmark (ULB) is the expected lifespan of a vehicle and varies by vehicle type and use. The ULB and year of manufacture provide an approximation of when a vehicle will require replacement.

The FTA TERM Scale is a series of criteria for assessing the condition of non-vehicle assets owned by transit agencies. These include storage and maintenance facilities, parking lots, and others. The TERM scale is a scale from 1-5, where 1 is poor and 5 is Excellent.

Asset Category	Performance Measure	Asset Class	Current
Rolling Stock	Percent of revenue vehicles that have met or exceeded their Useful Life Benchmark (ULB), by vehicle class	Cutaway	14%
		Van	43%
		Bus	27%
		Over-the-road Bus	None
		Minivan	0%
Equipment	Percent of non-revenue vehicles that have met or exceeded their Useful Life Benchmark (ULB)	All vehicles	33%
Facilities	Percent of facilities with a condition rating below 3.0 on the FTA TERM Scale	Passenger	0%
		Administrative	0%
		Maintenance	33%
		Storage	NA

Source: FTA. Year: 2020. Granularity: SRPC, RPC.

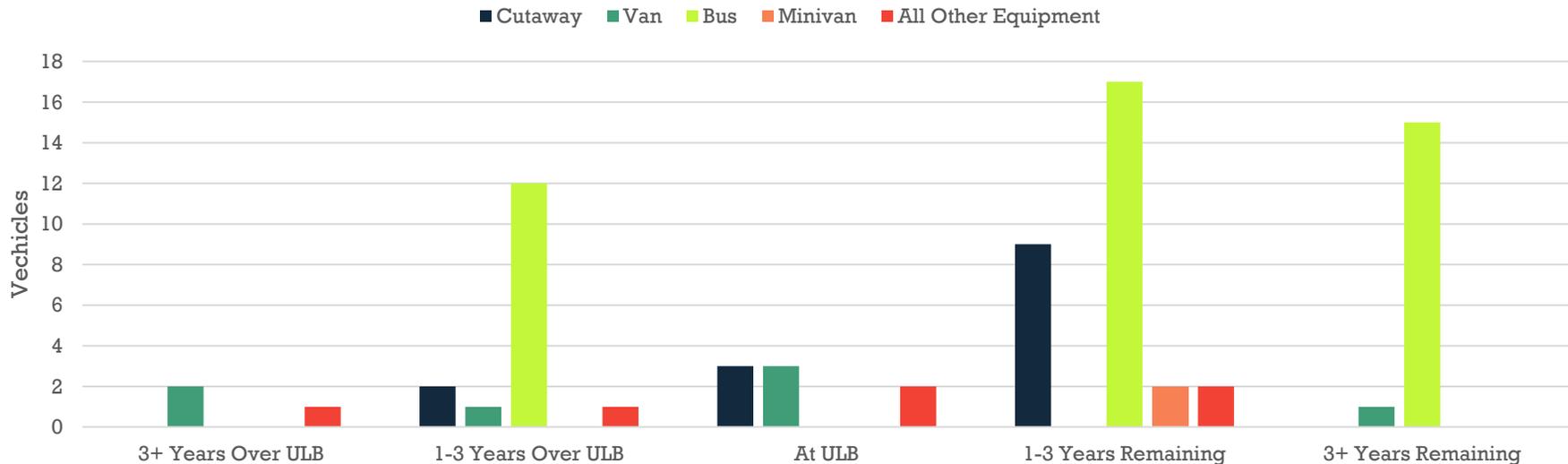
Remaining Useful Life of Transit Vehicles

These calculations illustrate the frequency with which transit agencies can expect to replace vehicles based on their current ages and expected ULBs. Three averages are calculated:

- For buses that have exceeded their ULB, the average number of years they have exceeded it by.
- For buses that have some remaining years before reaching their ULB, the average number of years remaining.
- For all buses in the fleet, the average years over or under the ULB.

Category	Class	Average Years Beyond ULB (for vehicles exceeding their ULB)	Average Years Remaining (for vehicles not exceeding their ULB)	Average Years Remaining for all vehicles
Rolling Stock	Cutaway	3.0	1.5	0.9
	Van	3.0	2.0	-0.5
	Bus	2.0	4.3	3.3
	Minivan	None	3	3
Equipment	Non-revenue vehicles	5	0.5	-1.3

Age of Transit Fleet



Source: FTA. Year: 2020. Granularity: SRPC, RPC.

Transit Fleet Using Alternative Fuels

This data is supplied by COAST and Wildcat Transit asset inventories reported to FTA transit database. These alternative fuels come from dedicated fueling stations. Wildcat Transit has dedicated CNG and bio-diesel facilities in Durham and COAST has a dedicated bio-diesel facility in Dover.

COAST regularly assesses the feasibility of converting to alternative fuel options such as electric, but the technology for electric buses is not yet feasible in a service area such as southeastern New Hampshire. In 2019, the longest-range electric bus models could run 225 miles on one charge without on-board charging or HVAC on. COAST's routes can range from 200-440 miles a day, meaning that some of these routes would not be possible for a single bus without an on-board charger.

In 2020, Wildcat Transit received a grant through the Congestion Mitigation & Air Quality Improvement Program (CMAQ) to purchase two more CNG heavy duty buses.

Category	Class	Percent Using Biodiesel	Percent using CNG
Rolling Stock	Cutaway	0%	36%
	Van	0%	0%
	Bus	0%	27%
	Over-the-road Bus	None	None
	Minivan	0%	0%
Equipment	Non-revenue vehicles	17%	17%

Source: Wildcat Transit. Year: 2021. Granularity: SRPC, RPC.

Source: COAST. Year: 2021. Granularity: SRPC, RPC.

Active Transportation

This subsection contains information about where the road network in the SRPC region is suitable for supplemental active transportation (e.g. walking and biking).

SRPC maintains data about bicycle level of traffic stress (BLTS) for the region's roads. BLTS uses a scale to assess road segments based on different presumed comfort levels of cyclists near motor vehicle traffic. See the following page for more information.

SRPC routinely collects data about the presence and condition of sidewalks upon request by municipalities. SRPC completed a city-wide assessment of Rochester's sidewalks, curb ramps, and crosswalks in the summer of 2019 using a comprehensive data collection protocol. The rest of the region was collected using a shortened methodology that is for planning purposes only.

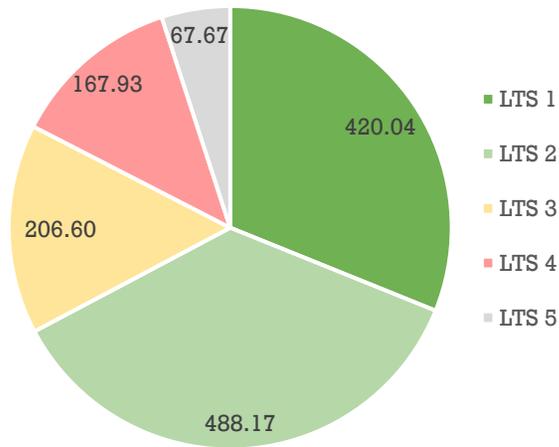
SRPC is working to build up bike and pedestrian count data for additional analysis. SRPC has 3 bicycle and pedestrian counters that can be set on posts. Historically they have only been set at a few locations in any given summer. Starting in 2022, bike and pedestrian counting will be incorporated into the data collection season so that data can be collected at 40 locations.

SRPC will be publishing a Bicycle and Pedestrian Plan later this year that will incorporate this data.

Bicycle Level of Traffic Stress (BLTS)

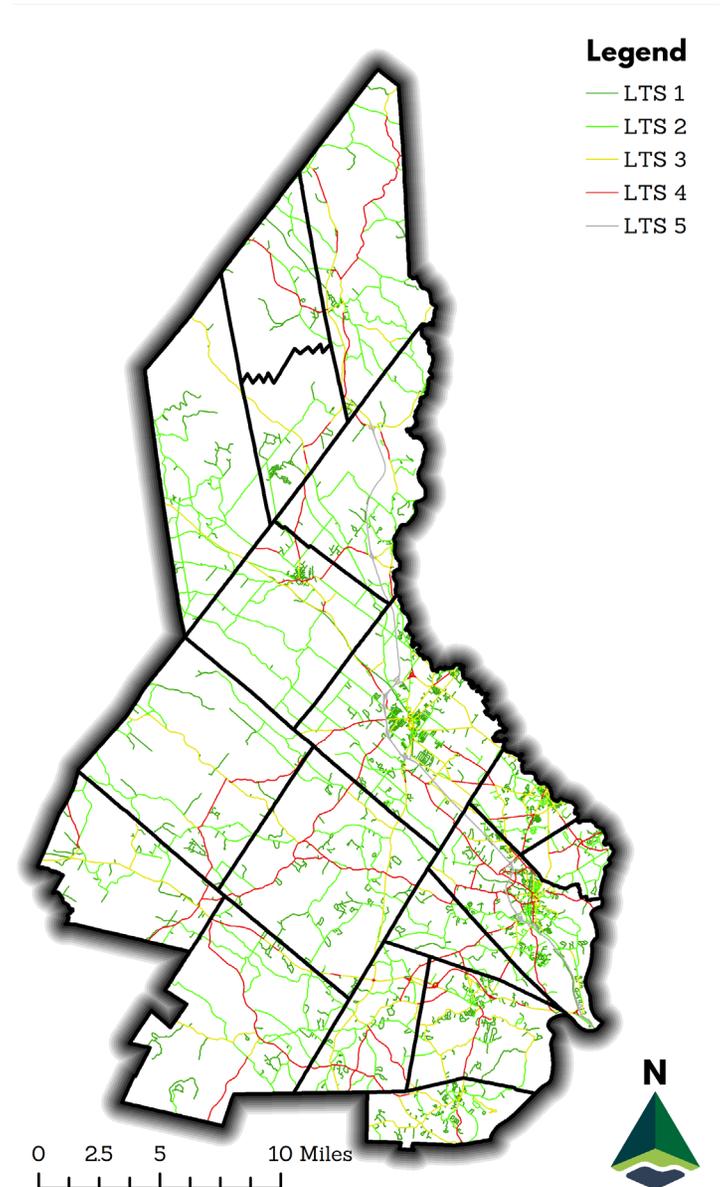
SRPC maintains data on the bicycle level of traffic stress (BLTS) for the region's road network. BLTS uses a four-tiered scale to assess road segments based on presumed comfort levels of cyclists near motor vehicle traffic (below). For instance, a road with a separated path dedicated to pedestrians and cyclists would have the lowest level of stress, while a high-speed road with no shoulders and lots of traffic would constitute the highest level of stress.

SRPC Miles of Road by LTS Score



LTS Rating	LTS Rating Description	Population Class
LTS 1	Lowest stress ; suitable for all riders	Kids and Beginners
LTS 2	Lower stress ; suitable for adults with some experience	Willing but Wary Riders
LTS 3	Moderate stress ; suitable for those who ride regularly	Comfortably Confident Riders
LTS 4	High stress ; suitable for experienced riders with tolerance to high speeds and traffic	Exposure-Experienced Riders
LTS 5	Bicycles prohibited	

Source: Bicycle Level of Traffic Stress. Year: 2019. Granularity: SRPC.



Sidewalks

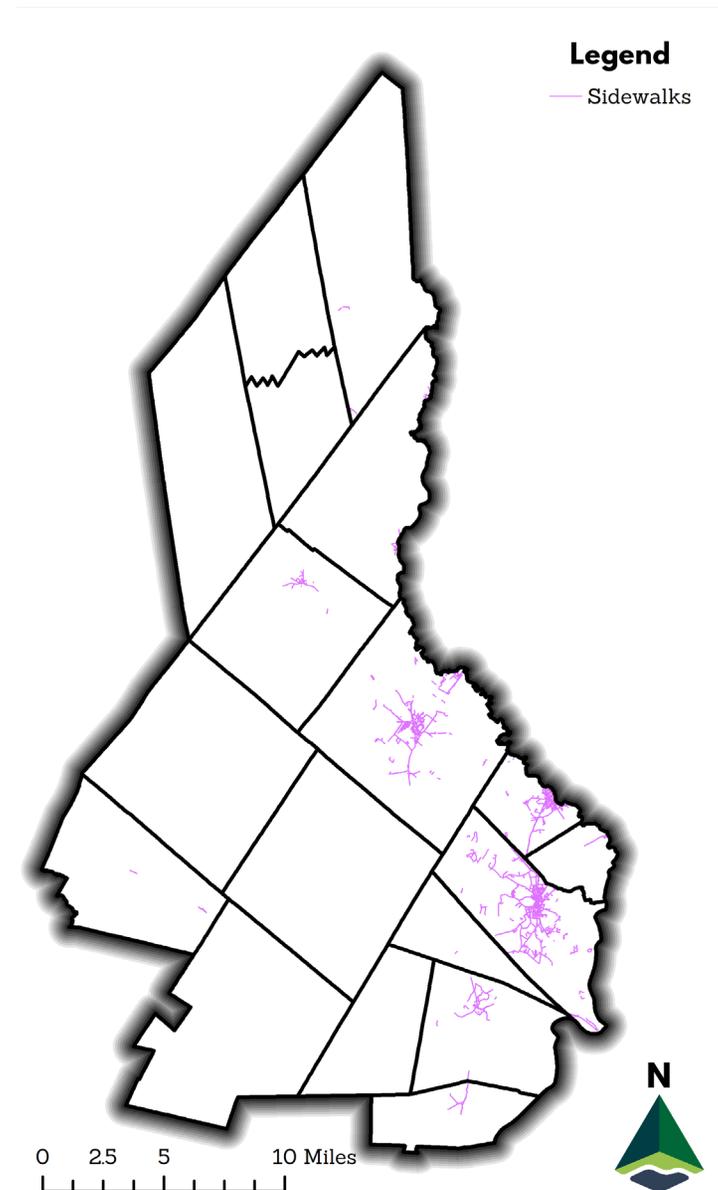
SRPC routinely collects data about the region's sidewalks and pedestrian friendliness. The most recent full inventory of sidewalks was conducted regionally in 2020. SRPC is in the process of prioritizing select sidewalks in the region for counts of foot traffic in the 2022 data collection season, with additional counts being conducted at some recreational locations outside the immediate urban areas of the region's communities.

Dover leads the way for pedestrian infrastructure in the region with nearly 80 miles of sidewalks! In fact, it's likely much more as this data does not account for the nearly 4-mile Dover Community Trail of which half is paved. Regional and local connectivity of sidewalks are constantly being addressed to reduce the dependence of cars in our everyday lives.

*SRPC does not have access to UNH sidewalk data.

Municipality	Miles
Dover	79.3
Durham	10.5*
Farmington	4.7
Madbury	0.1
Milton	3.2
Newmarket	3.9
Northwood	1.1
Rochester	46.3
Rollinsford	1.4
Somersworth	26.4
Wakefield	1.1

Source: SRPC. Year: 2020. Granularity: SRPC.



Road Classification Systems

The maps and data of this subsection outline the types and extent of roads that make up the transportation network in the SRPC region. Different classification systems are used to describe segments of road based on capacity, ownership, and maintenance responsibility.

In New Hampshire, there are three legal classifications of roads:

- Functional System – defined by FHWA.
- Legislative Class – defined by NH RSA 229.5.
- Tiers – defined by NHDOT.

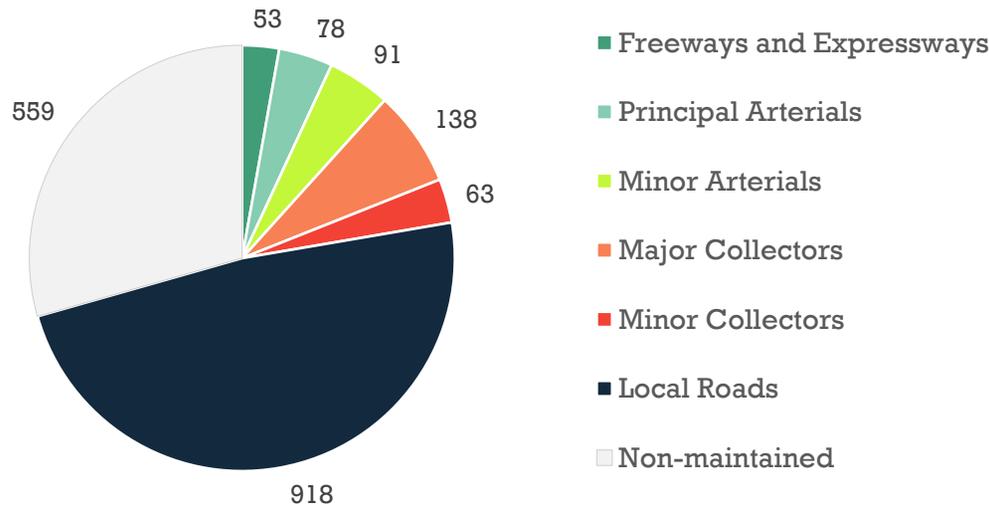
Functional Class

The Federal Highway Administration (FHWA) uses the highway functional classification system (functional class) to define a road's role in the transportation network. Functional class implies expectations for speed limits, capacity, and impacts on land use and future development. It is also used in determining federal funding categories that can be applied to the road, and what the minimum lane requirements are for that road. There are three functional classes: Arterial, Collector, and Local.

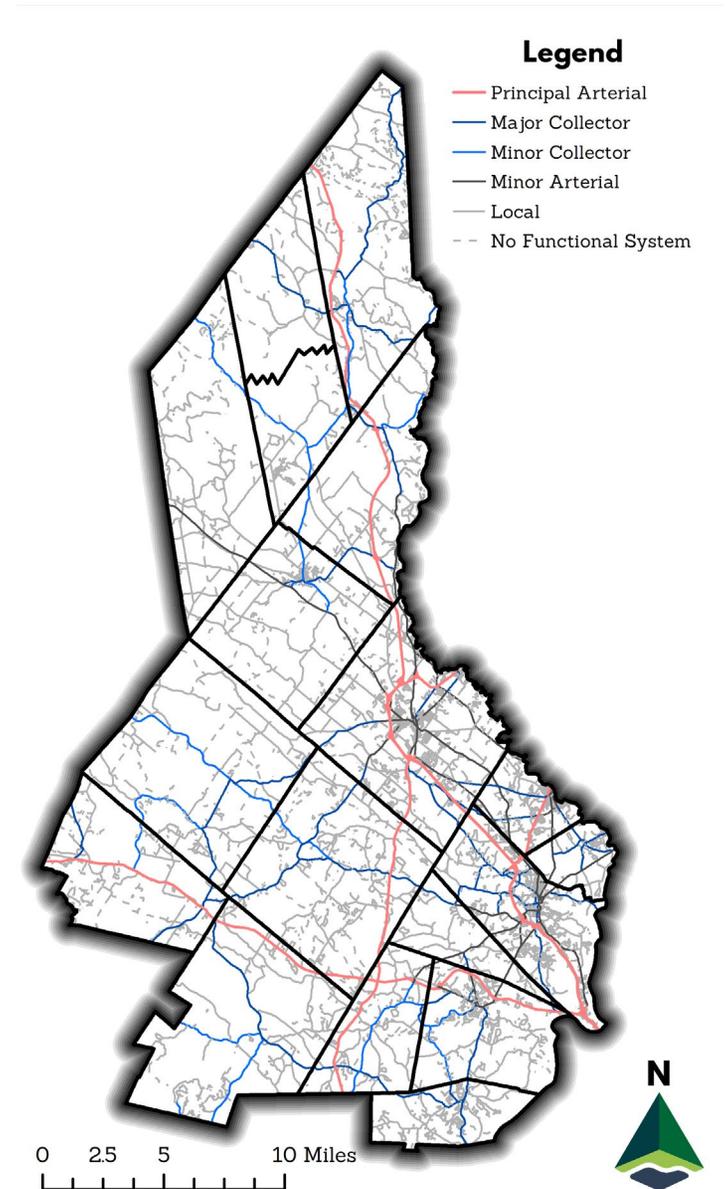
These are the generalized determinations and assumptions made for the respective classes:

Functional Class	Speed Limit	Daily Traffic	Distance Served	Significance
Arterial	High	High	Long	Statewide
Collector	Medium	Medium	Medium	Medium
Local	Low	Low	Short	Local

Centerline Miles of Road by Functional System



Source: FHWA. Year: 2021. Granularity: SRPC.

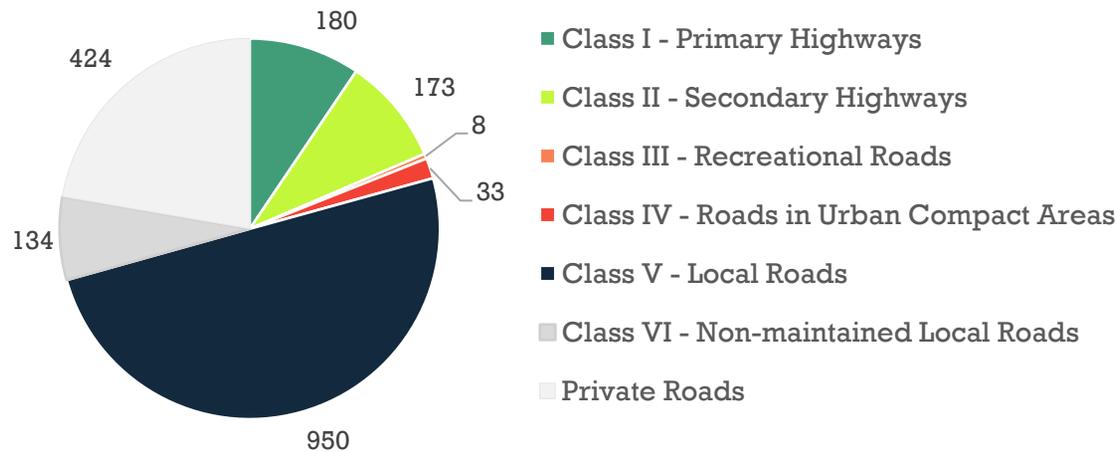


Legislative Class

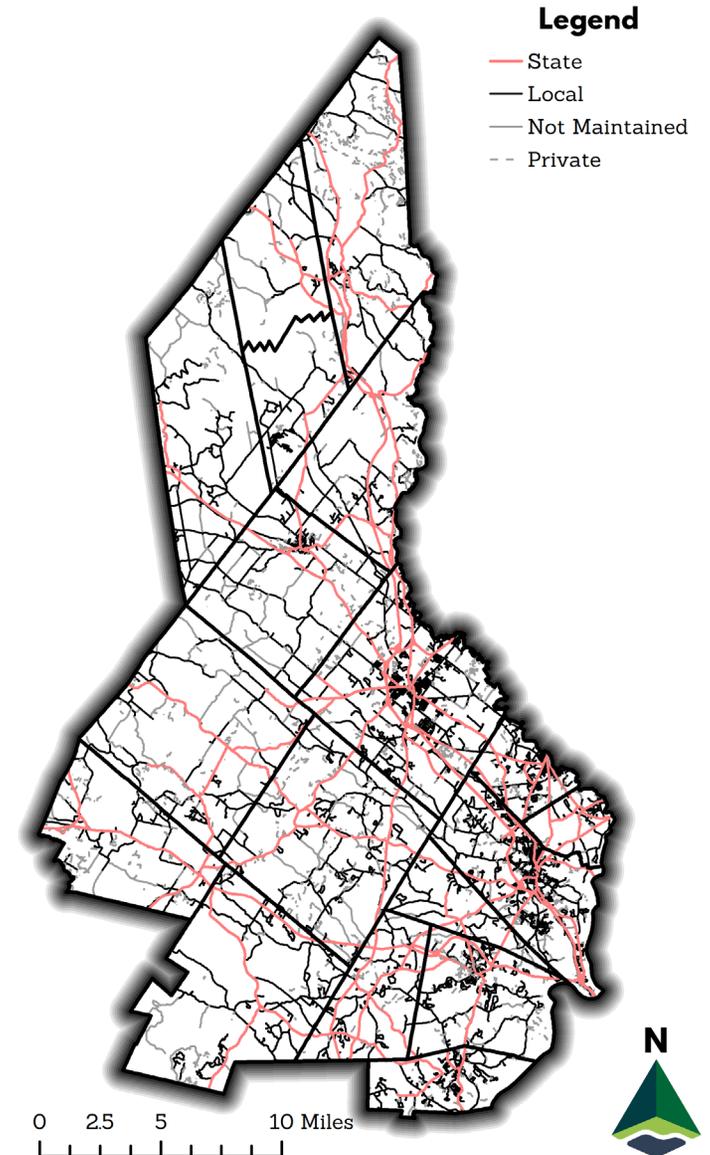
The New Hampshire Legislative Classification System as defined by RSA 229.5 is comprised of seven classes of roads. The legislative classes indicate ownership and maintenance responsibility. This system is separate from the FHWA Functional Class system.

Class	Ownership	Maintenance Responsibility
I	State	State
IIa	State	State
IIb	State	Municipal
III	State	State
IV	Municipal	Municipal
V	Municipal	Municipal
VI	Municipal	Not maintained
VII	Federal	Federal

Centerline Miles by Legislative Class



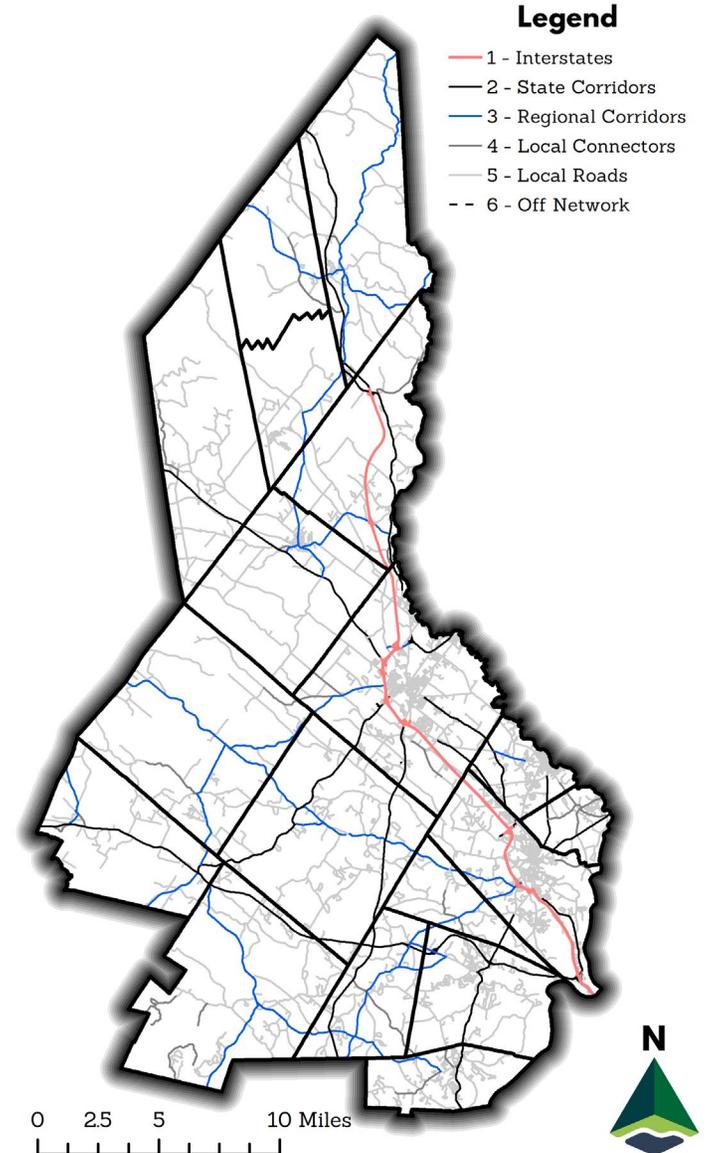
Source: NHDOT. Year: 2021. Granularity: SRPC.



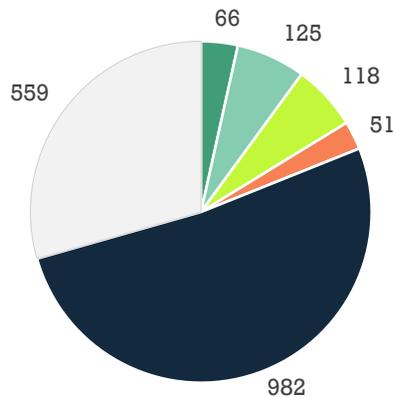
Tier

NHDOT additionally uses a six-tier system to categorize roads by volume and mobility in contrast to ownership and maintenance responsibilities. This system is used in statewide pavement programs and planning.

Tier	Description	Significance	Speed Limit (mph)	Daily Traffic	Connectivity	Distances served
1	Interstates, Turnpikes, & Divided Highways	Statewide	50+	Highest	State to state	Longest
2	Other Statewide corridors	Statewide	40 – 55	High	State to state	Long
3	Regional corridors	Regional	40 – 45	Moderate	Access to Tiers 1 & 2	Medium
4	Local Connectors	Regional	30 – 40	Low	Access to Tier 3	Short
5	Local Roads	Local	≤35	Lowest	Access to destination	Shortest
6	Off Network (State owned parking lots)	N/A	N/A	N/A	N/A	N/A



Centerline Miles of Road by Tier



- Tier 1 - Interstates and Divided Highways
- Tier 2 - Statewide Corridors
- Tier 3 - Regional Corridors
- Tier 4 - Local Connectors
- Tier 5 - Local Roads
- Tier 6 - Non-maintained Roads

Source: NHDOT. Year: 2021. Granularity: SRPC.

RESILIENCY

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Pollution and Renewables

Maintaining a healthy resilient region involves observance and removal of harmful contamination and pollutants in the ground, water and air. Pollution contributes to climate change and impacts public health. This section includes data on contaminated sites (locations where NH Department of Environmental Services has identified hazardous waste, Methyl tertiary-Butyl Ether (MtBE), petroleum, or other contaminants) and Green House Gas Emissions.

To prevent future pollutants and protect the region from existing harmful contaminants, it is important to monitor progress in remediation efforts. Some of the easier-to-track initiatives are the ones surrounding the use of fossil fuels. The innovation of technology in the energy sector in the past 20 years has made transitions to cleaner energy affordable for utility networks and the average consumer. If the region were to become less reliant on fossil fuels, it would only increase our resilience in terms of health and dependance on foreign goods.

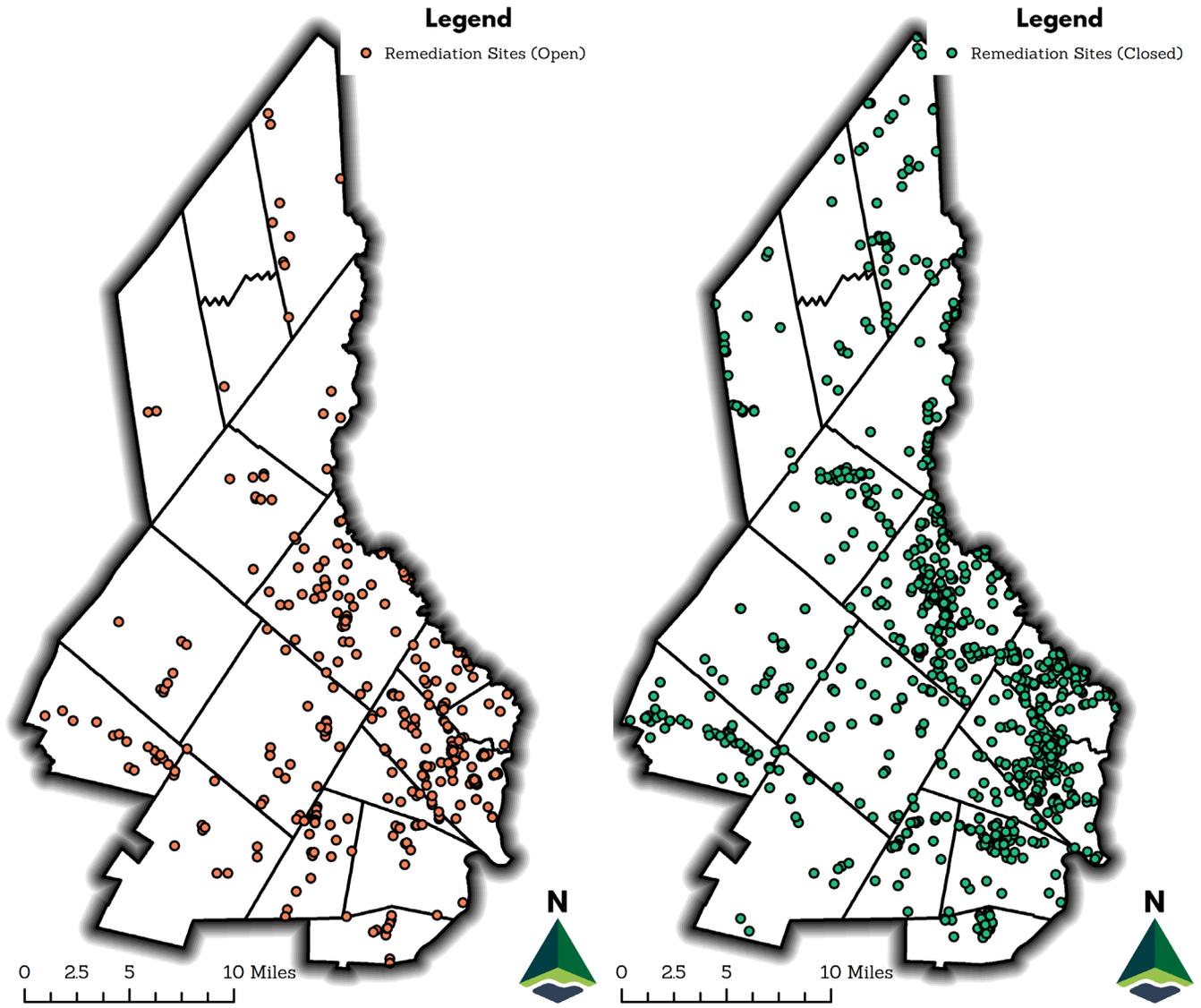
This subsection contains metrics about:

- Contaminated (and remediated) sites.
- Green house gas emissions from on-road vehicles.
- Alternative fueling stations.
- Renewable energy sources.

Contaminated Sites

A contaminated site can have a serious impact on human health and water supplies. Many regulations exist at the federal, state and local levels to prevent contamination. However, ongoing mitigation strategies and clean-up protocols are imperative to this type of environmental protection. This process of “cleaning up” is known as site remediation, which removes contaminated soil, sediment, surface water, or groundwater to reduce the impact on people or the environment.

Several NHDES programs are aimed at monitoring and assessing contaminated sites, as well as providing assistance in the clean-up process and the repurposing of those sites. Closed remediation sites are sites that have already been cleaned up while open sites are still in the process of remediation.



Map - Source: NHDES. Year: 2021. Granularity: SRPC.

On-Road GHG Emissions per Capita

“The National Emissions Inventory (NEI) is a comprehensive and detailed estimate of air emissions of criteria pollutants, criteria precursors, and hazardous air pollutants from air emissions sources. The NEI is released every three years based primarily upon data provided by State, Local, and Tribal air agencies for sources in their jurisdictions and supplemented by data developed by the US EPA. The NEI is built using the Emissions Inventory System (EIS) first to collect the data from State, Local, and Tribal air agencies and then to blend that data with other data sources.”

– EPA National Emissions Inventory

NEI on-road sources include emissions from motor vehicles that use gasoline, diesel, and other fuels. These sources include light duty and heavy-duty vehicle emissions from operation on roads, highway ramps, and while idling.

NEI data is available at the county level and is representative of the fuel purchased in each of the three counties in the SRPC region and is current as of 2017. The NEI is supposed to be updated every three years, but the 2020 data is not yet available. This is likely due to COVID-19 related delays.

Mobile On-Road GHG Emissions (Tons per person)

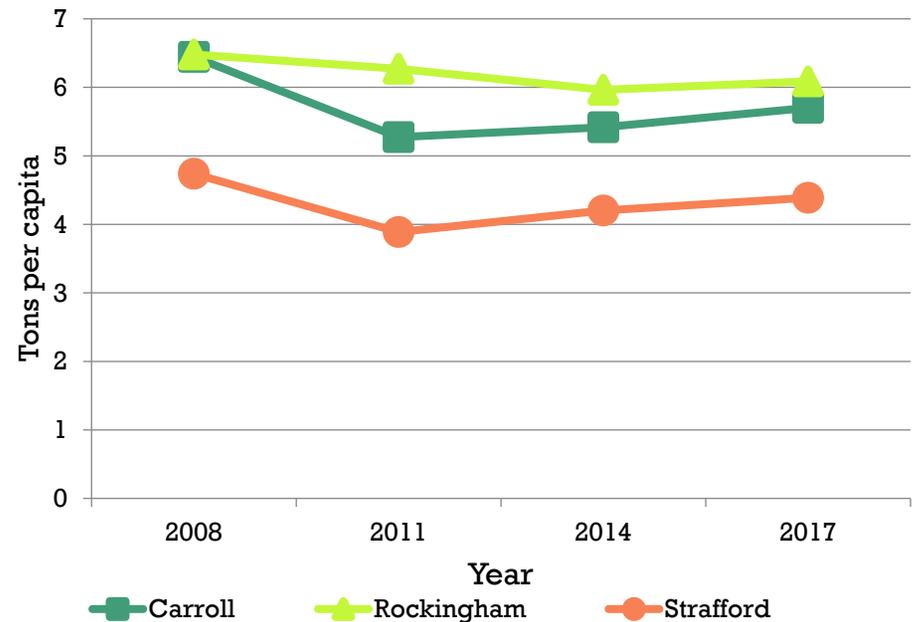


Chart - Source: NHOPD. Year: 2008, 2011, 2014, 2017. Granularity: Counties

Text - Source: EPA. Year: 2008, 2011, 2014, 2017. Granularity: Counties.

Alternative Fuels

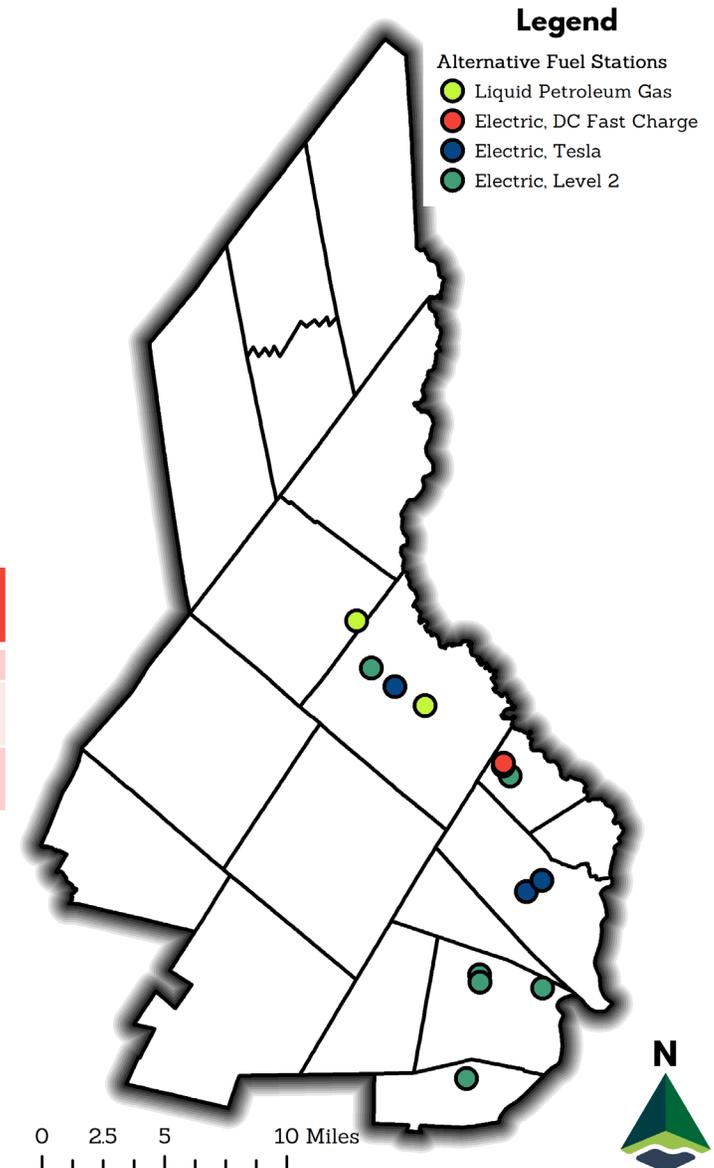
Adoption of alternative transportation fuels is growing nationwide and in the SRPC region. Electric and propane are the most common alternative fuel types. Charging rates vary by station “level” and planning is required to install stations at appropriate locations. Expansion of public vehicle charging will require public investment and broad-scale upgrades of electric infrastructure. Most electric stations in the SRPC region are “Level 2,” except for eight DC Fast Charging (Level 3) stations at Hilltop Chevrolet in Somersworth and one in Rochester reserved for Tesla vehicles. See the table below for the differences between each level. Liquid Petroleum Gas (LPG) is also known as propane Autogas where it is used primarily for fleet applications such as buses and heavy-duty machinery. Propane vehicles are typically as efficient as gasoline but offer lower carbon and oil contaminants for a longer lasting engine.

Electric vehicle charging stations will become more common throughout the United States in the coming 5 years as the National Infrastructure bill’s budget gets allocated to local projects. The increase of these stations will allow less dependence on oil, better protection for our environment, and encourage economic development during wait times.

Charging Station Levels	Volts	Range per hour of charging	Potential Application	Unit Cost	Cost to Install
Level 1	120V	2-5 miles	At-home charging	\$0 to \$1,500	\$0 to \$3,000
Level 2	240V	10-20 miles	Homes and employers	\$400 to \$6,500	\$600 to \$12,700
DC Fast Chargers (Level 3)	480V	60-80 miles	Downtowns & Commercial centers	\$10,000 to \$40,000	\$4,000 to \$51,000

Municipality	Electric Station	Liquified Petroleum Gas
Dover	2	0
Durham	3	0
Farmington	0	1
Newmarket	1	0
Rochester	2	1
Somersworth	3	0

Charging Station Table - Source: DOE. Year: 2021. Granularity: United States.
Map - Source: DOE. Year: 2022. Granularity: SRPC.



Renewable Energy

Renewable energy within the SRPC region is very limited with a large majority of power stemming from non-renewable sources outside of Strafford County. According to the Department of Energy, the sources to the right are all the renewable power sources in our region along with other non-renewable sources specifically around Newington, NH. Our renewable energy is typically generated from dams that do not operate at peak capacity on a daily basis and are limited to the riverine strength which is highest during Spring melting months. The UNH-Turnkey biomass project has been fully operational since 2010 helping reduce the total emissions from UNH by about 25% since then.

The current climate target goal for NH is for renewable energy to make up 25% of total energy production in the state. Progress has been slow due to the lack of investment into utility-driven renewable power sources.

NH ranks 40th in the nation with 165 MW total solar installed (31MW added in 2020). That's enough to power 27,888 homes (roughly Rochester and Dover combined) in NH. Solar panel installation is supposed to grow in NH with an increase of 427MW over the next 5 years. That's an increase of 260% in solar power between 2021 – 2025. The distribution of annular solar installations is split evenly between residential and commercial installations. We expect to see much more investment in the utility sector in NH from the bipartisan infrastructure bill to be able to meet NH's goals.

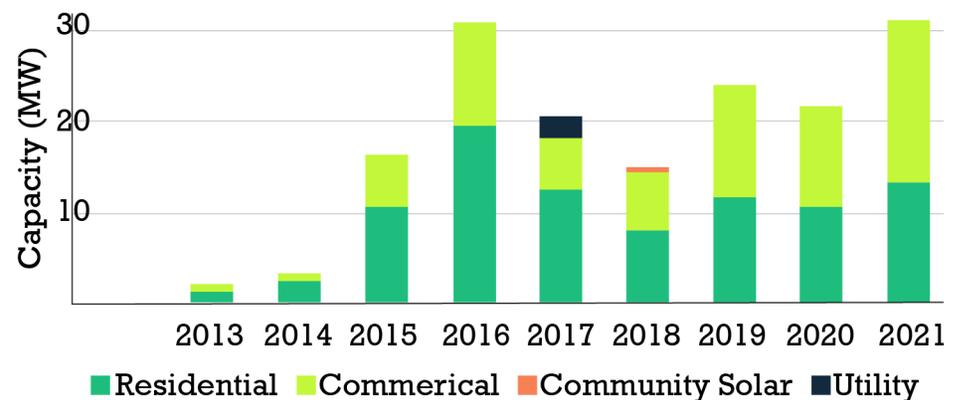
Utility Renewable Power within SRPC Region

Power Type	Name of Facility	Peak Capacity
Hydroelectric	Milton Hydro	1.4 MW
Hydroelectric	GE Great Upper Hydro	2.1 MW
Hydroelectric	Somersworth Lower Great Dam	2.1 MW
Hydroelectric	Green Mountain Power Corp	1.4 MW
Biomass	Turnkey Landfill Gas Recovery	9.2 MW
Biomass	UNH - Turnkey Landfill Gas	7.9 MW

Other Significant Local (NH) Power Sources

Power Type	Name of Facility	Peak Capacity
Natural Gas	Newington Natural Gas (EP)	605 MW
Natural Gas	Newington Natural Gas (GS)	414 MW
Coal	Newington Schiller Coal	171 MW
Nuclear	NextEra Energy Seabrook LLC	1247 MW

New Hampshire Annual Solar Installations



Tables - Source: DOE. Year: 2022. Granularity: SRPC, RPC.

Chart - Source: SEIA. Year: 2013-2021. Granularity: New Hampshire

Climate Change Impacts on the Region

Climate change is the process of long-term change in the average weather patterns that have been defined as today's climates. Climate change can be driven by natural factors, such as volcanic eruptions. However, over the last century human activities have been the primary drivers of climate change. Activities which emit greenhouse gasses, like burning fossil fuels, contribute to a process which warms the Earth's atmosphere. These gasses (carbon dioxide, methane, and nitrous oxide to name a few) prevent heat from escaping the atmosphere into space, and this is known as the greenhouse effect. As greenhouse gas concentrations increase in the atmosphere, warming accelerates at a rate exceeding naturally driven trends.

For Strafford county, several impacts of climate change will be seen in the next 100 years as water becomes a significant challenge to maintain a resilient region. This section will examine the following impacts of climate change in the SRPC region.

1. Sea Level Rise and Flooding
2. Infrastructure Impacted by Sea Level Rise
3. Extreme Precipitation
4. High Tide Flood Frequency
5. Urban Heat Islands
6. Shoreline Ecology
7. Living Shorelines

The New Hampshire Coastal Flood Risk Summary is a report published by the University of New Hampshire (UNH) in 2019. The report studies the projected impacts of global climate change on NH's local weather over the next 80 years. The next several pages will examine some of the factors studied in this report. This report was a combination of several years of scientific evidence and several local groups to put together the document. The snapshot will examine the 2014 and 2019 report with up-to-date science.

The full report can be found here:

<https://scholars.unh.edu/cgi/viewcontent.cgi?article=1209&context=ersc>

Sea Level Rise and Flooding

The Sea Level Rise (SLR) scenarios to the right look at 3 different levels of green-house gas emissions that would lead to either 1.7, 4, or 6.3 feet of sea level rise by 2100. This data was created in 2014 and was supplemented by the “C-Rise” project that SRPC completed for the region in 2016. Each of these data points are summaries of the 5 coastal communities within our region (Dover, Durham, Madbury, Newmarket, and Rollinsford). UNH conducted a more recent analysis for climate modeling in 2019 as a matter of probability (see “High Tide Flooding frequency” section) which are not incorporated in the infrastructure tables on this page.

A **storm surge** is defined as a large coastal storm event that has a 1% chance of happening in any given year. A variety of factors influence the impact of a storm surge such as wind direction, orientation of the coastline, and size/intensity of the storm. All these factors can be made worse by flooding during high tide called a Storm Tide. A storm surge is also referred to as a 100-year flood. This does not mean that it will only happen every 100 years, just that it has a 1% chance of flooding every year and is typically used by the National Flood Insurance Program to regulate insurance policies. For example, we had two inland 100-year floods in 12 months in NH between the Mother’ Day Flood of 2006 and the Patriot’s day Flood of 2007. Each of these storms brought tremendous damage to the SRPC region along riverine communities with up to 10 inches of rain. One-hundred-year floods are becoming more regular with longer, more powerful precipitation events projected in the future. In the maps on the following pages, Dover point, Coastal Great Bay, and the Oyster/Bellamy river are anticipated to have significant flooding impact their coasts.

Infrastructure	Sea Level Rise			Sea Level Rise + Storm		
	1.7 feet	4.0 feet	6.3 feet	1.7 feet	4.0 feet	6.3 feet
Homes	3	25	92	192	212	212
Bridges	17	18	18	18	18	20
Miles of Roads	0.32	1.29	3.3	7.96	8.05	8.05
Critical Facilities	0	2	3	3	3	3

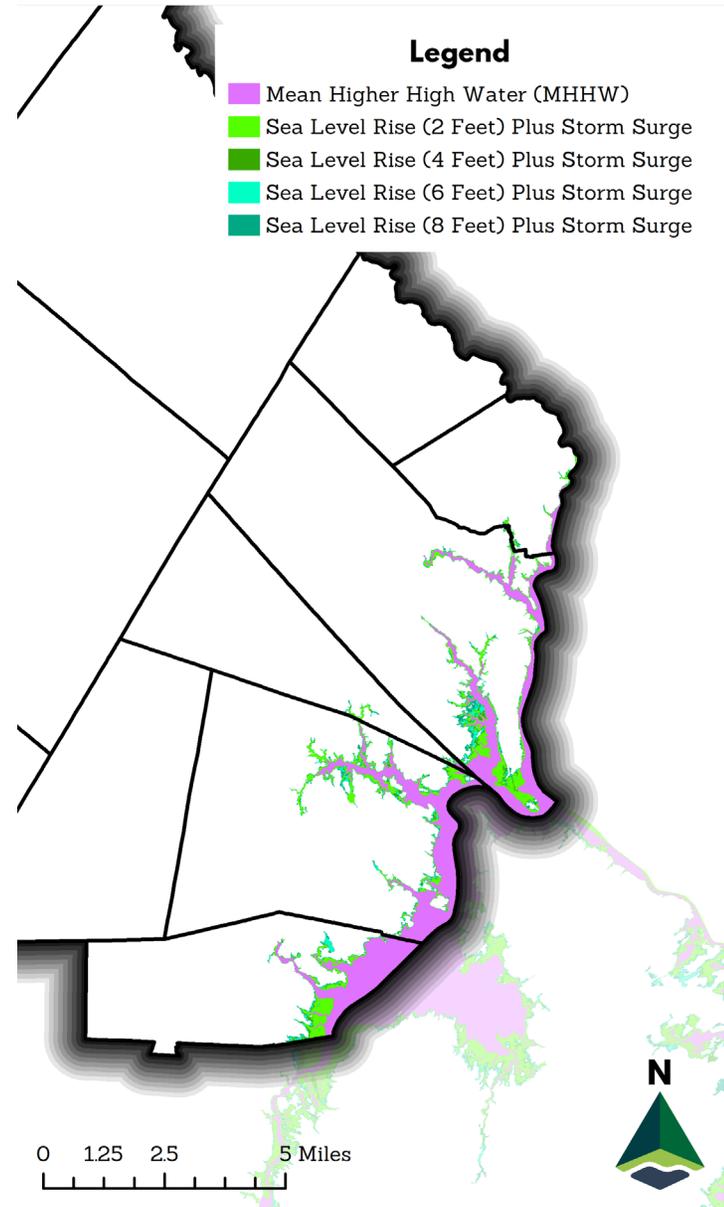
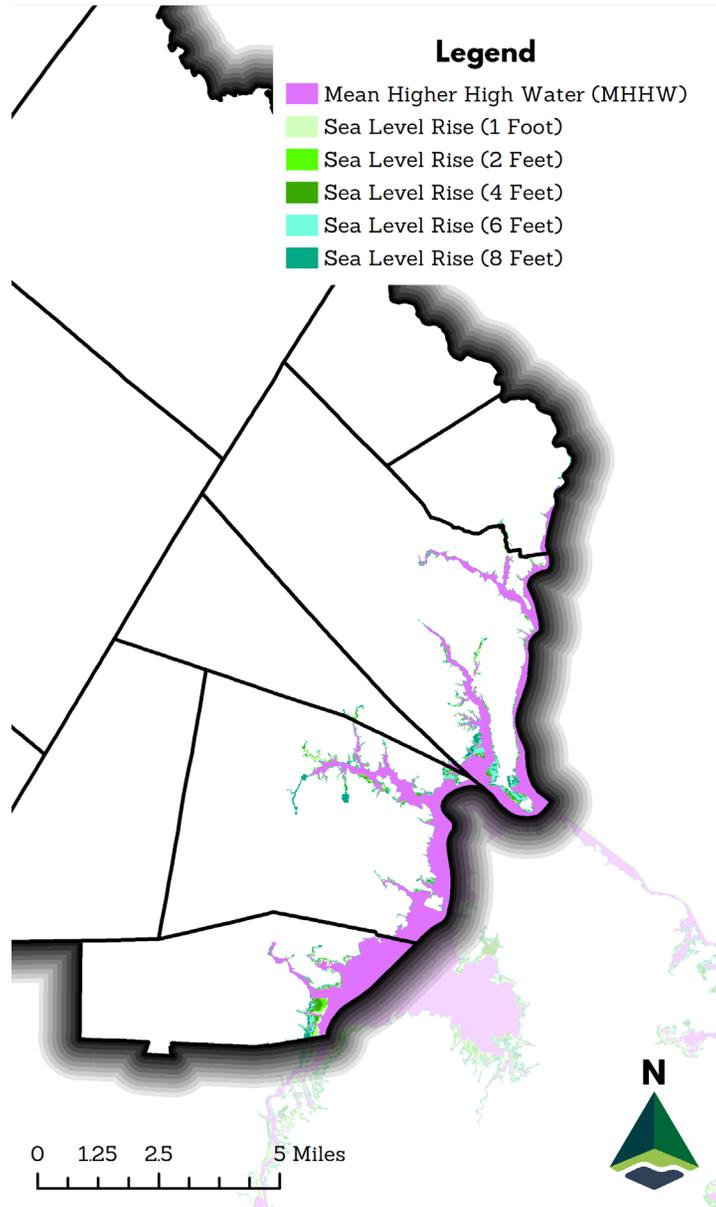
SRPC Critical facilities impacted by SLR

Critical Facilities	Municipality	SLR Scenario	SLR + Storm Surge Scenario
Primary Sewer Lift Station	Durham	6.3 feet	1.7 feet
Riverwalk Park	Newmarket	4 feet	1.7 feet
Creighton Street Pump Station	Newmarket	4 feet	1.7 feet

Critical Facilities include all public and private facilities that a community considers essential for the delivery of vital services for the protection of the community, such as emergency operations centers, shelters, or utilities.

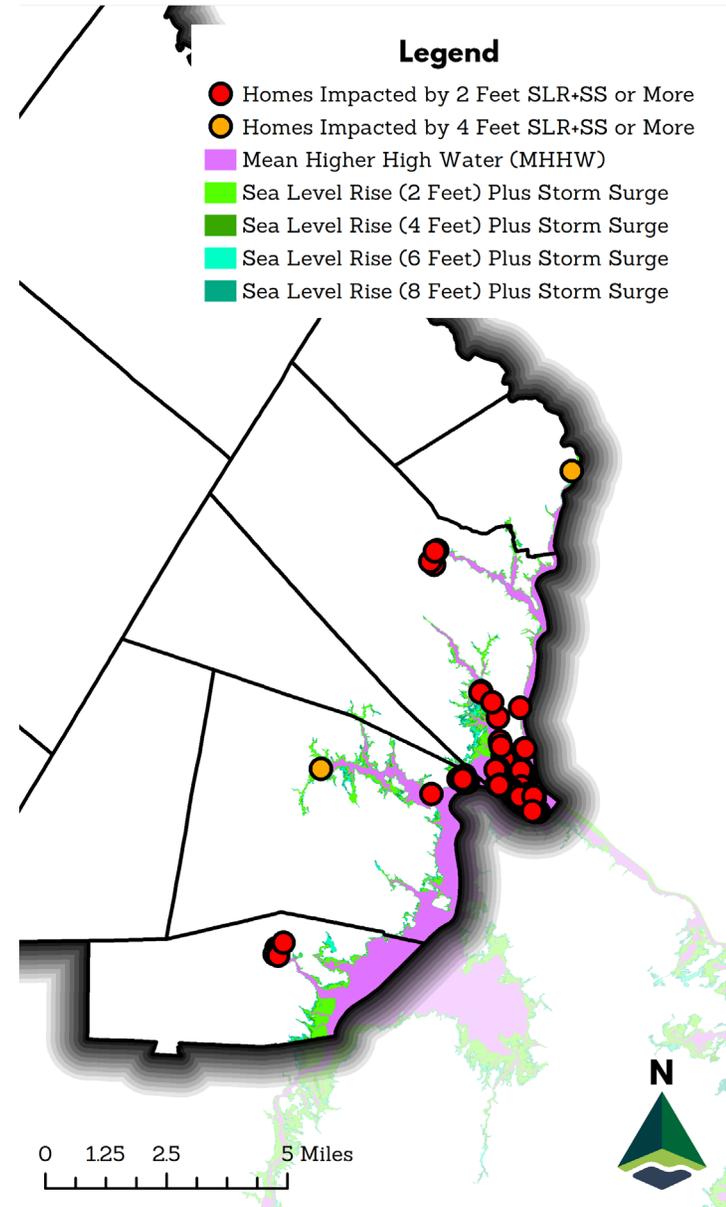
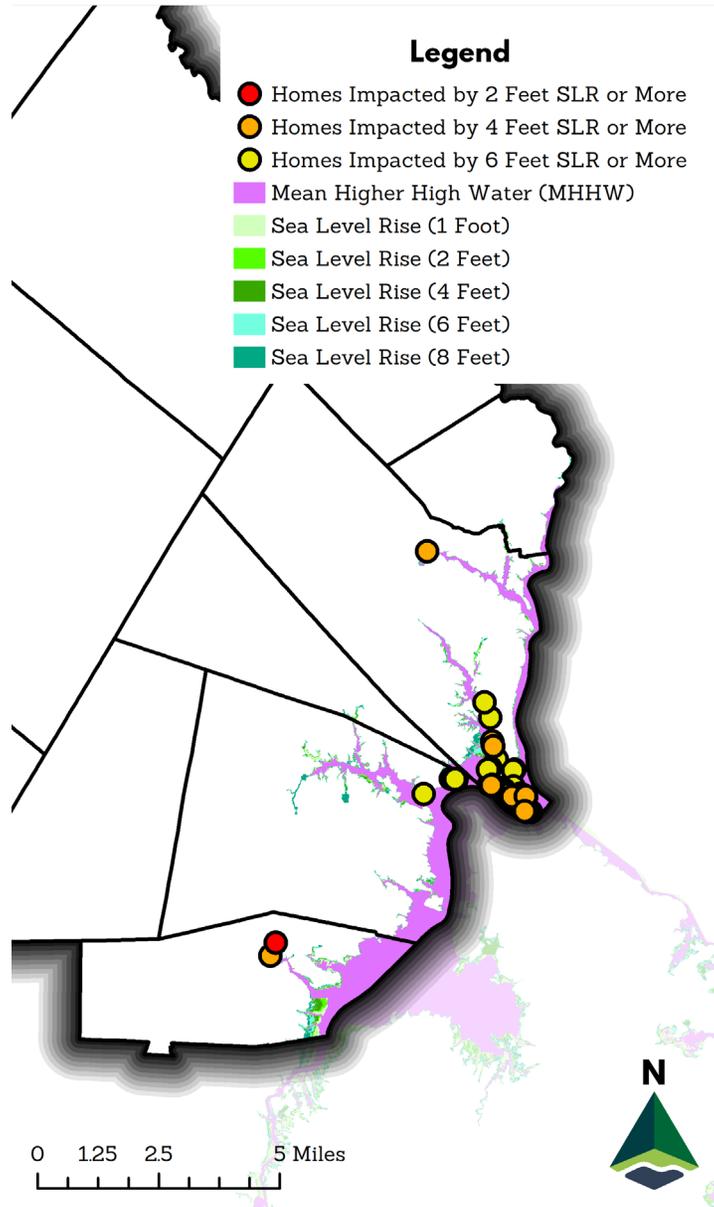
For 2014 report: <https://scholars.unh.edu/cgi/viewcontent.cgi?article=1017&context=sustainability>
 Text - Source: UNH. Year: 2014. Granularity: Coastal NH.
 Infrastructure table - Source: SRPC. Year: 2014. Granularity: SRPC.

Sea Level Rise and Storm Surge



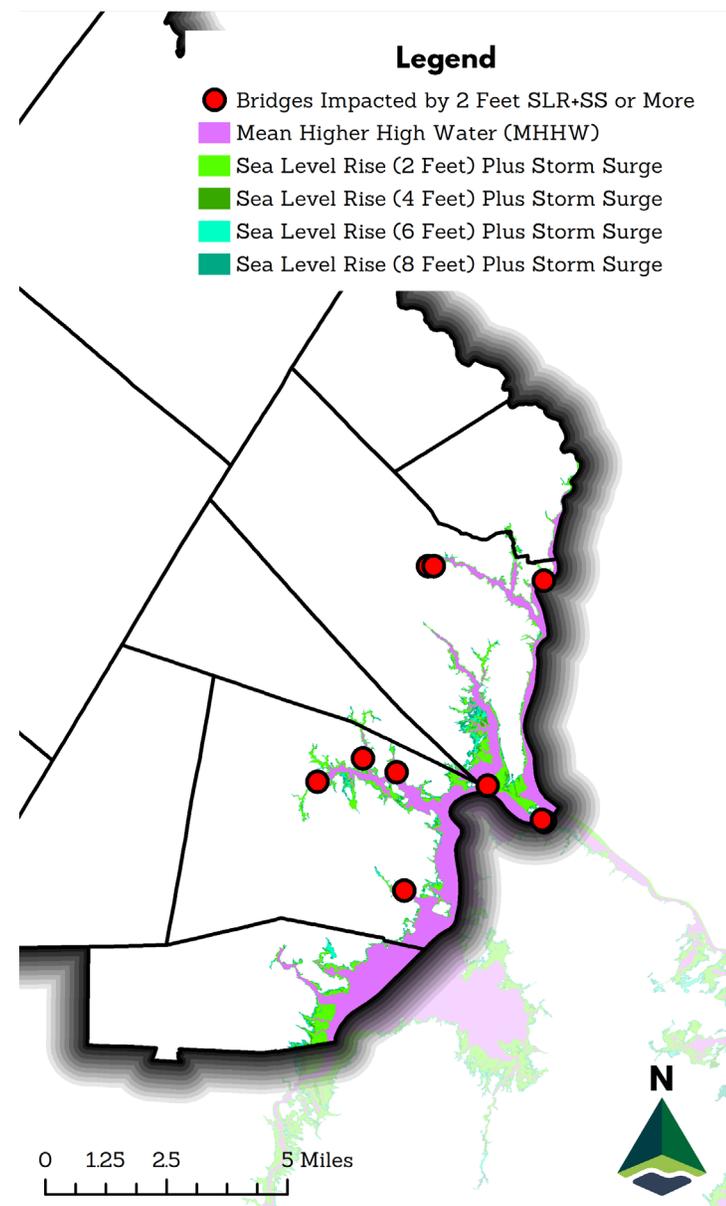
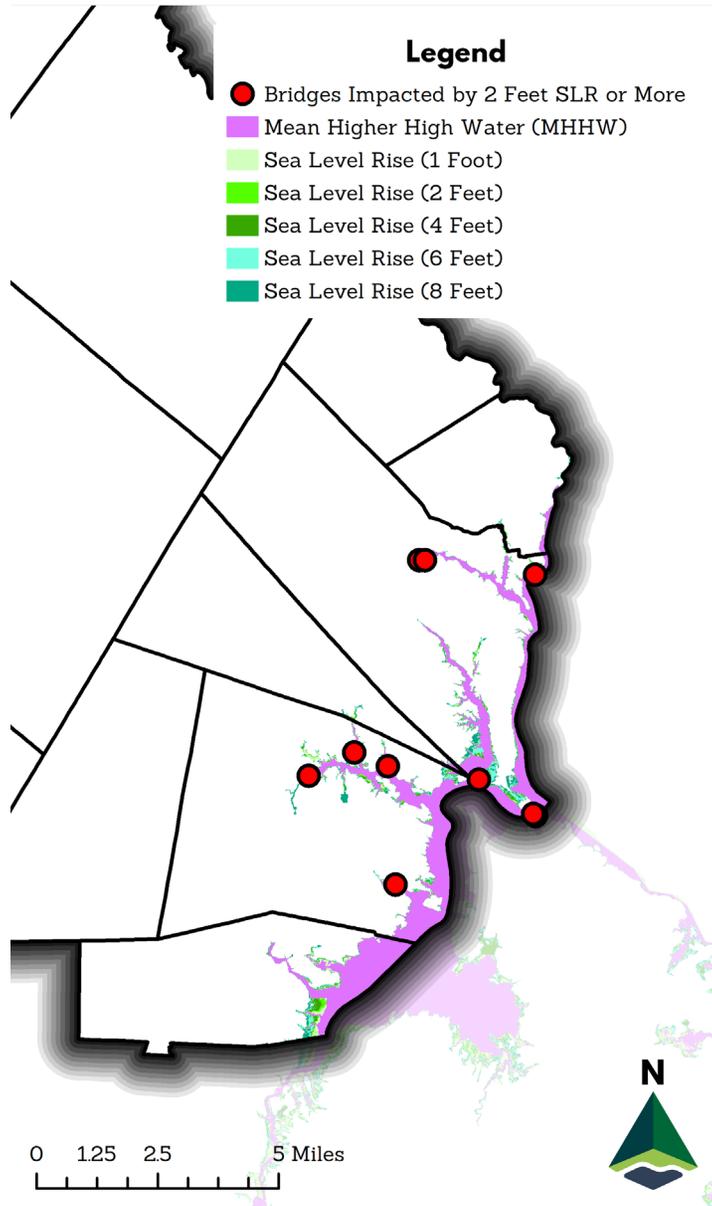
Source: UNH. Year: 2019. Granularity: Coastal NH.

Homes Impacted by Sea Level Rise and Storm Surge



Source: UNH. Year: 2019. Granularity: Coastal NH.

Bridges Impacted by Sea Level Rise and Storm Surge



Source: UNH. Year: 2019. Granularity: Coastal NH.

Extreme Precipitation

Representative Concentration Pathways (RCP) are a collection of 4 different global greenhouse gas concentration scenarios that consider melting ice sheets and industrial trends. For precipitation, the Coastal Flood Risk Summary only looked at the 2 most likely scenarios. It appears under either RCP 4.5 (assuming carbon emissions begin to stabilize and then slowly decline after 2050) or RCP 8.5 (assuming carbon emissions continue to grow through the end of the century) that precipitation events will be longer and carry more water.

This is evident at Durham's weather station where they predict that 2" precipitation events will increase by 73% each decade by the end of the century under the RCP 8.5 scenario. This means that 2" precipitation events will occur nearly 14 times per decade by the end of the century if nothing is done to reduce dependence of fossil fuels. It is also interesting to note the season with the biggest increase in precipitation is winter where we could see anywhere between 14-22% more precipitation by the end of the century.

Examples of local 2" precipitation events within 24 hours include Hurricane Irene in 2011 where the state saw 3-6" of rain, and Winter Storm Nemo in 2013 which brought 2 feet of snow.

Future extreme weather projections will impact the planning and development of critical infrastructure, particularly as it relates to stormwater and other facilities whose designs rely on flooding scenarios.

	Historical Average (1980-2009)	Approximate Change from Historical					
		Short Term (2010-2039)		Medium Term (2040-2069)		Long Term (2070-2099)	
		RCP 4.5	RCP 8.5	RCP 4.5	RCP 8.5	RCP 4.5	RCP 8.5
Durham, NH (Precipitation in Inches)							
Annual	43.51	1.41 (3%)	1.49 (3%)	2.35 (5%)	3.07 (7%)	3.07 (7%)	4.79 (11%)
Winter	10.56	0.64 (6%)	0.47 (5%)	0.81 (8%)	1.4 (13%)	1.44 (14%)	2.34 (22%)
Spring	11.05	0.32 (4%)	0.57 (5%)	0.74 (7%)	1.03 (9%)	0.84 (8%)	1.78 (16%)
Summer	9.88	0.38 (4%)	0.38 (4%)	0.65 (4%)	0.35 (4%)	0.69 (7%)	0.46 (5%)
Fall	12.03	0.08 (1%)	0.07 (1%)	0.14 (1%)	0.29 (2%)	0.1 (1%)	0.21 (2%)
PMAX	2.27	0.19 (9%)	0.21 (9%)	0.24 (10%)	0.37 (16%)	0.35 (15%)	0.54 (24%)
Extreme Precipitation in events per year							
1" in 24 hours	6.5	0.7 (11%)	0.8 (12%)	1.2 (18%)	1.6 (24%)	1.5 (23%)	2.5 (38%)
Extreme Precipitation in events per decade							
2" in 24 hours	8	1.2 (15%)	1 (13%)	2 (25%)	3.5 (44%)	3.2 (40%)	5.8 (73%)
4" in 48 hours	3	1.2 (38%)	1.5 (52%)	1.8 (60%)	2.6 (93%)	2.1 (69%)	4.4 (154%)

For Report: <https://scholars.unh.edu/cgi/viewcontent.cgi?article=1209&context=ersc>

Source: UNH. Year: 2019. Granularity: Town of Durham.

High Tide Flooding Frequency

As relative sea level rise continues in coastal New Hampshire, the frequency of high tide flooding will also increase. High tide in the Northeast United States is predicted to reach or exceed 10 feet above Mean Lower-Low Water a total of 56 times in 2019 according to NOAA, not including storm surge. Under the Intermediate Global mean sea level rise (GMSLR) scenario of 3.3, high tide flood frequencies will increase to 132±26 days per year by 2050 in the Northeast US. For reference, water levels of 10 feet, 11 feet, 12 feet, and 13 feet above the Mean Lower-Low Water level correspond with Hampton's threshold for "taking action" on minor flooding, moderate flooding, and major flooding, respectively, as defined by the National Weather Service.

"A separate analysis found that under a 3.9 feet of SLR scenario by the end of the century, 40% of all East Coast communities will be chronically inundated (defined as flooding that occurs at least 26 times per year) (UNH New Hampshire Coastal Flood Risk Summary)"

Sea Level Rise Scenario	High Tide Flood Frequency	Year
Current (Hampton, NH)	56 (not including storms)	2019
3.3 feet (GMSLR) NE US	132±26 days per year	2050
3.3 feet (GMSLR) NE US	Daily (365 days)	2100

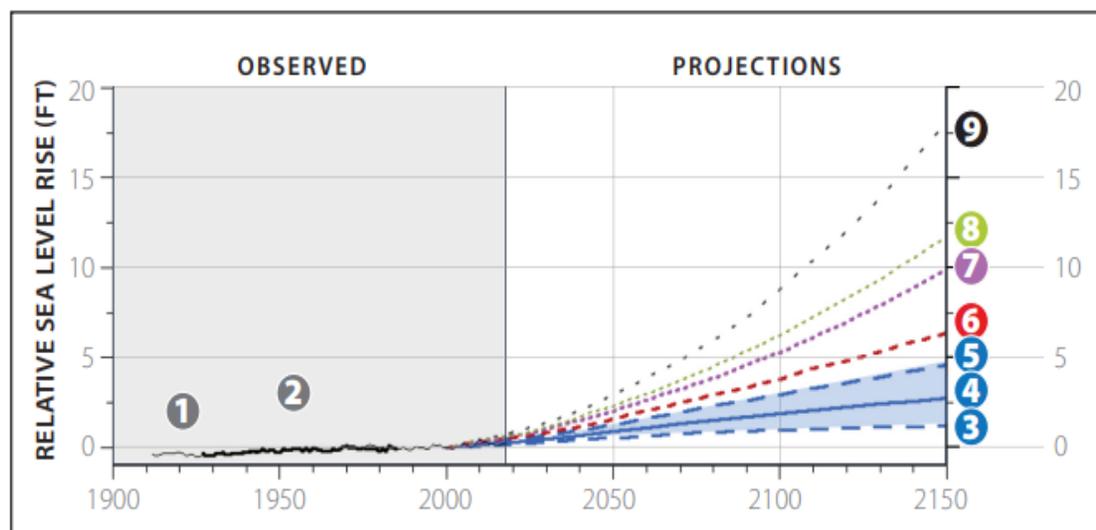


Figure 4.5. Observed and Projected Relative Sea-Level Rise for Seavey Island Tide Gauge K14 Projections | Stabilized Greenhouse Gas Concentrations (RCP 4.5).

- ① Historical data for Portland, ME (1912-2018; thin black line)
- ② Historical data for Seavey Island, ME (1927-1986; thick black line)
- ③ Lower end of "likely range"
- ④ Central estimate
- ⑤ Upper end of "likely range"
- ⑥ 1-in-20 chance estimate
- ⑦ 1-in-100 chance estimate
- ⑧ 1-in-200 chance estimate
- ⑨ 1-in-1000 chance estimate

The graph to the left was UNH's approach to sea level rise calculations by examining the probabilities of each of these sea level rise scenarios rather than having 3 concrete scenarios. It is also indicative of the continuous change in the research field, where they analyze several possible scenarios to account for the complex changes in our planet's climate. This analysis also goes 50 years further than the "C-rise" project that SRPC created using UNH data..

For Report: <https://scholars.unh.edu/cgi/viewcontent.cgi?article=1209&context=ersc>
 Source: UNH. Year: 2019. Granularity: Northeast United States, Hampton, NH.

Urban Heat Island/Extreme Heat

Extreme heat is a hazard becoming increasingly more common as we have seen 19 of the last 20 summers set record highs for temperatures. Due to lack of efforts to significantly cut the greenhouse gas emissions responsible for climate change, the Union of Concerned Scientists predicts that the number of Americans experiencing 30 or more days with a heat index above 105 degrees in an average year will increase from 900,000 people today to more than 90 million by mid-century. As seen below, NH will not experience many days with a heat index of over 105 degrees but will expect many more 90-degree days. To combat the heat, green spaces can reduce the amount of heat being absorbed in the urban infrastructure surfaces such as asphalt and concrete. Areas within a 10-minute walk of a park can even be as much as 6 degrees cooler than neighborhoods outside that range.

Recreation sites are often the most readily accessible areas to get out of the sun due to the plethora of shade and water resources such as community pools and splash pads. SRPC's region is home to over 300 recreation sites of which 77% have some sort of shade. Thirteen percent of recreation sites have manmade shade structures while 64% have shaded trees. The remaining 23% have no shade at all. Other avenues to get out of the heat include cooling centers, which are often provided on hot days in the Summer, typically in public facilities such as libraries and municipal buildings across the region.

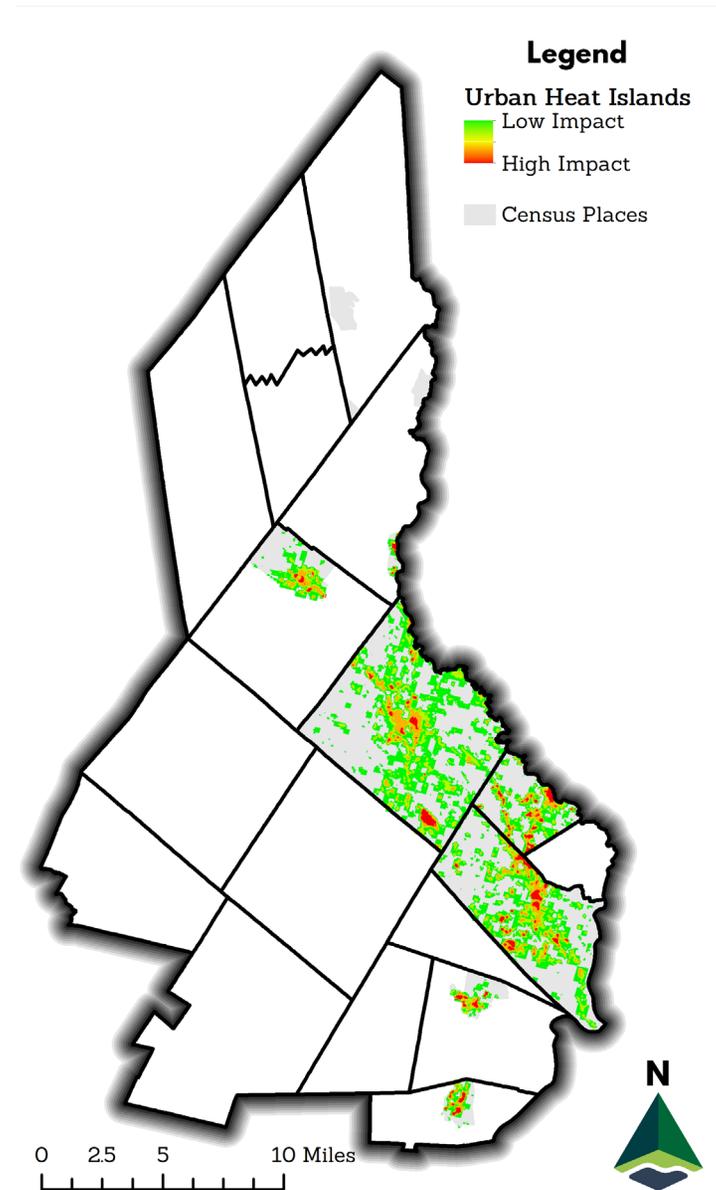
Annual NH Heat Index Frequencies	Annual Historical	Midcentury		Late century		Rapid action
		Slow action	No action	Slow action	No action	
NH with 90 + degree days	3	16	23	22	49	17
NH with 100 + degree days	0	2	6	4	19	2
NH with 105 + degree days	0	0	2	1	10	0

Table - Source: Union of Concerned Scientists. Year: 2019. Granularity: New Hampshire.

Text - Source: SRPC. Year: 2020. Granularity: SRPC.

Text - Source: Trust for Public Land. Year: 2020. Granularity: United States.

Map - Source: UNH. Year: 2020. Granularity: SRPC



Shoreline Ecology

Salt Marshes are defined as coastal wetlands that typically flood due to tidal intervals of twice a day to twice a month, but in the Northeast, it is twice a day. They are among the most productive ecosystems in the world that provide shelter from high-energy ocean wave action.

Shoreline ecology has become an integral part of combatting climate change in the past several years. The health and consistency of our shoreline allows our region to be more resilient from effects such as sea level rise, coastal storm surge, and other erodible processes. Maintaining these riverine and coastal ecosystems allow the region to have a natural capacity of flood mitigation.

In New Hampshire, an estimated 18-50% of the state's original salt marsh habitat has been lost to development or inadequate tidal flow, further exacerbated by the spread of invasive species. These invasive species are likely to spread much further as the impacts of climate change such as reduced salinity content in the water column and excess nutrients from higher river discharges create ideal locations for these invasive species to thrive.

The SRPC region has not lost much salt marsh due to local conservation efforts and protected natural erosion barriers, but there are areas where the salt marsh has potential to protrude inland due to sea level rise. Because the region is located on the inland side of the Great Bay Estuary, Newmarket has the greatest concentration of salt marshes in the region along the mouth of the Squamscott and Lamprey Rivers where they flow into the Great Bay Estuary. This area already has a significant salt marsh that could be pushed inland due to factors listed above.

Status	Acres
Salt marsh lost	81.9
Salt marsh persistent	440.5
Salt marsh potential	816.8



Text - Source: New Hampshire Fish and Game. Year: 2015. Granularity: New Hampshire.
Map & Table - Source: UNH GRANIT. Year: 2014-2021. Granularity: SRPC.

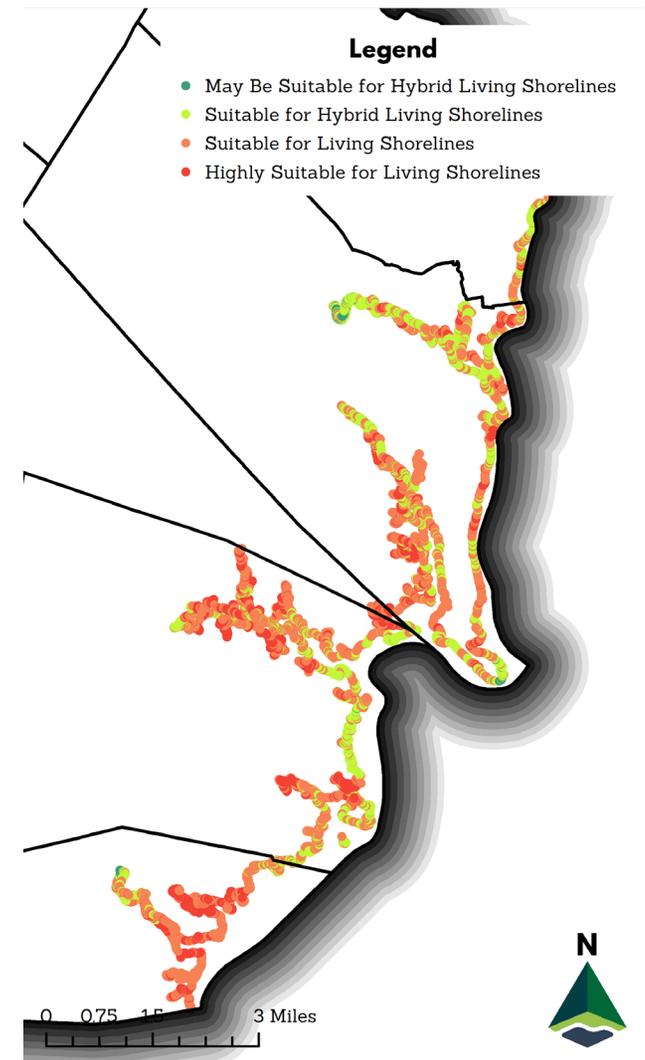
Living Shorelines

A living shoreline is a protected, stabilized coastal edge made of natural materials such as plants, sand, or rock. Unlike a concrete seawall or other hard structure, which impede the growth of plants and animals, living shorelines grow over time. Natural infrastructure solutions like living shorelines provide wildlife habitat and natural resilience to communities near the waterfront. Living shorelines are sometimes referred to as nature-based, green, or soft shorelines. They are an innovative and cost-effective technique for coastal management.

Recent efforts are seeking ways to create a pipeline of living shoreline projects that enhance resilience of salt marsh habitat and coastal community assets and avoid future hard shoreline stabilization. However, adoption remains slow in NH, partly due to a lack of visible projects and a small community of professional engineers experienced enough to recommend projects to their clients. Momentum is mounting to advance living shoreline adoption as the preferred alternative to hard structural stabilization in coastal NH.

Eighty-two percent of the New Hampshire tidal shoreline received biophysical suitability index numbers between 4 and 6, suggesting that the majority of the New Hampshire tidal shoreline may be suitable for no stabilization action, low impact management, or nature-based stabilization.

SRPC partners with NH CAW on the Great Bay Living Shoreline project, focused on creating more living shoreline projects in NH. More information can be found at <https://www.nhcaw.org/greatbaylivingshorelineproject/>



Map - Source: NHDES. Year: 2019, 2022. Granularity: New Hampshire.

Mitigation and Emergency Response

Hazard mitigation is the process of reducing or eliminating loss of life or property damage for future events. This is done by undertaking activities that will minimize the impact on the community in advance of a possible hazard. These hazards can be manmade like oil spills or gas leaks but are primarily natural phenomena such as thunderstorms and flooding. Mitigation is a key component in preventing hazards from becoming costly repairs and saving lives.

The US Government has attempted to mitigate the impact on flood-prone areas by establishing the National Flood Insurance Policy (NFIP) in 1968 to reduce future flood damage and protect property owners. The goal of the NFIP was to disincentivize property owners from buying in flood areas by paying a monthly premium. This premium was to offset the costs of a potential flood impact and to promote the property owner to follow good practices of floodplain management. All municipalities participating in the program must establish floodplain management regulations, and all SRPC municipalities participate in the NFIP. The private industry will have greater influence on flood insurance in the coming years.

Lastly, one of the biggest tests of resilience in the past 3 years has been health care and emergency response services. The COVID-19 pandemic has pushed the whole nation to near-capacity as we navigate the most significant pandemic since yellow fever nearly 100 years ago. This section will look at the following metrics in the SRPC region:

1. Hazard Mitigation
2. National Flood Insurance Policy Loss Claims
3. Emergency Response Capacities

Hazard Mitigation

Municipal Hazard Mitigation plans are required to be updated every five years to be eligible for FEMA grant funding. This process involves setting up a hazard mitigation committee to collect historic information about what mitigation projects and procedures have been put in place in the past 5 years and to set goals for what the municipality plans to accomplish in the next five years. The map to the right shows the current status of the region's Hazard Mitigation Plans. Each community is labeled with the expiration date of the current plan. Several hazard mitigation plans in the region are out of date.

Across the US, billion-dollar disaster events are becoming more common. In NH, single weather events have not reached the billion-dollar level, however multiple events in 1998 had a combined disaster cost of over a billion dollars for the first time in the 40 years of data. As these events become more common and widespread, it is important for NH communities to prepare now through mitigation to reduce the cost of damages to infrastructure that are inevitable for NH.

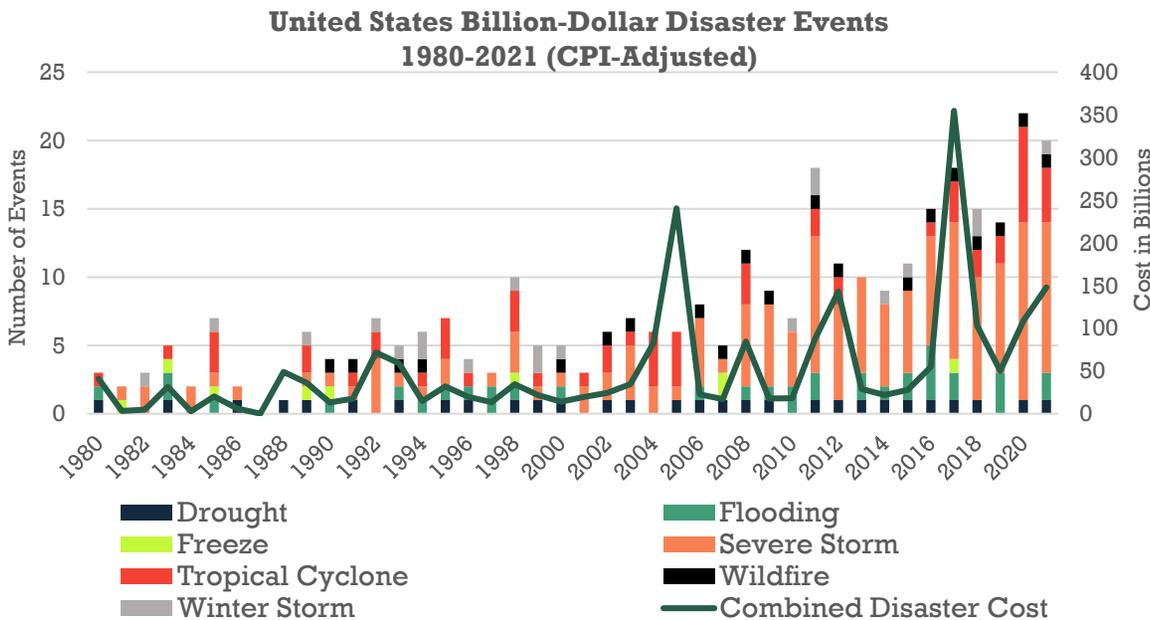
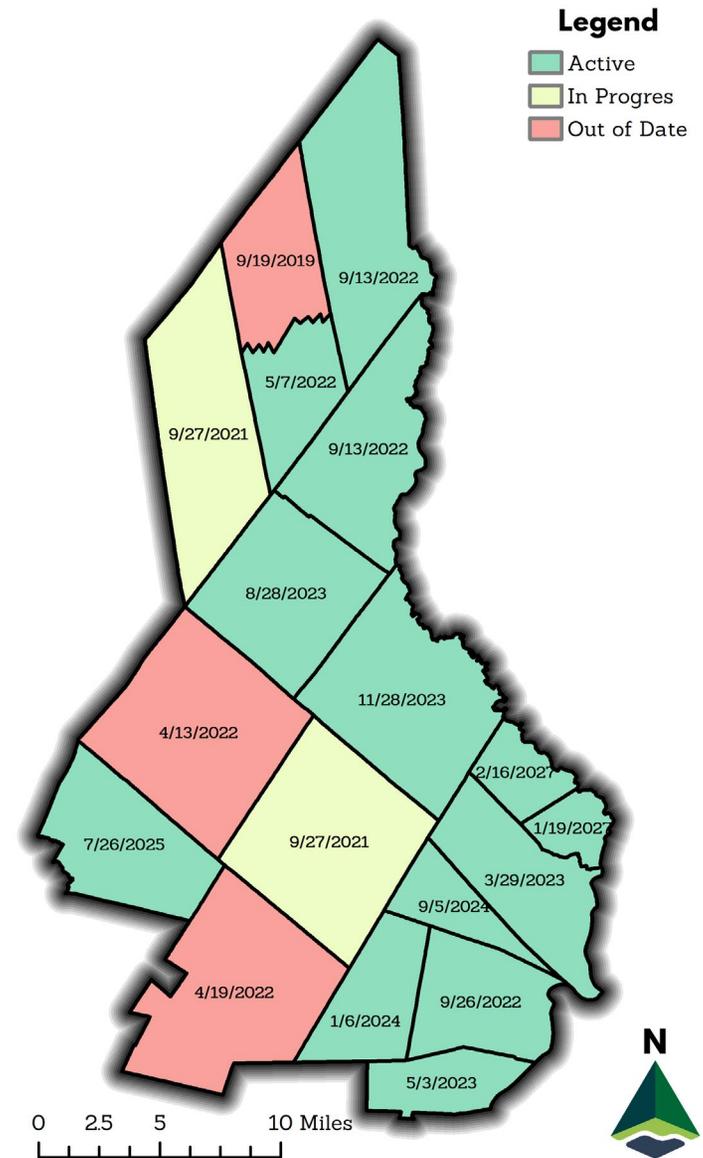


Chart - Source: NOAA. Year: 1980-2021. Granularity: United States

Map - Source: NHHSEM. Year: 2022. Granularity: SRPC.

National Flood Insurance Policy Loss Claims

The National Flood Insurance Policy (NFIP) is a program that provides insurance to property owners in flood-prone areas. Insurance rates through NFIP have been driven by a property's location in the Flood Insurance Rate Map (FIRM). Flood insurance is optional in moderate and low risk flood areas but required in high-risk areas. These maps are updated regularly to ensure that the risk level is as accurate as possible. In 2021, FEMA overhauled their risk assessment methodology to look at where the property is, how many buildings are constructed, and what the replacement cost value is for any buildings. This new methodology also analyzes multiple flooding scenarios such as storm surge, coastal erosion, and property characteristics such as elevation change.

This change in methodology has resulted in significant changes in policy rates. In Farmington there was a 33% decrease in previously mandatory policies, but a substantial premium increase for policies whose risk is now commensurate with their full risk rate. This is evident by the significant loss in policies, while maintaining a five percent increase in the total premiums paid from 2020 to 2022. This means that the new methodology has determined that some properties do not require policies, but the properties that do require policies now have much higher premiums. Lee and Middleton followed the same trend as Farmington. The rest of the region had a similar net change between their total premium amounts and the number of policies.

Percent change between NFIP methodology in 2020 and 2022

Municipalities	% Change of Policies	% Change of Premiums (\$) Paid
Barrington	-20.0%	-17.6%
Brookfield	0.0%	0.0%
Dover	-6.3%	-5.5%
Durham	-30.0%	-30.9%
Farmington	-33.3%	5.8%
Lee	-7.7%	4.2%
Madbury	0.0%	0.0%
Middleton	-16.7%	7.8%
Milton	-38.2%	-29.3%
New Durham	-10.0%	-11.2%
Newmarket	0.6%	4.5%
Northwood	-55.6%	-42.4%
Nottingham	-83.3%	-70.4%
Rochester	-13.2%	-12.1%
Rollinsford	0.0%	0.0%
Somersworth	-25.0%	-14.3%
Strafford	-18.2%	-14.8%
Wakefield	-42.1%	-33.4%
Total	-13.4%	-8.3%

Source: NHOSI. Year: 2020, 2022. Granularity: SRPC.

Emergency Response Capacities

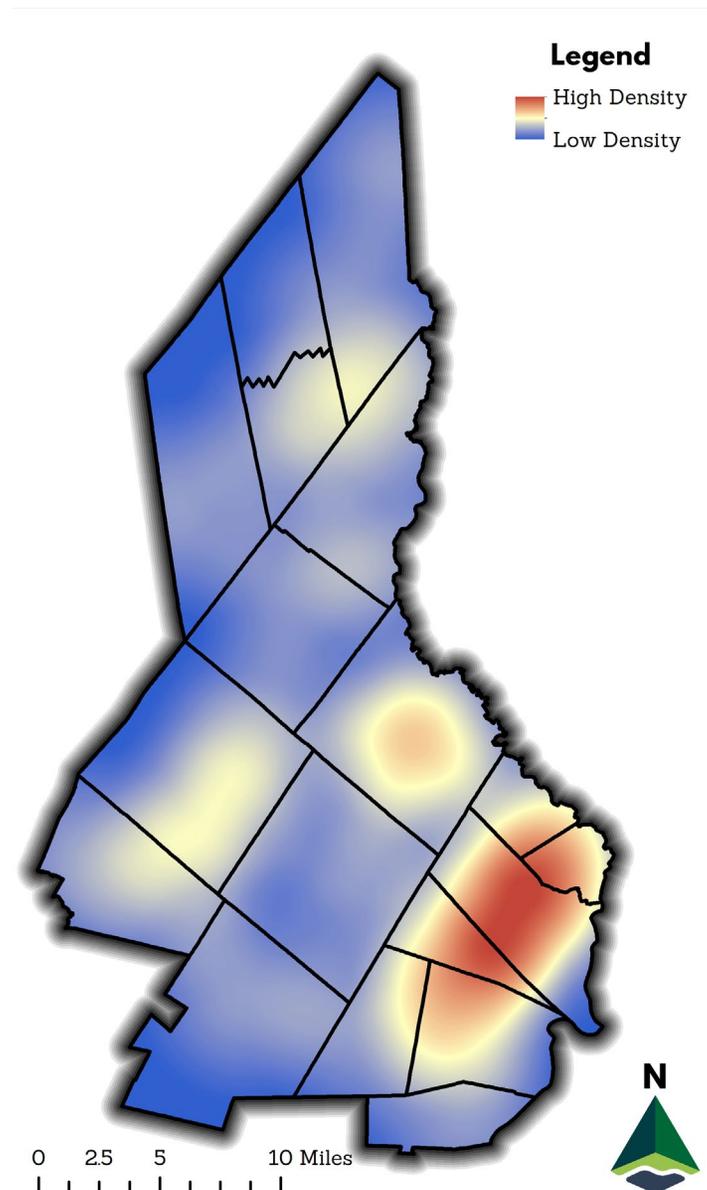
During the COVID pandemic, hospitals in our region were pushed to levels of care they had not seen in their history with historical numbers of hospitalizations and demand for beds. For example, Frisbee Memorial Hospital in Rochester was pushed to its capacity of ICU beds for nine weeks straight during fall of 2020 which is around 6 beds. Case numbers fluctuated over the course of 2020-2022, especially during winters where we saw the most significant changes to weekly case numbers.

Wentworth Douglass Hospital has had to continuously adjust their number of beds throughout the pandemic to keep up with the amount of people that were being hospitalized, specifically with COVID-19. As the region approaches living freely through the pandemic, it is important to note that these hospitals are taking the brunt of the impact that could be exacerbated by another winter with no COVID-19 protections.

The map on the right refers to the availability of hospital and emergency medical service locations throughout the SRPC region. EMS services are typically fire departments in each of the 18 communities, however there is a greater concentration and availability to the more urban southern communities based on population. Each town either operates their own EMS team or outsources those operations to companies like Stewart's Ambulance Services. For example, Dover has 3 fire stations, meaning they have three EMS service locations to either dispatch and treat on site or to transport to a local hospital.

Hospitals	Frisbee Memorial Hospital (Rochester)	Wentworth Douglass Hospital (Dover)
MAX Inpatient Beds	103	191
Used beds percentage	>80% since October 2021	>85% since October 2021
Beds Since September 2020	68	>170
ICU Beds	6	21

Table - Source: NHHHS. Year: 2020-2022. Granularity: SRPC.
 Map - Source: GRANIT. Year: 2015. Granularity: SRPC.



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