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# 2024

## Greater Lowell Annual Comprehensive Economic Development Strategy Annual Report





# 2024 Greater Lowell Comprehensive Economic Development Strategy (CEDS) Annual Performance Report

|                                    |  |
|------------------------------------|--|
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**Cover Photos** (From left to right)  
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# Section 1

## 1. Introduction

## 1.1. About the Greater Lowell CEDS for 2020-2024

The Greater Lowell Comprehensive Economic Development Strategy (CEDS) is a guide for Greater Lowell's municipalities, nonprofits, agencies, education providers, and other strategic partners to enhance regional economic resiliency, sustainability, inclusivity, and success. It contributes to effective economic development in our communities through a locally-based, regionally-driven economic development planning process. Where appropriate, it seeks to integrate or leverage other regional planning efforts, including the use of state and federal funds, and leverage private sector resources and investment.

The 2020-2024 CEDS planning process was led by the Northern Middlesex Council of Governments (NMCOG). NMCOG has been designated by the Economic Development Administration (EDA) of the U.S. Department of Commerce as the regional economic development entity for the Greater Lowell region and has been developing the Greater Lowell CEDS since the *2004-2008 Greater Lowell CEDS*. The Plan was developed in accordance with EDA regulations 13 C.F.R. § 303.7 and under guidance issued on January 21, 2015.

The CEDS provides a vehicle for private industry and individuals to engage in meaningful discussion with Greater Lowell's economic development partners to identify capacity-building efforts that would best serve economic development in the region. The CEDS planning process began in May 2019, and included significant revisions to address the evolving COVID-19 pandemic before the Plan's approval by the EDA in September 2020. The process included four meetings with the Greater Lowell CEDS Committee as well as three Strengths-Weaknesses-Opportunities-Threats (SWOT) Analysis sessions to receive input from the business community, public agencies, and the public on the economic future of the Greater Lowell region. The three SWOT Analyses and creation of the Summary Background were largely completed by February 2020—prior to full COVID impacts. On March 10, 2020, Governor Baker approved a state of emergency, and on March 29, 2020, President Trump approved a disaster declaration for Massachusetts. The Strategic Development and Action Plan was completed after that date and reflects the change in the public health and economic situation.

At that time, there were no available data sources to accurately reflect the serious, developing repercussions to our regional economy, small businesses, and workforce. Based upon the timeframe for the completion of the CEDS, we moved forward with data available at that time and expected to provide updated statistics with the submission of annual performance reports, including this *2024 Greater Lowell CEDS Annual Performance Report*.



*City of Lowell, Courtesy Greater Merrimack Valley Chamber of Commerce*

## 1.2. About the 2024 Greater Lowell CEDS Annual Performance Report

This *2024 Greater Lowell CEDS Annual Performance Report* (CEDS Annual Report for short) is the third of four annual performance reports on the progress of the CEDS implementation. Our CEDS Annual Reports will track our progress in completing the actions recommended in the plan, track evaluation measures to determine whether our actions are having a positive impact, and evaluate whether changing economic conditions necessitate changes in the CEDS. This CEDS Annual Report covers the period between January 1, 2023 and December 31, 2023.

The CEDS Annual Report includes the following sections:

- 1. Introduction**
- 2. Adjustment to the Strategy:** Updated socioeconomic data; major events since the CEDS completion including impacts from the COVID-19 Pandemic; and any necessary changes to the CEDS
- 3. Report on Economic Development Activities:** A summary of the activities undertaken by the CEDS Committee or its partners to advance the CEDS and their successes since the previous year
- 4. Evaluation of Progress on Action Plans and Goals:** A summary of progress toward the specific goals and objectives in the CEDS and report of the performance measures articulated in the CEDS
- 5. Next Steps:** A 2024 action plan, including challenges and mitigation and required EDA assistance

This CEDS Annual Report extensively utilized the *Economic Recovery and Resiliency Plan* (ERRP) Phase 2, which made use of robust data, surveys, and public agency input to identify the economic injury to the Greater Lowell region caused by COVID-19. It also made recommendations, outlining steps to take to address these issues and to prepare for potential future impacts associated with this pandemic or similar major emergencies and economic shocks.

The CEDS Annual Report was created by NMCOG staff under the guidance of the CEDS Committee.



*Epigram Brewing System in new development in Tyngsborough, courtesy Town of Tyngsborough*

## 1.3. Greater Lowell and the *Greater Lowell CEDS* Vision Statement

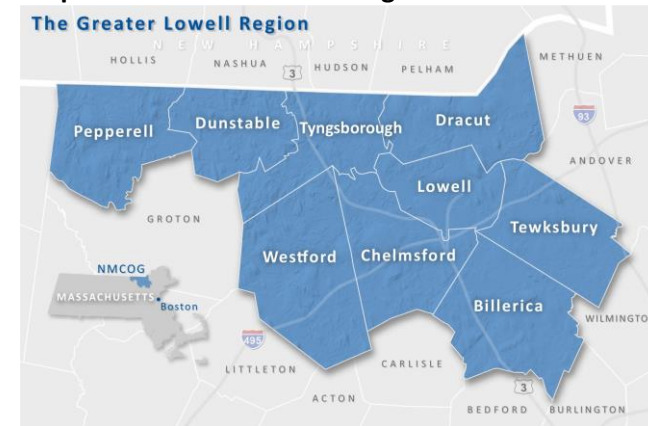
The Greater Lowell region consists of the City of Lowell and the Towns of Billerica, Chelmsford, Dracut, Dunstable, Pepperell, Tewksbury, Tyngsborough, and Westford. The region is located along the Concord and Merrimack Rivers in northeast Massachusetts and is bordered by Essex County to the east, by southern Middlesex County to the west and south, and by New Hampshire's Hillsborough County to the north. The City of Lowell is located 26 miles from Boston and is well-served by U.S. Route 3, Interstates 93 and 495, the MBTA Commuter Rail, and the Lowell Regional Transit Authority (LRTA).

The Greater Lowell region has extensive assets that include an ideal location accessible to the rest of New England through a well-organized highway network, a highly educated workforce, an established framework of banking institutions, and an integrated educational network offering pre-K to PhD instruction led by the University of Massachusetts at Lowell (UMass Lowell) and Middlesex Community College (MCC).

The vision articulated in the CEDS for the Greater Lowell region is to build upon the region's cultural history and economic characteristics to develop a regional economic framework that supports:

- The creation of **high skill, well-paying jobs** that are sustainable and resilient;
- **Affordable and market-rate housing** to provide housing options for the regional employment base;
- An integrated **economic development, workforce development, and education system** that builds upon the industry clusters in the region and prepares students and workers for today's jobs and employment in the future, based on evolving demand for certain skills;
- Private and public investment in the region's **physical infrastructure** – transportation, sewer, water, utilities, internet, etc. – and **social infrastructure** – day care, skill training, transportation services, etc. – to improve the quality of life in the region;
- An **inclusive and racially diverse workforce** that encourages economic success; and
- An economic foundation and governmental structure that **is well-prepared to respond to evolving situations** brought about by change in market conditions, a natural disaster, public health emergency, or other unforeseen circumstances.

**Map 1: The Greater Lowell Region**



*Source: MassGIS/NMCOG (town boundaries);  
MassDOT/NMCOG (roads)*

# Section 2

## 2. Adjustment to the Strategy



The CEDS is meant to be a flexible document. It may be adjusted to respond to changing economic conditions. To this end, this section of the CEDS Annual Report will describe any changes in the region's economic conditions and whether this necessitates adjustments, including the following:

1. A snapshot of socioeconomic data and how it has changed since the last Annual Report;
2. Major economic events, including but not limited to those arising from the COVID-19 Pandemic;
3. Any changes to the CEDS Committee or staff since the last Annual Report; and
4. A summary of the above updates and whether they necessitate a change in activities, priorities, or the evaluation framework.

## 2.1. Socioeconomic and Housing Data

### About the Data

The CEDS Annual Report contains a snapshot of socioeconomic and housing data for Greater Lowell and how it has changed since the CEDS was adopted. Our region can best be characterized as a large, central city (Lowell) surrounded by smaller towns. To clarify trends that may be obscured if the data were broken out by each of the nine communities, we analyzed data for the region as a whole, Lowell specifically, and the region outside Lowell. Information is also presented for the United States and the Commonwealth of Massachusetts for comparison when appropriate. The data is broken into four major categories:

1. **Demographic Data** chart the changes in population, race/ethnicity, and educational attainment in the region. This primarily uses the U.S. Census Bureau's American Community Survey (ACS) five-year data. As the most recent data is from the years 2018-2022, it does not reflect impacts due to recent events or activities. Instead, this report will analyze whether any long-term trends have changed since the last CEDS Annual Report and whether that impacts the CEDS in any way.
2. **Housing Data** charts the type and affordability of housing in the region. It also uses five-year ACS data. However, number of sales and median sales price uses Warren Group data, which is collected monthly and current through 2023. This data may reflect recent developments and will be noted as such.
3. **Commerce and Industry Data** represents businesses located in our region. This primarily uses Employment and Wage (ES-202) data from the Commonwealth of Massachusetts Department of Unemployment Assistance. It is current to Quarter 1 (March) 2023 and may reflect recent developments.
4. **Employment Data** represent workers over age 16 living in our region. It uses a combination of ACS and Local Area Unemployment Statistics (LAUS) data, which is current to November 2023.

Finally, while a brief summary of highlights for each socioeconomic subject are provided in this section, Appendix 1, **Socioeconomic Data**, contains a set of charts and tables with additional analysis.

**DATA SOURCES AND LIMITATIONS**  
Much of the demographic data comes from federal programs, including the U.S. Census Bureau's American Community Survey (ACS) Five-year Estimates, the U.S. Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW) also known as the ES-202, and the Local Area Unemployment Statistics (LAUS) program.

The ACS dataset is released annually and derived from household survey responses collected over a five-year period. In other words, Five-Year ACS samples a subset of the community and essentially represents estimates of the average condition over five years. The most recent dataset was collected from 2018 through 2022, which is one year after the dataset used in the previous CEDS Annual Report (2017 through 2021). Therefore, changes in trends can be noted, but any changes due to recent impacts will not be in this dataset.

The QCEW data is published quarterly and covers private and public sector employers with Unemployment Insurance coverage. Self-employed workers, agricultural workers on small farms, and others are excluded from this data. LAUS data is published monthly and has the most up-to-date information.

## Demographics

2023 saw the continuation of the City of Lowell’s trend of a declining population, which echoes Massachusetts. There is some evidence that high housing costs combined with new mobile work opportunities is impacting the region. The United States continued to grow during that time, but by a smaller rate than previous years.

Long-term trends among age groups appeared to continue, with increases in those aged 65 and above across the board. As this age group has been growing steadily over the last decade, it represents a potential strength area. As the Baby Boom generation ages, the number of people aged 65 and over continues to have the highest growth rate, mirroring national trends.

The region continues to have a higher level of educational achievement than the U.S.—the region’s level of population with a Bachelor’s degree and above is 6 points higher than the U.S. As in the previous CEDS Annual Report, although there is a gap in both education and income between the City of Lowell and the rest of the region, both measures are slowly improving region-wide. Overall, the City of Lowell is the most racially and economically diverse municipality in the Greater Lowell Region. White, Asian, and Interracial groups are making the most money, and those making more money are more likely to live in the region outside of Lowell.

Finally, regional trends in race and ethnicity continue to echo national trends, with a declining share of the population who are “white, not Hispanic or Latino/a”. The proportion of those identifying as Hispanic or Latino is slowly increasing in the region outside of Lowell, while the fastest growing racial group is those who identify as two or more races.

## Housing

The mix of housing in Greater Lowell is important, as it reflects Objective 2.5 (supporting diverse rental units) and, more broadly, represents the ability to house families with diverse preferences, incomes, and needs—important to both quality of life and the workforce.

Although the previous CEDS Annual Report noted that housing development had accelerated since 2011-15, that development has slowed considerably since the pandemic. Development of units in buildings containing 10 or more units grew the most (6.2% growth between 2016-2010 and 2018-22). However, permitting activity shows a very large slowdown in the last couple of years, particularly in the City of Lowell. That said, many of the units permitted in previous years are under construction now. Tewksbury permitted a new 200-unit development in spring 2023, leading to a spike in the region outside of Lowell at that time. Several large projects throughout the region are currently in pre-permitting.

Although housing prices have jumped considerably, the volume of home sales has dropped recently. Median single family home sales prices had previously been increasing between 3% and 9% annually. However, they jumped 11%-16% in 2020 and 15%-22% in 2021. In 2023, Dunstable saw a 20.4% increase in its median single family home sales prices, while Westford’s decreased by 5.2% over the same year. The City of Lowell saw median condo prices increase by 13%. These jumps in price along with high interest rates have led to significant drops in sale volume, with all types of housing sales in the region dropping by 26%.

A household is considered “burdened” when it pays more than 30% of its income on housing. Renters in both the City of Lowell and the region outside of Lowell are more cost burdened compared to 2016-2020 data, while the proportion of cost burdened homeowners remains the same, with the exception of the City of Lowell, where they saw an increase in cost burdened homeowners of three percentage points.

## Commerce and Industry

Employment in the region has yet to completely recover to pre-pandemic levels both in Lowell and surrounding areas. Although the dip in number of employees within the City of Lowell was not as severe as the rest of the region, its overall recovery has been slower.

Average weekly wages have come out higher outside of Lowell since the beginning of 2023. Wages in the City of Lowell peaked in Q2 2021 and have yet to reach that level since. Wages for Greater Lowell and the Commonwealth of Massachusetts remain higher than those of the US as a whole.

Natural resources and mining saw a 22.2% decrease in number of establishments, while the Information industry saw an 8.2% increase in number of establishments. Though the number of establishments in the Information industry increased, its overall number of employees saw a 5.2% decrease. Professional and business services saw a similar trend of increased number of establishments (3.3%), but a decrease in number of employees (4.3%). Public administration saw the most growth in number of employees, followed by Education and Health Services and Manufacturing. Trade, Transportation, and Utilities saw the largest decrease in number of employees (5.7%).

Wage growth between 2022 and 2023 was scattered amongst many industries, but most significantly in Other Services (12.1%), Financial Activities (10.9%), Leisure and Hospitality (10.8%), and Natural Resources and Mining (9.5%). Professional and Business Services, Education and Health Services, and Public Administration saw decent increases in wage growth (8.8%, 8%, and 7.8% respectively). Information and Trade, Transportation and Utilities saw the largest decreases in wages (10.2% and 9.6% respectively).

## Employment

As observed in previous years, per capita income, which simply divides the total wages made in a community by the number of people, was above the U.S. in every Greater Lowell community except the City of Lowell. The City of Lowell's per capita income remains high enough to not qualify as distressed. In other words, it was above 80% of the U.S. per capita income. This is the result of City of Lowell incomes growing since the 2010-14 ACS and through the 2018-22 ACS. This measure is now at \$33,574, or 81% of the U.S. per capita income.

Regardless, the City of Lowell continues to trail the rest of the region in terms of per capita income partially because the city's occupation mix contains proportionally more production, food service, and "other" occupations, which tend to be lower-paid, while the region outside Lowell has a larger-than-average proportion in the Management and Technical occupations.

Further, the gap between the city of Lowell's unemployment rate and the rest of the region's unemployment rate has remained at around 0.6%. While the regional unemployment rate grew from last year (2.6% to 2.8%), it remains below the national rate by 0.7 percentage points. However, regional labor force numbers, which measures all people over 16 living in the region and working or looking for a job, has not recovered as of November 2022. The number decreased from 168,180 in November 2022, then to 165,748 in November 2023, and is still well below the high of 171,684 in June 2019.

The CEDS Annual Report also examines unemployment claimant data. The number of monthly claimants grew considerably. It grew 7.6% between May 2022 and May 2023. Notably, Construction has the largest number of claimants in our region, with a 22.1% increase in claimants. Many sectors, including Manufacturing, Information, Professional, Scientific, and Technical Services, and Public Administration all had increases in claimants of over 200%. No industry saw a decrease in claimants between May 2022 and May 2023.

## 2.2. Major events

In this subsection, NMCOG summarizes major impacts and other influences on the regional economy in 2023. Over the past year, national GDP rates have increased 2.1% in Q2 and 4.9% in Q3. Federal Reserve rate hikes and inflation rates remain high, while unemployment has remained near record lows regionally, statewide, and nationwide. It is in this context that all impacts and influences must be examined.

### Inflation and Interest Rate Hikes

Over the year 2023, interest rates remained high, peaking at 9.1% over the summer. Interest rates for mortgages remain at around 7%, a slight improvement from the October rate of 8%. These high rates are likely due to the economic after-effects of the COVID-19 Pandemic, which saw increased demand for health care services, disruptions to supply chains, changes in work conditions with work from home options, reduced consumer traffic to brick and mortar stores and offices, and an increased need and demand for housing. As a result of the increased interest rate for mortgages, Lowell's First Time Homebuyer Program has seen a reduction in applicants. Though homebuyers continue to purchase housing, overall demand and the number of pending sales has decreased.

### Housing Prices

As mortgage rates have increased with the Federal Funds Rate hikes, the number of monthly home sales have declined in Massachusetts. According to Redfin, home prices in Massachusetts went up 6.8% in December 2023 compared to last year, with a median price of \$469,900. The number of homes sold decreased 31.3% compared to the past year, with 57 homes sold, down from 83 homes last year. Full information on housing prices in the region is reported in Appendix 1: Socioeconomic Data.

## Sun-setting of ESSER Funding

As part of the American Rescue Plan (ARP) Act of 2021, the Elementary and Secondary School Emergency Relief (ESSER III) Fund's purpose is to support the safe reopening and sustain the safe operations of schools while meeting students' academic, social, emotional, and mental health needs resulting from the COVID-19 Pandemic. This third round of funding is focused on longer-term investments in education in three key areas: accelerate learning to prevent learning loss, equitable instruction, and professional training to meet the needs of all students.

This last round of ESSER funding is set to end in September 2024. Schools throughout the Greater Lowell Area are concerned about being able to continue to support students once this federal funding source runs out.

## Drug Crisis

Substance and alcohol abuse has been a major issue within the Greater Lowell Region. The 2022 Greater Lowell Health Needs Assessment reports that participants in the Community Health Survey ranked substance and alcohol use as the third most important health issue in the region.<sup>1</sup> Between 2015 and 2021, the City of Lowell experienced a total of 400 opioid-related deaths, the highest in the entire region. Overall, the overdose death rates for every racial and ethnic group within Lowell are above the state rate. In addition, Hispanic and Black populations in Lowell are far less likely to receive medications for opiate use disorder. The needs assessment recommends a two-pronged approach to combating the drug crisis that includes prevention and treatment. The prevention side emphasized in-school prevention programming to reduce rates of substance use among young people. The treatment side involves well-funded, comprehensive treatment programs that offer a wide range of treatment options, particularly for people struggling with polysubstance addiction.<sup>2</sup>

<sup>1</sup> Tello, Hannah, Kerrie D'Entremont, and Amanda Clermont. "2022 Greater Lowell Community Health Needs Assessment." *Tufts Medicine: Lowell General Hospital, Greater Lowell Health Alliance, and UMass Lowell*. Published: September 30, 2022.

Accessed: March 15, 2024. <https://www.tuftsmedicine.org/sites/default/files/2023-11/2022-greater-lowell-community-health-needs-assessment-v6a.pdf>.

<sup>2</sup> Ibid, 51-58.

## LRTA Reduced Service

On January 3, 2022, the Lowell Regional Transit Authority (LRTA) made two major service reductions due to a driver shortage. It reduced frequency from all city routes except the downtown connector (Route 18) from once every half-hour to once an hour, and reduced Route 18 from once every 15 minutes to once an hour. All other routes serve municipalities outside Lowell, and they were already were at frequencies of once an hour to once every hour and a half. LRTA also combined six city routes into three one-directional loops, effectively eliminating half of these routes’ service, increasing travel times due to needing to travel the loop. The result of these two reductions is that Vehicle Revenue Hours (VRH) were reduced from 90,308 hours in 2019 to 62,340 hours in 2023—a 30.1% reduction.

The City of Lowell has experienced disproportionately more burden as result of the service reductions. This is because the majority of the service reductions were on city routes which primarily serve Lowell. Areas that have experienced the most decline in transit service are South Lowell, Centralville, and the Highlands. These changes reduce the mobility of Environmental Justice (EJ) populations, young people, elderly people, immigrants, and others who cannot easily travel by car, thereby reducing their access to jobs, healthcare, activities, and services. In addition, one impacted route primarily serves UMass students traveling to and from the Gallagher Terminal. This can make it very challenging for students to use the Commuter Rail to get to classes and for on-campus students to travel to and

from Boston, reducing the attractiveness of UMass Lowell to critical populations. UMass is a vital component of the economy in Lowell. Finally, the reduction in frequency for Route 18 may lead to fewer people visiting downtown businesses.

## Environmental Sustainability and Resilience

Flooding has created major economic impacts in 2023. In particular, a rainstorm in August 2023 caused overflow of stormwater systems in Billerica, prompting more than 100 calls for flooding in homes and impacted town and school buildings. Other climate impacts also threaten the region.

In response, all nine NMCOC Communities have created plans outlining environmentally sustainable policies, including conservation of both natural and historic resources. Dracut’s updated Open Space and Recreation Plan (OSRP) is currently under review. Billerica’s OSRP has expired and Pepperell’s OSRP is set to expire in 2024. The Lowell Forward 2040 Plan is anticipated to be completed in February 2024. The Lowell Forward 2040 Plan outlines the city’s continued commitment to sustainable policies by requiring all capital building projects assisted with Consolidated Plan funding to be Energy Star certified, LEED certifiable, or otherwise demonstrate comprehensive environmental sustainability and expanding an organic lawn care policy to all green spaces in the city where feasible. Billerica is prioritizing pollution prevention and the protection of wetlands and floodplain resources. Dracut wishes to establish a “Detection and Response” plan to address invasive plant species.

TABLE 1: ENVIRONMENTAL PLANNING EFFORTS BY MUNICIPALITY

| Community    | Hazard Mitigation Plan | Open Space and Recreation Plan | Net Zero Plan           | Stormwater Management Plan | Environmental Chapter in Master Plan |
|--------------|------------------------|--------------------------------|-------------------------|----------------------------|--------------------------------------|
| Billerica    | Current HMP            | Expired OSRP                   |                         |                            | Yes                                  |
| Chelmsford   | Current HMP            | Current OSRP                   | Drafted Net Zero Plan   |                            | Yes                                  |
| Dracut       | Current HMP            | Updated Plan in Development    |                         |                            | Yes                                  |
| Dunstable    | Expired HMP            | Current OSRP                   |                         |                            | Yes                                  |
| Lowell       | Current HMP            | Current OSRP                   |                         |                            | Yes                                  |
| Pepperell    | Current HMP            | Will expire in 2024            |                         |                            | Yes                                  |
| Tewksbury    | Current HMP            | Current OSRP                   |                         |                            | Yes                                  |
| Tyngsborough | Current HMP            | Current OSRP                   |                         |                            | Yes                                  |
| Westford     | Current HMP            | Current OSRP                   | Completed Net Zero Plan |                            | Yes                                  |

Source: NMCOC. Blank entries indicate the specified plan was not found for that community.



## Water and Wastewater Infrastructure

Communities within the Greater Lowell Area are concerned about existing water and sewer infrastructure's overall quality and its ability to meet demand. About half of the City of Lowell's sewer pipes are over one hundred years old, making their replacement an expensive undertaking. Combined sewer lines also make up 60% of all the city's pipes. Several surrounding communities are either at or close to maximum sewer capacity. In December 2023, the city was penalized \$200,000 by the Environmental Protection Agency and the Massachusetts Department of Environmental Protection for violating the Clean Water Act associated with combined sewer overflows.<sup>3</sup> Multiple NMCOC communities are also facing continued concerns about compliance with standards for per-and polyfluoroalkyl substances (PFAS) for certain wells in the western portion of the region.

## Need for Broadband Access

The 2022 Massachusetts Broadband Strategic Plan stated, "The COVID-19 pandemic has brought heightened attention to the importance of broadband access and adoption in almost every facet of daily life. Access to affordable broadband service is no longer considered a luxury, but an essential utility. The need for broadband in the 21st century is often compared to the need for electricity or phone service in previous centuries."<sup>4</sup> Examples of the essential uses of broadband in our region include:

- Participation in remote work and school
- Telehealth medical services
- Online job fairs and job interviews
- Online opportunities for civic engagement
- Digital services such as banking, bill payment, and other services

Within our region, the CEDS Annual Report identifies several issues that contribute to a gap in digital equity. This includes a lack of:

- Affordability of internet and access and affordability of appropriate desktop or laptop computers, especially for low-income populations
- Access to appropriate levels of bandwidth for larger, often intergenerational families
- Digital literacy, especially for older community members, newcomer populations, and low-income populations
- More than one high-speed provider option in many geographic areas, especially in lower-income or less-dense neighborhoods

As of October 2023, NMCOC, alongside MAPC, began working on a Digital Equity Plan for the Greater Lowell Region. This plan will analyze and provide policy and investment recommendations to close the Digital Divide through three main components: infrastructure, device access, and literacy and education.

## Staffing Shortages, Online Shopping, Work from Home Impacting Downtown Businesses

CEDS Committee members have reported that many local businesses are having trouble hiring staff. This makes it difficult for them to maintain consistent opening hours, resulting in reduced foot traffic in commercial districts. These staffing shortages have continued from the COVID-19 Pandemic and are likely related to economic shocks caused by the pandemic.

Furthermore, the COVID-19 Pandemic accelerated the use of online shopping due to quarantine and business shut downs. Although public spaces and businesses have reopened, online shopping continues to grow. However, most online shopping is through national retail chains rather than local businesses. The Pandemic also increases work from home, reducing the demand for office space and convenience businesses in downtowns. With a lack of foot traffic and staffing shortages, many stores have been forced to reduce hours or close, reducing retail activity in Downtown Lowell and other urban cores in the Greater Lowell region. There has been a subsequent increase in vacant retail space.

<sup>3</sup> Melanie Gilbert. "Lowell Pays EPA Fine, Plans \$200M in Sewer Upgrades." *The Sun*. Published: December 14, 2023. Accessed: February 16, 2024. <https://www.lowellsun.com/2023/12/14/lowell-pays-epa-fine-plans-200m-in-sewer-upgrades/>.

<sup>4</sup> "2022 Massachusetts Broadband Strategic Plan." *Massachusetts Broadband Institute*. Published: 2022. Accessed: March 15, 2024. <https://broadband.masstech.org/sites/default/files/2022-10/MassBroadbandStrategicPlan-2022-07.pdf>. Page 3.

## State of Emergency and Reuse of the UML Conference Center

In September 2023, Governor Maura Healey declared a state of emergency for the Commonwealth of Massachusetts in regard to the shortage of available shelters needed to house the increased number of migrants arriving in the Commonwealth. According to a Mass Live article from Alvin Buyinza, most of these migrants are coming to the commonwealth to escape political violence, and the Massachusetts shelter system is currently overwhelmed from increased demand.<sup>5</sup>

Starting on December 1, 2023, the Commonwealth began a \$4 million one-year long lease of the UMass Lowell Inn & Conference Center, which will be used as an emergency shelter for homeless families and migrants. It is unclear how the temporary loss of this space will impact UMass Lowell or the downtown Lowell economy.<sup>6</sup> As of February 2, 2024, the reported 46 families set to move in are on hold.<sup>7</sup>

### Layoffs

An important consideration when measuring economic distress and considering mitigation of distress are understanding layoffs. The MassHire Department of Career Services issues weekly notices of layoffs meeting the criteria of the Worker Adjustment and Retraining (WARN) Act. In calendar year 2023, the following three layoffs met that criteria:

- 251 layoffs by Lowell General Hospital 8/9/2023
- 133 layoffs by EMD Serono Research and Development Institute, Inc. 3/21/2023 in Billerica
- 6 layoffs by EMD Serono Research and Development Institute, Inc. 5/22/2023-6/4/2023 in Billerica

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<sup>5</sup> Buyinza, Alvin. "What does the state of emergency declared by Governor Healey really mean?" *MassLive Politics*. Published: August 9, 2023. Accessed: February 14, 2024. <https://www.masslive.com/politics/2023/08/what-does-the-state-of-emergency-declared-by-gov-healey-really-mean.html>.

<sup>6</sup> Alana Melanson. "\$4M Deal to Use ICC as Emergency Shelter Being Finalized." *The Sun*. Updated: November 11, 2023. Accessed: January 10, 2024.

<https://www.lowellsun.com/2023/11/13/4m-deal-to-use-icc-as-emergency-shelter-being-finalized/>.

<sup>7</sup> Melanie Gilbert. "Migrant Moves to Lowell on Hold, State Agency Says." *The Sun*. Updated: February 2, 2024. Accessed: February 16, 2024. <https://www.lowellsun.com/2024/02/02/migrant-moves-to-lowell-on-hold-state-agency-says/>.

## 2.3. Change to CEDS Committee or Staff

Since the completion of the CEDS, the CEDS Committee has met at least quarterly to discuss a variety of topics, including the Economic Recovery and Resiliency Plan Phase II, various grant opportunities, and the CEDS Annual Report. During this time, two people left their positions or changed roles at their agencies, three agencies joined the committee, two guests joined the committee and a new NMCOG staff member joined, resulting in the following changes:

- Tom O'Donnell, Innovation Initiatives Senior Director at UMass Lowell, joined the committee
- LZ Nunn, Executive Director at Project LEARN, joined the committee
- Brent Carney, Communications and Marketing Director at LCHC, joined the committee
- Joe Giniewicz, Town Planner for the Town of Westford, joined the committee
- Jennifer Gingras, Town Planner for the Town of Pepperell, left the committee
- Clare Gunther at the Lowell Community Health Center, left the committee
- Ian Burns, Community and Economic Development Program Coordinator at the Merrimack Valley Planning Commission, joined the committee as a guest
- Jason Palitsch, Executive Director at the Metrowest 495 Partnership, joined the committee as a guest
- Isabel Emmet, Regional Planner II at NMCOG, joined as a staff assistant to the committee

## 2.4. Summary of Regional CEDS Updates

The major barrier to continued economic growth in the 2023 CEDS program year is the high cost of living, driven by high housing costs and interest rates. Although the latest one-year American Community Survey has indicated that the population of Massachusetts did not shrink in 2021-22, it did shrink in the City of Lowell and potentially the Greater Lowell region. This is likely at least in large part due to the dysfunctional housing market, reflected in a declining number of sales without a decline in median prices. This represents an outflow of talented individuals, often young people who would be entering the labor force, to less-expensive areas. This outflow has, in turn, created a tight labor market that creates impacts such as reduced transit service, reduced municipal services, and reduced hours for small businesses. The housing shortage also has stressed the regional and statewide family shelter system.

Housing is not the only barrier to economic development. Infrastructure, especially affordable energy, clean water, and efficient stormwater/wastewater systems, was identified as a critical barrier to economic development in the five-year CEDS. That concern has only grown as climate change has prompted more flooding events and the state and federal governments have encouraged moves toward greater utilization of clean electricity for home heating, private vehicles, and other uses.



*New Bakery located in Pepperell, courtesy Pepperell Economic Development Committee*



This represents a threat to the region’s economic prosperity. Notably, the growth of number of businesses has slowed significantly in the Greater Lowell region. The highest-paid industries in the Greater Lowell region, Information, Financial Activities, and Professional and Business Services, saw declines in number of employees. In addition, Trade, Transportation, and Utilities and Information saw declines in average weekly wages. On a micro-level, municipalities in the region are grappling with increasing numbers of vacant storefronts.

That said, the regional industrial mix is still strong, with a large and growing number of employees in manufacturing, especially advanced manufacturing; a well-educated workforce that is continuing to improve its education; and a strong research university that continues to advance partnerships with private entities. In addition, several goals were advanced over the last year by NMCOG and its CEDS partners, including the completion of a cultural plan for Lowell, the development of proposed multifamily zoning districts in compliance with the Multi-family requirement for MBTA Communities, the award of major grants worth more than \$4 million in grants for workforce development, and the advance of critical state of good repair bridge and highway infrastructure projects.

With this in mind, the recommended economic development priorities are to use the five-year CEDS Update planning process that will begin in 2024 to identify gaps in the region’s economic development program to take advantage of the region’s excellent industrial mix, in addition to working to attract clean energy technology industries. Another critical priority is to advance housing planning and policy to increase the affordability and accessibility of housing stock in the region to ensure it is no longer a barrier to economic development. A third priority is to restore and expand transit service or other alternative transportation systems through identifying strategies that could be implemented in coming years. A final critical priority is to address the region’s aging infrastructure, including identifying strategies and resources to support clean water, affordable energy, and adequate sewer and stormwater systems.



*National Main St. Conference (Boston) – Lowell-based panel on Equitable Access to Capital, featuring EforAll, CTI’s Entrepreneurship Center, City of Lowell, and the LDFC, courtesy Lowell Plan*

## **Section 3**

# 3. Progress on Plan and Goals

The 2020-2025 CEDS defined seven **goals**, each with several objectives based on the region's vision statement. Each of these objectives contained multiple activities to advance that objective. These activities seek public investment and are to be pursued over a five-year period by the governmental entities or non-profit organizations that are championing them. In addition, the CEDS defined an evaluation framework. This framework contains **performance measures** that were selected to allow NMCOG to analyze whether each of the seven goals and their associated objectives were being met.

This section analyzes our progress as a region toward achieving these goals three different ways:

- **Summary of Accomplishments** is a table evaluating the region’s progress on the goals it set forth in the previous year
- **Action Plan Updates** provides narrative updates on the actions NMCOG and regional agencies made and how they advanced the **goals** in the previous years.
- **Evaluation Framework Measurements** provides updates on the **performance measures**.

### 3.1. Summary of Accomplishments

As the District Organization of Greater Lowell, NMCOG develops and tracks an annual “Schedule of Goals” that is based on the Action Plan in the five-year CEDS and prioritized by the region’s economic development strategic partners. This includes activities undertaken by regional partners such as local jurisdictions, public agencies, and nonprofits and sometimes utilize EDA or state economic development funding. An evaluation of how these actions and others advanced the goals of the CEDS is in Section 3, Progress on Plan and Goals. The objectives listed are based on those outlined in the Five-Year CEDS Report for 2020-2024. See the full description of goals and objectives in the Greater Lowell CEDS for 2020-2024 at <https://www.nmcog.org/ceds>

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project                                      | Task   | Lead Agency or Actor | Objective(s) Advanced | Outcome   |
|--|--|----------------------|-----------------------|---|
| 1. Planning for housing at the local and regional levels | 1.1. Form a coalition of municipalities, housing providers and developers, and nonprofit partners to develop a Regional Housing Strategy.  | NMCOG                | 6.2, 6.3              | NMCOG has met with Town and City Managers and Administrators and staff to develop a coalition for "At Home in Greater Lowell." NMCOG developed steering committee formed of people with diverse roles, backgrounds, and communities.              |
|  | 1.2. Undertake and advance the first phase of a Regional Housing Strategy Plan that would include a shared vision, goals for number and type of housing created in each community, policy recommendations to achieve those goals, and visualizations, case studies, and stories to assist in public education. | NMCOG                | 6.2, 6.3              | NMCOG received a Greater Lowell Community foundation grant in spring 2023 and an Executive Office of Environmental and Energy Affairs planning assistance grant in fall 2023, and begun contracting with two providers for data and storytelling. |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project                                    | Task   | Lead Agency or Actor                               | Objective(s) Advanced | Outcome   |
|--|--|--|-----------------------|---|
|  | 1.3. Undertake a public education campaign on homes and housing as guided by the first phase of the Regional Housing Strategy Plan, focused on building a shared understanding of the region’s housing needs and breaking down housing-related myths   | NMCOG, Local Housing Organizations, Municipalities | 6.2, 6.3              | NMCOG has provided assistance to MBTA communities, providing education at board meetings and community meetings. This education will accelerate after the Regional Housing Strategy starts.   |
|  | 1.4. Continue the best practices for housing creation identified in the ERRP Phase II, Section 3.  | NMCOG, Local Housing Organizations, Municipalities | 6.1, 6.2, 6.3         | NMCOG's focus on best practices for housing creation has been in assisting communities that have requested assistance in developing districts compliant with Section 3A. NMCOG is determining other ways to continue tracking the recommendations of the ERRP.  |
|  | 1.5. Complete Tewksbury Housing Production Plan.   | Tewksbury, NMCOG                                   | 6.2                   | The Tewksbury HPP was completed in summer 2023 and accepted by Executive Office of Housing and Livable Communities August 2023.   |
|  | 1.6. Complete Dunstable Housing Production Plan.   | Dunstable, NMCOG                                   | 6.2                   | The Dunstable HPP was completed and is pending adoption by Planning Board and Select Board.   |
|  | 1.7. Complete Phase 2 of Lowell Housing Production Plan Project.   | Lowell, NMCOG                                      | 6.2                   | The Lowell HPP has had an extensive public outreach process reaching more than 700 through surveys, meetings, and focus groups. NMCOG is currently finishing the Comprehensive Needs Assessment. Phase 3 will include work with the City and public to create qualitative and quantitative goals.   |
| <b>2. Supportive housing with wrap-around services</b> | 2.1. Develop a phased plan to create 300 supportive housing units for those experiencing chronic homelessness, including identifying and obligating funding toward rehabilitation of uninhabitable units; prioritizing units affordable to extremely low incomes; adding appropriate wrap-around services; and identifying private partners to dedicate existing units to extremely low incomes. This plan should be committed to by all parties, including municipalities, and publicly shared. | CTI, GLCC, Lowell Plan, SMOC, GLCF, NMCOG          | 6.2, 6.3              | The City's participation in "Talk About Housing" Public Education Campaign, one goal of which was to develop 300 supportive housing units, was boosted in early 2023 by the new Director of Homeless Services. NMCOG facilitated a Regional Meeting on Homelessness that was an extension of the campaign in August 2023.   |
|  | 2.2. Identify and undertake at least one project in implementation of that plan.   | CTI, GLCC, Lowell Plan, SMOC, GLCF, NMCOG          | 6.2, 6.3              | 59 units were created in 2023, and NMCOG will work with CTI to determine if additional units are in the pipeline that could be identified in the 300 unit phased plan. NMCOG intends to work with CTI to determine whether breaking the 300 unit goal into a phased plan that could be publicized is still feasible or if there are roadblocks that might be addressed in the upcoming Regional Housing Strategy. |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project  | Task   | Lead Agency or Actor  | Objective(s) Advanced | Outcome   |
|--|--|-----------------------|-----------------------|---|
| <b>3. MBTA Community Multi-Family Compliance</b>   | <b>3.1.</b> Provide technical support through the DLTA and other state funding programs (including MHP) to identify appropriate locations for zoning districts, potential capacity of zones, and other data as requested by local communities. Draft zoning amendments may be developed as part of this process.   | NMCOG                 | 6.1                   | NMCOG is providing scenario development, public engagement, and assistance modifying the state’s model zoning to Chelmsford, Tyngsborough, and Billerica and assistance with the state compliance model to Westford, Tewksbury, Dracut, and Lowell. In addition, regular updates on DLTA including the sharing of best practices, successes, and challenges are shared at a monthly meeting with planners of the seven communities. |
|  | <b>3.2.</b> Develop and adopt TOD overlay district that would change parking requirements, building height stipulations, and the removal of special permitting processes to expedite development of land around the Gallagher Station to encourage economic development for businesses with foot traffic for their success; encourage mode shift for environmental resiliency; and produce housing to combat unaffordability and homelessness. | Lowell                | 2.5, 6.1, 6.2         | In October 2023, after recommendation by the Planning Board, City Council voted to approve three transit transit-oriented development overlay districts that would bring Lowell into compliance with MGL Chapter 40A Section 3A. City staff subsequently submitted an application to the Executive Office of Housing and Livable Communities (EOHLC) to certify compliance.   |
| <b>4. Local and Regional Water and Wastewater Infrastructure Plan and Implementation</b> | <b>4.1.</b> Apply for funding for a Regional Water System Expansion and PFAS mitigation system for Dunstable, Groton and Pepperell.  | Pepperell, Dunstable  | 4.1                   | The Town of Groton took the lead agency role to apply for funding for a regional plan. Pepperell plans to create its own cleaning facility. As the connection between the three towns most benefits Dunstable and Groton, they will bear that cost. The connection from Pepperell may come from a joint application.  |
|  | <b>4.2.</b> Inventory existing wastewater and stormwater capacity and needs for each community and develop a report that may be used for future planning, grantwriting, and coordination.  | NMCOG                 | 1.1, 4.1, 4.3         | A wastewater report was completed by NMCOG in August 2023, and its recommendations will be evaluated for regionalization grant opportunities to explore feasibility of alternative solutions for increasing capacity.   |
|  | <b>4.3.</b> Create a PFAS task force for the region that will be charged with<br>1. Creating PFAS outreach materials<br>2. Standardizing testing and reporting methods<br>3. Creating an online repository for actual and historical records, outreach materials, and potential funding opportunities  | NMCOG                 | 1.1, 4.3              | Pepperell has developed near-term and long-term actions for PFAS mitigation. NMCOG staff plan to reach out to appropriate Pepperell and Dunstable staff in 2024 to determine priorities and next steps.   |
|  | <b>4.4.</b> Identify possible alternative measures to increase wastewater and stormwater capacity, including both on-site and off-site storage and/or treatment and identify resources required for such alternative measures.   | NMCOG, Municipalities | 1.1, 4.1, 4.3         | NMCOG staff is evaluating grant opportunities for implementation of recommendations of the Wastewater Report (See 4.2).   |
|  | <b>4.5.</b> Host annual Good Housekeeping training for municipal staff.  | NMCOG                 | 1.1, 4.1              | The Annual Good Housekeeping training was completed in June. This is critical for the MS4 permit.   |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project  | Task  | Lead Agency or Actor                   | Objective(s) Advanced | Outcome   |
|--|---|--|-----------------------|---|
|  | 4.6. Host one technical training related to the requirements of the Year 5 MS4 Permit.  | NMCOG                                  | 1.1, 4.1              | NMCOG staff have referred NMCOG communities to existing resources and have attended shared webinars.  |
|  | 4.7. Submit the Year 5 MS4 Permit.  | Municipalities, NMCOG                  | 1.1, 4.1              | NMCOG staff reached out to the Stormwater Collaborative to offer assistance. Communities are on track or in communication with NMCOG. All communities have completed the Year 5 MS4 Permit.   |
| <b>5. Regional Energy and Sustainability Planning and Coordination</b> | 5.1. Develop a regional sustainability collaborative among towns in the NMCOG region modeled on the Northern Middlesex Stormwater Collaborative and possibly building on other regional and statewide efforts such as the North Central Climate Change Collaborative (NC4).   | NMCOG                                  | 1.1, 5.2              | NMCOG has proposed workshops to create a group that can share best energy efficiency practices and resources around Green Communities and was awarded \$69,339.00 for a REPA DOER Grant to advance Green Communities work.  |
|  | 5.2. Complete Net Zero Municipal Plans for Chelmsford, Pepperell, and Westford.   | Chelmsford, Pepperell, Westford, NMCOG | 1.1, 5.2              | Westford Clean Energy and Sustainability Committee released its V2 of the Westford Climate Roadmap on Feb 4, 2023. The roadmap contains goals to reduce greenhouse gas emissions to zero by 2050. Pepperell requires additional assistance for completing their Net Zero Plan as current staff lacks the necessary expertise. Chelmsford adopted a specialized stretch code effective July 1, 2024. Chelmsford was also awarded a 2023 Mass Save grant to help assist low/moderate income households. |
|  | 5.3. Assist communities with holistic environmental and sustainability planning, this includes<br>1. Ensuring that all municipalities have up-to-date and approved plans<br>2. Managing timely updates to Municipal Vulnerability Assessments and Plans, Open Space and Recreation, Hazard Mitigation, Stormwater Management, and Net Zero Plans or the assisting in the creation of those plans if one does not already exist<br>3. Creating a shared online repository for current and past plans<br>4. Working with municipalities to create a regionalized approach where relevant (e.g. where there may be shared open space or other natural resources) | NMCOG, Municipalities                  | 1.1, 5.2              | NMCOG collected Master Plans, OSRPs, and HPPs to share on their website. This will provide an easy way for communities, the public, and NMCOG to be aware of upcoming expiration dates and begin coordination with communities in advance.  |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project  | Task  | Lead Agency or Actor                | Objective(s) Advanced | Outcome   |
|--|---|-------------------------------------|-----------------------|---|
|  | 5.4. Identify a lead agency or agencies that may assist businesses in creating sustainability plans, including solid waste plans taking advantage of state or federal resources.  | NMCOG, Small Business Centers       | 2.2                   | NMCOG was unable to complete this action item in 2023 and will discuss prioritizing this action in 2024 as part of the CEDS Five-Year Outreach process.   |
| <b>6. Enhance Regional Transportation Planning</b>           | 6.1. Complete the Long-range Regional Transportation Plan, Envision 2050.   | NMCOG                               | 5.1, 5.2, 5.3         | On August 23, 2023 the Northern Middlesex Metropolitan Planning Organization (NMMPO) voted unanimously to adopt Envision 2050, the Long Range Transportation Plan for Greater Lowell. The plan went into effect October 1, and staff will continue to monitor recommendations over the next 5 years.  |
|  | 6.2. Collect existing Complete Streets and other transportation infrastructure prioritization plans for municipalities within the NMCOG region, track updates and progress on those plans, and assist interested municipalities in prioritization and/or identifying funding for transportation projects. | NMCOG, Communities                  | 5.2, 5.3              | Lowell's Complete Streets Prioritization Plan update is underway, hopefully to be submitted in November. NMCOG collected existing Complete Streets plans from its nine communities and is now keeping plans on file to monitor, understand, and prioritize transportation work within each community and recommend applicable funding when available.     |
|  | 6.3. Evaluate journey to work commuter flows and off-peak flows (to services, entertainment, amenities, or shopping) in the region.   | NMCOG                               | 5.1, 5.2, 5.3         | NMCOG will use new access to Replica software to evaluate travel patterns throughout the region and evaluate journey to work and non-work travel patterns in 2024.  |
|  | 6.4. Implement Safe Streets and Roads for All Grant award to develop a Regional Safety Action Plan.   | MVPC, NMCOG                         | 5.1, 5.2, 5.3         | NMCOG is in the process of developing a Regional Safety Action Plan, Greater Lowell Vision Zero, under the Safe Streets and Roads for All grant program. The City of Lowell received an SS4A supplemental grant which will be complimentary to the NMCOG regional plan.   |
| <b>7. Transit and Alternative Transportation Connections</b> | 7.1. Evaluate transit rider comfort, which may include shelters, signage, ADA Accessibility, connectivity to other transit options, and public communications/ announcements throughout system.   | NMCOG, LRTA                         | 5.2                   | NMCOG has assisted LRTA with evaluating the connectivity of bus routes to Commuter Rail. Over the next year NMCOG will inventory bus routes for amenities and accessibility. NMCOG will also support LRTA in their planned implementation of vehicle location, automatic passenger counters, and automated voice announcement systems over the next year. |
|  | 7.2. Coordinate with transit and paratransit providers in the region to ensure access to health care service for individuals without access to automobiles. Provide a report related to barriers for the 2024 CEDS Report.  | NMCOG; LRTA; GLHA; HCPs; CBOs, COAs | 1.1, 5.2              | NMCOG held a Regional Coordinating Council (RCC) meeting in partnership with MVPC in May 2023. NMCOG wrote the triannual Coordinated Public Transit Human Services Plan. NMCOG transportation staff will resume coordination with Councils on Aging in January 2024.  |



**TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES**

| Activity or Project | Task  | Lead Agency or Actor  | Objective(s) Advanced | Outcome  |
|---------------------|---|---|-----------------------|--|
|                     | <p><b>7.3.</b> Evaluate Transportation Network Companies (TNCs) in the region, including their use and possible roles in providing alternative transportation to groups or individuals.</p>   | <p>NMCOG, MassHire</p>  | <p>5.2</p>            | <p>In fall 2023, Masshire Greater Lowell kicked off a ride sharing pilot project they developed which provides for home-work-home transportation to employees in the Greater Lowell region. With subsidy from MassDevelopment, MassHire is able to provide this this service for \$2 per ride. This includes a full-time call center and app which is helping to build the service.</p>  |
|                     | <p><b>7.4.</b> Address first-mile, last-mile connections through the Regional Transportation Plan process and in collaboration with private companies and other regional partners.</p>  | <p>NMCOG; LRTA; Middlesex 3 Coalition, MassHire</p>   | <p>5.2</p>            | <p>NMCOG's Regional Transportation Plan, Envision 2050, was completed in August of 2023. In a survey administered in the planning process, the majority of respondents identified improvements to first and last-mile connections as the highest priority to improve transportation in the region. NMCOG will continue to explore ways to improve these connections through its planning work and in collaboration with private companies and other regional partners.</p> |
|                     | <p><b>7.5.</b> Facilitate discussion between communities, LRTA, and MBTA of rerouting or rescheduling fixed route bus routes to improve efficiency or connect additional destinations/users.</p>                                      | <p>NMCOG, LRTA, Communities</p>   | <p>5.2</p>            | <p>In 2024, NMCOG will resume conversations with MBTA and MBTA MPO liaisons. The LRTA is in communication with NMCOG on coordination on bus routes and scheduling services.</p>  |
|                     | <p><b>7.6.</b> Develop an implementation schedule for the GoLowell Multimodal Plan including funding sources and align with Complete Streets priority plan.</p>   | <p>City of Lowell</p>   | <p>5.2</p>            | <p>A contract is underway for the design and construction of bus stops along Merrimack Street at City Hall and John Street. Other plan elements have been integrated into Lowell Forward, Lowell's comprehensive master plan.</p>  |
|                     | <p><b>7.7.</b> Designate a subcommittee to develop CEDS recommendations for regional bicycle improvements based on the Regional Transportation Plan and for actions to leverage existing bicycle assets for economic development.</p> | <p>CEDS Committee</p>   | <p>5.2</p>            | <p>This priority was put on hold until after the establishment of the Safe Streets and Roads for All project. As this project has been kicked off, the CEDS Committee will evaluate whether to proceed in 2024 in conversation with that effort.</p>   |
|                     | <p><b>7.8.</b> Determine status of and continue to advocate for Capital Corridor Commuter Rail extension or alternatives and roadblocks to progress and continue advocacy or study as appropriate.</p>                                | <p>NMCOG, MassDOT, MBTA, NHDOT, MAPCNRPC, Southern NH RPC, MVPC, NH Office of Energy, Central New Hampshire Regional Planning</p> | <p>5.2</p>            | <p>NMCOG staff have discussed this project with the Nashua RPC and will continue to explore ways to advance progress on this project.</p>  |



TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project   | Task   | Lead Agency or Actor  | Objective(s) Advanced | Outcome  |
|---|--|---|-----------------------|--|
|   |  | Commission, MAPC  |                       |  |
| <b>8. Continue Focus on Transportation Safety and State of Good Repair on Projects of Regional Importance</b> | <b>8.1.</b> Seek design funding for engineering improvements to the intersection at Gorham, Central, Appleton, and Green Streets in Lowell in order to advance this as a TIP-eligible project.   | Lowell  | 5.1                   | City of Lowell received a \$260,000.00 MassWorks grant to design improvements for this intersection and advance it as a TIP eligible project.  |
|   | <b>8.2.</b> Seek funding sources to repair key automotive and pedestrian bridges throughout Lowell that carry inter-regional traffic and/or are in Environmental Justice neighborhoods.  | Lowell  | 5.1, 5.3              | City of Lowell received \$21M RAISE grant to repair/upgrade three bridges (Broadway, Swamp Locks, Lower Pawtucket Canal) and is now contracting with FHWA and MassDOT.   |
|   | <b>8.3.</b> Continue advancing the Rourke Bridge Replacement Project, communicating updates to all stakeholders.   | All partners  | 5.1                   | The Rourke Bridge project completed its 25% design public hearing and is programmed on the TIP. NMCOG will continue to participate and attend Rourke Bridge Public meetings and remaining in conversation with MassDOT.  |
| <b>9. Regional Partnerships for Workforce Recruitment, Retainage, and Development</b>                         | <b>9.1.</b> Complete a scope of work proposal that includes a system dynamics study of the connection between housing, education, childcare, quality of life, and workforce; estimate the gap between available and desired workforce in number and skills; and estimate needed housing units for the “gap” in order to create recommendations for targeted investment to improve workforce recruitment and retainage, with a focus on historically underserved communities within our region. | NMCOG   | 1.1, 2.3, 3.1, 4.4    | NMCOG worked with a consultant to develop a scope of work and integrated the first three tasks into a grant application for the 5-year CEDS.   |
|   | <b>9.2.</b> Work with Greater Lowell healthcare providers and workforce training providers to ensure training is available to increase the talent pipeline of clinical and non-clinical healthcare professionals. Include a report of training programs available, including number of seats available and actual participation, for 2024 CEDS report.   | Greater Lowell Health Alliance (GLHA); MassHire Greater Lowell Workforce Board (GLWB); Health care providers (HCPs) | 1.1, 3.1, 3.2         | MassHire GLWB has partnered with three workforce boards to apply for a \$2.2 million grant for behavioral health training and \$2.4 million grant from for establishment of a Healthcare Hub from the Commonwealth Corporation. This builds upon a \$200,000 grant from Commonwealth Corporation to plan behavioral health training. NMCOG plans to work with GLHA, GLWB, and LCHC to continue to report progress in 2024 as part of the five-year CEDS process. |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project   | Task  | Lead Agency or Actor                     | Objective(s) Advanced               | Outcome  |
|---|---|--|-------------------------------------|--|
|   | <p><b>9.3.</b> Continue developing, updating, and seeking funding for a regional workforce strategy through coordination with MassHire Workforce Boards in northeast Massachusetts and in partnership with stakeholders, including educational institutions, comprehensive high schools, technical schools, industry-specific associations, and unions.</p> | <p>NMCOG; MassHire Workforce Boards</p>  | <p>1.1, 2.3, 3.1, 3.2, 3.3, 4.4</p> | <p>MassHire GLWB has released an RFP in partnership with the North Shore and Merrimack Valley Workforce Boards to develop a new Regional Blueprint that will be focused on manufacturing, healthcare, and IT for the Greater Lowell region. NMCOG plans to work with MassHire GLWB to continue to report progress in 2024 and integrate the recommendations of the blueprint into the five-year CEDS plan.</p> |
|   | <p><b>9.4.</b> Create a business contact database of the regions' largest employers that includes estimated number of workers and mission of firms based on proprietary, state, and local data.</p>   | <p>NMCOG, Communities</p>                | <p>1.1, 2.6, 3.1</p>                | <p>NMCOG is seeking additional capacity to develop and maintain a shared database, potentially through an internship project in 2024.</p>  |
|   | <p><b>9.5.</b> Explore possible CEDS 2024 action steps to create stronger career ladders in culinary arts with technical schools, workforce development programs, and other stakeholders.</p>   | <p>GLWB, NMCOG, Educational Agencies</p> | <p>2.6, 3.1</p>                     | <p>NMCOG is considering exploring this with MassHire in 2024 depending on NMCOG and MassHire capacity.</p>   |
|   | <p><b>9.6.</b> Reach out to the region's technical schools to receive an assessment of needed resources to include in future CEDS planning.</p>   | <p>NMCOG</p>                             | <p>3.1</p>                          | <p>NMCOG was unable to complete this activity in 2023, and is considering exploring this in 2024.</p>  |
| <p><b>10. Strengthen partnerships for regional equity in health, food access, and economic outcomes</b></p> | <p><b>10.1.</b> Track health outcomes, including evaluating whether health outcomes are equitable across the region. This could include the impacts of active transportation, air quality, access to open space, or other community health measures.</p>  | <p>NMCOG</p>                             | <p>2.2</p>                          | <p>NMCOG has evaluated data sources for inclusion of key tracking factors in the 2024 Annual CEDS Report.</p>  |
|   | <p><b>10.2.</b> Track economic outcomes, including evaluating economic outcomes by race and ethnicity, newcomer status, and limited English proficiency for use in developing 2024 priorities.</p>  | <p>NMCOG</p>                             | <p>2.2</p>                          | <p>NMCOG has evaluated data sources for inclusion of key tracking factors in the 2024 Annual CEDS Report.</p>  |
|   | <p><b>10.3.</b> Support contingency planning by and coordination of emergency food organizations, councils on aging, faith-based organizations, and other providers to prepare for and handle spikes in demand for groceries, meals and food delivery.</p>  | <p>NMCOG; CBOs</p>                       | <p>1.1, 2.4</p>                     | <p>NMCOG was unable to complete this activity in 2023, and is looking to explore this through a potential 2024 meeting of food security organizations or attending a meeting if one exists to receive an update and understand if any roadblocks that exist.</p>   |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project  | Task  | Lead Agency or Actor  | Objective(s) Advanced | Outcome  |
|--|---|---|-----------------------|--|
|  | <b>10.4.</b> Identify a single community-based or regional organization to lead the dissemination of information about locations and hours of operation of emergency food providers and places where WIC, SNAP and HIP are accepted. Information should be up to date, available in multiple languages and in multiple media formats including online and flyers for distribution or posting in targeted locations.                 | CBOs  | 1.1, 2.4              | NMCOG was unable to complete this activity in 2023, and is looking to explore this through a potential 2024 meeting of food security organizations or attending a meeting if one exists to receive an update and understand if any roadblocks that exist.  |
|  | <b>10.5.</b> Seek funding to increase the communications capacity of organizations engaged in emergency food, including trainings on the use of remote technologies for improved dissemination of information and food resources.   | NMCOG; CBOs   | 1.1, 2.4              | NMCOG was unable to complete this activity in 2023, and is looking to explore this through a potential 2024 meeting of food security organizations or attending a meeting if one exists to receive an update and understand if any roadblocks that exist.  |
|  | <b>10.6.</b> Expand food security programs and subsidies by working with the private and non-profit sectors.  | NMCOG; CBOs   | 1.1, 2.4              | NMCOG was unable to complete this activity in 2023, and is looking to explore this through a potential 2024 meeting of food security organizations or attending a meeting if one exists to receive an update and understand if any roadblocks that exist.  |
|  | <b>10.7.</b> Work with partners to increase the number of places where Supplemental Nutrition Assistance Program (SNAP) and the Healthy Incentives Program (HIP) are accepted, particularly at small businesses, farmers markets, and farm stands.  | NMCOG; CBOs; Business Assistance Providers                                      | 1.1, 2.4              | NMCOG was unable to complete this activity in 2023, and is looking to explore this through a potential 2024 meeting of food security organizations or attending a meeting if one exists to receive an update and understand if any roadblocks that exist.  |
|  | <b>10.8.</b> Perform outreach to emergency food providers to identify culturally appropriate foods for their clients and to inform their clients about preparation of unfamiliar ingredients.   | CBOs  | 1.1, 2.4              | NMCOG was unable to evaluate progress on this activity in 2023, and is looking to explore this through a potential 2024 meeting of food security organizations or attending a meeting if one exists to receive an update and understand if any roadblocks that exist.                              |
|  | <b>10.9.</b> Provide resources to ensure public information is translated in multiple languages and that interpreters are provided to break down barriers to further access.  | GLHA; HCPs; CBOs; interpreter/translation companies and certification providers | 1.1                   | NMCOG was unable to evaluate progress on this activity in 2023, and is looking to explore this through a potential 2024 meeting of food security organizations or attending a meeting if one exists to receive an update and understand if any roadblocks that exist.                              |
| <b>11. Implement the ERRP Phase II to strengthen the resiliency of regional healthcare systems</b> | <b>11.1.</b> Identify locations for emergency spillover testing and vaccination sites in case of future need, including benefits and deficiencies of the sites such as accessibility for people without automobiles. This may also include identification and evaluation of sites for distribution of supplies such as home tests, personal protective equipment such as effective face masks, or cleaning supplies as appropriate. | NMCOG; GLHA; HCPs; Municipalities   | 1.1                   | NMCOG was unable to track progress on this action in 2023, and hopes to work with GLHA and LCHC in 2024 to better understand the lessons learned from COVID-19, any new plans, policies, or documents that were established from those lessons, and track progress on implementation if necessary. |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project  | Task  | Lead Agency or Actor  | Objective(s) Advanced | Outcome   |
|--|---|---|-----------------------|---|
|  | <b>11.2.</b> Investigate, document, and strengthen strategies that address hospital bed shortages during health crises.   | GLHA; HCPs  | 1.1                   | NMCOG was unable to evaluate progress on this action in 2023, and hopes to work with GLHA and LCHC in 2024 to better understand the lessons learned from COVID-19, any new plans, policies, or documents that were established from those lessons, and track progress on implementation if necessary. |
|  | <b>11.3.</b> Expand telehealth services to meet demand for remote health care including mental and behavioral health care services.   | GLHA; HCPs; CBOs  | 1.1                   | NMCOG was unable to evaluate progress on this action in 2023, and hopes to work with GLHA and LCHC in 2024 to better understand the lessons learned from COVID-19, any new plans, policies, or documents that were established from those lessons, and track progress on implementation if necessary. |
|  | <b>11.4.</b> Increase telehealth options for people experiencing homelessness, people who make lower incomes, people with limited internet access, and people with limited English proficiency. | GLHA; HCPs; CBOs; interpreter/translation companies and certification providers | 1.1                   | NMCOG was unable to evaluate progress on this action in 2023, and hopes to work with GLHA and LCHC in 2024 to better understand the lessons learned from COVID-19, any new plans, policies, or documents that were established from those lessons, and track progress on implementation if necessary. |
| <b>12. Strengthen childcare networks to support employment opportunities and economic mobility for child guardians</b> | <b>12.1.</b> Ensure zoning bylaws are compliant with as-of-right childcare uses and provide reasonable regulatory reviews under MGL Chapter 40A Section 3, the Dover Amendment.                 | NMCOG; Municipalities   | 3.3                   | NMCOG was unable to complete this activity in 2023, and is considering exploring this in 2024.  |
|  | <b>12.2.</b> Identify barriers in local permitting processes to support new and existing childcare providers and to remove barriers to opening additional facilities.                           | NMCOG; Municipalities   | 3.3                   | NMCOG was unable to complete this activity in 2023, and is considering exploring this in 2024.  |
|  | <b>12.3.</b> Identify barriers to home-based, family childcare providers operating in rental housing, including through outreach and potential incentives for landlords.                        | NMCOG; Municipalities; CBOs   | 3.3                   | NMCOG was unable to complete this activity in 2023, and is considering exploring this in 2024.  |
|  | <b>12.4.</b> Work with the business community to identify employer best practices for supporting childcare options for employees.   | NMCOG; CBOs; Local Development Organizations                                    | 3.3                   | NMCOG was unable to complete this activity in 2023, and is considering exploring this in 2024.  |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project   | Task  | Lead Agency or Actor                                     | Objective(s) Advanced | Outcome  |
|---|---|--|-----------------------|--|
| <b>13. Regional Digital Equity Plan</b>   | <b>13.1.</b> Investigate the needs of the people who have barriers to broadband internet and support initiatives to fill those needs, allowing equitable access to essential internet services. The population facing barriers may include seniors, people who make low incomes, people with limited English proficiency, people experiencing homelessness, and other communities. Initiatives may include providing education toward computer and internet literacy, appropriate equipment such as computers or routers, financial assistance to pay for access at appropriate speeds, education and enforcement addressing security and privacy risks, or other initiatives as appropriate. | NMCOG; Municipalities; CBOs; Local Housing Organizations | 1.1, 4.1              | NMCOG and MAPC kicked off a \$303,367 Greater Lowell Digital Equity Plan project in October 2023 with a completion date of September 2024. The agencies conducted a listening tour of the nine municipalities in December. Work in 2024 will include data collection, focus groups and interviews, mini-charrettes, and recommendations.   |
| <b>14. Grant Application and Administration Capacity Building</b>                 | <b>14.1.</b> More closely identify top project priorities throughout the region; research, assess, and identify federal, state and other funding opportunities; review grant application guidelines and preparation of applications; identify needed procurement services; and assess municipal grant reporting capacity and determination if assistance is needed.   | NMCOG  | 2.4                   | NMCOG reviewed Master Plans and other planning documents for potential project priorities to discuss with communities. The agency released a Call for Ideas that will include assistance earmarked for research, application, procurement, and reporting and has developed a scope to prioritize projects and attach potential funding sources to those priorities.  |
| <b>15. City of Lowell Master Plan</b>   | <b>15.1.</b> Complete Lowell Forward, the update of the Comprehensive Master Plan for the city of Lowell with a goal to increase participation of the community and create very thorough implementation strategies that align with the community’s expectations as a city while catering to their unique needs as neighborhoods with specific characteristics and socioeconomic compositions.   | Lowell   | 1.1, 2.1              | The Lowell Forward comprehensive update first draft has been completed and the project is anticipated to be completed in February 2024. In 2023, Lowell completed an extensive existing conditions analysis and multi-pronged community engagement (three surveys with 1500+ total responses in total, four public workshops, and a listening tour. Concurrently, NMCOG is working with the City to develop its first Housing Production Plan (HPP) which will inform the housing section of Lowell Forward. |
| <b>16. Revitalization of Regional Network of Village and Neighborhood Centers</b> | <b>16.1.</b> Complete the Westford Brownfield project of inventorying and making recommendations for brownfield sites in the Graniteville Neighborhood.   | NMCOG, Westford  | 2.1                   | NMCOG staff completed the Westford Brownfield study in July. This allowed for a big-picture look into redevelopment planning for Graniteville; a robust community charette allowed for deeper public involvement and sharing of local expertise. A \$500k grant received by Westford for 12 North Main will build upon this work.  |
|   | <b>16.2.</b> Seek funding for wayfinding signage and streetscape improvements for Railroad Square.  | Pepperell  | 2.1, 7.1              | This project is on hold until Pepperell hires a new Town Planner. The streetscape improvements for the RR Square work are nearly 100% complete, with final segments scheduled for completion in spring 2024.   |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project   | Task   | Lead Agency or Actor  | Objective(s) Advanced | Outcome  |
|---|--|---|-----------------------|--|
|   | 16.3. Complete a feasibility analysis of creating a pedestrian mall in downtown Lowell.  | NMCOG, Lowell   | 2.1, 5.3, 7.1         | The Lowell Open Streets study was completed in October 2023, with potential for a pilot in summer, 2024.   |
|   | 16.4. Implement neighborhood infrastructure programs and Economic Development programs to help local businesses increase their sales, fund equipment repairs, and improve general business practices to contribute to their success. | Lowell  | 2.1, 2.6, 5.3, 7.1    | The City of Lowell has implemented two ARPA-funded programs: the Economic Resilience Grant Program to help small businesses implement strategies to deal with future crises and the Storefront Improvement Program to fund signage, lighting, and façade and accessibility improvements. The City has also implemented a CDBG-funded Small Business Expansion program, and plans to launch more small business technical assistance programs focusing on business operations and equipment upgrades. |
|   | 16.5. Coordinate with arts and culture communities for improved design, coordination, and local branding/ identity.  | NMCOG; Municipalities, Local Development Organizations; Business Assistance Providers | 7.1, 7.2, 7.3         | Four municipalities provided updates on their work with arts and culture-related organizations to improve local branding and identity. These updates were shared with the CEDS Committee to promote additional coordination in the arts and culture communities.   |
|   | 16.6. Seek funding for sidewalk expansion from the Senior Center at 37 Nashua Rd down Mill Street and Main Street toward the Main Street Rotary.   | Pepperell   | 2.1, 5.3, 7.1         | Pepperell received a Massworks grant for \$2.75 million for this project. Initial planning is underway with work anticipated to begin by spring 2025 at the earliest. The grant allows the town to expend grant funding through June 2027.   |
|   | 16.7. Explore methods of inventorying vacant storefronts in the regional network of village and neighborhood centers.  | NMCOG   | 2.1, 2.5, 2.6         | NMCOG was unable to complete this activity in 2023, and is considering exploring this in 2024.   |
| 17. Evaluate and Improve Regional Zoning and Permitting Practices | 17.1. Evaluate development environment and identify barriers to development, which may include education and policy, with a focus on supporting sustainable development  | Municipalities, NMCOG   | 2.5, 6.1, 6.2         | Middlesex 3 updated a permitting matrix that identifies 25 practices, many of which apply to housing production. NMCOG and other communities will utilize this matrix to track adoption of best practices.   |
|   | 17.2. Continue work on comprehensive zoning review with the Zoning Review Committee and consultants  | Tyngsborough  | 2.5, 6.1, 6.2         | Tyngsborough received Attorney General approval for recodification, including updates to the Table of Uses and separating the Special Permit process from the Site Plan Review Process in September 2023. The Town is currently focused on housing related updates, specifically multi-family, by removing the requirement for Town Meeting approval and amendments to comply with the MBTA Communities legislation.   |



TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project   | Task   | Lead Agency or Actor                          | Objective(s) Advanced | Outcome  |
|---|--|---|-----------------------|--|
|   | 17.3. Update Pepperell's current subdivision regulations and site plan review process to clarify and modernize language.   | Pepperell, NMCOG                              | 2.5, 6.1, 6.2         | NMCOG and Pepperell completed draft revisions to the subdivision regulations in summer 2023. The Planning Board will review the revisions in a public hearing sometime in early 2024.  |
|   | 17.4. Advance Dracut rezoning study to streamline permitting and investigate Inclusionary Zoning and/or 40R districts as part of the process through the DLTA program  | Dracut, NMCOG                                 | 2.5, 6.1, 6.2         | NMCOG and Dracut completed a report in early May, with recommendations to have more detailed conversations with developers and undertake a market feasibility study.   |
| <b>18. Industrial and Mixed-Use Development</b>   | 18.1. Analyze the market for Tanner Street and evaluate future EDA funding opportunities to advance the Ayer's City Industrial Park (ACIP) Urban Renewal Plan.   | Lowell  | 2.1                   | The Tanner Street Market Study is anticipated to be completed by January 2024. This updated study will lay the foundation for re-evaluating the City of Lowell's goals.  |
|   | 18.2. Continue a focus on developing the remaining vacant parcels of the Hamilton Canal Innovation District, including continual outreach to potential developers.   | Lowell  | 2.5                   | The City of Lowell is in active negotiations with developers about the remaining parcels in the HCID.  |
|   | 18.3. Investigate feasibility and evaluate scope of a cost-benefit analysis for construction of a southbound exit on Route 3 near the New Hampshire state line.  | Tyngsborough                                  | 2.1                   | Tyngsborough and NMCOG held discussions to move this topic further with MassDOT or place it on the TIP schedule. A Casino was proposed at Pheasant Lane Mall, providing additional justification for this improvement.   |
|   | 18.4. Determine a potential Project Beneficiary of transportation improvements on Locust Avenue and continue to seek funding for those improvements.   | Tyngsborough                                  | 2.1                   | Private entity W.L. French held discussions to purchase 24 acres at 54 Locust Ave in 2023. This is proximal to the Brewery / Restaurant scheduled to open at 394 Middlesex Rd. NMCOG will explore whether it may assist in attracting federal EDA investment for necessary improvements. |
|   | 18.5. Evaluate the approach to promotion and utilization of Opportunity Zones through case studies or other methods.   | NMCOG, Lowell                                 | 2.4                   | NMCOG was unable to complete this activity in 2023, and is considering exploring this in 2024 as part of the five-year CEDS planning process.  |
| <b>19. Enhance Coordination among Businesses, Small Business Assistance Providers, and Municipalities</b> | 19.1. Identify a lead agency to assist small businesses in creation of business continuity/preparedness plans that include risk management, attraction/retention for workforce, technology adaptation, and business planning. This may include identifying programs that may be undertaken by local, regional, or state agencies to assist small businesses in one or more of these areas. | NMCOG, Small Business Centers                 | 2.2                   | NMCOG was unable to complete this activity in 2023, and is considering exploring this in 2024.   |
|   | 19.2. Share knowledge on the best methods to share ARPA and other direct small business support to continue economic recovery.   | Municipalities, NMCOG, Small Business Centers | 2.4, 2.6              | Four municipalities reported updates on uses of ARPA funds to assist small businesses in economic recovery. These updates were shared with the CEDS committee to promote peer learning related to COVID-19 recovery.   |

TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project                | Task   | Lead Agency or Actor  | Objective(s) Advanced | Outcome   |
|------------------------------------|--|---|-----------------------|---|
|                                    | 19.3. Share knowledge about promoting and/or identify barriers to retaining small businesses as they grow within the region.   | Municipalities, NMCOG, Small Business Centers   | 2.4, 2.6              | Three municipalities reported updates on promoting and retaining small businesses as they grow within the Greater Lowell Region. These updates were shared with the CEDS committee to promote peer learning related to COVID-19 recovery. |
|                                    | 19.4. Provide and promote up-to-date information about available resources for small businesses through municipal and regional websites and evaluate the feasibility of creating a one-stop website or clearinghouse for business assistance and grants in each town or throughout the region. | NMCOG, Middlesex 3, Small Business Centers  | 2.6                   | Dracut, Tyngsborough, and Westford partnered for a small business mini-conference on September 19. NMCOG is considering exploring creating a one-stop page or identifying partners to be a one-stop shop further in 2024.                 |
| 20. Enhance Tourism and Visitation | 20.1. Define the region, a vision for the region, and identify common "themes" or an "identity" which could be referenced in marketing campaigns by local and regional entities.   | NMCOG; Greater Lowell Chamber of Commerce; Nashoba Valley Chamber of Commerce; Middlesex West Chamber of Commerce; Local Dev. Organizations; Municipalities | 7.2, 7.3              | NMCOG is seeking to complete a report with recommendations developed by a working group in early 2024, and will reconvene the group to discuss the report, its recommendations, and any next steps as part of the five-year CEDS process. |
|                                    | 20.2. Evaluate existing local and regional marketing, determine where the gaps are, and coordinate marketers.  | GMVCVB  | 7.2, 7.3              | NMCOG is seeking to complete a report with recommendations developed by a working group in early 2024, and will reconvene the group to discuss the report, its recommendations, and any next steps as part of the five-year CEDS process. |
|                                    | 20.3. Provide technical assistance and support to local organizations or municipalities to establish, develop, or sustain marketing, branding, and promotional programs.   | NMCOG; GLCC; NVCC; MWCC; Business Assistance Providers; Municipalities; Local Development Organizations; MTWG   | 7.2, 7.3              | NMCOG is seeking to complete a report with recommendations developed by a working group in early 2024, and will reconvene the group to discuss the report, its recommendations, and any next steps as part of the five-year CEDS process. |
|                                    | 20.4. Develop cross promotional regional theme or event (or anchor event with offshoots) that would encourage visitors to tour the entire region.  | GMVCVB  | 7.2, 7.3              | NMCOG is seeking to complete a report with recommendations developed by a working group in early 2024, and will reconvene the group to discuss the report,  |



TABLE 2: 2023 SCHEDULE OF GOALS OUTCOMES

| Activity or Project  | Task   | Lead Agency or Actor   | Objective(s) Advanced | Outcome  |
|--|--|--|-----------------------|--|
|  |  |  |                       | its recommendations, and any next steps as part of the five-year CEDS process.   |
|  | <b>20.5.</b> Expand Shop Local programs to promote local businesses and attract visitors to the region.  | NMCOG; GLCC; NVCC; MWCC; Local Development Organizations; Municipalities; MTWG | 2.6, 7.2              | Four municipalities reported updates on their respective Shop Local programs. These updates were shared with the CEDS committee to promote peer learning related to COVID-19 recovery.   |
|  | <b>20.6.</b> Provide support in state-wide initiatives such as the Statewide Trail Mapping program or development of the regional or statewide trail networks.   | NMCOG, Lowell Parks & Conservation Trust                                       | 7.1                   | NMCOG assisted in a statewide trail mapping effort by updating existing trail information, assisting in creation of a standardized format, transforming local data into that format, and providing it to the MAPC team leading this effort. NMCOG held an introductory meeting about regional trail priorities in fall 2023 with LP&CT, and will continue to work with them in 2024. |
| <b>21. Economic Development District Application</b>           | <b>21.1.</b> Amend and resend updated Economic Development District (EDD) designation application with the EDA and examine opportunities available under a Revolving Loan Fund (RLF) program to be approved by EDA.  | NMCOG  | 2.2                   | NMCOG amended and resent an application for EDD designation, received notification the application was complete and has been sent through the review process in June 2023. NMCOG remains in contact with EDA to evaluate progress of its application.  |
| <b>22. Prepare for the 2024 CEDS Report and 2025-2029 CEDS</b> | <b>22.1.</b> Evaluate small retail and service businesses adoption of internet-based service models and the compare internet-only businesses, brick-and-mortar businesses, and hybrid models to determine best ways to assist very small businesses in growth. | NMCOG, Small Business Centers  | 2.6                   | NMCOG and MAPC have included the work of small business adoption of digital services and its impact on equity in the Greater Lowell Digital Equity Plan scope, which will be undertaken in 2024.   |
|  | <b>22.2.</b> Investigate data sources to provide additional context to new business formation, including size and type of business.  | NMCOG  | 2.6                   | NMCOG has evaluated data sources for inclusion of key tracking factors in the 2024 Annual CEDS Report.   |
|  | <b>22.3.</b> Track Women-Owned-Businesses and Minority-Owned-Businesses regionally and make the list available to the public   | NMCOG  | 2.6                   | NMCOG has evaluated data sources for inclusion of key tracking factors in the 2024 Annual CEDS Report.   |
|  | <b>22.4.</b> Apply for funding for Five-Year CEDS Development  | NMCOG  | 2.2                   | NMCOG has developed a draft application and process for a Five-Year CEDS and discussed it at the Q3 meeting of the CEDS Committee.   |

## 3.2. Action Plan Updates

### Goal 1: Economic Resiliency

**Incorporate long-term measures that bolster the region’s ability to withstand or avoid a shock and enhance the region’s capability and ability to respond to recovery needs following an incident.**

NMCOG and MAPC have started working on the Greater Lowell Digital Equity Plan. This plan seeks to address to further the goals of Digital Equity, ensuring that everyone in the region is able to successfully access and navigate the Internet with a workable device. Closing the Digital Divide has become a top priority for the Commonwealth of Massachusetts, as inequities in digital access either lead to or exacerbate inequities in key areas of daily life, such as healthcare, education, economic opportunity, and safety. The plan focuses on three key themes: infrastructure, device access, and education. The team will be conducting outreach to all nine municipalities, conducting interviews with stakeholders in areas such as business development, education, healthcare, and housing, as well as charrettes open to the public. Initial interviews with each municipal office were completed at the end of 2023. The project is scheduled to be completed in fall 2024.

### Goal 2: Economic Development

**Restore the regional and local economies devastated by the COVID-19 pandemic and build economic resilience through a diversified economy that includes science, health and technology innovation, advanced manufacturing, biotech, and prosperous small businesses.**

Most municipalities have taken advantage of Shop Local Programs such as ribbon cuttings, holiday gift strolls, and local shopping raffles. Tyngsborough, Dracut, and Westford organized and hosted a mini-conference titled Big Ideas for Small Business on September 19<sup>th</sup>, 2023 that was well-attended by small business owners, regional organizations, non-profits, and developers.

### Goal 3: Workforce Development and Employment Support

**Ensure that workforce initiatives align with current and future employment opportunities; that training supports workforce resiliency and the ability to shift between jobs and industries; and the necessary support services - day care, transportation, language training, etc. – are in place to overcome barriers to employment.**

Middlesex Community College is expanding their hospitality workforce development program to include culinary arts training. These courses can be combined with training in restaurant supervision, and are offered at the new Culinary Lab located at the Cowan Center on the Lowell Campus. Specialized coursework includes two culinary courses, two baking courses, food science and sanitation, service safety training, food and beverage management, and food and beverage revenue and cost control. This program requires an internship course to



*Westford Strategic Planning Retreat at Kimball Farms, courtesy Town of Westford*

provide students with real industry experience as well as an additional career development-related course.<sup>8</sup> Lowell Plan intends to fund a feasibility study to support MCC's efforts to eventually turn the UMass Lowell Inn and Conference Center into a space for their culinary and hospitality program.<sup>9</sup>

In the fall of 2023, MassHire Greater Lowell started a ride sharing pilot project that provides home-work-home transportation to employees in the region. Using a subsidy from MassDev, MassHire is able to provide this service at \$2 per ride. A full-time call center and cell phone app are also helping to expand the service. In the survey for Envision 2050, the majority of respondents requested improved first and last-mile connections as the first method to improve regional transportation. MassHire GLWB has partnered with three workforce boards to apply for a \$2.2 million grant for behavioral health training and a \$2.4 million grant for establishment of a Healthcare Hub from the Commonwealth Corporation, building upon a previous \$200,000 grant to plan behavioral health training. MassHire GLWB also released an RFP with the North Shore and Merrimack Valley Workforce Boards to develop a Regional Blueprint focused on manufacturing, healthcare, and IT for the Greater Lowell Region.

## Goal 4: Infrastructure

**Build upon the existing sewer, water, telecommunication and public utility infrastructure to increase capacity and address gaps in the existing infrastructure so that businesses can grow in the future.**

UMass Lowell is also conducting a Digital Equity Project focused within the City of Lowell. A major component of this project is Wi-Fi Buildout, providing Wi-Fi access to historically underserved neighborhoods.

With regard to the application for funding for a regional water system expansion and PFAS mitigation system for Dunstable, Groton, and Pepperell, Groton has taken the lead on funding for the regional plan and Pepperell will create its own cleaning facility. The connection between the three municipalities primarily benefits Dunstable and Groton, so they will bear the cost. The connection from Pepperell will likely come from a joint application. Pepperell has also begun developing both near and long-term actions for PFAS mitigation, after which NMCOG staff will work with Pepperell and Dunstable to determine priorities and next steps. NMCOG completed a wastewater report in August of 2023. Its recommendations will be evaluated for grant opportunities. All communities have completed the Year 5 MS4 Permit.

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<sup>8</sup> "Welcome to Hospitality and Culinary Arts." *Middlesex Community College*. Last modified: November 30, 2023 Accessed: February 15, 2024.

<https://www.middlesex.mass.edu/hospitality/>.

<sup>9</sup> Melanie Gilbert. "Let's Make a Deal: Lowell Plan Supports ICC-MCC Proposal." *The Sun*. Last modified: October 11, 2023. Accessed: February 22, 2024.

<https://www.lowellsun.com/2023/10/11/lets-make-a-deal-lowell-plan-supports-icc-mcc-proposal/>.

## Goal 5: Transportation

Develop the transportation infrastructure to ensure that the Transportation Network supports economic development needs and accommodates future economic growth and address evolving mobility technology, which is trending toward driverless cars, ride sharing, telecommuting and electrification.

Several NMCOG communities, including Dracut, Dunstable, and Chelmsford, have begun installing electric vehicle infrastructure in public parking lots devoted to civic uses such as libraries. Additional research and development of electric vehicle-related infrastructure is anticipated to be in higher demand in the future. A draft of the Envision 2050 Plan was also completed in 2023, and is currently in the process of being implemented.

TABLE 3: REGIONAL HIGHWAY IMPROVEMENT AND BRIDGE PROJECTS (NOT COUNTING INTERSTATE/HIGHWAY RESURFACING PROJECTS)

| Town       | Project  | Status  |
|------------|--|---|
| Billerica  | Boston Road Improvements   | Anticipated complete in 2026  |
| Billerica  | Middlesex Turnpike Improvements  | Anticipated complete in 2023  |
| Billerica  | Intersection improvements at Boston Road/Lexington Road and Glad Valley Road | Under development or design<br>(Still under development and seems to have right-of-way concerns, but programmed for construction start in Summer 2025)  |
| Chelmsford | Route 3A/4 Improvements from Richardson Road to Technology Drive             | Under development or design   |
| Chelmsford | Route 110 Corridor Improvements  | Under development or design<br>(Associated with 607401)   |
| Chelmsford | Intersection Improvements at Route 110 & I-495                               | Under development or design (Still under development, corridor analysis being performed, scoping is starting 2/9/24)  |
| Chelmsford | Intersection Improvements at Route 129 And Riverneck Road                    | Completed in 2022   |
| Chelmsford | Bridge replacement, Gorham Street over I-495 and Westford Street over I-495  | Spring 2024 - Anticipated Construction Start  |
| Dracut     | Nashua Road Improvements   | Anticipated complete in 2024  |
| Dracut     | Lakeview Avenue Safe Routes to Schools Sidewalk Improvements                 | Under development or design (Currently Spring 2025 construction start; recommended to be moved to 2026 TIP. - various factors including needing Town-Meeting-Approval and MassDOT is waiting on scope-and-fee for this project) |
| Dracut     | Route 110 Resurfacing in Methuen, Dracut and Lowell                          | Summer 2024 - Anticipated Construction Start  |
| Dunstable  | Route 113 Improvements   | Completed in 2023   |
| Lowell     | Rourke Bridge Replacement  | Winter 2024/2025 - Anticipated Construction Start<br>(Ad Date in September 2024)  |
| Lowell     | Replacement of Bridge on Gorham Street over I-49                             | IF SO - SPRING 2024   |
| Lowell     | VFW Highway Bridge Over Beaver Brook   | Completed in 2022   |
| Lowell     | VFW Highway Resurfacing  | Spring 2025 - Anticipated Construction Start  |

**TABLE 3: REGIONAL HIGHWAY IMPROVEMENT AND BRIDGE PROJECTS (NOT COUNTING INTERSTATE/HIGHWAY RESURFACING PROJECTS)**

| Town                 | Project  | Status   |
|----------------------|--|--|
| Lowell               | Pawtucket Street Corridor Improvements   | Under development or design  |
| Lowell               | Lowell Connector Reconstruction from Thorndike Street to Gorham Street                     | Spring 2028 - Anticipated Construction Start   |
| Lowell/<br>Tewksbury | Route 38 Intersection Improvements around I-495 interchange                                | PINFO NOTES A START DATE OF AUTUMN 2023  |
| Tewksbury            | Route 133/River Road Intersection Improvements   | Anticipated complete in 2024   |
| Tewksbury            | Resurfacing and sidewalk reconstruction on Route 38 from Colonial Drive to Old Boston Road | Anticipated complete in 2023   |
| Tewksbury            | Intersection Improvements at Main Street/Pleasant Street & East Street/North Street        | Under development or design<br>(programmed for 2027)   |
| Westford             | Rehabilitation of Boston Road  | Autumn 2024 - Anticipated Construction Start   |
| Westford             | Rehabilitation of Stony Brook Road Bridge over Stony Brook                                 | <i>Spring 2025 - Anticipated Construction Start (moved back because of minimal activity)</i> |
| Westford             | Route 110 Improvements from Minot's Corner to Powers Road                                  | Under development or design  |

Trail projects advanced or completed in 2023 include those listed in Table 4.

**TABLE 4: REGIONAL TRAIL PROJECTS**

| Town      | Project   | Status                      |
|-----------|---|-----------------------------|
| Billerica | Yankee Doodle Bike Path                                   | Under development or design |
| Dracut    | Route 110 Multiuse Path                                   | Under development or design |
| Lowell    | Merrimack Riverwalk Phase II                              | Completed in 2022           |
| Lowell    | Centralville River Path                                   | Under development or design |
| Lowell    | Connector Trail (First Phase of River Meadow Brook Trail) | Completed in 2022           |

## Goal 6: Housing

**Create more market-rate and affordable housing throughout the region to ensure that businesses can expand and relocate to the region with the assurance that their workforce will be able to own, lease or rent affordable, quality housing.**

NMCOG has been working with the seven of its nine communities that are designated MBTA Communities on forming residential zoning districts that allow multifamily housing as of right as required by the MBTA Communities Act. The seven communities with this designation are Billerica, Chelmsford, Dracut, Lowell,

Tewksbury, Tyngsborough, and Westford. During the last third of 2023, NMCOG focused most of their work on Billerica, Tewksbury, and Chelmsford, all of whom now have draft plans ready for review and approval.

NMCOG has also worked on Housing Production Plans for both Dunstable and Lowell. Dunstable’s plan was completed in the latter half of 2023 and Lowell’s plan is in the drafting process. Given the size and larger scope needed for Lowell, additional work and review is required. Overall, increased flexibility in zoning and housing development is considered crucial to increasing housing stock in both communities.

NMCOG has put together a Regional Housing Workgroup to help coordinate and implement housing policy within the region. The Workgroup has been asked to get involved in the advisory committee for the new “At Home in Greater Lowell” Regional Housing Plan, which will kick off in March 2024. This group will also oversee the Subsidized Housing Inventory Pilot Project, for which NMCOG staff are collecting data on SHI units such as ownership, income eligibility, affordability expiration dates, permitting information, average rents, and monitoring details in order to better understand the amount of affordable housing stock within the NMCOG Region. The two pilot communities are Dracut and Westford.

**TABLE 5: HOUSING CHOICE COMMUNITY STATUS**

| Town         | Last Designated | Current Status as of 2023    | Permitted Units in 5 years as of April 2023 | Grant Project in FY23   |
|--------------|-----------------|------------------------------|---|---|
| Billerica    | 2020            | Housing Choice Community     | 802   | Billerica will conduct a feasibility and urban design/conceptual plan to support redevelopment in the Town Center to leverage approximately 50 acres of land just east of the Historic Town Center, and possibly link to two privately owned commercial parcels to provide connection to regional trails. |
| Chelmsford   | 2022            | Housing Choice Community     | 551   | None  |
| Dracut       | 2019            | Expired                      | 524   | None  |
| Dunstable    | Unknown         | Not Housing Choice Community |   | None  |
| Lowell       | 2021            | Housing Choice Community     | 982   | None  |
| Pepperell    | N/A             | Not Housing Choice Community |   | None  |
| Tewksbury    | 2020            | Housing Choice Community     | 540   | None  |
| Tyngsborough | 2020            | Housing Choice Community     | 236   | None  |
| Westford     | 2020            | Housing Choice Community     | 581   | Westford will continue exploring off-site sewer options and conduct a market study for key parcels to assess best redevelopment options.  |

Source: <https://www.mass.gov/info-details/housing-choice-designation>

## Goal 7: Community and Quality of Life

**Maintain the community character in the region by preserving and protecting the region’s natural, cultural and historic resources and by encouraging balanced growth.**

Within the City of Lowell, there remains interest in continuing to convert existing mill buildings into new housing. Such adaptive reuse projects balance preservation of Lowell’s history as a mill city while addressing current economic and cultural needs. Though many first-floor space in commercial buildings remains empty,



many have been filled with holiday decorations and other eye-catching displays to enhance the attraction of these underutilized spaces.

Later this year, the consortium consisting of Mass Audubon, Lowell Parks & Conservation Trust, Mill City Grows, and the City of Lowell, will open the Pawtucket Farm Wildlife Sanctuary located at the former Christmas tree farm, Rollie’s Farm. The conservation space consists of twenty acres and is located near the Merrimack River and the Lowell-Dracut-Tyngsborough State Forest. In addition to the conservation space, the land will house a vegetable farm, and education center, and outdoor classroom, and a community garden.<sup>10</sup>



*Lowell Plan Public Matters cohort members rafting on the Concord, courtesy Lowell Plan*

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<sup>10</sup> Paula Moura. “Group to Turn Lowell Christmas Tree Farm into Nature Sanctuary.” *Wbur Local Coverage*. Published: January 11, 2024. Accessed: January 12, 2024. <https://www.wbur.org/news/2024/01/11/group-to-turn-lowell-christmas-tree-farm-into-nature-sanctuary>.



### 3.3. Evaluation Framework Measurements

The seven CEDS Goals and Objectives were summarized in the Strategic Direction and Action Plan. Outlined below are the specific measures, indicators, and 2020 and 2021 quantities for each indicator. The timeframe each measurement represents differs from indicator to indicator depending on the data source, which is noted in the final column. The performance indicators will reflect whether the specific measures have been positive, negative or unchanged. Notably, occasionally the quantity reported in the previous CEDS is adjusted as data sources have adjusted their preliminary numbers.

TABLE 6: EVALUATION FRAMEWORK

| Goal | Measure                                   | Indicator   | 2021 Quantity | 2022 Quantity | 2023 Quantity | Change between most recent periods | Note  |
|------|---|---|---------------|---------------|---------------|------------------------------------|---|
| 1    | Update hazard mitigation plans            | Number of hazard mitigation plans or projects completed during CEDS | 6             | 8             | 8             | 0 plans                            | The number represents the number of current HMPs as of December 31 each year.   |
| 2    | Attract and grow small businesses         | Total number of establishments                                      | 10,186        | 10,437        |               | +2.5%                              | This number represents the total number of private establishments of all types in Q4 of the preceding years (2021 Q4 and 2022 Q4).  |
| 2    | Increase employment                       | Total number of Jobs  | 126,644       | 127,758       |               | +0.9%                              | This number represents the average monthly employment for all public and private establishments in Q4 of the preceding years (2021 Q4 and 2022 Q4)  |
| 2    | Improve wages                             | Average wages   | \$1,742       | \$1,733       |               | -0.5%                              | This number represents the average weekly wage of all public and private establishments in Q4 of the preceding years (2021 Q4 and 2022 Q4)  |
| 2    | Reduce unemployment rate                  | Unemployment rate   | 5.6%          | 3.2%          | 2.3%          | -28.1%                             | This number represents the region's average unemployment rate for the first 11 months of the year (2020, 2021, 2022) as reported by the Local Area Unemployment Survey <i>*Final month of data not available at time of updates</i>       |
| 2    | Expand Opportunity Zone investments       | Number and amount of Opportunity Zone investments                   | 0             | 0             | 5             | 500%                               | This represents the number and total estimated value of major projects <u>commenced</u> in the opportunity zone each year (projects may be completed in future years) as provided by the City of Lowell                                   |
| 3    | Increase workforce training participation | Number of residents served by GLWFB                                 | 232           | 320           | 344           | 24 enrollments                     | This number represents the Total Enrollments of Workforce or Skills Training Programs of the MassHire Greater Lowell Workforce Board in the previous fiscal year (FY 20). Note that data prior to FY 20 was not available for comparison. |

TABLE 6: EVALUATION FRAMEWORK

| Goal | Measure  | Indicator  | 2021 Quantity | 2022 Quantity | 2023 Quantity | Change between most recent periods | Note  |
|------|--|--|---------------|---------------|---------------|------------------------------------|---|
| 3    | Enhance workforce training services for businesses | Number of businesses receiving services from GLWFB                           | 515           | 929           | 892           | -37 employees                      | This number represents the Total Employers Receiving Services from the MassHire Greater Lowell Workforce Board in the previous fiscal year (FY 20). Note that data prior to FY 20 was not available for comparison.                       |
| 3    | Increase level of skills training certification    | Number of industry-recognized certifications and credentials Issued by GLWFB | 146           | 275           | 203           | -72 certifications                 | This number represents the Total Industry Certifications from the MassHire Workforce Board in the previous fiscal year (FY 20). Note that data prior to FY 20 was not available for comparison.   |
| 5    | Increase population served by transit              | Unlinked LRTA Trips  | 656,458       | 665,619       | 957,501       | 43.9%                              | These numbers are the sum total per calendar year.  |
| 5    | Improve bridge conditions                          | Number of structurally deficient bridges                                     | 24/248 (9.7%) | 24/253 (9.5%) |               |                                    | This number represents the number of structurally deficient bridges and total bridges on the MassDOT Bridge Inspection Management System. Note that numbers prior to 2021 were not available for comparison.                              |
| 5    | Increase walking and bicycle trails                | Number and miles of walking and bicycle trails                               | 342           | 343           | 343           | 0 miles                            | NMCOG regional trails database as of 12/29/2023. Mileage excludes shared bike lanes (sharrows). Mileage is based on the total length of trail segments in the GIS data. Note that mileage prior to 2021 was not available for comparison. |
| 6    | Increase number of housing units                   | Number of housing units permitted  | 292           | 239           | 497           | +108%                              | The numbers are the sum total preliminary housing unit building permits for each year reported by HUD's State of the Cities Data Systems  |
| 6    | Increase affordable housing units                  | Number of affordable housing units   | 11,556        | 11,597        | 11,602        | +0.04%                             | These are snapshots provided by DHCD of the SHI in July 9, 2020; June 22, 2021; and May 5, 2022   |
| 7    | Increase economic footprint of cultural businesses | Total wage of selected industries  | \$250,613     | \$288,457     |               | +15.1%                             | This is the sum total of all wages paid in Arts, Entertainment, and Recreation Industry and Accommodation and Food Services Industry in the preceding years (2020 and 2021) in thousands of dollars                                       |

## **Section 4**

# 4. Schedule of Goals for 2024

# 4.1. 2024 Action Plan and Next Steps

This section describes the anticipated and priority actions to be undertaken in 2024. These activities will be selected based on their importance to increase the region’s resiliency, workforce availability, equity, and flexibility in the face of constantly changing economic conditions. In addition, they follow the recommendations in Local Rapid Recovery Plans and the Economic Resilience and Recovery Plan whenever possible. Activities are nominated by NMCOG based on the analysis in Sections 3 and 4 and stakeholder input, then refined by a working group of CEDS Committee members.

In addition to these activities or projects, communities and agencies will undertake other economic development activities, such as but not limited to continuing business support and recruitment, regular workforce development activities, and infrastructure maintenance and construction. See the full description of goals and objectives in the Greater Lowell CEDS for 2020-2024 at <https://www.nmcog.org/ceds>



*Ribbon cutting at the City of Lowell.*

**TABLE 7: 2024 SCHEDULE OF GOALS**

| Activity or Project  | Task   | Lead Agency or Actor  | Objectives Advanced | Milestone Complete |
|--|--|-----------------------|---------------------|--------------------|
| <b>1. Complete the 2025-2029 CEDS and Integrate Workforce Planning</b> | <b>1.1.</b> Contract with consultants to develop a Comprehensive Economic Development Strategy (CEDS) Update for 2025-2029, including a focus on analysis of changes and trends, system dynamics analysis of the labor force, and gaps in economic development activities that could be filled by an additional staff position, including a strategy to build capacity for small-scale economic development projects.  | NMCOG                 |                     | May 2024           |
|  | <b>1.2.</b> Seek additional capacity to create a business contact database of the regions’ largest employers that includes estimated number of workers and mission of firms based on proprietary, state, and local data in order to better engage the business community in the CEDS process.  | NMCOG, Municipalities | 1.1, 2.6, 3.1       | July 2024          |
|  | <b>1.3.</b> Complete listening sessions and data collection for the CEDS Update, including: <ol style="list-style-type: none"> <li>1. A systems dynamics study of the labor market</li> <li>2. An investigation of the feasibility and process through which local companies operating within the Greater Lowell Region can access MassCEC funding through the Commonwealth's Climatech Initiative</li> <li>3. Data sources for additional context to new business formation, including size and type of business</li> <li>4. Development of a region-wide Women-Owned-Businesses and Minority-Owned-Businesses list that can be made available to the public</li> </ol> | NMCOG                 |                     | August 2024        |
|  | <b>1.4.</b> Complete an Economic Development summit and begin drafting the 2024-2029 CEDS Update.  | NMCOG                 |                     | December 2024      |

TABLE 7: 2024 SCHEDULE OF GOALS

| Activity or Project  | Task   | Lead Agency or Actor                           | Objectives Advanced                 | Milestone Complete   |
|--|--|--|-------------------------------------|----------------------|
|  | <p><b>1.5.</b> Continue working with GLHA, GLWB, and LCHC to advance grant-funded work for behavioral health training and the establishment of a Healthcare Hub, both from the Commonwealth Corporation.</p>   | <p>GLHA, GLWB, Health Care Providers</p>       | <p>1.1, 3.1, 3.2</p>                | <p>Continuous</p>    |
|  | <p><b>1.6.</b> Advance the Regional Blueprint focused on manufacturing, healthcare, and IT for the Greater Lowell Region, keeping all stakeholders updated on progress throughout 2024. The recommendations will be integrated into the five-year CEDS plan.</p>   | <p>MassHire Workforce Boards</p>               | <p>1.1, 2.3, 3.1, 3.2, 3.3, 4.4</p> | <p>December 2024</p> |
|  | <p><b>1.7.</b> Integrate the recommendations developed as part of the Climate Pollution Reduction Grant and Regional Priority Climate Action Plan into the CEDS Update, including circular economy models at community and regional scales and identify potential partners.</p>  | <p>NMCOG</p>                                   | <p>2.2, 4.2</p>                     | <p>December 2024</p> |
| <p><b>2. Plan for Housing at the Local and Regional Levels</b></p> | <p><b>2.1.</b> Kickoff the "At Home in Greater Lowell" Regional Housing Strategy plan. This plan will identify priority growth areas for housing across the region to identify strategies and funding to meet regional housing needs, including, but not limited to, developing housing units for those experiencing chronic homelessness, recommending zoning policy for higher-density and affordable residential development, obtaining funding to rehabilitate housing units, and identifying and dedicating existing units to those with lower incomes. This plan will be committed to by all parties, including municipalities, and publicly shared.</p> | <p>NMCOG, Municipalities, Housing Agencies</p> | <p>6.1, 6.2, 6.3</p>                | <p>March 2024</p>    |
|  | <p><b>2.2.</b> Complete the "At Home in Greater Lowell" Regional Housing Strategy plan, including the development of a toolkit, storytelling campaign, and final implementation summit. This may include an inventory of underutilized or vacant municipal-owned property that can be redeveloped for housing.</p>   | <p>NMCOG, Municipalities, Housing Agencies</p> | <p>2.5, 6.1, 6.2, 6.3</p>           | <p>October 2024</p>  |
|  | <p><b>2.3.</b> Seek and secure funding to establish a Regional Housing Services Organization to maintain, monitor, and support the development of affordable housing across the region.</p>  | <p>NMCOG, Municipalities</p>                   | <p>6.2</p>                          | <p>December 2024</p> |
|  | <p><b>2.4.</b> Complete the Lowell Housing Production Plan.</p>  | <p>NMCOG, Lowell</p>                           | <p>6.1, 6.2, 6.3</p>                | <p>May 2024</p>      |
|  | <p><b>2.5.</b> Complete the Dracut Housing Production Plan.</p>  | <p>NMCOG, Dracut</p>                           | <p>6.1, 6.2, 6.3</p>                | <p>August 2024</p>   |
|  | <p><b>2.6.</b> Complete the Chelmsford Housing Production Plan.</p>  | <p>NMCOG, Chelmsford</p>                       | <p>6.1, 6.2, 6.3</p>                | <p>December 2024</p> |
|  | <p><b>2.7.</b> Complete the Tyngsborough Housing Production Plan.</p>  | <p>NMCOG, Tyngsborough</p>                     | <p>6.1, 6.2, 6.3</p>                | <p>December 2024</p> |
|  | <p><b>2.8.</b> Review progress on ERRP Housing Best Practices and report to the CEDS committee.</p>  | <p>NMCOG, Municipalities</p>                   | <p>6.2, 6.3</p>                     | <p>December 2024</p> |

TABLE 7: 2024 SCHEDULE OF GOALS

| Activity or Project   | Task   | Lead Agency or Actor  | Objectives Advanced | Milestone Complete |
|---|--|-----------------------|---------------------|--------------------|
| <b>3. Advance MBTA Community Multi-Family Compliance</b>                            | <b>3.1.</b> Support municipalities in advancing zoning amendments compliant with M.G.L. Ch. 40A, Section 3A (Multi-Family Zoning Requirement for MBTA Communities).  | NMCOG, Municipalities | 2.5, 6.3            | Continuous         |
| <b>4. Invest in Local and Regional Water, Wastewater, and Energy Infrastructure</b> | <b>4.1.</b> Establish a regional working group or committee comprised of representatives from each municipality, wastewater treatment plants, and relevant stakeholders to coordinate efforts and collectively address capacity issues based on the findings of the 2023 Regional Wastewater Infrastructure Study. The goal of this committee will be to create a wastewater feasibility study scope of work to expand the region’s wastewater system to accommodate future growth and development for which NMCOG may seek funding. | NMCOG, Municipalities | 4.1                 | July 2024          |
|   | <b>4.2.</b> Coordinate with interested municipalities to create a PFAS Response Strategy.  | NMCOG, Municipalities | 1.1, 4.3            | July 2024          |
|   | <b>4.3.</b> Seek funding and research programs to assist with mapping electrical energy sources and availability.  | NMCOG, Municipalities | 4.1, 4.3            | December 2024      |
| <b>5. Regional Energy and Sustainability Planning and Coordination</b>              | <b>5.1.</b> Identify best practices or viable financial models for projects outlined in the region’s Regional Priority Climate Action Plan (PCAP).   | NMCOG                 | 4.2                 | December 2024      |
|   | <b>5.2.</b> Learn how to use ResilientMass’ new infrastructure and climate data projection tools and applications for economic development.  | NMCOG, Municipalities | 1.1, 4.1            | December 2024      |
|   | <b>5.3.</b> Educate municipalities on the PACE municipal opt-in process to increase regional participation in the program. Reach out to local banks to create local PACE partners.   | NMCOG, Lowell Plan    | 4.2                 | December 2024      |
|   | <b>5.4.</b> Seek funding or capacity to identify best practices or viable financial models for projects to meet stretch energy codes.  | NMCOG, Municipalities | 4.2                 | December 2024      |
| <b>6. Enhance Regional Transportation Planning</b>                                  | <b>6.1.</b> Create scopes of work for Complete Streets and other transportation infrastructure prioritization plans, and assist interested municipalities in identifying funding for transportation projects.  | NMCOG                 | 5.2, 5.3            | June 2024          |
|   | <b>6.2.</b> Use Replica software to evaluate travel patterns throughout the region.  | NMCOG                 | 5.1, 5.2, 5.3       | December 2024      |

TABLE 7: 2024 SCHEDULE OF GOALS

| Activity or Project  | Task   | Lead Agency or Actor   | Objectives Advanced | Milestone Complete |
|--|--|--|---------------------|--------------------|
| <b>7. Transit and Alternative Transportation Connections</b> | <b>7.1.</b> Collaborate and develop strategies to restore service to pre-pandemic levels, including a focus on innovative ways to address first-mile, last-mile connections through the Regional Transportation Plan process and in collaboration with private companies and other regional partners. This should include coordination with MBTA and Boston MPO/CPTS | NMCOG, LRTA, Middlesex 3   | 5.2, 5.3            | December 2024      |
|  | <b>7.2.</b> Inventory bus routes for amenities and accessibility while supporting LRTA in their planned implementation of vehicle location, automatic passenger counters, and automated voice announcement systems over the next year.   | NMCOG, LRTA  | 5.2, 5.3            | December 2024      |
|  | <b>7.3.</b> Verify and correct bus stop GTFS data to support vehicle location and passenger count systems.   | NMCOG, LRTA  | 5.2, 5.3            | December 2024      |
|  | <b>7.4.</b> Develop a scope of work for a regional bicycle and pedestrian plan and commence the planning process.  | NMCOG  | 5.2, 5.3            | December 2024      |
|  | <b>7.5.</b> Establish a subcommittee to develop CEDS recommendations for regional bicycle improvements based on the Regional Transportation Plan and for actions to leverage existing bicycle assets for economic development. Integrate these recommendations into the bicycle and pedestrian plan.   | CEDS Committee   | 5.2                 | July 2024          |
|  | <b>7.6.</b> Advance the contract for the design and construction of bus stops along Merrimack Street at City Hall and John Street as part of the GoLowell Multimodal Plan.   | Lowell   | 5.2, 5.3            | December 2024      |
|  | <b>7.7.</b> Evaluate MassHire Greater Lowell Workforce Board's ride sharing pilot project for employees in the region. Consider expansion of these and similar services.   | NMCOG, MHGWFB  | 5.2                 | December 2024      |
|  | <b>7.8.</b> Advance the Billerica-Yankee Doodle Bike Path Project, communicating updates to all stakeholders.  | Billerica, NMCOG   | 5.3                 | December 2024      |
|  | <b>7.9.</b> Continue to explore ways to advance progress on the Capital Corridor Commuter Rail extension or alternatives. The Capital Corridor Commuter Rail is a commuter rail extension project from Lowell, MA to Manchester, NH.   | NMCOG, MassDOT, MBTA, NHDOT, MAPCNRPC, Southern NH RPC, MVPC, NH Office of Energy, Central NH Regional Planning Commission, MAPC | 5.2                 | Continuous         |



TABLE 7: 2024 SCHEDULE OF GOALS

| Activity or Project   | Task   | Lead Agency or Actor          | Objectives Advanced | Milestone Complete |
|---|--|-------------------------------|---------------------|--------------------|
| <b>8. Continue Focus on Transportation Safety and State of Good Repair on Projects of Regional Importance</b>         | <b>8.1.</b> Advance the contract with FHWA and MassDOT to perform repairs and upgrades to the Broadway, Swamp Locks, and Lower Pawtucket Canal bridges.  | Lowell                        | 5.1, 5.3            | Continuous         |
|   | <b>8.2.</b> Continue advancing the Rourke Bridge Replacement Project, communicating updates to all stakeholders.   | MassDOT, NMCOG                | 5.1                 | Continuous         |
|   | <b>8.3.</b> Advance the rehabilitation of Boston Road located in Westford, communicating updates to all stakeholders.  | MassDOT, NMCOG                | 5.1                 | December 2024      |
|   | <b>8.3.</b> Advance the replacements of Chelmsford Bridge and the section Gorham Street over I-495, and the rehabilitation of Westford Street over I-495, communicating updates to all stakeholders.   | MassDOT, NMCOG                | 5.1                 | December 2024      |
| <b>9. Strengthen Childcare Networks to Support Employment Opportunities and Economic Mobility for Child Guardians</b> | <b>9.1.</b> Review municipal zoning to ensure that childcare-related uses, including in-home family daycares, are allowed by-right.  | NMCOG                         | 3.3                 | December 2024      |
| <b>10. Complete Regional Digital Equity Plan</b>  | <b>10.1.</b> Investigate the needs of the people who have barriers to broadband internet and support initiatives to fill those needs, allowing equitable access to essential internet services. The population facing barriers may include seniors, people who make low incomes, people with limited English proficiency, people experiencing homelessness, and other communities. | NMCOG, Municipalities, CBOs   | 1.1, 4.1            | October 2024       |
|   | <b>10.2.</b> Seek funding for initiatives to advance digital equity, such as programs providing education towards computer and Internet literacy, appropriate equipment such as computers or routers, financial assistance to pay for access at appropriate speeds, and education and enforcement addressing security and privacy risks.   | NMCOG, Municipalities, CBOs   | 3.3, 3.4, 3.5       | October 2024       |
|   | <b>10.3.</b> Evaluate small retail and service businesses adoption of internet-based service models and the compare internet-only businesses, brick-and-mortar businesses, and hybrid models to determine best ways to assist very small businesses in growth.   | NMCOG, Small Business Centers | 2.6, 3.1            | October 2024       |
|   | <b>10.4.</b> Perform outreach to stakeholders and populations facing barriers to achieving digital equity and connect them with programming to address infrastructure, device, and literacy needs.   | NMCOG, Municipalities, CBOs   | 3.3, 3.4, 3.5, 4.1  | Continuous         |

TABLE 7: 2024 SCHEDULE OF GOALS

| Activity or Project   | Task  | Lead Agency or Actor                   | Objectives Advanced | Milestone Complete |
|---|---|--|---------------------|--------------------|
| <b>11. Grant Application and Administration Capacity Building</b>                 | <b>11.1.</b> Identify top project priorities for Pepperell, Dunstable, and Tewksbury to support grant applications for these priorities.  | NMCOG, Pepperell, Dunstable, Tewksbury | 2.4                 | June 2024          |
|   | <b>11.2.</b> Research, assess, and identify federal, state and other funding opportunities, especially through the Community Compact, to benefit the region’s municipalities.   | NMCOG                                  | 2.4                 | June 2024          |
| <b>12. Revitalization of Regional Network of Village and Neighborhood Centers</b> | <b>12.1.</b> Complete the planning for the sidewalk expansion from the Senior Center at 37 Nashua Road down Mill Street and Main Street towards the Main Street Rotary using the \$2.75 million Massworks grant.                                | Pepperell                              | 2.1, 5.3, 7.1       | December 2024      |
|   | <b>12.2.</b> Explore methods and create a process for inventorying vacant storefronts in the regional network of village and neighborhood centers.  | NMCOG                                  | 2.1, 2.5, 2.6       | December 2024      |
|   | <b>12.3.</b> Complete the Chelmsford Center Village Master Plan Update.   | NMCOG, Chelmsford                      | 2.5, 2.6            | December 2024      |
|   | <b>12.4.</b> Complete the Dunstable Union Building Reuse Feasibility Study and advance its recommendations.   | NMCOG, Dunstable                       | 7.1                 | May 2024           |
|   | <b>12.5.</b> Continue incremental improvements to wayfinding signage for key sites within the City of Lowell.   | Lowell                                 | 7.1, 7.2            | Continuous         |
|   | <b>12.6.</b> Investigate funding sources and research strategies to establish small business incubators within underutilized properties throughout the Greater Lowell Region, including the coordination of food-based and other opportunities. | NMCOG, Lowell Plan, Municipalities     | 7.2, 7.3            | December 2024      |
| <b>13. Industrial and Mixed-Use Development</b>                                   | <b>13.1.</b> Continue negotiations with developers about activating the remaining parcels in the Hamilton Canal Innovation District.  | Lowell                                 | 2.5                 | Continuous         |
|   | <b>13.2.</b> Continue discussions with MassDOT to place construction of a southbound exit on Route 3 near the New Hampshire state line, including evaluation of steps needed to make it a higher priority or place it on the TIP.               | NMCOG, Tyngsborough                    | 2.1                 | Continuous         |
|   | <b>13.3.</b> Apply for Federal Economic Development Administration (EDA) funding to make necessary transportation improvements on Locust Avenue if a private beneficiary partner is identified.   | NMCOG, Tyngsborough                    | 2.1                 | As Needed          |
|   | <b>13.4.</b> Evaluate the approach to promotion and utilization of Opportunity Zones through case studies or other methods.   | NMCOG, Lowell                          | 2.4                 | December 2024      |

TABLE 7: 2024 SCHEDULE OF GOALS

| Activity or Project                                  | Task   | Lead Agency or Actor   | Objectives Advanced | Milestone Complete |
|--|--|--|---------------------|--------------------|
| <b>14. Enhance Tourism and Visitation</b>            | <b>14.1.</b> Complete the Greater Lowell Tourism and Visitation Report.  | NMCOG  | 7.1, 7.2, 7.3       | April 2024         |
|  | <b>14.2.</b> Reconvene the Greater Lowell Tourism and Visitation Subcommittee (GLTVS) of the CEDS Committee.   | NMCOG; Greater Lowell Chamber of Commerce; Nashoba Valley Chamber of Commerce ; Middlesex West Chamber of Commerce; Local Dev. Organizations; Municipalities | 7.1, 7.2, 7.3       | May 2024           |
|  | <b>14.3.</b> Brainstorm and define a visual brand and coordinated activities to promote tourism in the Greater Lowell Region in anticipation of the 250th anniversary of the United States and the City of Lowell's 200th anniversary. | GLTVS  | 7.1, 7.2, 7.3       | August 2024        |
|  | <b>14.4.</b> Provide support in state-wide initiatives such as the Statewide Trail Mapping program or development of the regional or statewide trail networks.   | NMOCG, Lowell Parks & Conservation Trust   | 7.1                 | Continuous         |
| <b>15. Economic Development District Application</b> | <b>15.1.</b> Continue working with the Federal Economic Development Administration (EDA) to achieve Economic Development District (EDD) designation.   | NMCOG  | 2.2                 | Continuous         |

## 4.2. Challenges and Mitigation

Two continuing challenges for local governments and CEDS project champions are capacity and funding. For many communities, there is limited professional staff capacity to take on additional tasks to pursue economic development projects including grant applications requiring match. Sustained efforts by volunteers or the phasing of projects have been successful in some cases, but may not work for all efforts. Access to resources can be a challenge from early project development to implementation.

The Commonwealth's new One Stop for Growth application portal and new economic development funding programs were created for the purpose of offering multiple funding sources to help projects advance to the next stage. These competitive funding sources present new opportunities to move projects forward. However for some projects, the cost for implementation may be higher than local or state funding sources can provide and additional resources are needed. It can be very challenging to align timelines for state and federal funding programs, creating a funding gap that prevents some projects from proceeding.

## 4.3. EDA Assistance Needed

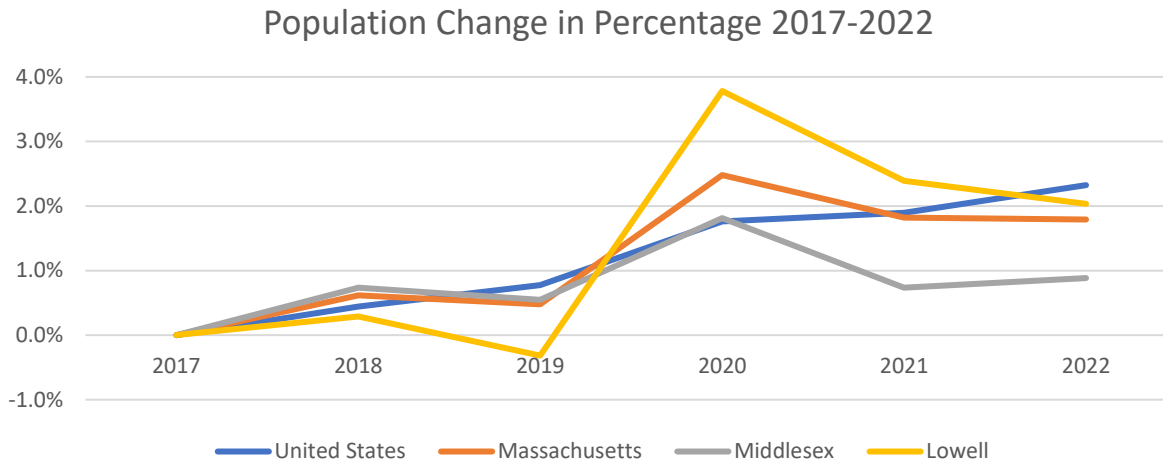
Through the American Rescue Plan Act of 2021, additional federal funding was made available to state and local governments and through new federal funding opportunities, primarily through the Economic Development Administration (EDA). As guidance is issued, local governments and CEDS project managers and stakeholders will explore these funding opportunities. NMCOG staff are prepared to assist governmental and non-profit organizations in pursuing EDA assistance, as well as other federal and state funding programs, to advance CEDS projects.

# Appendix 1

## 5. Socioeconomic Data

## Demographics: Population

FIGURE 1: POPULATION CHANGE IN % SINCE 2017 ACS, 2017 TO 2022



This CEDS Report measures and discusses overall population trends in relevant to the Greater Lowell area. Data was collected from the ACS. While the population of Middlesex County increased from 2021-2022, it remains lower than it was in 2020. The City of Lowell ultimately saw slight declines in population despite estimations of an increase in population.

Source: U.S. Census Bureau, American Community Survey, One-Year data, Table B01001. \*2020 1-year data is not available, so data from U.S. Census Bureau, Decennial Census, Table PL1 was used.

TABLE 8: POPULATION IN THE REGION, STATE, AND NATION, 2009-13 TO 2018-2022

|                              | 2009-2013   | 2011-2015   | 2013-2017   | 2014-2018   | 2016-2020   | 2018-2022   |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>United States</b>         | 311,536,594 | 316,515,021 | 321,004,407 | 322,903,030 | 326,569,308 | 331,097,593 |
| <b>Massachusetts</b>         | 6,605,058   | 6,705,586   | 6,789,319   | 6,830,193   | 6,873,003   | 6,984,205   |
| <b>Greater Lowell</b>        | 291,027     | 297,449     | 302,306     | 303,541     | 304,931     | 307,886     |
| <b>City of Lowell</b>        | 107,466     | 109,349     | 110,964     | 111,249     | 111,311     | 114,737     |
| <b>Region Outside Lowell</b> | 183,561     | 188,100     | 191,342     | 192,292     | 193,620     | 193,149     |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B01001.

TABLE 9: POPULATION IN THE REGION, STATE, AND NATION, 2017-2022

|                         | 2017        | 2018        | 2019        | 2020*       | 2021        | 2022        |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>United States</b>    | 325,719,178 | 327,167,439 | 328,239,523 | 331,449,281 | 331,893,745 | 333,287,557 |
| <b>Massachusetts</b>    | 6,859,819   | 6,902,149   | 6,892,503   | 7,029,917   | 6,984,723   | 6,982,740   |
| <b>Middlesex County</b> | 1,602,947   | 1,614,714   | 1,611,699   | 1,632,002   | 1,614,742   | 1,617,105   |
| <b>City of Lowell</b>   | 111,343     | 111,666     | 110,990     | 115,554     | 114,005     | 113,608     |

Source: U.S. Census Bureau, American Community Survey, One-Year data, Table B01001. 2020

TABLE 10: AGE COHORTS IN THE REGION, STATE, AND NATION, 2009-13 TO 2018-22

|                       |              | 2009-2013 | 2010-2014 | 2012-2016 | 2014-2018 | 2016-2020 | 2018-2022 |
|-----------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|
| United States         | 19 and below | 26.6%     | 27.0%     | 25.0%     | 26.0%     | 25.0%     | 24.9%     |
|                       | 20-44        | 33.6%     | 34.0%     | 32.0%     | 33.0%     | 33.0%     | 33.3%     |
|                       | 45-64        | 26.4%     | 26.0%     | 26.0%     | 28.0%     | 26.0%     | 25.3%     |
|                       | 65 and above | 13.4%     | 13.0%     | 14.0%     | 16.0%     | 16.0%     | 16.5%     |
| Mass.                 | 19 and below | 24.5%     | 24.0%     | 24.0%     | 23.0%     | 23.0%     | 22.5%     |
|                       | 20-44        | 33.6%     | 34.0%     | 34.0%     | 34.0%     | 34.0%     | 33.7%     |
|                       | 45-64        | 27.8%     | 27.0%     | 29.0%     | 28.0%     | 27.0%     | 26.6%     |
|                       | 65 and above | 14.1%     | 13.0%     | 15.0%     | 16.0%     | 17.0%     | 17.2%     |
| Greater Lowell        | 19 and below | 26.2%     | 26.0%     | 25.0%     | 25.0%     | 24.0%     | 23.7%     |
|                       | 20-44        | 32.9%     | 33.0%     | 33.0%     | 32.0%     | 33.0%     | 33.4%     |
|                       | 45-64        | 28.7%     | 28.0%     | 29.0%     | 30.0%     | 29.0%     | 28.2%     |
|                       | 65 and above | 12.2%     | 13.0%     | 13.0%     | 14.0%     | 14.0%     | 14.7%     |
| City of Lowell        | 19 and below | 26.9%     | 26.0%     | 27.0%     | 26.0%     | 25.0%     | 24.6%     |
|                       | 20-44        | 38.8%     | 38.0%     | 39.0%     | 39.0%     | 40.0%     | 39.5%     |
|                       | 45-64        | 23.6%     | 24.0%     | 24.0%     | 24.0%     | 24.0%     | 24.4%     |
|                       | 65 and above | 10.7%     | 10.0%     | 10.0%     | 11.0%     | 11.0%     | 11.5%     |
| Region Outside Lowell | 19 and below | 25.7%     | 25.0%     | 24.0%     | 23.0%     | 23.0%     | 23.2%     |
|                       | 20-44        | 29.5%     | 29.0%     | 28.0%     | 30.0%     | 30.0%     | 29.7%     |
|                       | 45-64        | 31.7%     | 33.0%     | 32.0%     | 32.0%     | 31.0%     | 30.4%     |
|                       | 65 and above | 13.1%     | 14.0%     | 16.0%     | 16.0%     | 16.0%     | 16.7%     |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B01001.

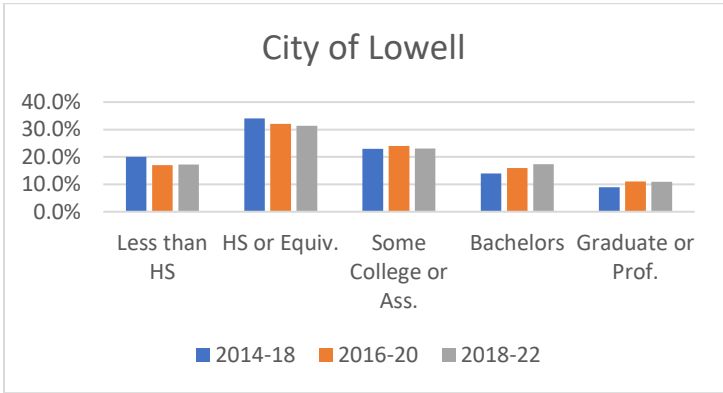
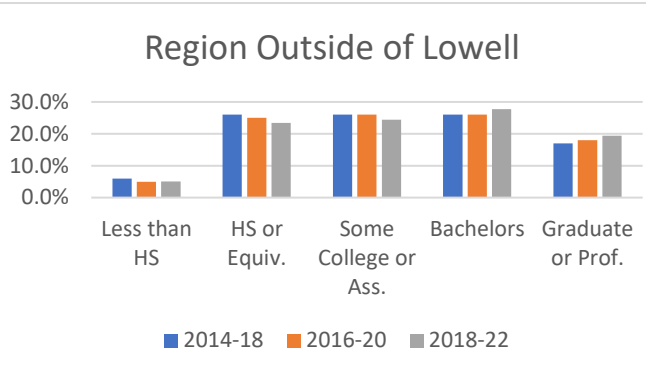
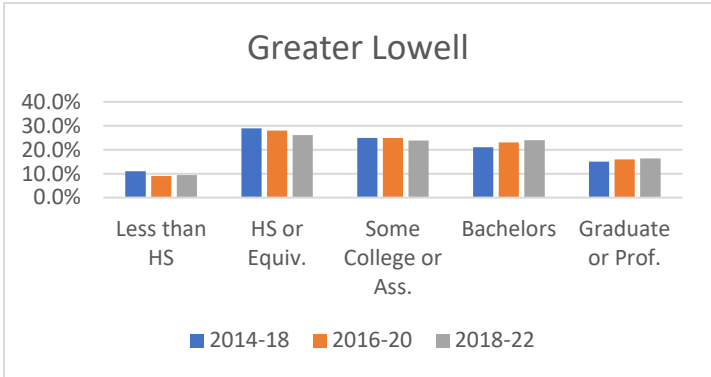
This CEDS Report will measure change in age trends by comparing 2017-21 data to 2018-22 data. Trends have generally continued, with proportions of each age group remaining relatively steady with the exception of a slight increase in residents aged 65 and older. This increase reflects current global trends of increased older populations as people live longer and birth rates decline.

The City of Lowell has a younger population compared to the rest of the country, with more residents between the ages of 20 and 44 and fewer residents aged 65 and older. The region outside of Lowell is slightly older compared to the rest of the country, with a higher proportion of residents aged between 45 and 64.



# Demographics: Educational Attainment

FIGURE 2: PROPORTION OF POPULATION 25 AND OVER BY EDUCATIONAL ATTAINMENT, BY REGION AND YEAR



According to 2016-2020 and 2018-2022 ACS data, Massachusetts, Greater Lowell, and the region outside of Lowell all saw increases in residents obtaining Bachelor’s degrees or a graduate or professional degree. The City of Lowell saw an increase residents getting Bachelor’s degrees while the proportion of graduate or professional degrees remained the same. Proportions of those who graduated from high school or less are either decreasing or remaining the same in most areas, with the exception being the region outside of Lowell, which saw a small increase in residents with less education than a high school graduate. Though the Greater Lowell Region has higher proportions of people with a Bachelor’s degree or more compared to the United State as a whole, the City of Lowell has lower proportions of people with these levels of education compared to the United States.

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B06009.

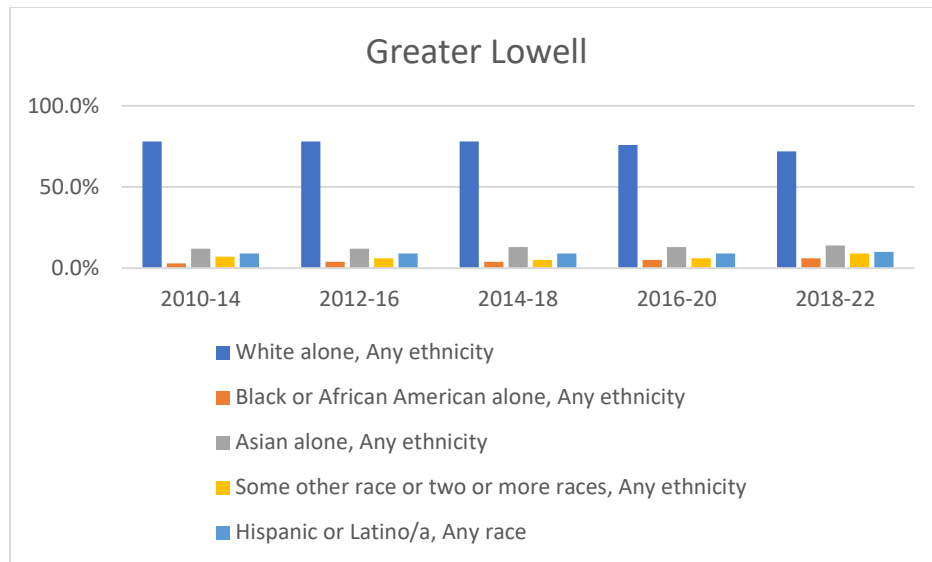
TABLE 11: PROPORTION OF POPULATION 25 AND OVER BY EDUCATIONAL ATTAINMENT IN THE REGION, STATE, AND NATION, 2012-16 TO 2018-22

|                       |   | 2012-16 | 2014-18 | 2016-20 | 2018-22 |
|-----------------------|---|---------|---------|---------|---------|
| United States         | Less than high school graduate              | 11.1%   | 11.0%   | 11.1%   | 10.9%   |
|                       | High school graduate (includes equivalency) | 26.5%   | 27.0%   | 26.5%   | 26.4%   |
|                       | Some college or associate's degree          | 28.7%   | 29.0%   | 28.7%   | 28.5%   |
|                       | Bachelor's degree                           | 20.6%   | 20.0%   | 20.6%   | 20.9%   |
|                       | Graduate or professional degree             | 13.1%   | 13.0%   | 13.1%   | 13.4%   |
| Massachusetts         | Less than high school graduate              | 8.8%    | 9.0%    | 8.8%    | 8.8%    |
|                       | High school graduate (includes equivalency) | 23.2%   | 24.0%   | 23.2%   | 22.9%   |
|                       | Some college or associate's degree          | 22.8%   | 23.0%   | 22.8%   | 22.4%   |
|                       | Bachelor's degree                           | 24.8%   | 25.0%   | 24.8%   | 25.1%   |
|                       | Graduate or professional degree             | 20.4%   | 20.0%   | 20.4%   | 20.8%   |
| Greater Lowell        | Less than high school graduate              | 9.2%    | 9.0%    | 9.2%    | 9.4%    |
|                       | High school graduate (includes equivalency) | 27.3%   | 28.0%   | 27.3%   | 26.2%   |
|                       | Some college or associate's degree          | 24.3%   | 25.0%   | 24.3%   | 23.9%   |
|                       | Bachelor's degree                           | 23.2%   | 23.0%   | 23.2%   | 24.0%   |
|                       | Graduate or professional degree             | 16.0%   | 16.0%   | 16.0%   | 16.4%   |
| City of Lowell        | Less than high school graduate              | 17.6%   | 17.0%   | 17.6%   | 17.2%   |
|                       | High school graduate (includes equivalency) | 32.1%   | 32.0%   | 32.1%   | 31.4%   |
|                       | Some college or associate's degree          | 22.9%   | 24.0%   | 22.9%   | 23.1%   |
|                       | Bachelor's degree                           | 16.5%   | 16.0%   | 16.5%   | 17.4%   |
|                       | Graduate or professional degree             | 10.9%   | 11.0%   | 10.9%   | 10.9%   |
| Region Outside Lowell | Less than high school graduate              | 4.6%    | 5.0%    | 4.6%    | 5.1%    |
|                       | High school graduate (includes equivalency) | 24.7%   | 25.0%   | 24.7%   | 23.4%   |
|                       | Some college or associate's degree          | 25.1%   | 26.0%   | 25.1%   | 24.4%   |
|                       | Bachelor's degree                           | 26.8%   | 26.0%   | 26.8%   | 27.7%   |
|                       | Graduate or professional degree             | 18.8%   | 18.0%   | 18.8%   | 19.4%   |

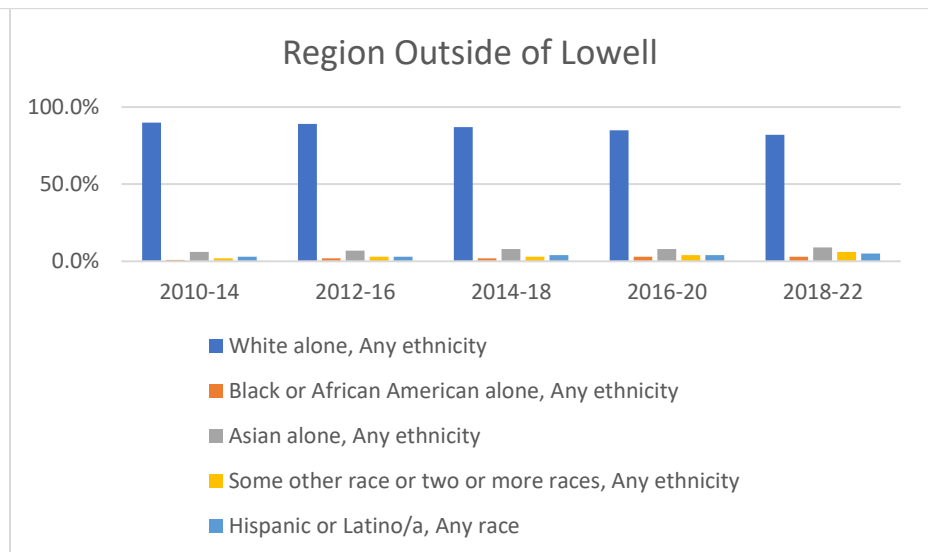
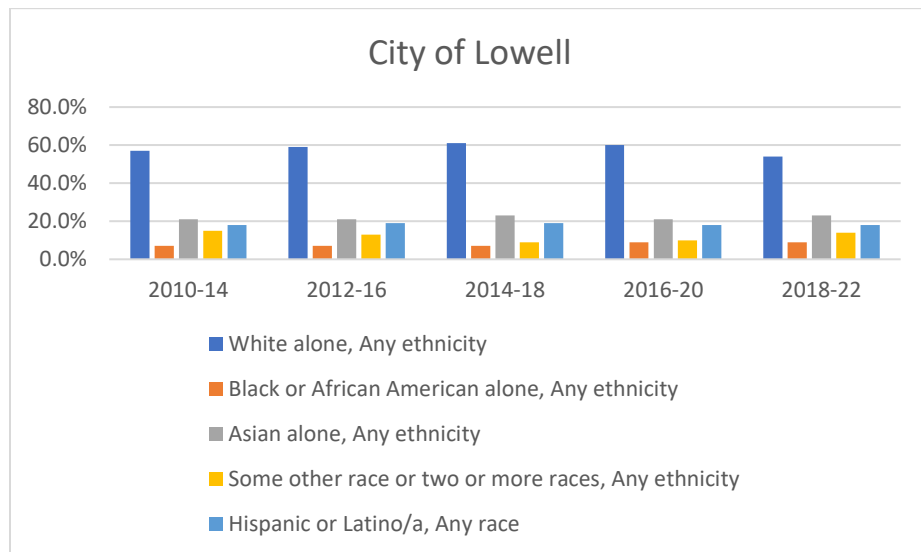
Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B06009.

## Demographics: Race/Ethnicity

FIGURE 3: RACE AND ETHNICITY, BY REGION AND YEAR



The Greater Lowell Region, like the Commonwealth of Massachusetts, has a higher proportion of residents identifying as white compared to the rest of the nation. Overall, the proportion of residents who identify as white is decreasing, while the proportions of all other racial groups are increasing. The Hispanic/Latino/a population is also growing in the region outside of Lowell. The fastest growing racial group is that of residents who identify as interracial.



Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B03002.

Table 12: Greater Lowell Population by Race, 2010 and 2020 Decennial Census

| Race                             | 2010 Population | 2020 Population | % Change Between 2010 and 2020 | % of Total Population in 2020 |
|----------------------------------|-----------------|-----------------|--------------------------------|-------------------------------|
| White                            | 216,755         | 201,156         | -7.2%                          | 64.9%                         |
| Black                            | 8,777           | 15,378          | 75.2%                          | 5.0%                          |
| Hispanic or Latino               | 22,704          | 33,722          | 48.5%                          | 10.9%                         |
| Asian                            | 31,843          | 43,143          | 35.5%                          | 13.9%                         |
| American Indian & Alaskan Native | 312             | 261             | -16.3%                         | 0.1%                          |
| Some Other Race                  | 1,926           | 3,905           | 102.8%                         | 1.3%                          |
| 2 or more races                  | 4,584           | 12,444          | 171.5%                         | 4.0%                          |

Source: U.S. Census Bureau 2010 Census and 2020 Census via Donahue Institute

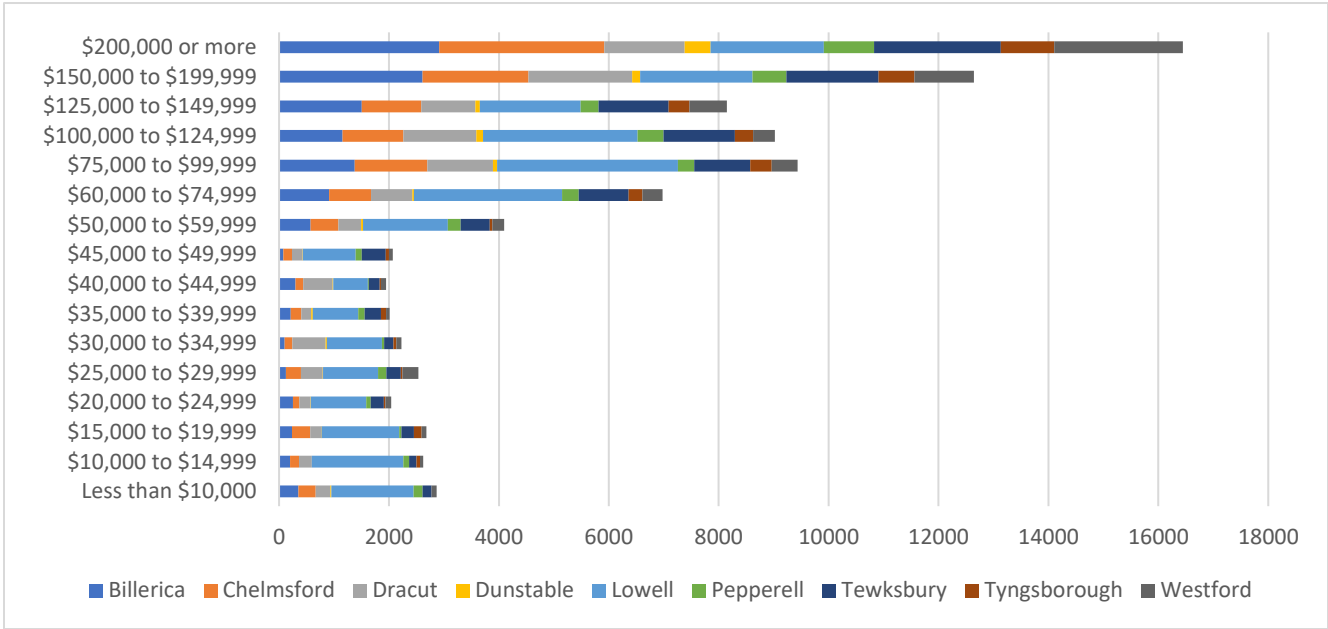
TABLE 13: PROPORTION OF POPULATION BY RACE BY THE REGION, STATE, AND NATION, 2010-14 TO 2018-22

|                       |   | 2010-14 | 2012-18 | 2014-18 | 2016-20 | 2018-22 |
|-----------------------|---|---------|---------|---------|---------|---------|
| United States         | White alone, Any ethnicity                          | 74.0%   | 73.0%   | 73.0%   | 70.0%   | 66.0%   |
|                       | Black or African American alone, Any ethnicity      | 13.0%   | 13.0%   | 13.0%   | 13.0%   | 12.0%   |
|                       | Asian alone, Any ethnicity                          | 5.0%    | 5.0%    | 5.0%    | 6.0%    | 6.0%    |
|                       | Some other race or two or more races, Any ethnicity | 9.0%    | 9.0%    | 9.0%    | 11.0%   | 16.0%   |
|                       | Hispanic or Latino/a, Any race                      | 17.0%   | 17.0%   | 18.0%   | 18.0%   | 19.0%   |
| Massachusetts         | White alone, Any ethnicity                          | 80.0%   | 79.0%   | 78.0%   | 77.0%   | 73.0%   |
|                       | Black or African American alone, Any ethnicity      | 7.0%    | 7.0%    | 7.0%    | 7.0%    | 7.0%    |
|                       | Asian alone, Any ethnicity                          | 6.0%    | 6.0%    | 6.0%    | 7.0%    | 7.0%    |
|                       | Some other race or two or more races, Any ethnicity | 7.0%    | 7.0%    | 8.0%    | 9.0%    | 13.0%   |
|                       | Hispanic or Latino/a, Any race                      | 10.0%   | 11.0%   | 12.0%   | 12.0%   | 13.0%   |
| Greater Lowell        | White alone, Any ethnicity                          | 78.0%   | 78.0%   | 78.0%   | 76.0%   | 72.0%   |
|                       | Black or African American alone, Any ethnicity      | 3.0%    | 4.0%    | 4.0%    | 5.0%    | 6.0%    |
|                       | Asian alone, Any ethnicity                          | 12.0%   | 12.0%   | 13.0%   | 13.0%   | 14.0%   |
|                       | Some other race or two or more races, Any ethnicity | 7.0%    | 6.0%    | 5.0%    | 6.0%    | 9.0%    |
|                       | Hispanic or Latino/a, Any race                      | 9.0%    | 9.0%    | 9.0%    | 9.0%    | 10.0%   |
| City of Lowell        | White alone, Any ethnicity                          | 57.0%   | 59.0%   | 61.0%   | 60.0%   | 54.0%   |
|                       | Black or African American alone, Any ethnicity      | 7.0%    | 7.0%    | 7.0%    | 9.0%    | 9.0%    |
|                       | Asian alone, Any ethnicity                          | 21.0%   | 21.0%   | 23.0%   | 21.0%   | 23.0%   |
|                       | Some other race or two or more races, Any ethnicity | 15.0%   | 13.0%   | 9.0%    | 10.0%   | 14.0%   |
|                       | Hispanic or Latino/a, Any race                      | 18.0%   | 19.0%   | 19.0%   | 18.0%   | 18.0%   |
| Region Outside Lowell | White alone, Any ethnicity                          | 90.0%   | 89.0%   | 87.0%   | 85.0%   | 82.0%   |
|                       | Black or African American alone, Any ethnicity      | 1.0%    | 2.0%    | 2.0%    | 3.0%    | 3.0%    |
|                       | Asian alone, Any ethnicity                          | 6.0%    | 7.0%    | 8.0%    | 8.0%    | 9.0%    |
|                       | Some other race or two or more races, Any ethnicity | 2.0%    | 3.0%    | 3.0%    | 4.0%    | 6.0%    |
|                       | Hispanic or Latino/a, Any race                      | 3.0%    | 3.0%    | 4.0%    | 4.0%    | 5.0%    |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B03002.

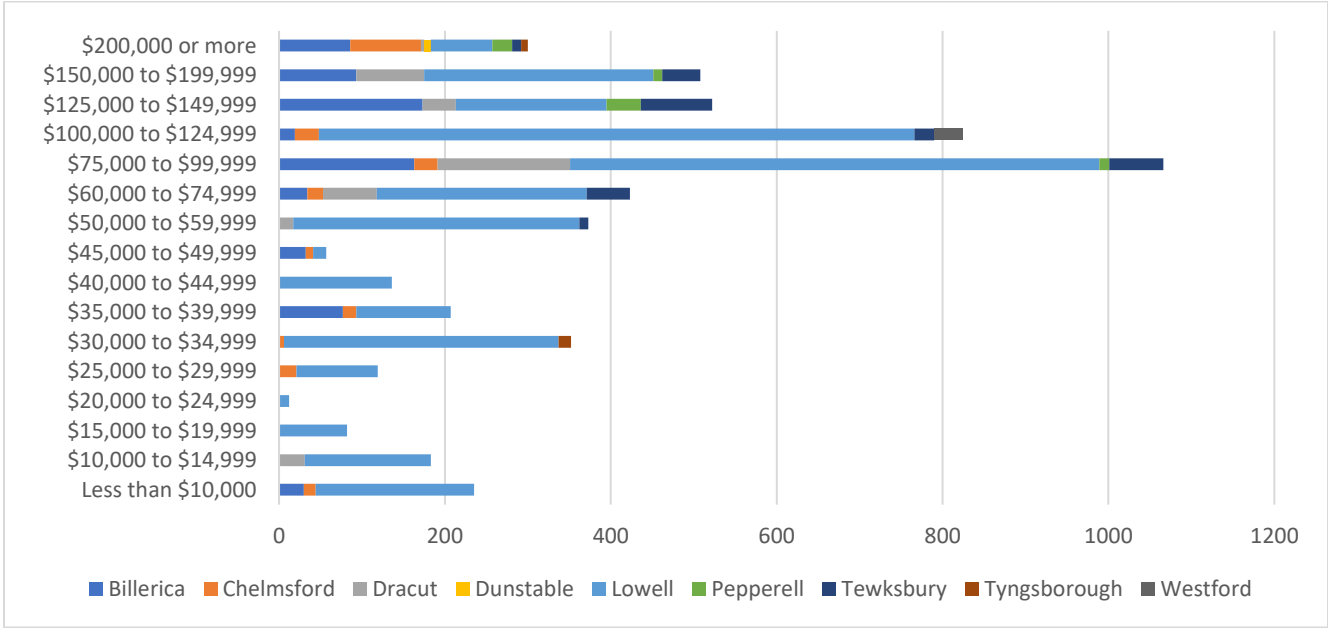
# Income by Race and Ethnicity

**INCOME BREAKDOWN BY RACE (WHITE) 2018-2022**

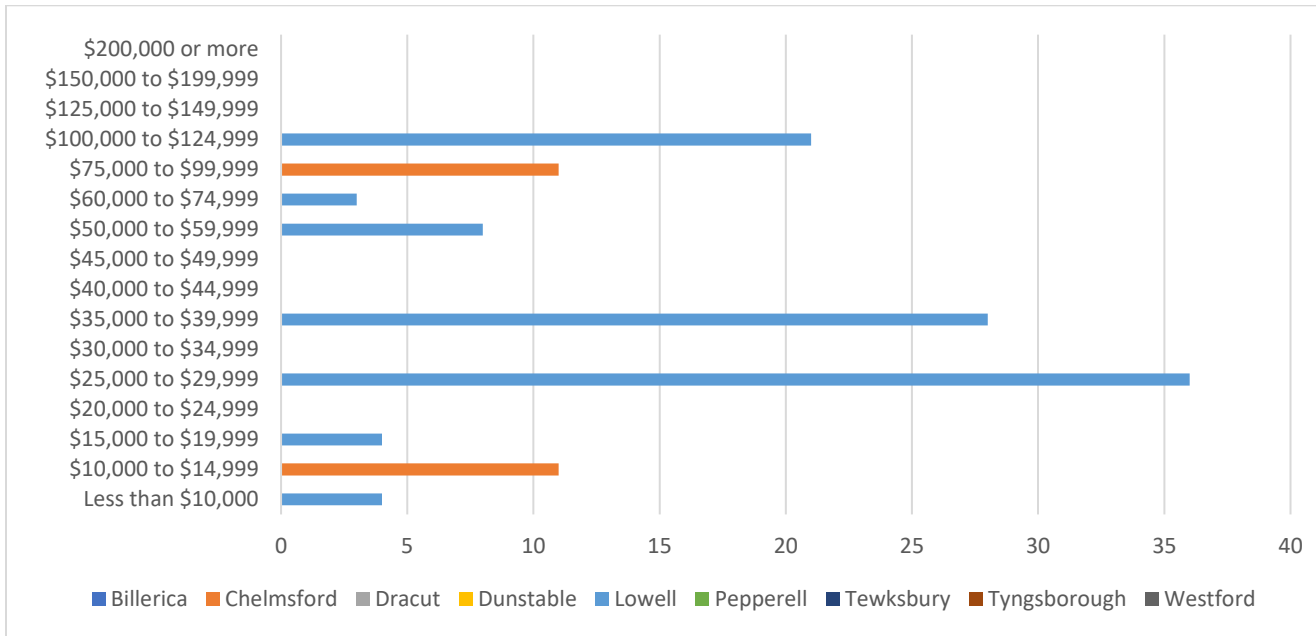


Overall, the City of Lowell is the most racially and economically diverse municipality in the Greater Lowell Region. White, Asian, and Interracial groups are making the most money, and those making more money are more likely to live in the region outside of Lowell.

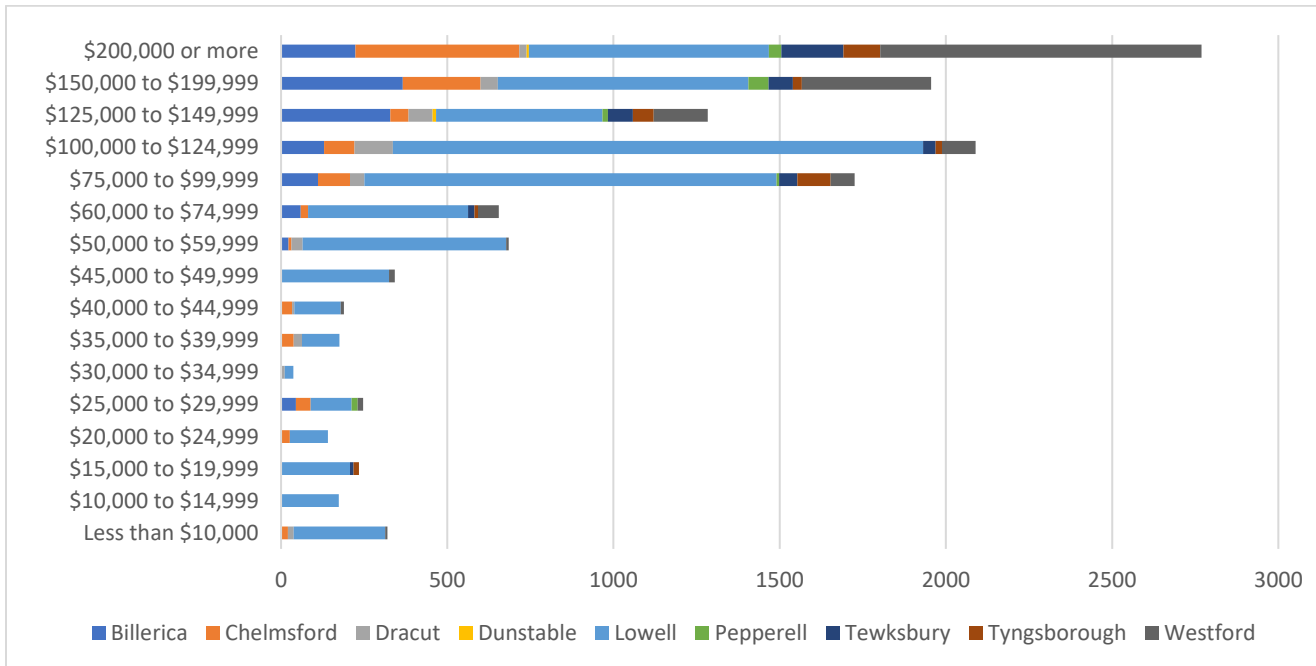
**INCOME BREAKDOWN BY RACE (BLACK) 2018-2022**



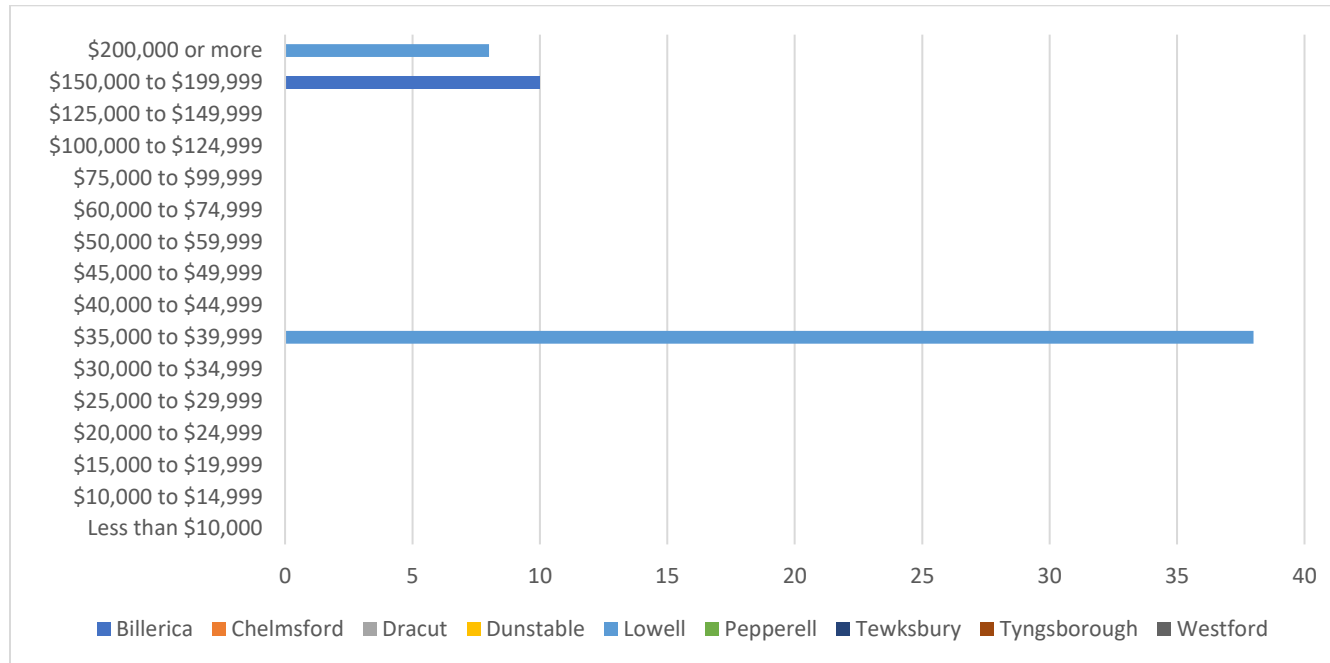
**INCOME BREAKDOWN BY RACE (AMERICAN INDIAN/ALASKA NATIVE) 2018-2022**



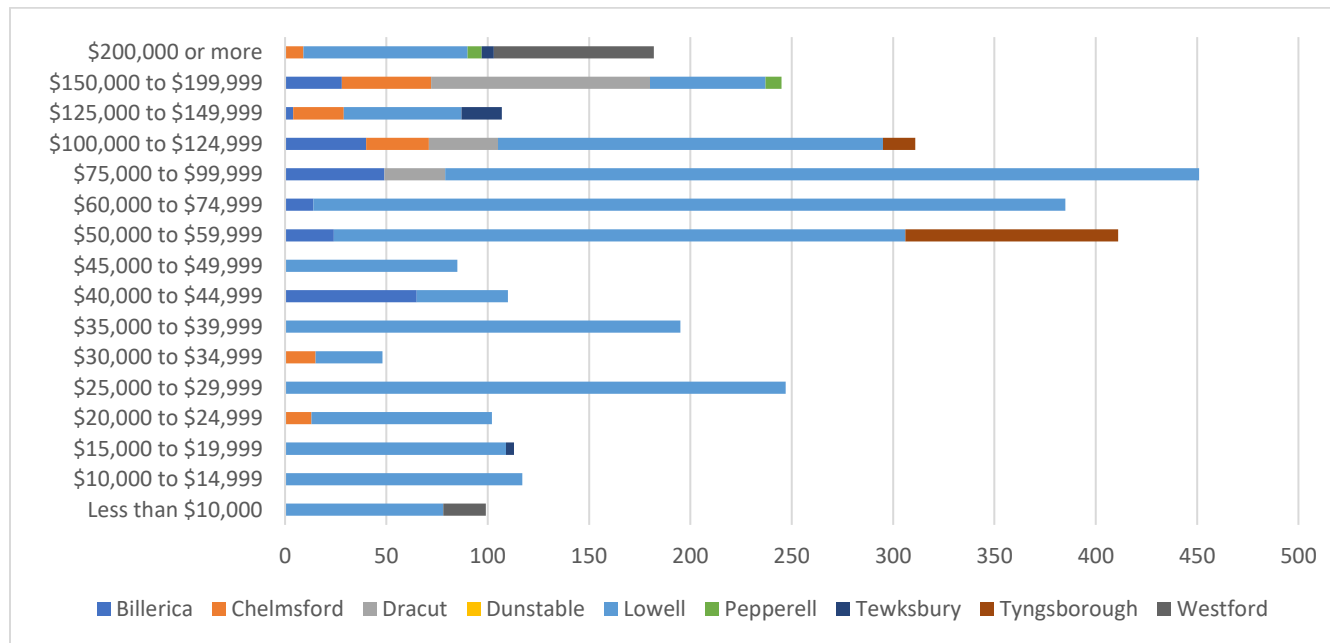
**INCOME BREAKDOWN BY RACE (ASIAN) 2018-2022**



**INCOME BREAKDOWN BY RACE (NATIVE HAWAIIAN/PACIFIC ISLANDER) 2018-2022**

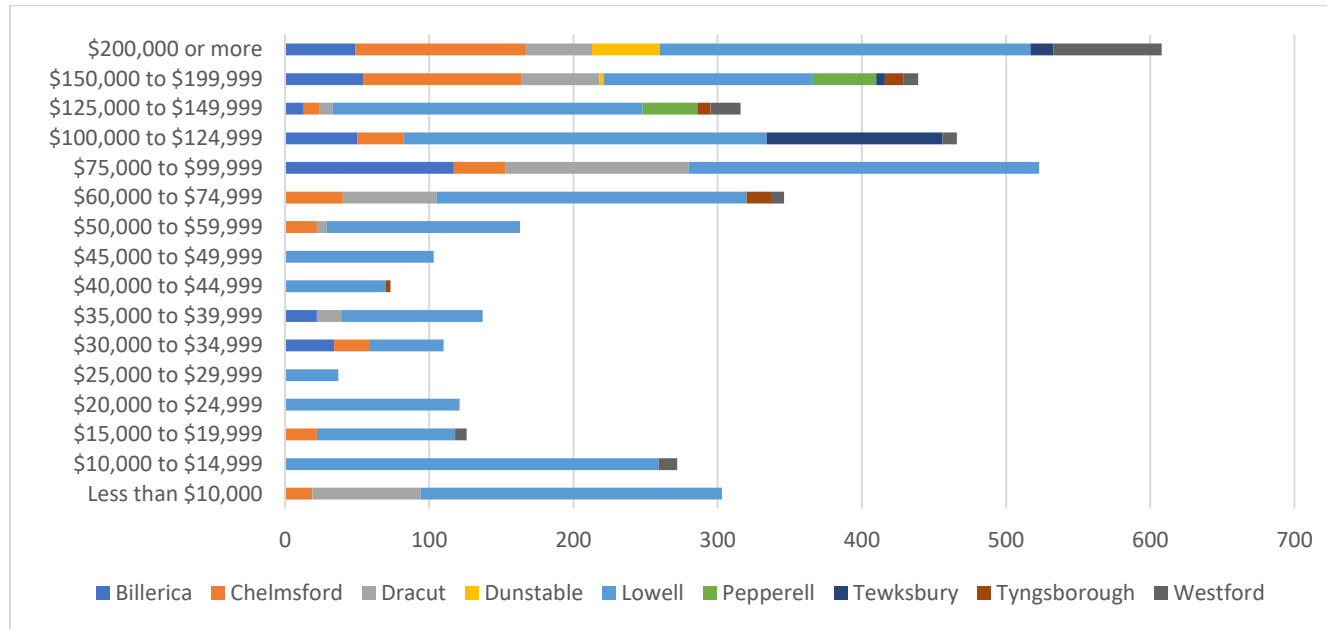


**INCOME BREAKDOWN BY RACE (SOME OTHER RACE) 2018-2022**

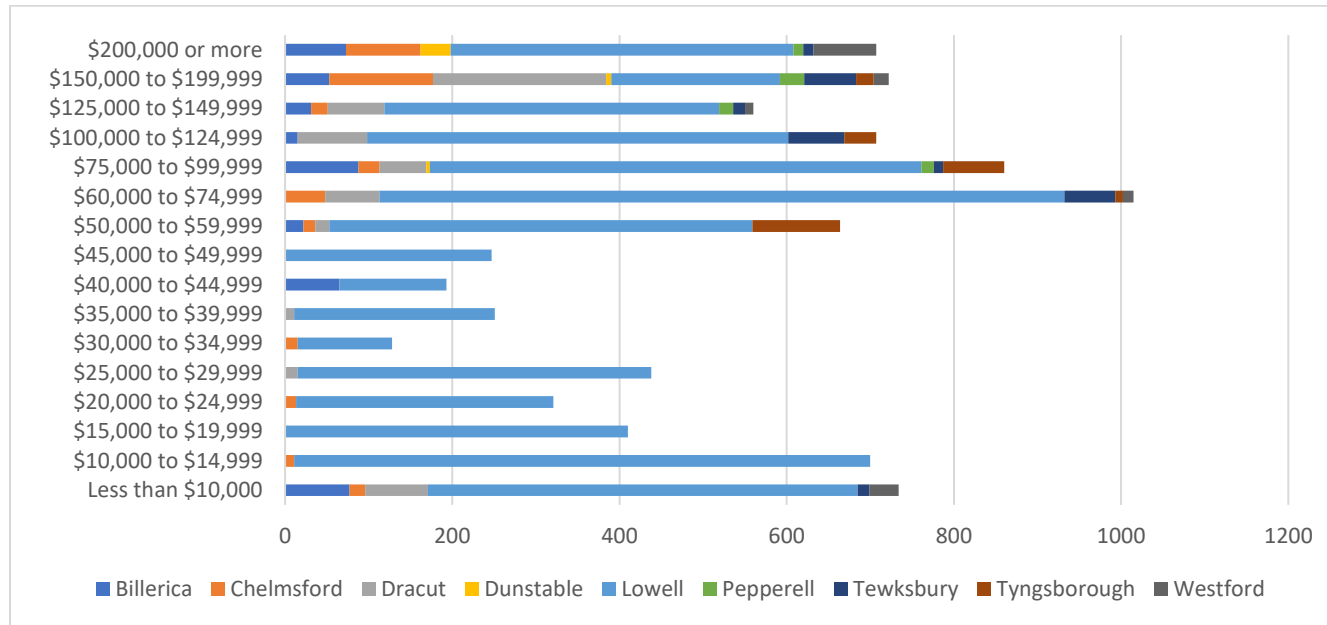




**INCOME BREAKDOWN BY RACE (TWO OR MORE RACES) 2018-2022**



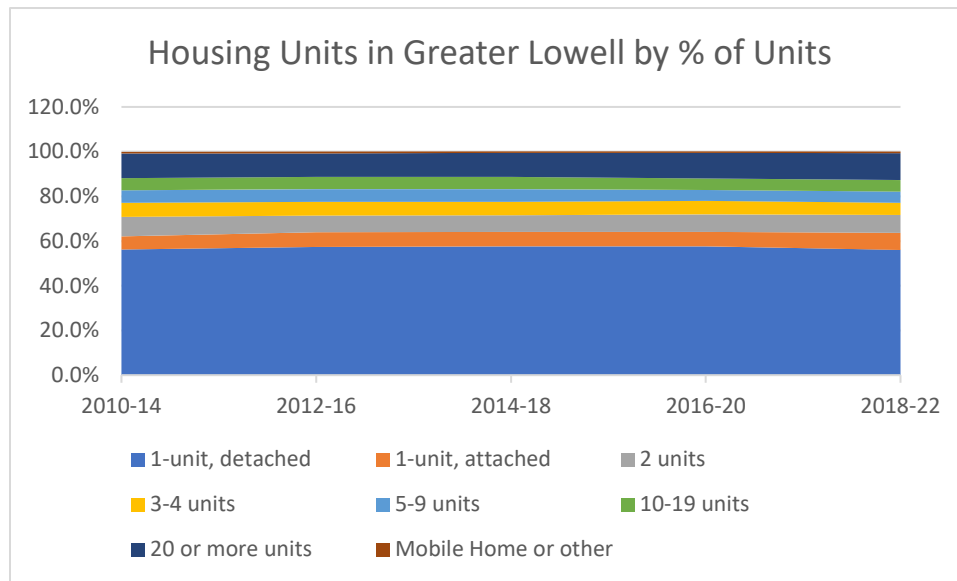
**INCOME BREAKDOWN BY ETHNICITY (HISPANIC/LATINO) 2018-2022**



Source: U.S. Census Bureau, American Community Survey, Five-Year data.

## Housing: Housing Units

FIGURE 4: HOUSING UNITS IN GREATER LOWELL BY # OF UNITS IN BLDG.



The mix of housing in Greater Lowell is important, as it reflects Objective 2.5 (supporting diverse rental units) and, more broadly, represents the ability to house families with diverse preferences, incomes, and needs—important to both quality of life and the workforce.

The long-term trend of a growing number of units continued, but has accelerated even more between 2016-20 and 2018-22. However, it is important to note that the five-year data does not fully cover the pandemic or post-pandemic years (permit data is provided to give a more accurate picture of recent trends).

Sticking to long-term trends, the growth rate of units in buildings containing 10 or more units (6.2% growth between 2016-2020 and 2018-22) has been higher than the overall rate (2.1% during the same period). Single family detached housing production decreased, while single family attached housing grew by 20.1%.

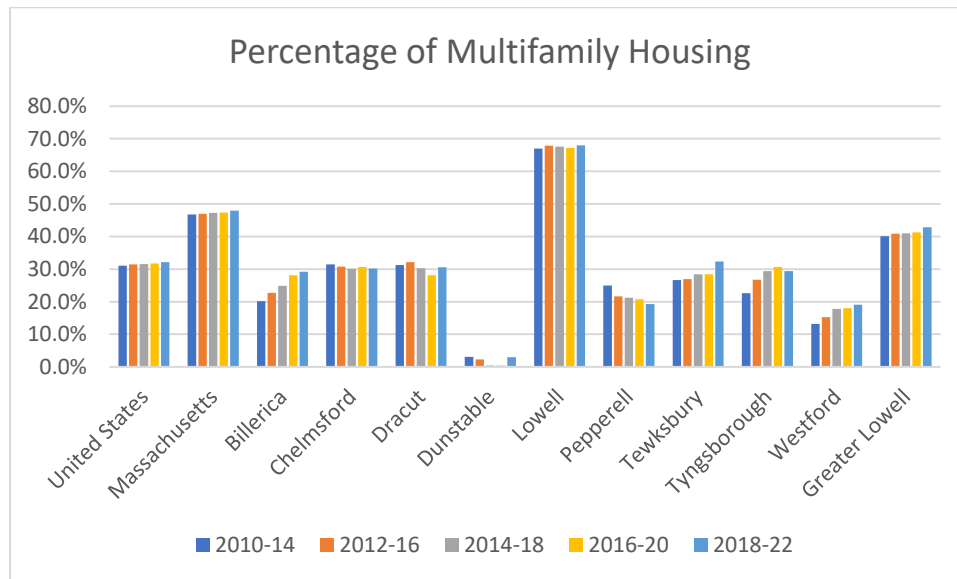
Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25024.

TABLE 14: GREATER LOWELL HOUSING UNITS, BY SIZE OF BUILDING, 2010-14 TO 2018-22

| Size of Building     | 2010-14        | 2012-16        | 2014-18        | 2016-20        | 2018-22        |
|----------------------|----------------|----------------|----------------|----------------|----------------|
| 1-unit, detached     | 56,366         | 63,962         | 65,041         | 66,127         | 65,570         |
| 1-unit, attached     | 5,898          | 7,397          | 7,340          | 7,408          | 8,898          |
| 2 units              | 8,769          | 8,341          | 8,438          | 8,916          | 9,449          |
| 3-4 units            | 6,348          | 6,765          | 6,763          | 6,971          | 6,344          |
| 5-9 units            | 5,598          | 6,396          | 6,324          | 5,668          | 5,916          |
| 10-19 units          | 5,476          | 6,129          | 6,204          | 5,824          | 6,097          |
| 20 or more units     | 11,056         | 11,728         | 12,158         | 13,204         | 14,103         |
| Mobile Home or other | 747            | 881            | 700            | 639            | 815            |
| <b>Total</b>         | <b>100,258</b> | <b>111,599</b> | <b>112,968</b> | <b>114,757</b> | <b>117,192</b> |

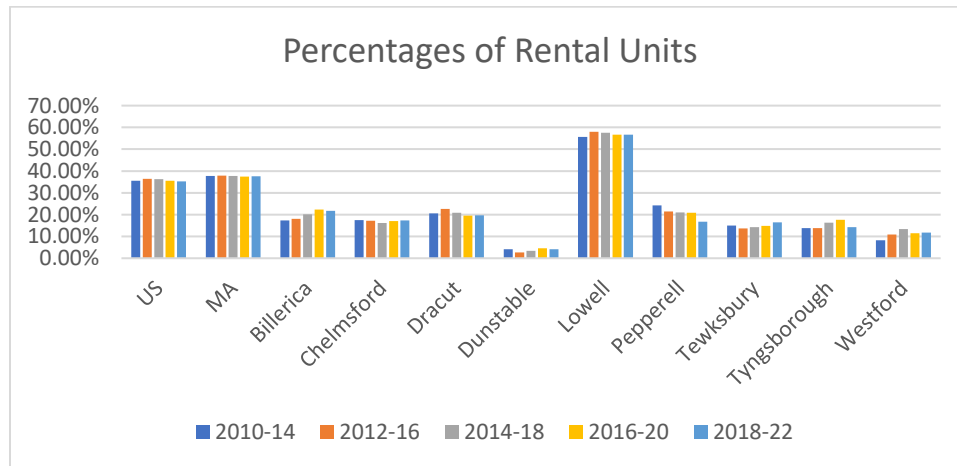
Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25024.

**FIGURE 5: HOUSING, PERCENT ATTACHED OR MULTIFAMILY (UNITS)**



Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25032.

**FIGURE 6: HOUSING, PERCENT RENTAL (UNITS)**



Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25003.

Although Greater Lowell’s percent attached or multifamily has grown in the recent ACS, it still lags Massachusetts. Billerica and Lowell’s trends continued, while other towns were close to steady or lost units proportionately. Proportions of rental housing have either remained steady or declined, the exception being Tewksbury.

The COVID-19 Pandemic may have impacted living patterns, which would not be represented by this data. More people are living outside large cities like Boston because of the ability to telecommute.

**TABLE 15: HOUSING UNITS BY COMMUNITY, STATE, AND NATION, PERCENT RENTER-OCCUPIED, 2010-14 2007-11 TO 2018-22 2015-19**

|              | 2010-14 | 2012-16 | 2014-18 | 2016-20 | 2018-22 |
|--------------|---------|---------|---------|---------|---------|
| US           | 35.6%   | 36.4%   | 36.2%   | 35.6%   | 35.2%   |
| MA           | 37.7%   | 37.9%   | 37.7%   | 37.5%   | 37.6%   |
| Billerica    | 17.3%   | 18.1%   | 20.1%   | 22.4%   | 21.8%   |
| Chelmsford   | 17.5%   | 17.2%   | 16.1%   | 17.0%   | 17.3%   |
| Dracut       | 20.5%   | 22.6%   | 20.8%   | 19.6%   | 19.7%   |
| Dunstable    | 4.2%    | 2.7%    | 3.4%    | 4.5%    | 4.1%    |
| Lowell       | 55.6%   | 58.0%   | 57.6%   | 56.6%   | 56.7%   |
| Pepperell    | 24.2%   | 21.5%   | 21.0%   | 20.9%   | 16.8%   |
| Tewksbury    | 15.0%   | 13.6%   | 14.3%   | 14.9%   | 16.5%   |
| Tyngsborough | 13.8%   | 13.8%   | 16.3%   | 17.6%   | 14.2%   |
| Westford     | 8.2%    | 10.9%   | 13.4%   | 11.5%   | 11.7%   |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25032

## Housing: Permits

FIGURE 7: UNITS PERMITTED IN GREATER LOWELL BY BUILDING SIZE, 3-MONTH ROLLING AVERAGE, 2021-2023

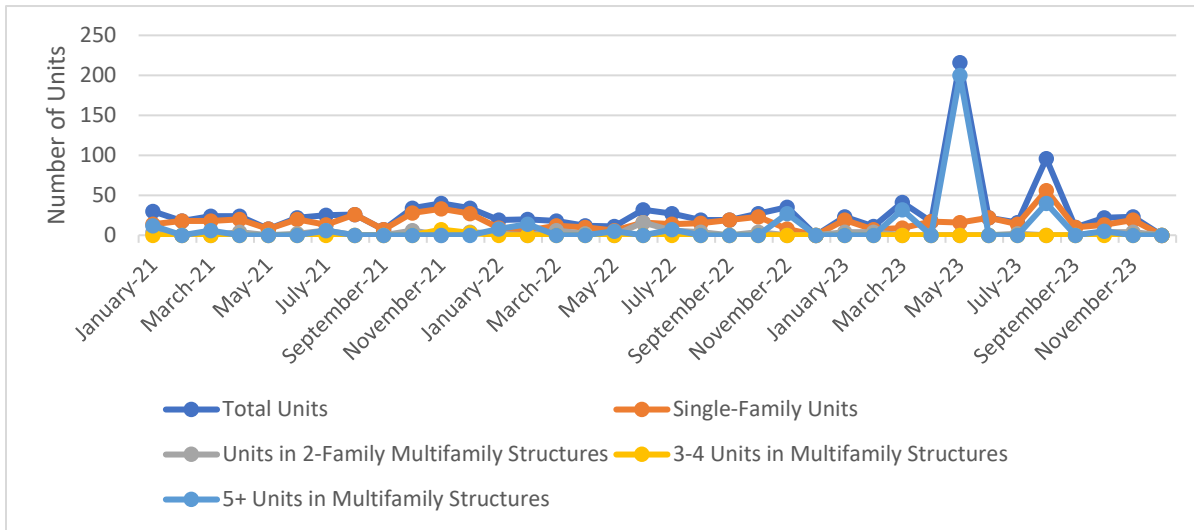
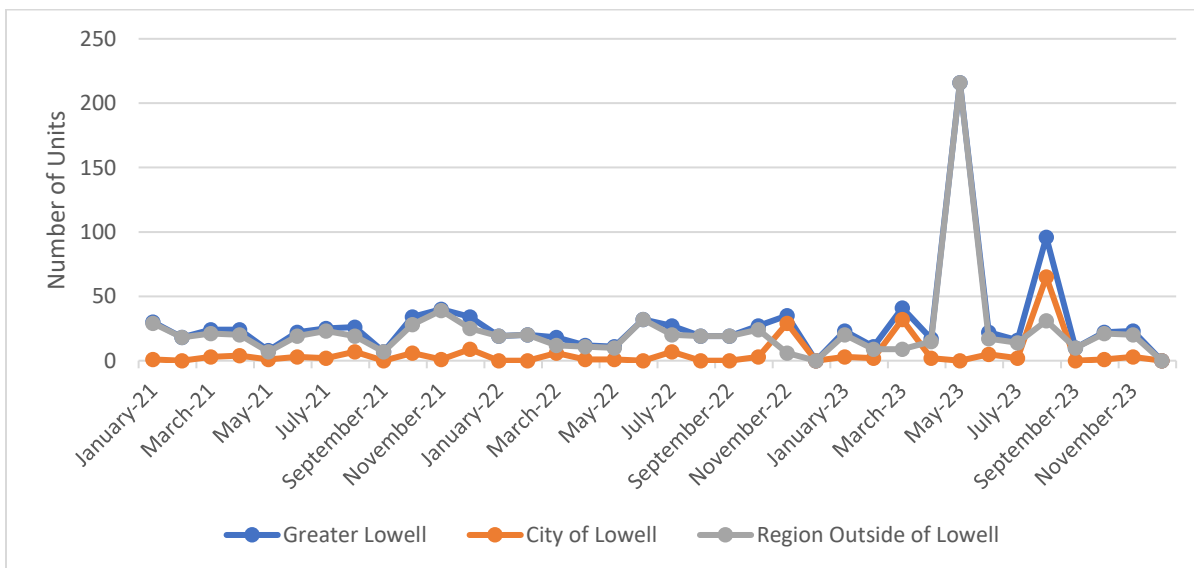


FIGURE 8: UNITS PERMITTED BY REGION, 3-MONTH ROLLING AVERAGE, 2021-2022



Source: U.S. Census Bureau, Building Permits Survey, via Department of Housing and Urban Development (HUD) State of the Cities Data Systems (SOCDS) Database. <https://socds.huduser.gov/permits/> Accessed January 20, 2023.

Housing permit data is collected in the U.S. Census Bureau's Building Permits Survey at the permit-issuing jurisdiction level. Final monthly data is published in May of the following calendar year annually. Preliminary data was used when final data was not available for the 2023 calendar year. Because of differences in the way jurisdictions report permit data, it may not capture or classify all permits accurately. Therefore, this data should be considered as estimates only. However, it provides a much more recent estimate of housing production than the ACS data used in previous sections.

Permitting activity picked up in 2023, especially in the region outside of Lowell. Tewksbury permitted development of a 200-unit development, causing a spike in units permitted in May of 2023. The City of Lowell's permitting activity has been comparatively low. A preference for single-family units over multi-family units remains apparent throughout the entire region.

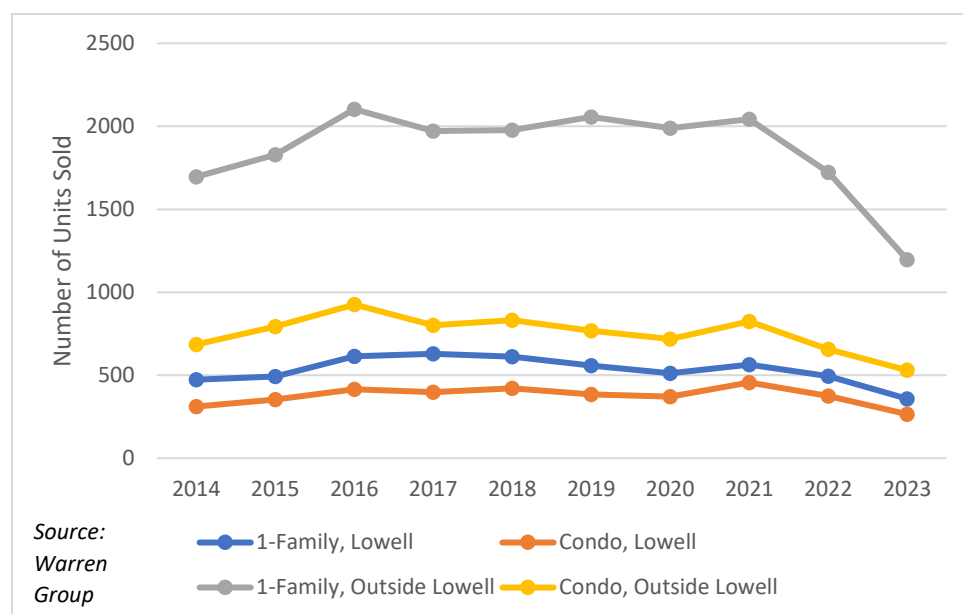
Notably, many units permitted in previous years are under construction now. In addition, several large projects are currently in the permitting process.

TABLE 16: UNITS PERMITTED BY REGION BY BUILDING SIZE, 2021-2023\*

| Year | Period | Greater Lowell |                        |                           |                              |                               |                               | City of Lowell |                                   |                                      |   |                                     |                               | Region Outside Lowell |                                   |                                      |   |                                     |                               |
|------|--------|----------------|------------------------|---------------------------|------------------------------|-------------------------------|-------------------------------|----------------|-----------------------------------|--------------------------------------|---|-------------------------------------|-------------------------------|-----------------------|-----------------------------------|--------------------------------------|---|-------------------------------------|-------------------------------|
|      |        | Total Units    | Units in Single-Family | Units in All Multi-Family | Units in 2-unit Multi-Family | Units in 3- and 4-unit Multi- | Units in 5+ Unit Multi-Family | Total Units    | Units in Single-Family Structures | Units in All Multi-Family Structures | Units in 2-unit Multi-Family Structures | Units in 3- and 4-unit Multi-Family | Units in 5+ Unit Multi-Family | Total Units           | Units in Single-Family Structures | Units in All Multi-Family Structures | Units in 2-unit Multi-Family Structures | Units in 3- and 4-unit Multi-Family | Units in 5+ Unit Multi-Family |
| 2021 | Jan    | 30             | 14                     | 16                        | 4                            | 0                             | 12                            | 1              | 1                                 | 0                                    | 0                                       | 0                                   | 0                             | 29                    | 13                                | 16                                   | 4                                       | 0                                   | 12                            |
| 2021 | Feb    | 18             | 18                     | 0                         | 0                            | 0                             | 0                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 18                    | 18                                | 0                                    | 0                                       | 0                                   | 0                             |
| 2021 | Mar    | 24             | 18                     | 6                         | 0                            | 0                             | 6                             | 3              | 3                                 | 0                                    | 0                                       | 0                                   | 0                             | 21                    | 15                                | 6                                    | 0                                       | 0                                   | 6                             |
| 2021 | Apr    | 24             | 20                     | 4                         | 4                            | 0                             | 0                             | 4              | 4                                 | 0                                    | 0                                       | 0                                   | 0                             | 20                    | 16                                | 4                                    | 4                                       | 0                                   | 0                             |
| 2021 | May    | 8              | 8                      | 0                         | 0                            | 0                             | 0                             | 1              | 1                                 | 0                                    | 0                                       | 0                                   | 0                             | 7                     | 7                                 | 0                                    | 0                                       | 0                                   | 0                             |
| 2021 | Jun    | 22             | 20                     | 2                         | 2                            | 0                             | 0                             | 3              | 3                                 | 0                                    | 0                                       | 0                                   | 0                             | 19                    | 17                                | 2                                    | 2                                       | 0                                   | 0                             |
| 2021 | Jul    | 25             | 13                     | 12                        | 6                            | 0                             | 6                             | 2              | 2                                 | 0                                    | 0                                       | 0                                   | 0                             | 23                    | 11                                | 12                                   | 6                                       | 0                                   | 6                             |
| 2021 | Aug    | 26             | 26                     | 0                         | 0                            | 0                             | 0                             | 7              | 7                                 | 0                                    | 0                                       | 0                                   | 0                             | 19                    | 19                                | 0                                    | 0                                       | 0                                   | 0                             |
| 2021 | Sep    | 7              | 7                      | 0                         | 0                            | 0                             | 0                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 7                     | 7                                 | 0                                    | 0                                       | 0                                   | 0                             |
| 2021 | Oct    | 34             | 28                     | 6                         | 6                            | 0                             | 0                             | 6              | 0                                 | 6                                    | 6                                       | 0                                   | 0                             | 28                    | 28                                | 0                                    | 0                                       | 0                                   | 0                             |
| 2021 | Nov    | 40             | 33                     | 7                         | 0                            | 7                             | 0                             | 1              | 1                                 | 0                                    | 0                                       | 0                                   | 0                             | 39                    | 32                                | 7                                    | 0                                       | 7                                   | 0                             |
| 2021 | Dec    | 34             | 27                     | 7                         | 4                            | 3                             | 0                             | 9              | 7                                 | 2                                    | 2                                       | 0                                   | 0                             | 25                    | 20                                | 5                                    | 2                                       | 3                                   | 0                             |
| 2022 | Jan    | 19             | 9                      | 10                        | 2                            | 0                             | 8                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 19                    | 9                                 | 10                                   | 2                                       | 0                                   | 8                             |
| 2022 | Feb    | 20             | 6                      | 14                        | 0                            | 0                             | 14                            | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 20                    | 6                                 | 14                                   | 0                                       | 0                                   | 14                            |
| 2022 | Mar    | 18             | 12                     | 6                         | 6                            | 0                             | 0                             | 6              | 0                                 | 6                                    | 6                                       | 0                                   | 0                             | 12                    | 12                                | 0                                    | 0                                       | 0                                   | 0                             |
| 2022 | Apr    | 12             | 10                     | 2                         | 2                            | 0                             | 0                             | 1              | 1                                 | 0                                    | 0                                       | 0                                   | 0                             | 11                    | 9                                 | 2                                    | 2                                       | 0                                   | 0                             |
| 2022 | May    | 11             | 6                      | 5                         | 0                            | 0                             | 5                             | 1              | 1                                 | 0                                    | 0                                       | 0                                   | 0                             | 10                    | 5                                 | 5                                    | 0                                       | 0                                   | 5                             |
| 2022 | Jun    | 32             | 16                     | 16                        | 16                           | 0                             | 0                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 32                    | 16                                | 16                                   | 16                                      | 0                                   | 0                             |
| 2022 | Jul    | 27             | 14                     | 13                        | 6                            | 0                             | 7                             | 7              | 0                                 | 7                                    | 0                                       | 0                                   | 7                             | 20                    | 14                                | 6                                    | 6                                       | 0                                   | 0                             |
| 2022 | Aug    | 19             | 15                     | 4                         | 4                            | 0                             | 0                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 19                    | 15                                | 4                                    | 4                                       | 0                                   | 0                             |
| 2022 | Sep    | 19             | 19                     | 0                         | 0                            | 0                             | 0                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 19                    | 19                                | 0                                    | 0                                       | 0                                   | 0                             |
| 2022 | Oct    | 27             | 23                     | 4                         | 4                            | 0                             | 0                             | 3              | 3                                 | 0                                    | 0                                       | 0                                   | 0                             | 24                    | 20                                | 4                                    | 4                                       | 0                                   | 0                             |
| 2022 | Nov    | 35             | 8                      | 27                        | 0                            | 0                             | 27                            | 29             | 2                                 | 27                                   | 0                                       | 0                                   | 27                            | 6                     | 6                                 | 0                                    | 0                                       | 0                                   | 0                             |
| 2022 | Dec    | 0              | 0                      | 0                         | 0                            | 0                             | 0                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 0                     | 0                                 | 0                                    | 0                                       | 0                                   | 0                             |
| 2023 | Jan    | 23             | 19                     | 4                         | 4                            | 0                             | 0                             | 3              | 3                                 | 0                                    | 0                                       | 0                                   | 0                             | 20                    | 16                                | 4                                    | 4                                       | 0                                   | 0                             |
| 2023 | Feb    | 11             | 7                      | 4                         | 4                            | 0                             | 0                             | 2              | 2                                 | 0                                    | 0                                       | 0                                   | 0                             | 9                     | 5                                 | 4                                    | 4                                       | 0                                   | 0                             |
| 2023 | Mar    | 41             | 9                      | 32                        | 0                            | 0                             | 32                            | 32             | 0                                 | 32                                   | 0                                       | 0                                   | 32                            | 9                     | 9                                 | 0                                    | 0                                       | 0                                   | 0                             |
| 2023 | Apr    | 17             | 17                     | 0                         | 0                            | 0                             | 0                             | 2              | 2                                 | 0                                    | 0                                       | 0                                   | 0                             | 15                    | 15                                | 0                                    | 0                                       | 0                                   | 0                             |
| 2023 | May    | 216            | 16                     | 200                       | 0                            | 0                             | 200                           | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 216                   | 16                                | 200                                  | 0                                       | 0                                   | 200                           |
| 2023 | Jun    | 22             | 22                     | 0                         | 0                            | 0                             | 0                             | 5              | 5                                 | 0                                    | 0                                       | 0                                   | 0                             | 17                    | 17                                | 0                                    | 0                                       | 0                                   | 0                             |
| 2023 | Jul    | 16             | 14                     | 2                         | 2                            | 0                             | 0                             | 2              | 2                                 | 0                                    | 0                                       | 0                                   | 0                             | 14                    | 12                                | 2                                    | 2                                       | 0                                   | 0                             |
| 2023 | Aug    | 96             | 56                     | 40                        | 0                            | 0                             | 40                            | 65             | 33                                | 32                                   | 0                                       | 0                                   | 32                            | 31                    | 23                                | 8                                    | 0                                       | 0                                   | 8                             |
| 2023 | Sep    | 10             | 10                     | 0                         | 0                            | 0                             | 0                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 10                    | 10                                | 0                                    | 0                                       | 0                                   | 0                             |
| 2023 | Oct    | 22             | 13                     | 9                         | 4                            | 0                             | 5                             | 1              | 1                                 | 0                                    | 0                                       | 0                                   | 0                             | 21                    | 12                                | 9                                    | 4                                       | 0                                   | 5                             |
| 2023 | Nov    | 23             | 19                     | 4                         | 4                            | 0                             | 0                             | 3              | 3                                 | 0                                    | 0                                       | 0                                   | 0                             | 20                    | 16                                | 4                                    | 4                                       | 0                                   | 0                             |
| 2023 | Dec    | 0              | 0                      | 0                         | 0                            | 0                             | 0                             | 0              | 0                                 | 0                                    | 0                                       | 0                                   | 0                             | 0                     | 0                                 | 0                                    | 0                                       | 0                                   | 0                             |

## Housing: Home Sales

FIGURE 9: NUMBER OF SALES, GREATER LOWELL



Home sales data from Warren Group is among the most current data available in the CEDS report. This shows a region-wide sales decrease of all property types. Within Greater Lowell, all types of home sales decreased by 26%.

In the region outside of Lowell, single-family home sales dropped 24.7%, while condo sales dropped 19%. The City of Lowell saw decreases in single-family home and condo sales by 27.5% and 29% respectively.

The combination of a constrained supply pushing up prices and higher interest rates likely are causing this sales slump, but it represents significant headwinds in achieving the CEDS goal of having appropriate housing throughout the region to ensure that businesses can expand and relocate to the region with the assurance that their workforce will be able to own, lease, or rent affordable, quality housing.

TABLE 17: REAL ESTATE SALES IN THE REGION, 2014 TO 2023

| Year | Period    | Greater Lowell |       |           | City of Lowell |       |           | Region Outside Lowell |       |           |
|------|-----------|----------------|-------|-----------|----------------|-------|-----------|-----------------------|-------|-----------|
|      |           | Single Family  | Condo | All Types | Single Family  | Condo | All Types | Single Family         | Condo | All Types |
| 2014 | Jan - Dec | 2170           | 997   | 3881      | 474            | 311   | 1103      | 1696                  | 686   | 2778      |
| 2015 | Jan - Dec | 2321           | 1146  | 4201      | 493            | 353   | 1192      | 1828                  | 793   | 3009      |
| 2016 | Jan - Dec | 2717           | 1341  | 4896      | 614            | 415   | 1423      | 2103                  | 926   | 3473      |
| 2017 | Jan - Dec | 2600           | 1198  | 4590      | 629            | 397   | 1380      | 1971                  | 801   | 3210      |
| 2018 | Jan - Dec | 2590           | 1253  | 4672      | 612            | 421   | 1389      | 1978                  | 832   | 3283      |
| 2019 | Jan - Dec | 2615           | 1153  | 4566      | 558            | 385   | 1331      | 2057                  | 768   | 3235      |
| 2020 | Jan - Dec | 2501           | 1088  | 4339      | 512            | 370   | 1225      | 1989                  | 718   | 3114      |
| 2021 | Jan - Dec | 2607           | 1280  | 4766      | 564            | 456   | 1447      | 2043                  | 824   | 3319      |
| 2022 | Jan - Dec | 2217           | 1030  | 3984      | 494            | 374   | 1197      | 1723                  | 656   | 2787      |
| 2023 | Jan - Dec | 1555           | 795   | 2940      | 358            | 265   | 901       | 1197                  | 530   | 2039      |

Source: Warren Group

## Housing: Median Home Sales Prices

FIGURE 11: SINGLE-FAMILY HOME MEDIAN SALES PRICE BY TOWN

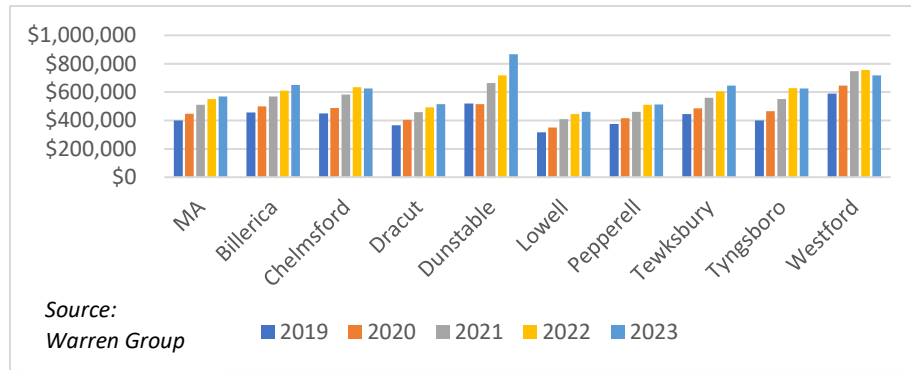
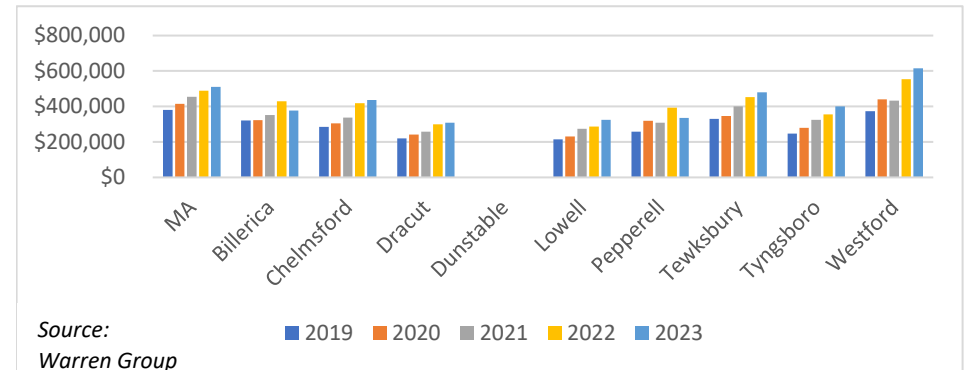


FIGURE 10: CONDO HOME MEDIAN SALES PRICE BY TOWN



Median condo home sales prices increased everywhere except for Billerica and Pepperell. The latter saw the largest decrease in condo sales at 14.6%. The City of Lowell saw the largest price increase in condos at 13%.

Median single-family home prices increased in most municipalities with the exceptions of Chelmsford, Tyngsborough, and Westford, with Westford seeing the largest drop in median home prices at 5.2%. Dunstable saw the largest increase in single-family home median price at 20.4%

TABLE 18: SINGLE FAMILY HOME MEDIAN SALES PRICE BY COMMUNITY AND STATE, 2019 TO 2023

| Year | MA        | Billerica | Chelmsford | Dracut    | Dunstable | Lowell    | Pepperell | Tewksbury | Tyngsboro | Westford  |
|------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2019 | \$400,000 | \$457,000 | \$450,000  | \$365,000 | \$519,000 | \$316,375 | \$375,000 | \$445,000 | \$400,000 | \$589,500 |
| 2020 | \$447,000 | \$499,900 | \$487,500  | \$405,000 | \$515,000 | \$350,000 | \$415,000 | \$486,050 | \$465,000 | \$646,000 |
| 2021 | \$510,000 | \$570,000 | \$582,550  | \$458,000 | \$665,000 | \$410,000 | \$460,000 | \$560,000 | \$550,000 | \$747,500 |
| 2022 | \$550,000 | \$610,000 | \$635,000  | \$491,750 | \$719,000 | \$445,000 | \$510,000 | \$605,000 | \$627,500 | \$757,500 |
| 2023 | \$570,000 | \$650,000 | \$625,000  | \$515,000 | \$866,000 | \$460,000 | \$513,000 | \$644,900 | \$625,000 | \$718,000 |

Source: Warren Group

TABLE 19: CONDO HOME MEDIAN SALES PRICE, BY COMMUNITY AND STATE, 2019 TO 2023

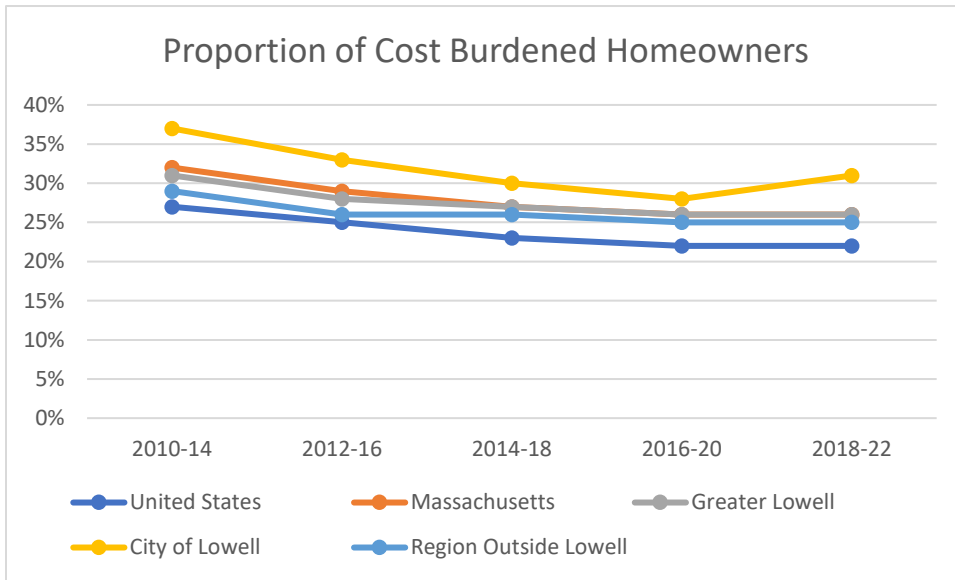
| Year | MA        | Billerica | Chelmsford | Dracut    | Dunstable | Lowell    | Pepperell | Tewksbury | Tyngsboro | Westford  |
|------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2019 | \$380,000 | \$320,500 | \$285,000  | \$220,000 | N/A       | \$215,000 | \$258,625 | \$330,000 | \$247,450 | \$373,500 |
| 2020 | \$415,000 | \$323,750 | \$305,250  | \$241,000 | N/A       | \$230,000 | \$320,000 | \$347,000 | \$279,000 | \$440,000 |
| 2021 | \$455,000 | \$352,500 | \$337,375  | \$258,500 | N/A       | \$275,000 | \$308,250 | \$400,000 | \$325,000 | \$433,000 |
| 2022 | \$488,830 | \$430,000 | \$418,000  | \$300,000 | N/A       | \$287,500 | \$392,500 | \$453,250 | \$355,000 | \$554,000 |
| 2023 | \$510,000 | \$377,500 | \$437,450  | \$308,500 | N/A       | \$325,000 | \$335,000 | \$479,561 | \$400,000 | \$615,000 |

Source: Warren Group



## Housing: Housing Affordability, Owners

FIGURE 12: PROPORTION OF HOMEOWNER HHS WHO ARE COST-BURDENED, 2010-14 TO 2018-22



Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25091.

TABLE 20: HOMEOWNER HOUSEHOLDS WHO ARE COST BURDENED IN THE REGION, STATE, AND NATION, 2010-14 TO 2018-22

|                       | 2010-14 | 2012-16 | 2014-18 | 2016-20 | 2018-22 |
|-----------------------|---------|---------|---------|---------|---------|
| United States         | 27%     | 25%     | 23%     | 22%     | 22%     |
| Massachusetts         | 32%     | 29%     | 27%     | 26%     | 26%     |
| Greater Lowell        | 31%     | 28%     | 27%     | 26%     | 26%     |
| City of Lowell        | 37%     | 33%     | 30%     | 28%     | 31%     |
| Region Outside Lowell | 29%     | 26%     | 26%     | 25%     | 25%     |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25091.

Please note the proportion of homeowner and renter households who are cost burdened charts utilize ACS data, so they do not reflect any impacts from COVID-19 or recent actions undertaken by the region.

The proportion of homeowners who are at moderately or severely burdened has been steadily declining in both the nation and the region. Although the proportion of homeowner households who were cost-burdened in the United States and Massachusetts stayed close to the same (23% to 22% and 27% to 26% respectively), the City of Lowell, had an increase in the proportion of cost burdened owner households between 2016-20 and 2018-22 (28% to 31%).

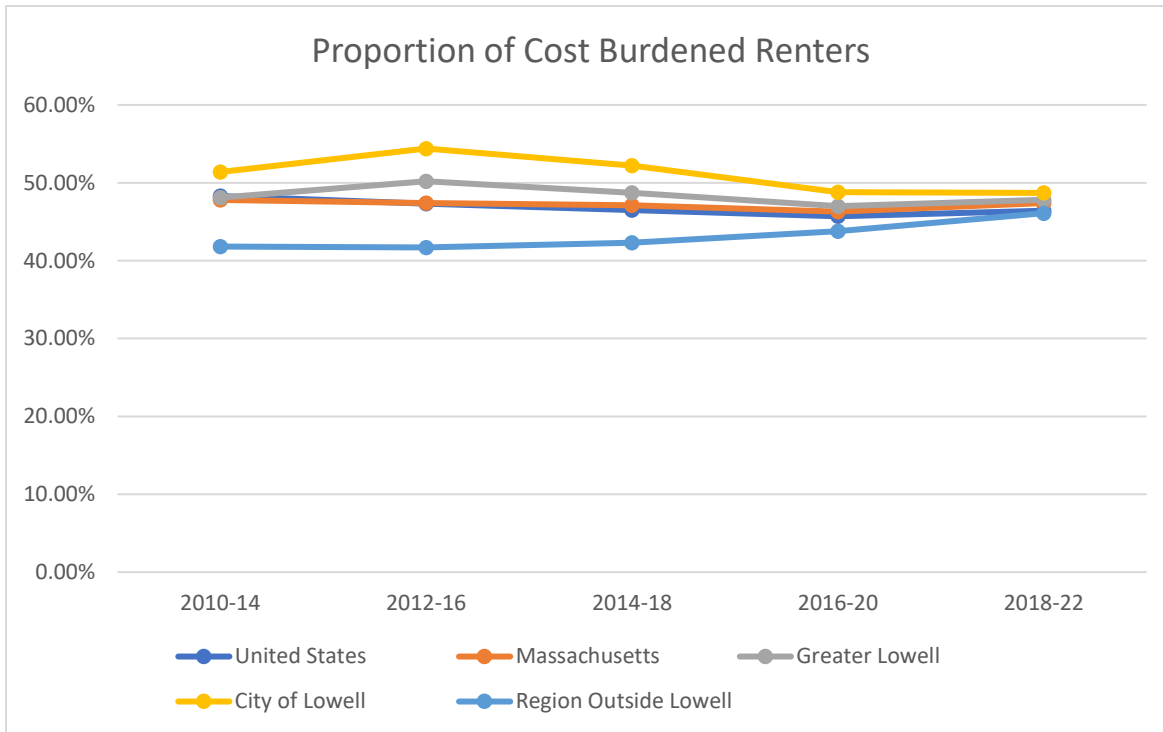
This trend among homeowners could also reflect that people with lower incomes are more often renting. Rental household burden has a more mixed trend. However, in the last ACS, the proportion of cost-burdened Greater Lowell renter households decreased, unlike Greater Lowell owner households (see next page).

### DEFINING COST BURDENED

Public officials generally agree to a definition of affordable housing as that which costs no more than 30% of a household's total annual income. Households that spend between 30% and 50% of their annual incomes on housing and related costs (including basic utilities and fuels) are said to be "moderately" burdened while those spending more than half of their incomes are considered "severely" burdened.

## Housing: Housing Affordability, Renters

FIGURE 13: PROPORTION OF RENTER HHS WHO ARE COST-BURDENED, 2010-14 TO 2018-22



The proportion of renters that are burdened are comparable to the U.S. However, proportions of cost burdened renters are either remaining steady or increasing throughout the region. The Region outside of Lowell has seen the largest increase in cost burdened renters. However, the City of Lowell has the highest proportion of cost burdened renters, likely due to its lower incomes.

Please note the proportion of homeowner and renter households who are cost burdened charts utilize ACS data, so they do not reflect any impacts from COVID-19 or recent actions undertaken by the region.

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25070.

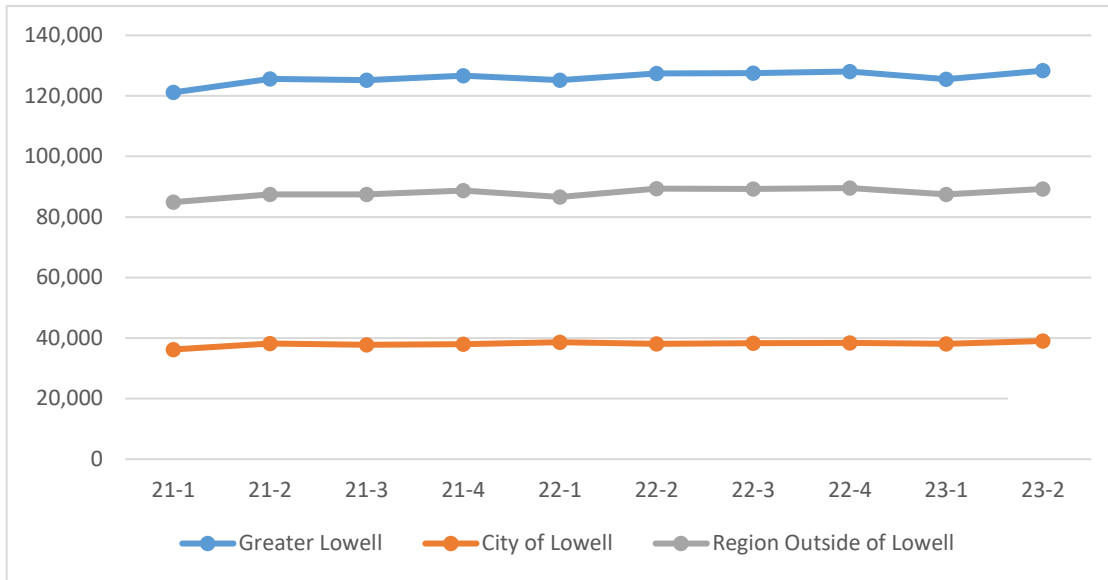
TABLE 21: RENTER HOUSEHOLDS WHO ARE COST BURDENED IN THE REGION, STATE, AND NATION, 2010-14 TO 2018-22

|                       | 2010-14 | 2012-16 | 2014-18 | 2016-20 | 2018-22 |
|-----------------------|---------|---------|---------|---------|---------|
| United States         | 48.3%   | 47.3%   | 46.5%   | 45.7%   | 46.4%   |
| Massachusetts         | 47.8%   | 47.4%   | 47.1%   | 46.3%   | 47.4%   |
| Greater Lowell        | 48.1%   | 50.2%   | 48.7%   | 47.0%   | 47.8%   |
| City of Lowell        | 51.4%   | 54.4%   | 52.2%   | 48.8%   | 48.7%   |
| Region Outside Lowell | 41.8%   | 41.7%   | 42.3%   | 43.8%   | 46.1%   |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B25070.

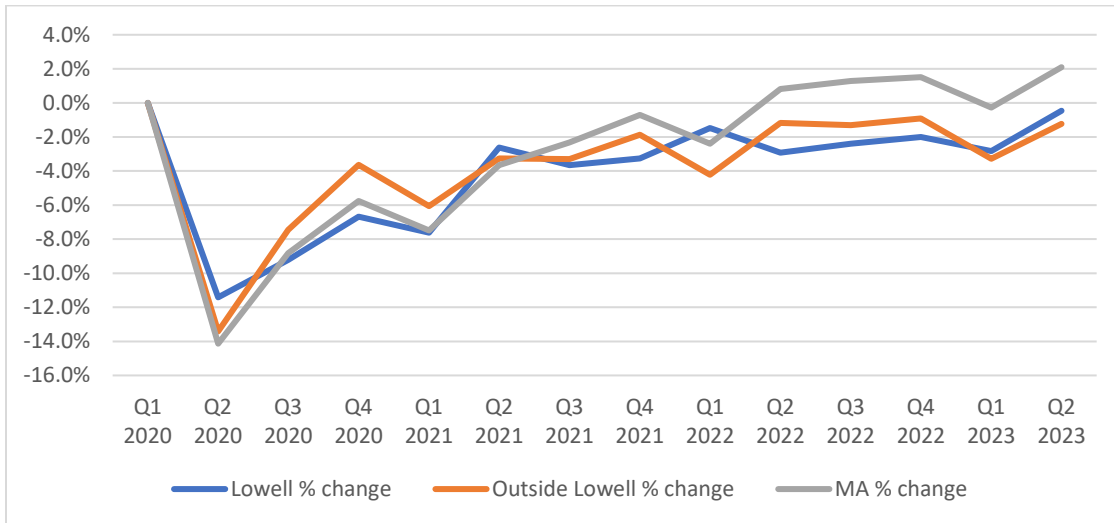
# Commerce and Industry: Employment over Time

**FIGURE 14: AVERAGE MONTHLY EMPLOYMENT, 2020 Q1 – 2023 Q2**



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

**FIGURE 15: CHANGE FROM 2020 Q1, # EMPLOYEES, 2020 Q1 - 2023 Q2**



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages. The chart above shows how each region changed as a proportion of 2020 Q1.

The data reflected in these charts reflects the number of establishments, employees, and weekly wages in firms located in Greater Lowell. It includes both public and private ownership. It is collected quarterly with most recent data from 2023 Q2; therefore, impacts of COVID-19 and any actions Greater Lowell took during the CEDS period may be represented.

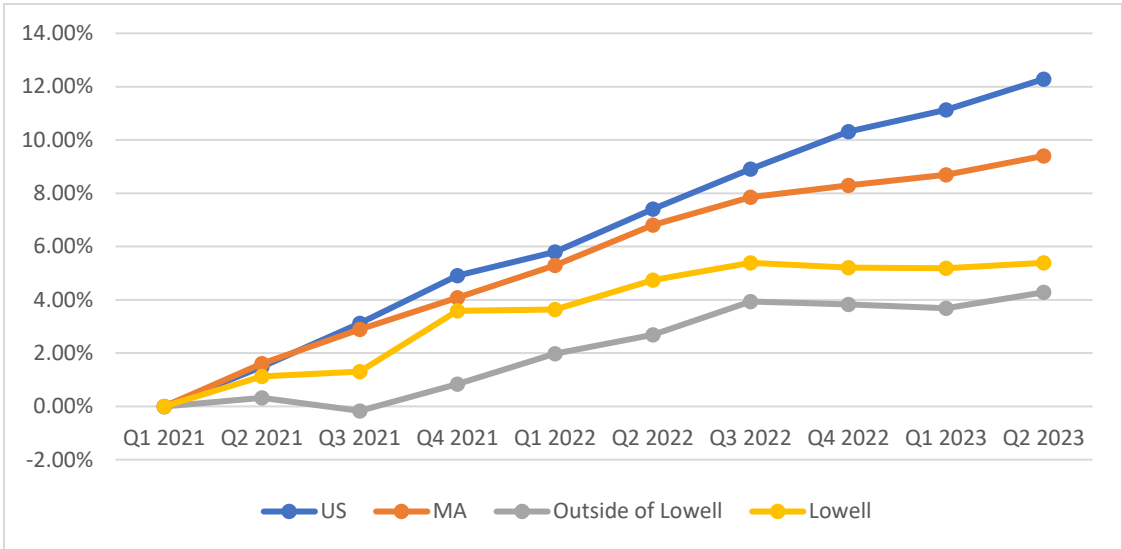
Employment in the region has yet to completely recover to pre-pandemic levels both in Lowell and surrounding areas.

Although the dip in number of employees within the City of Lowell was not as severe as the rest of the region, its overall recovery has been slower.

Full tables of employment, establishments, and wages from 2020 Q1 through 2023 Q2 are on the following pages.

# Commerce and Industry: Establishments and Wage over Time

**FIGURE 16: NUMBER OF ESTABLISHMENTS CHANGE 2021 Q1 – 2023 Q2**



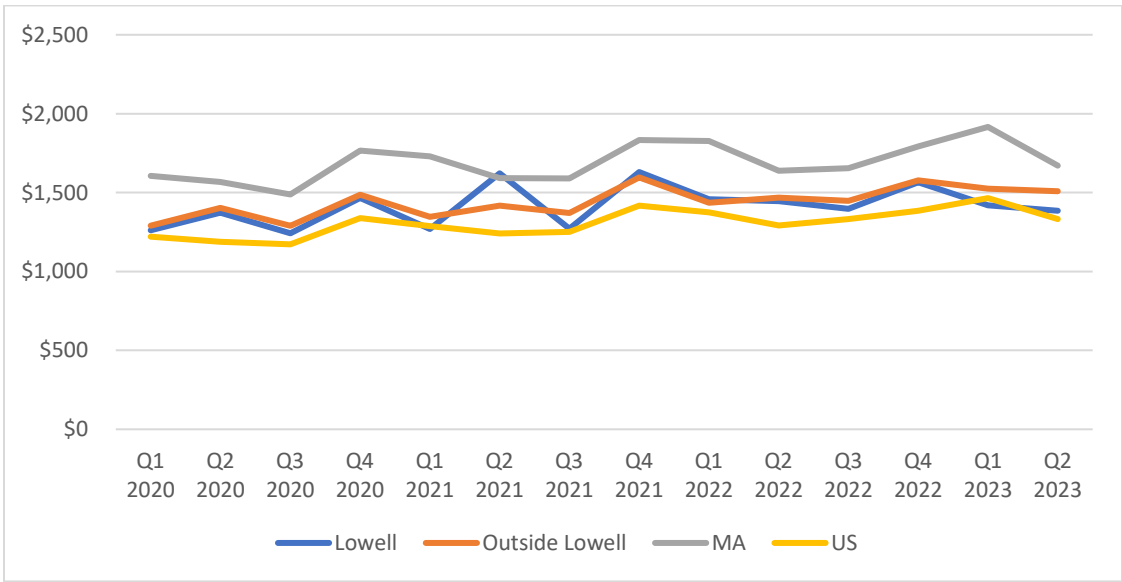
Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

Both the City of Lowell and the region outside of Lowell saw significant increases in business establishments from Q3 2021 to Q3 2022, likely somewhat due to the opening up of public spaces with the availability of the COVID-19 vaccine.

Average weekly wages have come out higher outside of Lowell since the beginning of 2023. Wages in the City of Lowell peaked in Q2 2021 and have yet to reach that level since. Wages for Greater Lowell and the Commonwealth of Massachusetts remain higher than those of the US as a whole.

Full tables of employment, establishments, and wages from 2019 Q1 through 2021 Q2 are on the following pages.

**FIGURE 17: AVERAGE WEEKLY WAGES, 2020 Q1 – 2023 Q2**



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

## Commerce and Industry: Establishments and Employment by Industry

TABLE 22: ESTABLISHMENTS, EMPLOYEES, AND WEEKLY WAGE GREATER LOWELL COMPARISONS

|                                     | Number of Establishments (Q1) |               |             |               |              | Number of Employees (Q1) |                |             |                |              | Average Weekly Wage (Q1) |                |              |                |             |
|-------------------------------------|-------------------------------|---------------|-------------|---------------|--------------|--------------------------|----------------|-------------|----------------|--------------|--------------------------|----------------|--------------|----------------|-------------|
|                                     | 21                            | 22            | Change      | 23            | Change       | 21                       | 22             | Change      | 23             | Change       | 21                       | 22             | Change       | 23             | Change      |
| <b>Goods-Producing</b>              | <b>1,495</b>                  | <b>1,519</b>  | <b>1.6%</b> | <b>1,510</b>  | <b>-0.5%</b> | <b>25,880</b>            | <b>26,496</b>  | <b>2.4%</b> | <b>27,273</b>  | <b>2.9%</b>  | <b>\$2,129</b>           | <b>\$2,178</b> | <b>2.3%</b>  | <b>\$2,217</b> | <b>1.8%</b> |
| Natural Resources and Mining        | 9                             | 18            | 100.0%      | 14            | -22.2%       | 59                       | 207            | 250.8%      | 211            | 1.9%         | \$783                    | \$771          | -1.6%        | \$844          | 9.5%        |
| Construction                        | 1,119                         | 1,140         | 1.9%        | 1,132         | -0.7%        | 7,724                    | 7,741          | 0.2%        | 7,869          | 1.7%         | \$1,398                  | \$1,516        | 8.5%         | \$1,538        | 1.5%        |
| Manufacturing                       | 325                           | 355           | 9.2%        | 355           | 0%           | 14,726                   | 18,466         | 25.4%       | 19,103         | 3.5%         | \$2,270                  | \$2,472        | 8.9%         | \$2,515        | 1.7%        |
| <b>Service-Providing</b>            | <b>8,498</b>                  | <b>8,738</b>  | <b>2.8%</b> | <b>8,911</b>  | <b>2%</b>    | <b>95,271</b>            | <b>98,734</b>  | <b>3.6%</b> | <b>98,285</b>  | <b>-0.5%</b> | <b>\$1,339</b>           | <b>\$1,473</b> | <b>10.1%</b> | <b>\$1,516</b> | <b>2.9%</b> |
| Trade, Transportation and Utilities | 1,271                         | 1,251         | -1.6%       | 1,253         | 0.2%         | 19,668                   | 20,966         | 6.6%        | 19,982         | -5.7%        | \$986                    | \$1,300        | 31.9%        | \$1,175        | -9.6%       |
| Information                         | 146                           | 171           | 17.1%       | 185           | 8.2%         | 2,956                    | 3,126          | 5.8%        | 2,962          | -5.2%        | \$2,501                  | \$3,080        | 23.2%        | \$2,765        | -10.2%      |
| Financial Activities                | 462                           | 469           | 1.5%        | 477           | 2%           | 3,530                    | 3,336          | -5.5%       | 3,308          | -0.8%        | \$1,796                  | \$1,870        | 4.1%         | \$2,074        | 10.9%       |
| Professional and Business Services  | 1,448                         | 1,521         | 5.0%        | 1,571         | 3.3%         | 23,422                   | 22,846         | -2.5%       | 21,866         | -4.3%        | \$2,235                  | \$2,381        | 6.5%         | \$2,591        | 8.8%        |
| Education and Health Services       | 3,633                         | 3,773         | 3.9%        | 3,866         | 2.5%         | 30,047                   | 31,191         | 3.8%        | 32,358         | 3.7%         | \$993                    | \$1,099        | 10.6%        | \$1,187        | 8%          |
| Leisure and Hospitality             | 689                           | 695           | 0.9%        | 702           | 1%           | 8,402                    | 9,950          | 18.4%       | 10,249         | 3%           | \$452                    | \$481          | 6.4%         | \$533          | 10.8%       |
| Other Services                      | 713                           | 718           | 0.7%        | 699           | -2.6%        | 3,315                    | 3,436          | 3.7%        | 3,474          | 1.1%         | \$766                    | \$811          | 5.9%         | \$909          | 12.1%       |
| Public Administration               | 93                            | 92            | -1.1%       | 91            | 1.1%         | 3,163                    | 3,200          | 1.2%        | 3,375          | 5.5%         | \$1,505                  | \$1,584        | 5.3%         | \$1,707        | 7.8%        |
| <b>Total, All Industries</b>        | <b>9,993</b>                  | <b>10,257</b> | <b>2.6%</b> | <b>10,421</b> | <b>16%</b>   | <b>121,150</b>           | <b>125,232</b> | <b>3.4%</b> | <b>125,557</b> | <b>0.3%</b>  | <b>\$1,507</b>           | <b>\$1,622</b> | <b>7.6%</b>  | <b>\$1,668</b> | <b>2.8%</b> |

Table 22's breakdown of employees and average wages by industries reveals that changes in employment and wages aren't evenly distributed. Natural resources and mining saw a 22.2% decrease in number of establishments, while the Information industry saw an 8.2% increase in number of establishments. Though the number of establishments in the Information industry increased, its overall number of employees saw a 5.2% decrease. Professional and business services saw a similar trend of increased number of establishments (3.3%), but a decrease in number of employees (4.3%). Public administration saw the most growth in number of employees, followed by Education and Health Services, and Manufacturing. Trade, Transportation, and Utilities saw the largest decrease in number of employees (5.7%).

Wage growth between 2022 and 2023 was scattered amongst many industries, but most significantly in Other Services (12.1%), Financial Activities (10.9%), Leisure and Hospitality (10.8%), and Natural Resources and Mining (9.5%). Professional and Business Services, Education and Health Services, and Public Administration saw decent increases in wage growth (8.8%, 8%, and 7.8% respectively). Information and Trade, Transportation and Utilities saw the largest decreases in wages (10.2% and 9.6% respectively).

TABLE 23: AVERAGE MONTHLY EMPLOYMENT IN THE REGION, 2021 Q1 – 2023 Q2

|                              |                                     | 21-1           | 21-2           | 21-3           | 21-4           | 22-1           | 22-2           | 22-3           | 22-4           | 23-1           | 23-2    |
|------------------------------|-------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------|
| Greater Lowell               | Goods-Producing                     | 25,880         | 26,955         | 27,475         | 27,099         | 26,496         | 27,858         | 28,442         | 28,034         | 27,273         | 27,971  |
|                              | Natural Resources and Mining        | 59             | 190            | 247            | 236            | 207            | 243            | 311            | 290            | 211            | 196     |
|                              | Construction                        | 7,724          | 8,408          | 8,767          | 8,597          | 7,741          | 8,627          | 8,838          | 8,679          | 7,869          | 8,457   |
|                              | Manufacturing                       | 14,726         | 15,046         | 15,162         | 18,199         | 18,466         | 18,875         | 19,182         | 18,969         | 19,103         | 19,162  |
|                              | Service-Providing                   | 95,271         | 98,683         | 97,732         | 99,544         | 98,734         | 99,552         | 99,050         | 99,969         | 98,285         | 100,362 |
|                              | Trade, Transportation and Utilities | 19,668         | 19,908         | 19,701         | 20,714         | 20,966         | 19,564         | 19,434         | 20,105         | 19,982         | 19,952  |
|                              | Information                         | 2,956          | 3,061          | 2,953          | 3,100          | 3,126          | 3,133          | 3,023          | 2,962          | 2,962          | 2,803   |
|                              | Financial Activities                | 3,530          | 3,418          | 3,383          | 3,361          | 3,336          | 3,382          | 3,296          | 3,300          | 3,308          | 3,374   |
|                              | Professional and Business Services  | 23,422         | 23,778         | 23,593         | 23,525         | 22,846         | 23,491         | 23,778         | 23,472         | 21,866         | 22,131  |
|                              | Education and Health Services       | 30,047         | 31,468         | 29,977         | 31,361         | 31,191         | 31,858         | 30,700         | 32,285         | 32,358         | 32,970  |
|                              | Leisure and Hospitality             | 8,402          | 9,636          | 10,610         | 10,026         | 9,950          | 10,760         | 11,261         | 10,314         | 10,249         | 11,280  |
|                              | Other Services                      | 3,315          | 3,445          | 3,508          | 3,521          | 3,436          | 3,552          | 3,587          | 3,434          | 3,474          | 3,592   |
|                              | Public Administration               | 3,163          | 3,160          | 3,174          | 3,232          | 3,200          | 3,196          | 3,277          | 3,366          | 3,375          | 3,525   |
| <b>Total, All Industries</b> | <b>121,150</b>                      | <b>125,639</b> | <b>125,205</b> | <b>126,644</b> | <b>125,232</b> | <b>127,410</b> | <b>127,493</b> | <b>128,004</b> | <b>125,557</b> | <b>128,334</b> |         |
| City of Lowell               | Goods-Producing                     | 3,862          | 3,970          | 3,971          | 4,035          | 3,978          | 4,149          | 4,197          | 4,130          | 3,909          | 4,033   |
|                              | Natural Resources and Mining        | 0              | 0              | 56             | 62             | 65             | 78             | 85             | 95             | 66             | 0       |
|                              | Construction                        | 917            | 980            | 1,056          | 1,024          | 938            | 998            | 1,003          | 940            | 767            | 835     |
|                              | Manufacturing                       | 2,904          | 2,941          | 2,859          | 2,949          | 2,976          | 3,074          | 3,108          | 3,095          | 3,076          | 3,129   |
|                              | Service-Providing                   | 32,377         | 34,227         | 33,822         | 33,907         | 34,665         | 33,931         | 34,085         | 34,308         | 34,209         | 35,011  |
|                              | Trade, Transportation and Utilities | 4,187          | 4,179          | 4,328          | 4,373          | 5,609          | 4,236          | 4,157          | 4,290          | 4,360          | 4,441   |
|                              | Information                         | 1,006          | 1,075          | 1,049          | 1,060          | 1,030          | 1,054          | 978            | 970            | 933            | 796     |
|                              | Financial Activities                | 1,393          | 1,237          | 1,137          | 1,107          | 1,071          | 1,075          | 1,057          | 1,043          | 1,068          | 1,079   |
|                              | Professional and Business Services  | 5,932          | 6,170          | 6,097          | 6,063          | 5,794          | 5,835          | 5,985          | 6,085          | 6,014          | 5,939   |
|                              | Education and Health Services       | 15,465         | 16,729         | 16,001         | 16,224         | 16,098         | 16,464         | 16,326         | 16,700         | 16,716         | 17,205  |
|                              | Leisure and Hospitality             | 2,267          | 2,669          | 2,986          | 2,846          | 2,855          | 3,018          | 3,196          | 2,916          | 2,796          | 3,083   |
|                              | Other Services                      | 814            | 862            | 900            | 883            | 860            | 903            | 928            | 826            | 840            | 909     |
|                              | Public Administration               | 1,313          | 1,305          | 1,324          | 1,350          | 1,349          | 1,345          | 1,458          | 1,477          | 1,483          | 1,558   |
| <b>Total, All Industries</b> | <b>36,239</b>                       | <b>38,197</b>  | <b>37,793</b>  | <b>37,943</b>  | <b>38,643</b>  | <b>38,080</b>  | <b>38,282</b>  | <b>38,438</b>  | <b>38,118</b>  | <b>39,044</b>  |         |
| Region Outside Lowell        | Goods-Producing                     | 22,018         | 22,985         | 23,504         | 23,064         | 22,518         | 23,709         | 24,245         | 23,904         | 23,364         | 23,938  |
|                              | Natural Resources and Mining        | 59             | 190            | 191            | 174            | 142            | 165            | 226            | 195            | 145            | 196     |
|                              | Construction                        | 6,807          | 7,428          | 7,711          | 7,573          | 6,803          | 7,629          | 7,835          | 7,739          | 7,102          | 7,622   |
|                              | Manufacturing                       | 11,822         | 12,105         | 12,303         | 15,250         | 15,490         | 15,801         | 16,074         | 15,874         | 16,027         | 16,033  |
|                              | Service-Providing                   | 62,894         | 64,456         | 63,910         | 65,637         | 64,069         | 65,621         | 64,965         | 65,661         | 64,076         | 65,351  |
|                              | Trade, Transportation and Utilities | 15,481         | 15,729         | 15,373         | 16,341         | 15,357         | 15,328         | 15,277         | 15,815         | 15,622         | 15,511  |
|                              | Information                         | 1,950          | 1,986          | 1,904          | 2,040          | 2,096          | 2,079          | 2,045          | 1,992          | 2,029          | 2,007   |
|                              | Financial Activities                | 2,137          | 2,181          | 2,246          | 2,254          | 2,265          | 2,307          | 2,239          | 2,257          | 2,240          | 2,295   |
|                              | Professional and Business Services  | 17,490         | 17,608         | 17,496         | 17,462         | 17,052         | 17,656         | 17,793         | 17,387         | 15,852         | 16,192  |
|                              | Education and Health Services       | 14,582         | 14,739         | 13,976         | 15,137         | 15,093         | 15,394         | 14,374         | 15,585         | 15,642         | 15,765  |
|                              | Leisure and Hospitality             | 6,135          | 6,967          | 7,624          | 7,180          | 7,095          | 7,742          | 8,065          | 7,398          | 7,453          | 8,167   |
|                              | Other Services                      | 2,501          | 2,583          | 2,608          | 2,638          | 2,576          | 2,649          | 2,659          | 2,608          | 2,634          | 2,683   |
|                              | Public Administration               | 1,850          | 1,855          | 1,850          | 1,882          | 1,851          | 1,851          | 1,819          | 1,889          | 1,892          | 1,967   |
| <b>Total, All Industries</b> | <b>84,911</b>                       | <b>87,442</b>  | <b>87,412</b>  | <b>88,701</b>  | <b>86,589</b>  | <b>89,330</b>  | <b>89,211</b>  | <b>89,566</b>  | <b>87,439</b>  | <b>89,290</b>  |         |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

TABLE 24: NUMBER OF ESTABLISHMENTS IN THE REGION, 2021 Q1 – 2023 Q2

|                              | 21-1                                | 21-2          | 21-3          | 21-4          | 22-1          | 22-2          | 22-3          | 22-4          | 23-1          | 23-2          |       |
|------------------------------|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
| Greater Lowell               | Goods-Producing                     | 1,495         | 1,507         | 1,498         | 1,509         | 1,519         | 1,525         | 1,531         | 1,524         | 1,510         | 1,517 |
|                              | Natural Resources and Mining        | 9             | 14            | 13            | 13            | 18            | 15            | 15            | 15            | 14            | 10    |
|                              | Construction                        | 1,119         | 1,135         | 1,128         | 1,134         | 1,140         | 1,139         | 1,147         | 1,142         | 1,132         | 1,138 |
|                              | Manufacturing                       | 325           | 321           | 319           | 354           | 355           | 361           | 360           | 358           | 355           | 357   |
|                              | Service-Providing                   | 8,498         | 8,550         | 8,537         | 8,677         | 8,738         | 8,818         | 8,913         | 8,907         | 8,911         | 8,948 |
|                              | Trade, Transportation and Utilities | 1,271         | 1,271         | 1,258         | 1,247         | 1,251         | 1,255         | 1,258         | 1,258         | 1,253         | 1,265 |
|                              | Information                         | 146           | 145           | 142           | 160           | 171           | 174           | 183           | 184           | 185           | 187   |
|                              | Financial Activities                | 462           | 459           | 458           | 465           | 469           | 467           | 471           | 479           | 477           | 481   |
|                              | Professional and Business Services  | 1,448         | 1,462         | 1,481         | 1,510         | 1,521         | 1,527         | 1,563         | 1,570         | 1,571         | 1,577 |
|                              | Education and Health Services       | 3,633         | 3,686         | 3,672         | 3,748         | 3,773         | 3,855         | 3,869         | 3,864         | 3,866         | 3,866 |
|                              | Leisure and Hospitality             | 689           | 679           | 687           | 696           | 695           | 698           | 702           | 709           | 702           | 718   |
|                              | Other Services                      | 713           | 712           | 705           | 712           | 718           | 717           | 727           | 702           | 699           | 702   |
|                              | Public Administration               | 93            | 94            | 93            | 91            | 92            | 92            | 93            | 93            | 91            | 89    |
| <b>Total, All Industries</b> | <b>9,993</b>                        | <b>10,057</b> | <b>10,035</b> | <b>10,186</b> | <b>10,257</b> | <b>10,343</b> | <b>10,444</b> | <b>10,431</b> | <b>10,421</b> | <b>10,465</b> |       |
| City of Lowell               | Goods-Producing                     | 257           | 261           | 264           | 272           | 277           | 275           | 280           | 279           | 275           | 280   |
|                              | Natural Resources and Mining        | 0             | 0             | 3             | 3             | 4             | 4             | 4             | 4             | 3             | 0     |
|                              | Construction                        | 173           | 176           | 180           | 187           | 190           | 186           | 189           | 190           | 189           | 193   |
|                              | Manufacturing                       | 82            | 83            | 81            | 82            | 83            | 85            | 87            | 85            | 83            | 84    |
|                              | Service-Providing                   | 3,733         | 3,774         | 3,778         | 3,861         | 3,858         | 3,904         | 3,925         | 3,919         | 3,922         | 3,925 |
|                              | Trade, Transportation and Utilities | 355           | 358           | 353           | 346           | 341           | 342           | 345           | 343           | 345           | 352   |
|                              | Information                         | 38            | 37            | 37            | 38            | 40            | 42            | 44            | 44            | 45            | 44    |
|                              | Financial Activities                | 123           | 120           | 121           | 120           | 116           | 118           | 118           | 121           | 116           | 115   |
|                              | Professional and Business Services  | 313           | 322           | 334           | 339           | 342           | 344           | 351           | 350           | 355           | 356   |
|                              | Education and Health Services       | 2,453         | 2,491         | 2,486         | 2,565         | 2,561         | 2,606         | 2,611         | 2,607         | 2,611         | 2,604 |
|                              | Leisure and Hospitality             | 227           | 218           | 220           | 225           | 228           | 228           | 231           | 233           | 226           | 234   |
|                              | Other Services                      | 183           | 187           | 186           | 188           | 189           | 183           | 183           | 179           | 177           | 178   |
|                              | Public Administration               | 41            | 41            | 41            | 40            | 41            | 41            | 42            | 41            | 39            | 38    |
| <b>Total, All Industries</b> | <b>3,990</b>                        | <b>4,035</b>  | <b>4,042</b>  | <b>4,133</b>  | <b>4,135</b>  | <b>4,179</b>  | <b>4,205</b>  | <b>4,198</b>  | <b>4,197</b>  | <b>4,205</b>  |       |
| Region Outside Lowell        | Goods-Producing                     | 1,238         | 1,246         | 1,234         | 1,237         | 1,242         | 1,250         | 1,251         | 1,245         | 1,235         | 1,237 |
|                              | Natural Resources and Mining        | 9             | 14            | 10            | 10            | 14            | 11            | 11            | 11            | 11            | 10    |
|                              | Construction                        | 946           | 959           | 948           | 947           | 950           | 953           | 958           | 952           | 943           | 945   |
|                              | Manufacturing                       | 243           | 238           | 238           | 272           | 272           | 276           | 273           | 273           | 272           | 273   |
|                              | Service-Providing                   | 4,765         | 4,776         | 4,759         | 4,816         | 4,880         | 4,914         | 4,988         | 4,988         | 4,989         | 5,023 |
|                              | Trade, Transportation and Utilities | 916           | 913           | 905           | 901           | 910           | 913           | 913           | 915           | 908           | 913   |
|                              | Information                         | 108           | 108           | 105           | 122           | 131           | 132           | 139           | 140           | 140           | 143   |
|                              | Financial Activities                | 339           | 339           | 337           | 345           | 353           | 349           | 353           | 358           | 361           | 366   |
|                              | Professional and Business Services  | 1,135         | 1,140         | 1,147         | 1,171         | 1,179         | 1,183         | 1,212         | 1,220         | 1,216         | 1,221 |
|                              | Education and Health Services       | 1,180         | 1,195         | 1,186         | 1,183         | 1,212         | 1,249         | 1,258         | 1,257         | 1,255         | 1,262 |
|                              | Leisure and Hospitality             | 462           | 461           | 467           | 471           | 467           | 470           | 471           | 476           | 476           | 484   |
|                              | Other Services                      | 530           | 525           | 519           | 524           | 529           | 534           | 544           | 523           | 522           | 524   |
|                              | Public Administration               | 52            | 53            | 52            | 51            | 51            | 51            | 51            | 52            | 52            | 51    |
| <b>Total, All Industries</b> | <b>6,003</b>                        | <b>6,022</b>  | <b>5,993</b>  | <b>6,053</b>  | <b>6,122</b>  | <b>6,164</b>  | <b>6,239</b>  | <b>6,233</b>  | <b>6,224</b>  | <b>6,260</b>  |       |

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

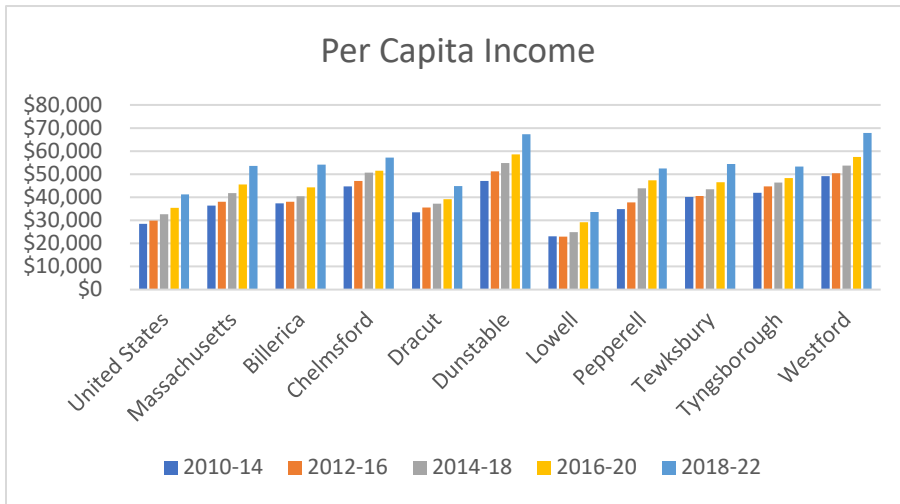


TABLE 25: AVERAGE WEEKLY WAGES IN THE REGION, 2021 Q1 – 2023 Q2

|                              | 21-1                                | 21-2           | 21-3           | 21-4           | 22-1           | 22-2           | 22-3           | 22-4           | 23-1           | 23-2           |         |
|------------------------------|-------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------|
| Greater Lowell               | Goods-Producing                     | \$2,129        | \$2,092        | \$1,884        | \$2,539        | \$2,178        | \$2,057        | \$1,954        | \$2,344        | \$2,217        | \$2,083 |
|                              | Natural Resources and Mining        | \$783          | \$585          | \$759          | \$844          | \$771          | \$800          | \$750          | \$780          | \$844          | \$701   |
|                              | Construction                        | \$1,398        | \$1,520        | \$1,504        | \$1,755        | \$1,516        | \$1,575        | \$1,680        | \$1,751        | \$1,538        | \$1,782 |
|                              | Manufacturing                       | \$2,270        | \$2,418        | \$2,002        | \$2,937        | \$2,472        | \$2,296        | \$2,101        | \$2,643        | \$2,515        | \$2,238 |
|                              | Service-Providing                   | \$1,339        | \$1,511        | \$1,375        | \$1,525        | \$1,473        | \$1,476        | \$1,447        | \$1,567        | \$1,516        | \$1,466 |
|                              | Trade, Transportation and Utilities | \$986          | \$1,048        | \$1,066        | \$1,172        | \$1,300        | \$1,145        | \$1,144        | \$1,199        | \$1,175        | \$1,169 |
|                              | Information                         | \$2,501        | \$2,033        | \$2,223        | \$2,237        | \$3,080        | \$2,295        | \$2,366        | \$2,483        | \$2,765        | \$2,441 |
|                              | Financial Activities                | \$1,796        | \$1,512        | \$1,381        | \$1,617        | \$1,870        | \$1,624        | \$1,679        | \$1,726        | \$2,074        | \$1,729 |
|                              | Professional and Business Services  | \$2,235        | \$2,790        | \$2,328        | \$2,561        | \$2,381        | \$2,440        | \$2,308        | \$2,740        | \$2,591        | \$2,386 |
|                              | Education and Health Services       | \$993          | \$1,163        | \$1,092        | \$1,260        | \$1,099        | \$1,226        | \$1,204        | \$1,217        | \$1,187        | \$1,263 |
|                              | Leisure and Hospitality             | \$452          | \$486          | \$504          | \$544          | \$481          | \$516          | \$546          | \$558          | \$533          | \$555   |
|                              | Other Services                      | \$766          | \$813          | \$880          | \$894          | \$811          | \$865          | \$978          | \$970          | \$909          | \$915   |
|                              | Public Administration               | \$1,505        | \$1,684        | \$1,547        | \$1,792        | \$1,584        | \$1,867        | \$1,792        | \$1,702        | \$1,707        | \$1,713 |
| <b>Total, All Industries</b> | <b>\$1,507</b>                      | <b>\$1,636</b> | <b>\$1,487</b> | <b>\$1,742</b> | <b>\$1,622</b> | <b>\$1,603</b> | <b>\$1,560</b> | <b>\$1,737</b> | <b>\$1,668</b> | <b>\$1,601</b> |         |
| City of Lowell               | Goods-Producing                     | \$1,905        | \$1,723        | \$1,597        | \$3,114        | \$2,093        | \$1,876        | \$1,888        | \$2,802        | \$1,944        | \$1,763 |
|                              | Natural Resources and Mining        | \$0            | \$0            | \$942          | \$994          | \$904          | \$1,013        | \$926          | \$953          | \$820          | \$0     |
|                              | Construction                        | \$1,864        | \$1,545        | \$1,539        | \$1,751        | \$2,012        | \$1,677        | \$2,220        | \$1,683        | \$1,374        | \$1,412 |
|                              | Manufacturing                       | \$1,932        | \$1,793        | \$1,631        | \$3,632        | \$2,144        | \$1,962        | \$1,808        | \$3,198        | \$2,111        | \$1,875 |
|                              | Service-Providing                   | \$1,194        | \$1,611        | \$1,234        | \$1,454        | \$1,384        | \$1,393        | \$1,336        | \$1,416        | \$1,360        | \$1,342 |
|                              | Trade, Transportation and Utilities | \$866          | \$955          | \$915          | \$1,001        | \$1,702        | \$921          | \$952          | \$1,007        | \$926          | \$989   |
|                              | Information                         | \$2,235        | \$1,825        | \$1,970        | \$2,142        | \$2,432        | \$1,890        | \$1,980        | \$2,084        | \$2,114        | \$1,934 |
|                              | Financial Activities                | \$2,046        | \$1,633        | \$1,455        | \$1,770        | \$2,119        | \$1,624        | \$1,656        | \$1,759        | \$2,373        | \$1,984 |
|                              | Professional and Business Services  | \$1,725        | \$3,921        | \$1,778        | \$2,436        | \$1,960        | \$2,532        | \$1,913        | \$2,325        | \$2,091        | \$1,883 |
|                              | Education and Health Services       | \$1,030        | \$1,118        | \$1,169        | \$1,306        | \$1,112        | \$1,214        | \$1,295        | \$1,266        | \$1,235        | \$1,299 |
|                              | Leisure and Hospitality             | \$514          | \$527          | \$528          | \$556          | \$509          | \$553          | \$586          | \$587          | \$563          | \$599   |
|                              | Other Services                      | \$659          | \$699          | \$752          | \$823          | \$706          | \$762          | \$803          | \$860          | \$805          | \$804   |
|                              | Public Administration               | \$1,571        | \$1,722        | \$1,700        | \$1,790        | \$1,735        | \$1,854        | \$1,838        | \$1,824        | \$1,694        | \$1,796 |
| <b>Total, All Industries</b> | <b>\$1,270</b>                      | <b>\$1,622</b> | <b>\$1,272</b> | <b>\$1,630</b> | <b>\$1,457</b> | <b>\$1,445</b> | <b>\$1,397</b> | <b>\$1,565</b> | <b>\$1,420</b> | <b>\$1,385</b> |         |
| Region Outside Lowell        | Goods-Producing                     | \$2,169        | \$2,155        | \$1,932        | \$2,438        | \$2,193        | \$2,089        | \$1,965        | \$2,265        | \$2,263        | \$2,137 |
|                              | Natural Resources and Mining        | \$783          | \$585          | \$705          | \$791          | \$710          | \$701          | \$684          | \$698          | \$857          | \$701   |
|                              | Construction                        | \$1,335        | \$1,516        | \$1,500        | \$1,756        | \$1,448        | \$1,562        | \$1,611        | \$1,759        | \$1,556        | \$1,822 |
|                              | Manufacturing                       | \$2,353        | \$2,569        | \$2,088        | \$2,803        | \$2,535        | \$2,360        | \$2,157        | \$2,534        | \$2,593        | \$2,309 |
|                              | Service-Providing                   | \$1,413        | \$1,459        | \$1,450        | \$1,562        | \$1,521        | \$1,520        | \$1,505        | \$1,645        | \$1,599        | \$1,533 |
|                              | Trade, Transportation and Utilities | \$1,019        | \$1,073        | \$1,109        | \$1,218        | \$1,153        | \$1,207        | \$1,196        | \$1,251        | \$1,244        | \$1,221 |
|                              | Information                         | \$2,638        | \$2,146        | \$2,362        | \$2,287        | \$3,399        | \$2,500        | \$2,551        | \$2,677        | \$3,064        | \$2,642 |
|                              | Financial Activities                | \$1,633        | \$1,443        | \$1,344        | \$1,542        | \$1,752        | \$1,624        | \$1,690        | \$1,711        | \$1,932        | \$1,609 |
|                              | Professional and Business Services  | \$2,408        | \$2,393        | \$2,520        | \$2,604        | \$2,525        | \$2,409        | \$2,440        | \$2,885        | \$2,781        | \$2,570 |
|                              | Education and Health Services       | \$954          | \$1,214        | \$1,005        | \$1,212        | \$1,085        | \$1,238        | \$1,099        | \$1,164        | \$1,135        | \$1,224 |
|                              | Leisure and Hospitality             | \$429          | \$470          | \$494          | \$540          | \$470          | \$502          | \$530          | \$546          | \$522          | \$538   |
|                              | Other Services                      | \$801          | \$851          | \$924          | \$917          | \$845          | \$900          | \$1,040        | \$1,005        | \$942          | \$953   |
|                              | Public Administration               | \$1,458        | \$1,657        | \$1,437        | \$1,794        | \$1,475        | \$1,876        | \$1,755        | \$1,606        | \$1,716        | \$1,647 |
| <b>Total, All Industries</b> | <b>\$1,609</b>                      | <b>\$1,642</b> | <b>\$1,580</b> | <b>\$1,790</b> | <b>\$1,696</b> | <b>\$1,671</b> | <b>\$1,630</b> | <b>\$1,811</b> | <b>\$1,777</b> | <b>\$1,695</b> |         |

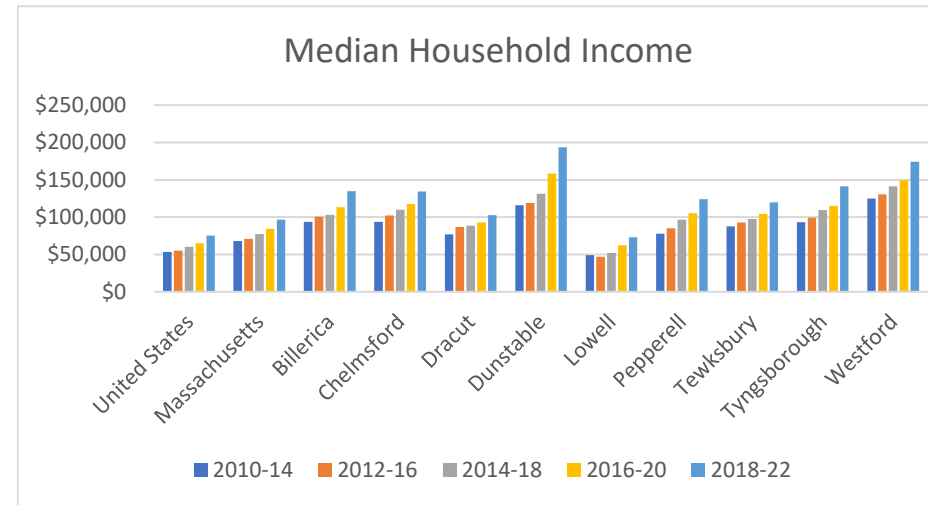
Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages

**FIGURE 19: PER CAPITA INCOME, 2010-14 TO 2018-22**



Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B19301.

**FIGURE 18: MEDIAN HOUSEHOLD INCOME, 2010-14 TO 2018-22**



Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B19301.

These charts and tables examine the income and employment of residents in Greater Lowell, unlike the previous charts which examined firms in Greater Lowell. These charts use ACS data, meaning that they do not reflect the impacts of COVID-19 or actions recently taken in the region. The per capita income, which simply divides the total wages made in a community by the number of people, is generally above the U.S. except in Lowell. This is also true of Median Household Income. As the Northeast has typically higher income levels than other regions in the nation, this is not unexpected.

**TABLE 26: PER CAPITA INCOME BY COMMUNITY, STATE, AND NATION, 2010-14 TO 2018-22**

|                | United States | Massachusetts | Billerica | Chelmsford | Dracut   | Dunstable | Lowell   | Pepperell | Tewksbury | Tyngsborough | Westford |
|----------------|---------------|---------------|-----------|------------|----------|-----------|----------|-----------|-----------|--------------|----------|
| <b>2010-14</b> | \$28,555      | \$36,441      | \$37,332  | \$44,699   | \$33,529 | \$47,060  | \$23,046 | \$34,826  | \$40,201  | \$41,977     | \$49,168 |
| <b>2012-16</b> | \$29,829      | \$38,069      | \$38,040  | \$47,124   | \$35,512 | \$51,292  | \$22,890 | \$37,824  | \$40,524  | \$44,664     | \$50,363 |
| <b>2014-18</b> | \$32,621      | \$41,794      | \$40,454  | \$50,685   | \$37,166 | \$54,832  | \$24,912 | \$43,882  | \$43,453  | \$46,434     | \$53,692 |
| <b>2016-20</b> | \$35,384      | \$45,555      | \$44,260  | \$51,458   | \$39,114 | \$58,598  | \$29,172 | \$47,301  | \$46,482  | \$48,375     | \$57,410 |
| <b>2018-22</b> | \$41,261      | \$53,513      | \$54,144  | \$57,133   | \$44,781 | \$67,346  | \$33,574 | \$52,428  | \$54,374  | \$53,249     | \$67,815 |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B19301. Values are inflated to the last year of each ACS, i.e., 2009-2013 data is inflated to 2013 dollars.

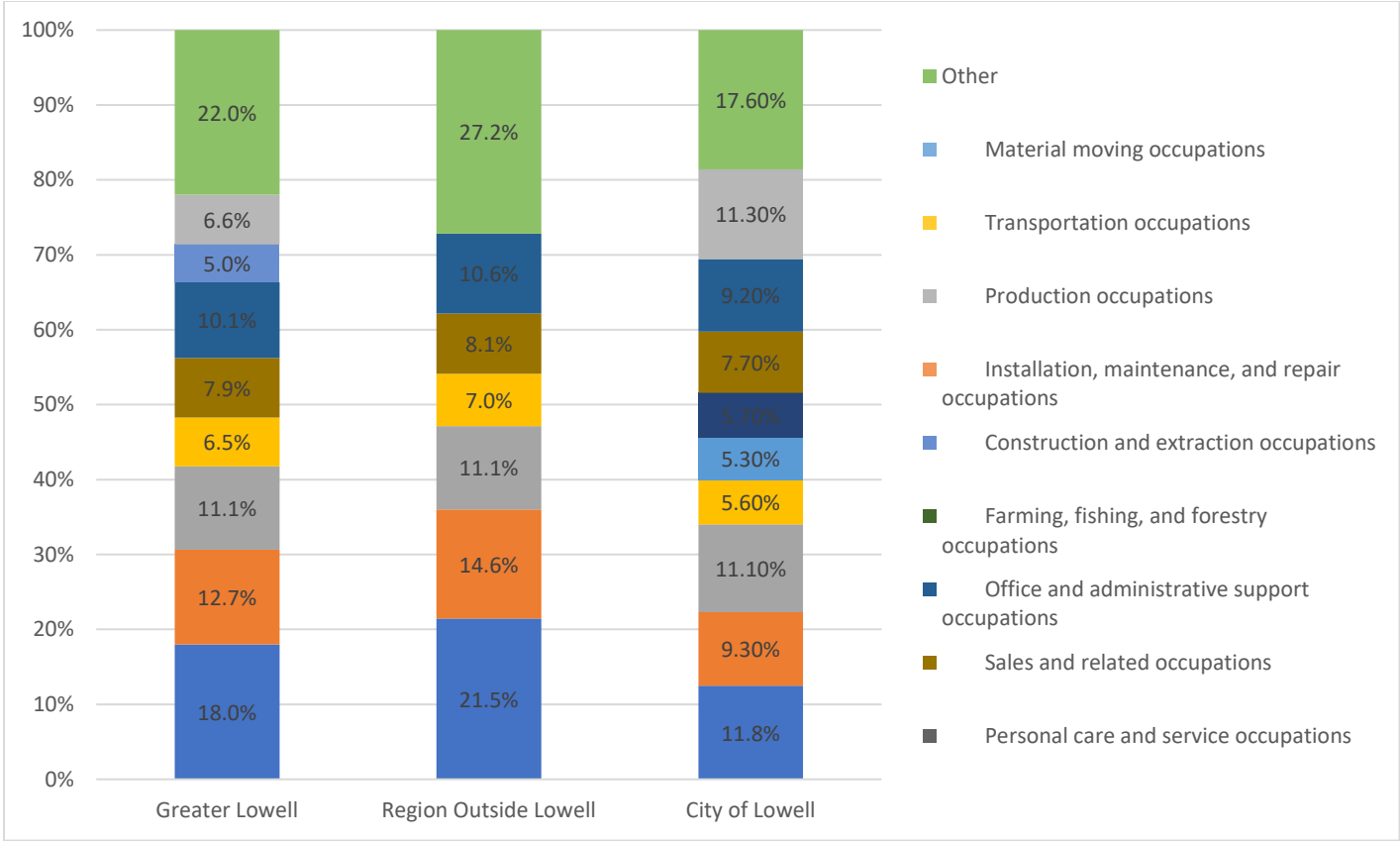
**TABLE 27: MEDIAN HOUSEHOLD INCOME BY COMMUNITY, STATE, AND NATION, 2010-14 TO 2018-22**

|                | United States | Massachusetts | Billerica | Chelmsford | Dracut    | Dunstable | Lowell   | Pepperell | Tewksbury | Tyngsborough | Westford  |
|----------------|---------------|---------------|-----------|------------|-----------|-----------|----------|-----------|-----------|--------------|-----------|
| <b>2010-14</b> | \$53,482      | \$67,846      | \$93,761  | \$93,643   | \$76,786  | \$116,125 | \$49,164 | \$77,767  | \$87,496  | \$93,108     | \$125,143 |
| <b>2012-16</b> | \$55,322      | \$70,954      | \$100,484 | \$102,160  | \$86,716  | \$118,984 | \$46,972 | \$84,980  | \$92,897  | \$99,325     | \$130,739 |
| <b>2014-18</b> | \$60,293      | \$77,378      | \$103,129 | \$109,955  | \$88,555  | \$131,250 | \$51,987 | \$96,750  | \$97,584  | \$109,652    | \$141,173 |
| <b>2016-20</b> | \$64,994      | \$84,385      | \$113,239 | \$117,582  | \$92,685  | \$158,523 | \$62,196 | \$105,377 | \$104,610 | \$115,280    | \$149,437 |
| <b>2018-22</b> | \$75,149      | \$96,505      | \$134,805 | \$134,291  | \$102,500 | \$193,583 | \$73,008 | \$124,254 | \$119,832 | \$141,070    | \$174,424 |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B19013. Values are inflated to the last year of each ACS, i.e., 2009-2013 data is inflated to 2013 dollars.

# Employment: Occupation

FIGURE 20: OCCUPATIONS IN SELECTED REGIONS, 2018-22



Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B2401. Occupations are categorized by second-level classifications and occupations with less than 5% are categorized into "other"

The City of Lowell trails the rest of the region in income partially because the City's occupation mix contains proportionally more installation/maintenance/repair, food service, and "other" occupations, which tend to be lower-paid, while the region outside Lowell has a larger-than-average proportion in the Management and Computer/engineering/science occupations. See Table 28 on the next page. That said, after several years of dropping or stagnant income, the City has increased its per capita and household income as estimated by the 2016-20 and 2018-22 ACS. Other towns have more consistently increased both measures over the eight-year period.

TABLE 28: OCCUPATION MIX BY COMMUNITY, STATE, AND NATION, 2018-22

|   | United States | Massachusetts | Billerica    | Chelmsford   | Dracut       | Dunstable    | Lowell       | Pepperell    | Tewksbury    | Tyngsborough | Westford     |
|---|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Management, business, science, and arts occupations:</b>                             | <b>41.0%</b>  | <b>50.0%</b>  | <b>51.8%</b> | <b>62.0%</b> | <b>41.5%</b> | <b>56.1%</b> | <b>37.8%</b> | <b>51.7%</b> | <b>50.1%</b> | <b>53.4%</b> | <b>69.3%</b> |
| <b>Management, business, and financial occupations:</b>                                 | <b>16.8%</b>  | <b>19.7%</b>  | <b>21.2%</b> | <b>24.3%</b> | <b>16.5%</b> | <b>23.5%</b> | <b>11.8%</b> | <b>18.7%</b> | <b>20.1%</b> | <b>2.2%</b>  | <b>26.8%</b> |
| Management occupations  | 11.0%         | 12.7%         | 14.0%        | 17.0%        | 10.9%        | 18.2%        | 7.2%         | 13.2%        | 10.5%        | 12.6%        | 19.5%        |
| Business and financial operations occupations   | 5.8%          | 7.0%          | 7.2%         | 7.3%         | 5.6%         | 5.3%         | 4.6%         | 5.5%         | 9.6%         | 9.6%         | 7.3%         |
| <b>Computer, engineering, and science occupations:</b>                                  | <b>6.8%</b>   | <b>9.8%</b>   | <b>13.8%</b> | <b>19.2%</b> | <b>10.1%</b> | <b>12.6%</b> | <b>9.3%</b>  | <b>14.8%</b> | <b>9.7%</b>  | <b>14.6%</b> | <b>21.5%</b> |
| Computer and mathematical occupations   | 3.5%          | 4.8%          | 6.5%         | 9.8%         | 5.9%         | 5.8%         | 3.9%         | 8.3%         | 4.8%         | 8.5%         | 11.4%        |
| Architecture and engineering occupations  | 2.1%          | 2.7%          | 4.5%         | 7.5%         | 2.7%         | 3.8%         | 3.8%         | 5.4%         | 4.1%         | 3.8%         | 6.7%         |
| Life, physical, and social science occupations  | 1.1%          | 2.4%          | 2.8%         | 1.9%         | 1.5%         | 3.0%         | 1.6%         | 1.2%         | 0.8%         | 2.3%         | 3.5%         |
| <b>Education, legal, community service, arts, and media occupations:</b>                | <b>11.2%</b>  | <b>7.5%</b>   | <b>9.3%</b>  | <b>12.6%</b> | <b>10.4%</b> | <b>13.6%</b> | <b>11.1%</b> | <b>11.4%</b> | <b>10.4%</b> | <b>10.2%</b> | <b>14.1%</b> |
| Community and social service occupations  | 1.8%          | 2.1%          | 1.2%         | 1.6%         | 1.5%         | 0.5%         | 2.1%         | 1.7%         | 2.2%         | 2.5%         | 0.9%         |
| Legal occupations   | 1.2%          | 1.5%          | 0.8%         | 0.9%         | 0.8%         | 2.5%         | 0.5%         | 1.0%         | 0.4%         | 0.4%         | 0.5%         |
| Educational instruction, and library occupations  | 6.2%          | 7.5%          | 6.0%         | 8.3%         | 7.0%         | 8.3%         | 6.3%         | 7.0%         | 6.6%         | 6.6%         | 8.7%         |
| Arts, design, entertainment, sports, and media occupations                              | 2.1%          | 2.4%          | 1.2%         | 1.8%         | 1.1%         | 2.2%         | 2.3%         | 1.8%         | 1.1%         | 0.7%         | 4.0%         |
| <b>Healthcare practitioners and technical occupations:</b>                              | <b>6.2%</b>   | <b>6.9%</b>   | <b>7.5%</b>  | <b>5.9%</b>  | <b>4.5%</b>  | <b>6.4%</b>  | <b>5.6%</b>  | <b>6.8%</b>  | <b>10.3%</b> | <b>6.5%</b>  | <b>6.9%</b>  |
| Health diagnosing and treating practitioners and other technical occupations            | 4.3%          | 5.0%          | 5.8%         | 4.0%         | 2.7%         | 5.7%         | 3.3%         | 4.0%         | 8.2%         | 3.4%         | 5.4%         |
| Health technologists and technicians  | 2.0%          | 1.9%          | 1.7%         | 1.8%         | 1.9%         | 0.6%         | 2.4%         | 2.8%         | 2.1%         | 3.1%         | 1.5%         |
| <b>Service occupations:</b>   | <b>16.8%</b>  | <b>15.8%</b>  | <b>10.1%</b> | <b>9.4%</b>  | <b>17.0%</b> | <b>13.5%</b> | <b>19.3%</b> | <b>10.6%</b> | <b>11.2%</b> | <b>10.2%</b> | <b>8.1%</b>  |
| <b>Healthcare support occupations</b>   | <b>3.3%</b>   | <b>3.3%</b>   | <b>2.4%</b>  | <b>1.0%</b>  | <b>3.8%</b>  | <b>3.5%</b>  | <b>5.3%</b>  | <b>2.9%</b>  | <b>2.1%</b>  | <b>2.0%</b>  | <b>2.1%</b>  |
| <b>Protective service occupations:</b>  | <b>2.1%</b>   | <b>2.0%</b>   | <b>1.7%</b>  | <b>1.5%</b>  | <b>2.5%</b>  | <b>3.7%</b>  | <b>1.7%</b>  | <b>2.0%</b>  | <b>1.8%</b>  | <b>1.6%</b>  | <b>0.5%</b>  |
| Firefighting and prevention, and other protective service workers including supervisors | 1.2%          | 1.1%          | 1.1%         | 0.7%         | 0.8%         | 2.4%         | 1.1%         | 1.0%         | 0.9%         | 0.4%         | 0.2%         |
| Law enforcement workers including supervisors   | 1.0%          | 0.9%          | 0.6%         | 0.8%         | 1.7%         | 1.3%         | 0.5%         | 0.9%         | 0.9%         | 1.2%         | 0.4%         |
| <b>Food preparation and serving related occupations</b>                                 | <b>5.3%</b>   | <b>4.6%</b>   | <b>3.2%</b>  | <b>2.8%</b>  | <b>7.1%</b>  | <b>3.6%</b>  | <b>5.7%</b>  | <b>2.4%</b>  | <b>3.0%</b>  | <b>2.1%</b>  | <b>2.1%</b>  |
| <b>Building and grounds cleaning and maintenance occupations</b>                        | <b>3.5%</b>   | <b>3.1%</b>   | <b>1.5%</b>  | <b>2.1%</b>  | <b>2.1%</b>  | <b>0.4%</b>  | <b>3.9%</b>  | <b>1.2%</b>  | <b>1.3%</b>  | <b>2.3%</b>  | <b>1.4%</b>  |
| <b>Personal care and service occupations</b>  | <b>2.6%</b>   | <b>2.8%</b>   | <b>1.4%</b>  | <b>2.0%</b>  | <b>1.5%</b>  | <b>2.2%</b>  | <b>2.7%</b>  | <b>2.1%</b>  | <b>3.0%</b>  | <b>2.2%</b>  | <b>2.0%</b>  |

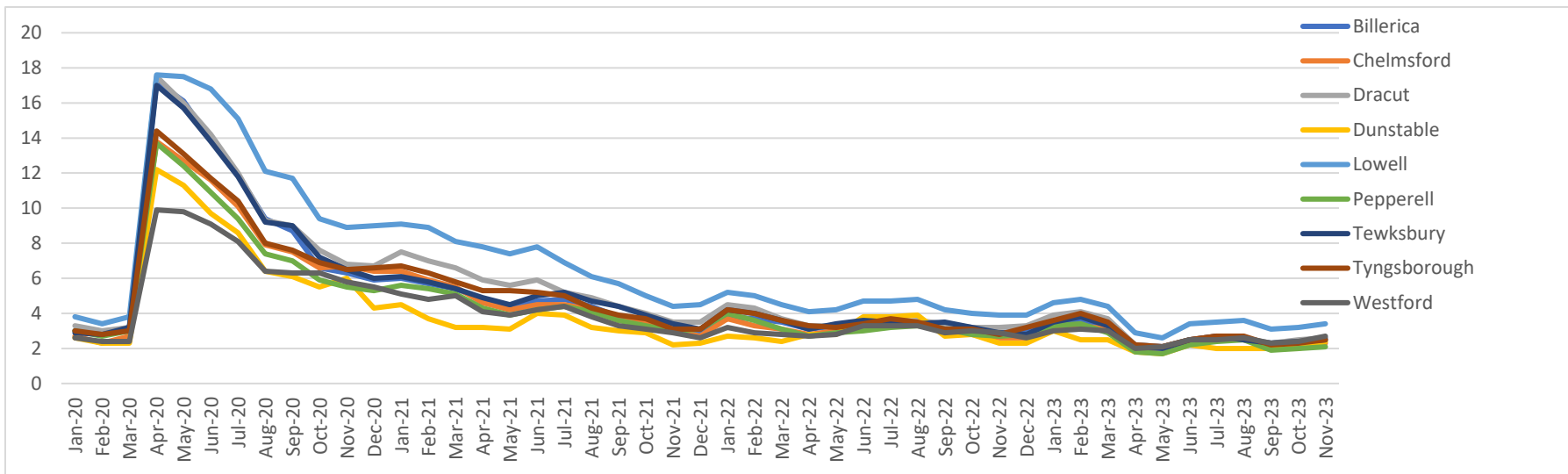
TABLE 28: OCCUPATION MIX BY COMMUNITY, STATE, AND NATION, 2018-22

|  | United States | Massachusetts | Billerica | Chelmsford | Dracut | Dunstable | Lowell | Pepperell | Tewksbury | Tyngsborough | Westford |
|--|---------------|---------------|-----------|------------|--------|-----------|--------|-----------|-----------|--------------|----------|
| <b>Sales and office occupations:</b>                                 | 20.5%         | 18.2%         | 18.0%     | 17.1%      | 22.6%  | 14.0%     | 17.0%  | 19.5%     | 21.7%     | 16.7%        | 14.4%    |
| <b>Sales and related occupations</b>                                 | 9.6%          | 8.6%          | 6.4%      | 8.8%       | 8.3%   | 5.2%      | 7.7%   | 7.9%      | 9.2%      | 8.5%         | 8.4%     |
| <b>Office and administrative support occupations</b>                 | 10.9%         | 9.6%          | 11.6%     | 8.3%       | 14.2%  | 8.8%      | 9.2%   | 11.6%     | 12.5%     | 8.2%         | 5.9%     |
| <b>Natural resources, construction, and maintenance occupations:</b> | 8.7%          | 6.8%          | 9.3%      | 5.7%       | 8.0%   | 7.2%      | 7.9%   | 8.8%      | 9.5%      | 7.8%         | 3.4%     |
| <b>Farming, fishing, and forestry occupations</b>                    | 0.6%          | 0.2%          | 0.0%      | 0.7%       | 0.0%   | 0.0%      | 0.1%   | 0.2%      | 0.4%      | 0.0%         | 0.0%     |
| <b>Construction and extraction occupations</b>                       | 5.0%          | 4.7%          | 5.1%      | 3.6%       | 5.1%   | 4.5%      | 5.3%   | 6.5%      | 6.5%      | 6.5%         | 2.4%     |
| <b>Installation, maintenance, and repair occupations</b>             | 3.1%          | 2.2%          | 4.2%      | 1.4%       | 2.8%   | 2.7%      | 2.5%   | 2.1%      | 2.6%      | 1.4%         | 1.0%     |
| <b>Production, transportation, and material moving occupations:</b>  | 13.1%         | 9.2%          | 10.7%     | 5.8%       | 11.0%  | 9.2%      | 18.1%  | 9.4%      | 7.0%      | 11.9%        | 4.8%     |
| <b>Production occupations</b>  | 5.5%          | 3.8%          | 4.4%      | 2.3%       | 6.2%   | 2.7%      | 11.3%  | 4.8%      | 4.1%      | 5.8%         | 1.9%     |
| <b>Transportation occupations</b>                                    | 3.8%          | 3.0%          | 3.0%      | 1.8%       | 2.4%   | 3.8%      | 3.2%   | 3.2%      | 1.8%      | 3.2%         | 1.7%     |
| <b>Material moving occupations</b>                                   | 3.8%          | 2.4%          | 3.3%      | 1.6%       | 2.4%   | 2.6%      | 3.5%   | 1.4%      | 1.2%      | 2.8%         | 1.2%     |
| <b>Civilian employed population 16 years and over</b>                | 158,913,204   | 3,671,485     | 24,141    | 19,437     | 17,319 | 1,931     | 59,027 | 6,230     | 17,189    | 6,479        | 12,942   |

Source: U.S. Census Bureau, American Community Survey, Five-Year data, Table B2401.

# Employment: Unemployment and Labor Force

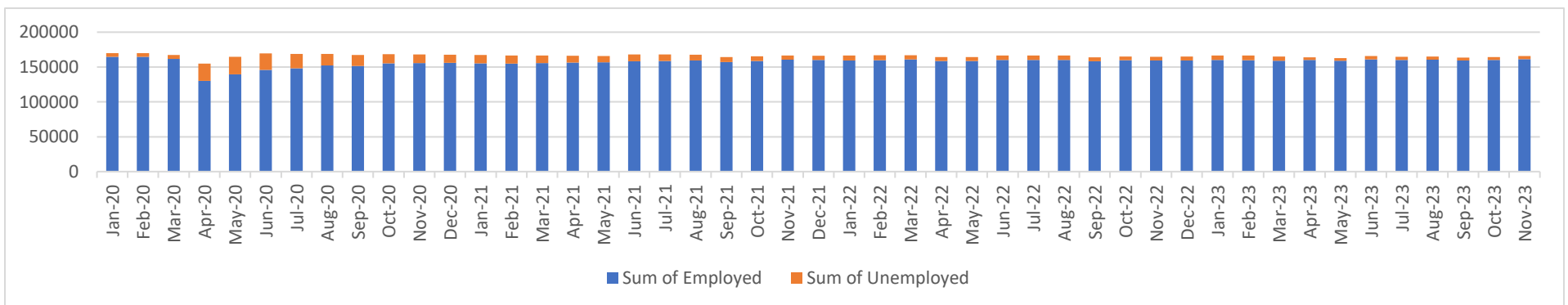
FIGURE 21: UNEMPLOYMENT RATE IN % BY TOWN



Source: Bureau of Labor Statistics and Massachusetts Department of Economic Research.

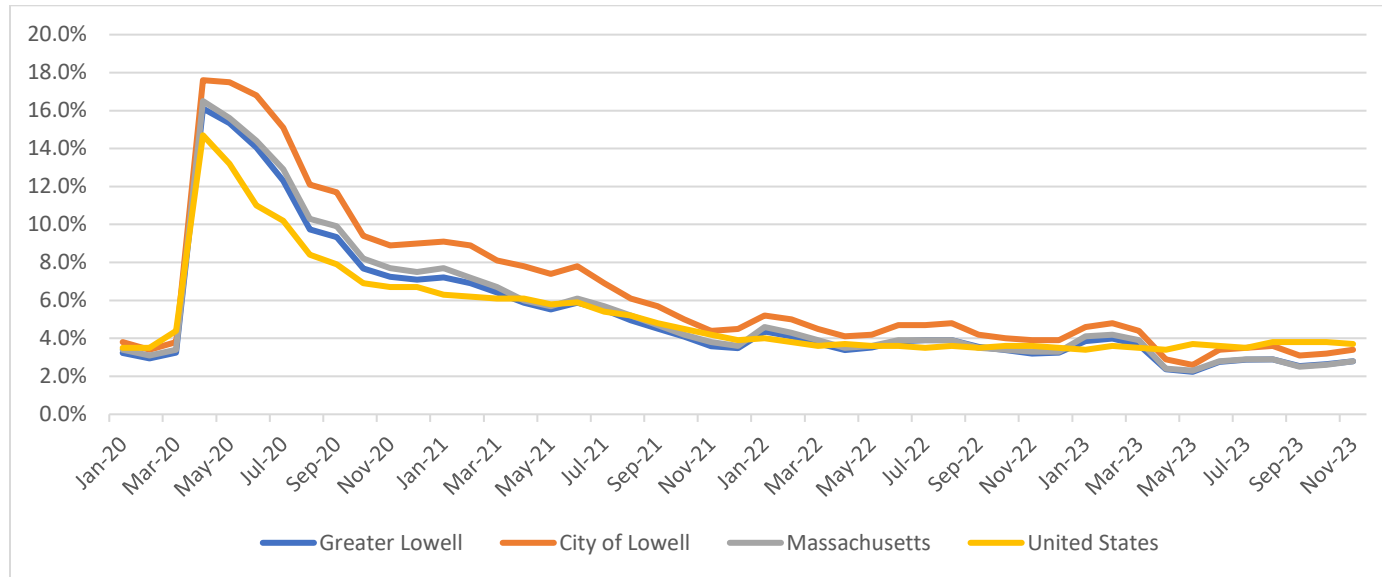
Figure 21 illustrates the unemployment rate for each NMCOG community from January 2020 to November 2023. Trends continued from 2020-2023 with continued decreases in unemployment. From November 2022 to November 2023, the region as a whole increased slightly from 2.7% to 2.8%. The region outside of Lowell has a lower rate of 2.5% while the City of Lowell has a rate of 3.4%. FIGURE 22 illustrates the labor force in workers for Greater Lowell. The number has decreased somewhat from 168,180 in November 2022 to 165,748 in November 2023.

FIGURE 22: GREATER LOWELL LABOR FORCE



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics \*November 2022 Preliminary Estimate

**FIGURE 23: UNEMPLOYMENT RATE IN % (COMPARISON WITH U.S.)**



Only the City of Lowell has had consistently higher unemployment than the U.S, but November 2023 saw a lower rate for Lowell compared to the US (3.4% vs 3.5%). As other towns have lower rates, Greater Lowell's overall unemployment rate, once higher than that the U.S.'s rate, is 0.7 points below the U.S.'s rate as of November 2023.

See Table 30 and Table 31 on the following pages.

**TABLE 29: UNEMPLOYMENT RATES BY COMMUNITY AND REGION, MAY 2019 – MAY 2023**

| Community             | 2019       | 2020        | 2021       | 2022       | 2023       | % Change May 2022-2023 |
|-----------------------|------------|-------------|------------|------------|------------|------------------------|
|                       | May        | May         | May        | May        | May        |                        |
| <b>Billerica</b>      | 2.6        | 16.1        | 4.4        | 2.9        | 2.1        | -27.6%                 |
| <b>Chelmsford</b>     | 2.5        | 12.8        | 4.3        | 2.7        | 2.1        | -22.2%                 |
| <b>Dracut</b>         | 2.8        | 16.1        | 5.7        | 3          | 2.1        | -30%                   |
| <b>Dunstable</b>      | 2.6        | 11.3        | 3.1        | 2.3        | 1.7        | -26%                   |
| <b>Lowell</b>         | 3.5        | 17.6        | 7.5        | 3.9        | 2.6        | -33.3%                 |
| <b>Pepperell</b>      | 2.4        | 12.4        | 4          | 2.4        | 1.7        | -29.2%                 |
| <b>Tewksbury</b>      | 2.5        | 15.7        | 4.6        | 3.1        | 2.0        | -35.5%                 |
| <b>Tyngsborough</b>   | 2.3        | 13.1        | 5.4        | 2.9        | 2.1        | -27.6%                 |
| <b>Westford</b>       | 2.5        | 9.8         | 4          | 2.5        | 2.1        | -16%                   |
| <b>Greater Lowell</b> | <b>2.9</b> | <b>15.4</b> | <b>5.6</b> | <b>3.2</b> | <b>2.3</b> | <b>-28.1%</b>          |

Source: Bureau of Labor Statistics, Not Seasonally Adjusted \*November 2022 Preliminary Estimate



TABLE 30: UNEMPLOYMENT RATES FOR THE REGION, STATE, AND NATION, JANUARY 2021 – NOVEMBER 2023

|           | United States | Massachusetts | Greater Lowell | City of Lowell | Region Outside Lowell |
|-----------|---------------|---------------|----------------|----------------|-----------------------|
| Jan 2021  | 6.8           | 7.7           | 7.2            | 9.1            | 6.2                   |
| Feb 2021  | 6.6           | 7.2           | 6.9            | 8.9            | 5.9                   |
| Mar 2021  | 6.2           | 6.7           | 6.4            | 8.2            | 5.5                   |
| Apr 2021  | 5.8           | 6.1           | 5.9            | 7.9            | 4.9                   |
| May 2021  | 5.5           | 5.8           | 5.6            | 7.5            | 4.6                   |
| Jun 2021  | 6.1           | 6.2           | 6.0            | 8.0            | 4.9                   |
| Jul 2021  | 5.7           | 5.9           | 5.6            | 7.1            | 4.9                   |
| Aug 2021  | 5.3           | 5.4           | 5.1            | 6.3            | 4.5                   |
| Sep 2021  | 4.6           | 5.0           | 4.8            | 6.1            | 4.1                   |
| Oct 2021  | 4.3           | 4.6           | 4.4            | 5.4            | 3.8                   |
| Nov 2021  | 3.9           | 4.2           | 4.0            | 5.0            | 3.4                   |
| Dec 2021  | 3.7           | 4.1           | 3.9            | 5.0            | 3.3                   |
| Jan 2022  | 4.4           | 5.0           | 4.6            | 5.5            | 4.1                   |
| Feb 2022  | 4.1           | 4.3           | 3.9            | 4.8            | 3.5                   |
| Mar 2022  | 3.8           | 3.8           | 3.5            | 4.2            | 3.1                   |
| Apr 2022  | 3.3           | 3.3           | 3.1            | 3.8            | 2.8                   |
| May 2022  | 3.4           | 3.4           | 3.2            | 3.9            | 2.8                   |
| Jun 2022  | 3.8           | 3.5           | 3.3            | 4.1            | 2.9                   |
| Jul 2022  | 3.8           | 3.4           | 3.3            | 4.0            | 2.9                   |
| Aug 2022  | 3.8           | 3.5           | 3.4            | 4.2            | 3.0                   |
| Sep 2022  | 3.3           | 3.1           | 3.0            | 3.6            | 2.7                   |
| Oct 2022  | 3.4           | 3.0           | 2.9            | 3.5            | 2.6                   |
| Nov 2022  | 3.4           | 2.9           | 2.7            | 3.3            | 2.4                   |
| Dec 2022  | 3.3           | 3.3           | 3.2            | 3.9            | 2.9                   |
| Jan 2023  | 3.9           | 4.1           | 3.9            | 4.6            | 3.5                   |
| Feb 2023  | 3.9           | 4.2           | 4.0            | 4.8            | 3.6                   |
| Mar 2023  | 3.6           | 3.9           | 3.6            | 4.4            | 3.3                   |
| Apr 2023  | 3.1           | 2.4           | 2.4            | 2.9            | 2.1                   |
| May 2023  | 3.4           | 2.3           | 2.2            | 2.6            | 2.0                   |
| Jun 2023  | 3.8           | 2.8           | 2.8            | 3.4            | 2.5                   |
| Jul 2023  | 3.8           | 2.9           | 2.9            | 3.5            | 2.6                   |
| Aug 2023  | 3.9           | 2.9           | 2.9            | 3.6            | 2.6                   |
| Sep 2023  | 3.6           | 2.5           | 2.5            | 3.1            | 2.2                   |
| Oct 2023  | 3.6           | 2.6           | 2.6            | 3.2            | 2.3                   |
| Nov 2023* | 3.5           | 2.8           | 2.8            | 3.4            | 2.5                   |

Source: Bureau of Labor Statistics, Not Seasonally Adjusted \*November 2023 Preliminary Estimate

**TABLE 31: GREATER LOWELL LABOR FORCE, JANUARY 2021 – NOVEMBER 2023**

|           | Massachusetts | Billerica | Chelmsford | Dracut | Dunstable | Lowell | Pepperell | Tewksbury | Tyngsborough | Westford | Greater Lowell |
|-----------|---------------|-----------|------------|--------|-----------|--------|-----------|-----------|--------------|----------|----------------|
| Jan 2021  | 3,758,139     | 24,246    | 19,732     | 18,430 | 1,913     | 57,697 | 7,024     | 17,510    | 7,328        | 13,277   | 167,157        |
| Feb 2021  | 3,759,275     | 24,165    | 19,624     | 18,335 | 1,902     | 57,554 | 7,031     | 17,448    | 7,298        | 13,236   | 166,593        |
| Mar 2021  | 3,782,622     | 24,187    | 19,622     | 18,326 | 1,908     | 57,322 | 7,059     | 17,454    | 7,292        | 13,317   | 166,487        |
| Apr 2021  | 3,721,397     | 24,164    | 19,547     | 18,295 | 1,902     | 57,436 | 6,985     | 17,445    | 7,294        | 13,270   | 166,338        |
| May 2021  | 3,723,656     | 24,068    | 19,473     | 18,240 | 1,905     | 57,184 | 6,971     | 17,385    | 7,296        | 13,247   | 165,769        |
| Jun 2021  | 3,780,537     | 24,423    | 19,756     | 18,495 | 1,911     | 58,080 | 6,949     | 17,674    | 7,363        | 13,434   | 168,085        |
| Jul 2021  | 3,780,667     | 24,531    | 19,814     | 18,443 | 1,916     | 57,718 | 6,991     | 17,763    | 7,378        | 13,507   | 168,061        |
| Aug 2021  | 3,774,664     | 24,497    | 19,810     | 18,420 | 1,910     | 57,363 | 6,993     | 17,730    | 7,344        | 13,464   | 167,531        |
| Sep 2021  | 3,698,042     | 23,992    | 19,413     | 18,075 | 1,891     | 56,323 | 6,906     | 17,414    | 7,209        | 13,202   | 164,425        |
| Oct 2021  | 3,735,590     | 24,183    | 19,592     | 18,199 | 1,907     | 56,556 | 6,948     | 17,523    | 7,277        | 13,324   | 165,509        |
| Nov 2021  | 3,716,692     | 24,369    | 19,715     | 18,306 | 1,907     | 56,845 | 6,977     | 17,623    | 7,312        | 13,448   | 166,502        |
| Dec 2021  | 3,720,031     | 24,275    | 19,633     | 18,276 | 1,906     | 56,750 | 6,973     | 17,538    | 7,295        | 13,378   | 166,024        |
| Jan 2022  | 3,723,612     | 24,363    | 19,704     | 18,356 | 1,909     | 56,859 | 7,027     | 17,634    | 7,338        | 13,377   | 166,567        |
| Feb 2022  | 3,727,618     | 24,417    | 19,697     | 18,373 | 1,921     | 56,918 | 7,045     | 17,671    | 7,349        | 13,393   | 166,784        |
| Mar 2022  | 3,723,599     | 24,490    | 19,761     | 18,368 | 1,932     | 56,914 | 7,066     | 17,690    | 7,354        | 13,441   | 167,016        |
| Apr 2022  | 3,721,759     | 24,086    | 19,454     | 18,050 | 1,920     | 55,994 | 6,963     | 17,372    | 7,241        | 13,261   | 164,341        |
| May 2022  | 3,782,883     | 24,115    | 19,487     | 18,043 | 1,918     | 56,018 | 6,968     | 17,417    | 7,231        | 13,268   | 164,465        |
| Jun 2022  | 3,800,680     | 24,390    | 19,730     | 18,224 | 1,932     | 56,790 | 6,955     | 17,610    | 7,310        | 13,456   | 166,597        |
| Jul 2022  | 3,793,118     | 24,458    | 19,770     | 18,256 | 1,925     | 56,841 | 6,950     | 17,590    | 7,336        | 13,467   | 166,593        |
| Aug 2022  | 3,731,317     | 24,435    | 19,782     | 18,291 | 1,929     | 56,925 | 6,959     | 17,597    | 7,329        | 13,471   | 166,718        |
| Sep 2022  | 3,751,520     | 24,064    | 19,442     | 18,017 | 1,893     | 55,914 | 6,897     | 17,388    | 7,210        | 13,254   | 164,079        |
| Oct 2022  | 3,770,869     | 24,250    | 19,576     | 18,134 | 1,909     | 56,253 | 6,930     | 17,496    | 7,270        | 13,377   | 165,195        |
| Nov 2022  | 3,715,913     | 24,151    | 19,508     | 18,123 | 1,900     | 56,130 | 6,930     | 17,420    | 7,242        | 13,351   | 164,755        |
| Dec 2022  | 3,715,913     | 24,183    | 19,529     | 18,153 | 1,907     | 56,189 | 6,965     | 17,418    | 7,271        | 13,321   | 164,936        |
| Jan 2023  | 3,759,154     | 24,386    | 19,713     | 18,309 | 1,942     | 56,723 | 7,069     | 17,586    | 7,319        | 13,410   | 166,457        |
| Feb 2023  | 3,763,398     | 24,362    | 19,678     | 18,320 | 1,919     | 56,718 | 7,030     | 17,598    | 7,342        | 13,397   | 166,364        |
| Mar 2023  | 3,738,390     | 24,178    | 19,557     | 18,164 | 1,909     | 56,258 | 6,962     | 17,444    | 7,272        | 13,323   | 165,067        |
| Apr 2023  | 3,709,917     | 24,046    | 19,451     | 18,003 | 1,902     | 55,714 | 6,910     | 17,334    | 7,220        | 13,275   | 163,855        |
| May 2023  | 3,682,601     | 23,898    | 19,351     | 17,879 | 1,887     | 55,256 | 6,846     | 17,221    | 7,169        | 13,207   | 162,714        |
| Jun 2023  | 3,742,891     | 24,310    | 19,690     | 18,182 | 1,897     | 56,414 | 6,889     | 17,532    | 7,292        | 13,442   | 165,648        |
| Jul 2023  | 3,749,238     | 24,176    | 19,607     | 18,070 | 1,887     | 56,141 | 6,879     | 17,450    | 7,265        | 13,362   | 164,837        |
| Aug 2023  | 3,748,751     | 24,210    | 19,613     | 18,135 | 1,885     | 56,298 | 6,878     | 17,462    | 7,276        | 13,395   | 165,152        |
| Sep 2023  | 3,700,212     | 24,007    | 19,418     | 17,942 | 1,875     | 55,664 | 6,799     | 17,302    | 7,195        | 13,265   | 163,467        |
| Oct 2023  | 3,723,647     | 24,134    | 19,542     | 18,073 | 1,889     | 55,985 | 6,860     | 17,399    | 7,236        | 13,349   | 164,467        |
| Nov 2023* | 3,744,348     | 24,348    | 19,665     | 18,203 | 1,908     | 56,432 | 6,908     | 17,526    | 7,291        | 13,467   | 165,748        |

Source: Bureau of Labor Statistics, Local Area Unemployment Statistics (Not seasonally adjusted) \*November 2023 Preliminary Estimate

## Employment: Unemployment by Industry

**TABLE 32: GREATER LOWELL WORKFORCE DEVELOPMENT AREA  
UNEMPLOYMENT CLAIMANTS BY INDUSTRY**

| NAICS # | Claimant Count by NAICS Industry Name            | May 2021     | May 2022     | May 2023     | Over-The-Year Change |
|---------|--|--------------|--------------|--------------|----------------------|
| 22      | Utilities  | 7            | 4            | 7            | 75%                  |
| 23      | Construction                                     | 291          | 263          | 321          | 22.1%                |
| 31-33   | Manufacturing                                    | 328          | 78           | 242          | 210.3%               |
| 42      | Wholesale Trade                                  | 132          | 70           | 130          | 85.7%                |
| 44-45   | Retail Trade                                     | 275          | 94           | 156          | 66%                  |
| 48-49   | Transportation and Warehousing                   | 135          | 59           | 85           | 44.1%                |
| 51      | Information                                      | 46           | 31           | 93           | 200%                 |
| 52      | Finance and Insurance                            | 81           | 44           | 82           | 86.4%                |
| 53      | Real Estate and Rental Leasing                   | 38           | 32           | 36           | 12.5%                |
| 54      | Professional, Scientific, and Technical Services | 225          | 144          | 457          | 217.4%               |
| 55      | Management of Companies and Enterprises          | 20           | 9            | 13           | 44.4%                |
| 56      | Admin & Support, Waste Mgmt & Remediation Serv.  | 405          | 205          | 277          | 35.1%                |
| 61      | Educational Services                             | 52           | 28           | 31           | 10.7%                |
| 62      | Health Care and Social Assistance                | 322          | 142          | 251          | 76.8%                |
| 71      | Arts, Entertainment, and Recreation              | 33           | 8            | 22           | 175%                 |
| 72      | Accommodation and Food Services                  | 235          | 104          | 111          | 6.7%                 |
| 81      | Other Services (except Public Administration)    | 255          | 116          | 139          | 19.8%                |
| 92      | Public Administration                            | 75           | 23           | 86           | 273.9%               |
| 99      | INA (No NAICS Code)                              | 85           | 77           | 161          | 109.1%               |
|         | <b>All Industries</b>                            | <b>3,040</b> | <b>1,531</b> | <b>2,700</b> | <b>76.4%</b>         |

Table 32 lists the number of unemployment claimants by industry in the Greater Lowell Workforce Development Area in May 2021, 2022, and 2023. It should be noted that the Greater Lowell Workforce Development Area does not include Pepperell. The “Construction” sector had the highest number of claimants in May 2023, with a 22% increase in claimants. Many sectors, including Manufacturing, Information, Professional, Scientific, and Technical Services, and Public Administration all had increases in claimants of over 200%. No industry saw a decrease in claimants between May 2022 and May 2023.

### MEASURING ECONOMIC DISTRESS

To pursue certain funding from the EDA, projects must respond to at least one of the administration’s stated investment priorities. They must also meet at least one of the established distress criteria applicable to the proposed project’s location at time of application. The specific criteria is described in the Notice of Funding Opportunity (NOFO) for the applicable grant program. The most recent NOFO had the following criteria:

- An unemployment rate for the most recent 24-month period that is 1 point above the national rate.
- Per capita income that is 80% or less of the national per capita income level.
- A “Special Need” as determined by EDA, which could include the closure of a major industry or employer, population loss, or demonstrated underemployment.

No community as a whole qualifies under per capita income (Lowell was 81% of U.S. per 2017-21 ACS). No community as a whole currently qualifies under the unemployment categories, either. However, many individual census tracts qualify, and administrations are encouraged to work with NMCOG and EDA to explore qualification on any potential projects that may utilize EDA funding.

