3

Context & Trends

THIS CHAPTER SETS THE FOUNDATION and context for informed decision-making to address the challenges facing the region and to shape its future. Population shifts, job growth, economic development and environmental concerns are among the many factors that will impact our region's transportation network over the next 30 years. Forecasts anticipate there will be an additional 1 million people and 300,000 jobs in the region by 2050. Appendix E details these forecast changes. ■ These forecasts and others in this chapter are based on data that predates the COVID-19 pandemic; however, this plan assumes that the region will largely recover to pre-pandemic growth levels after a five- to 10-year setback. In relying on that data, this plan recognizes many of the forces that drove previous trends will reassert themselves as the region recovers, though efforts must be made to reshape or redirect these trends for the benefit of the region.

Population

The NJTPA region is home to nearly seven million people. Initial decennial Census figures released in spring 2021 show that New Jersey's population increased 5.7 percent from 2010 to 2020. Previous estimates by the Census Bureau for the North Jersey region had suggested more gradual growth than this, so a more complete understanding of population trends over the past decade will require further analysis.

The region's attractiveness—its distinctive communities, vibrant culture, historic and natural resources, and position in one of the world's most vital markets—fuels population growth. Lower international

migration and population loss to elsewhere in the country, slows it. Overall, the region's population is forecast to grow 15 percent to 7.7 million people by 2050 (Figure 3-1).
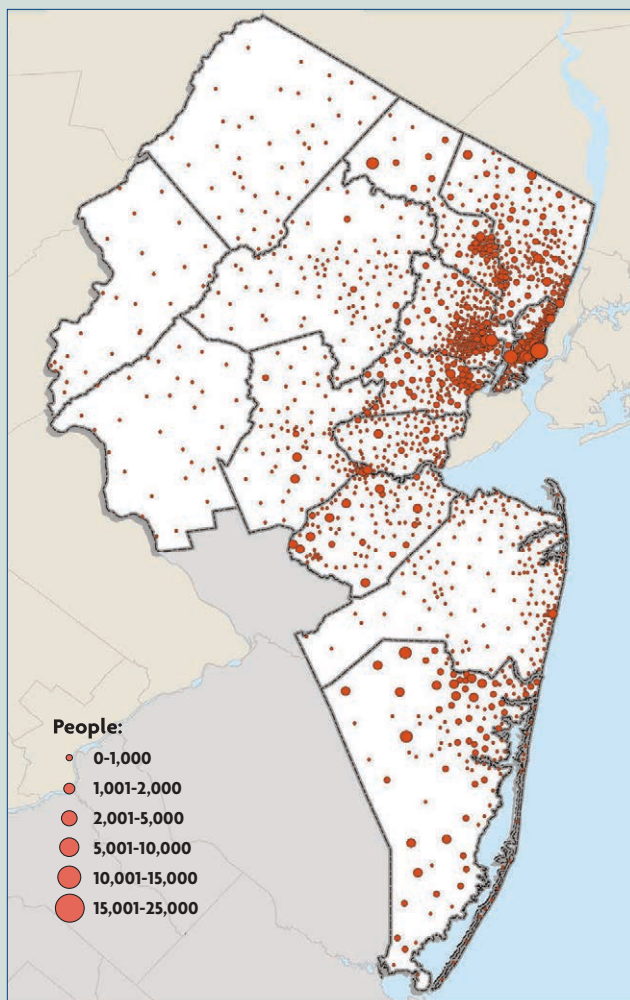
During the strong economic growth in the rebound from the great recession of 2008, many urban areas and denser downtowns experienced population growth, as well as increased office and other development that previously had been occurring in the suburbs. Factors influencing this trend included younger adults' preferences for urbanized locations with more entertainment and social opportunities and the attractiveness of places with easy walking, biking, and transit access. Jersey City benefited from these factors as did Newark and Elizabeth after years of suffering population declines. The trend also boosted growth in places with good access to New York City like Harrison and Secaucus and transit towns like Madison and Boonton.

At the same time there were some countervailing trends, with millennials beginning to raise families and seeking out suburban homes, and rising housing costs driving people away from sought-after denser locations. There's also been a growth in retirement communities, with more people choosing to age in New Jersey.

The pandemic has caused a dramatic break in these and other regional trends including the housing market (see sidebar p. 31). The extent to which this will alter future growth trends has become the subject of much discussion, with great stakes for the economy. Symposia and other outreach events for this plan helped highlight some of the following considerations:

- With companies realizing cost savings, many employees enjoying the flexibility of remote work and continuing concerns about social distancing, dependence on large central offices will likely decline, possibly driving continued suburbanization and leading to rehabilitation of aging suburban properties as remote satellite offices.
- The strength of the previous "back-to-cities" trend, which transformed many downtown and urban areas with large investments from major companies, suggests that it will not be quickly abandoned and will continue to draw population and jobs to denser areas.

Figure 3-1:
Population Growth Forecast 2015-2050

People:
- 0-1,000
- 1,001-2,000
- 2,001-5,000
- 5,001-10,000
- 10,001-15,000
- 15,001-25,000

Source: NJTPA, 2016; Esri, 2017

Push and Push from Denser Areas

↑ LONG STANDING ↑ ESPECIALLY LAST 10 YEARS ↑ PANDEMIC CHANGES

← Escape the worst of traffic congestion

← Travel options—driving, walking, transit

← Better schools, nature and recreation

→ Companies want access to talent, customers

→ Culture: music, dining, art

← Cheap land for development, lower taxes

→ Short commutes, convenience, close shopping

→ Downsizing by empty nesters

← Safe retirement communities

← Home prices rise in dense areas

→ Millenials want hip locations, entertainment, socializing

← Millenials start families

→ Opportunities for walking, biking, transit

← Socially distant living arrangements

← Safer driving—no buses, trains

← Shift away from Central office to distributed job sites

← More room for remote work

→ Lower urban rents for apartments, retail space

Dense Urban Area

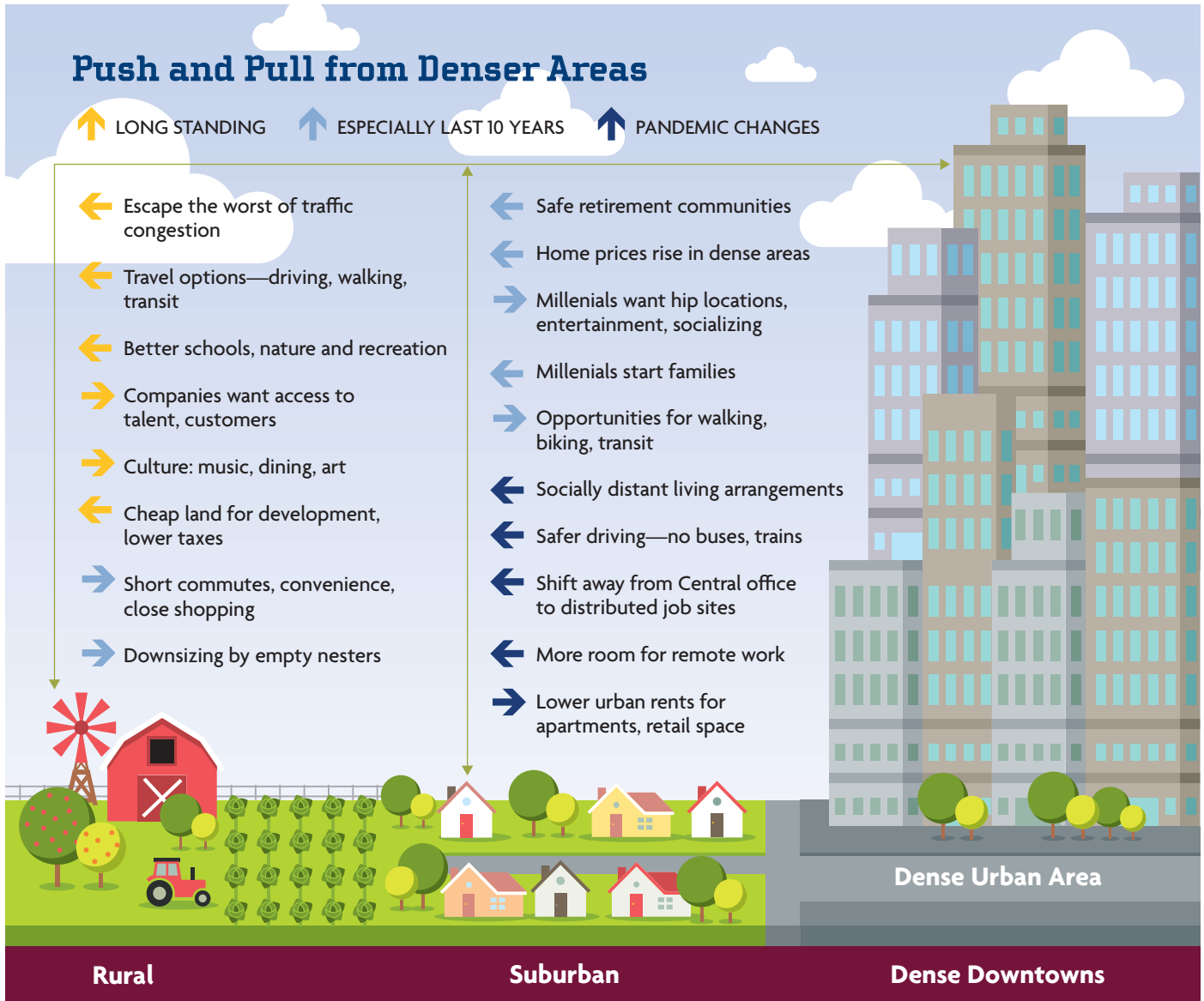**Rural**   **Suburban**   **Dense Downtowns**

KIM HAN

Figure 3-2

- The discovery or rediscovery of walking and biking and street life by many people during the pandemic will strengthen the appeal of complete streets and the attraction of walkable/bikeable neighborhoods.
- Greater recognition of the need to redress the effects of past racial discrimination and the harms caused by income inequality—including impacts on low-wage essential workers—will prompt more effective government and corporate activities to help distressed communities and to bolster their population growth.

As these and other possible futures take shape—driven mostly by the market but also influenced by public policy and investment decisions—the region's population is projected to continue its growth. However, the composition of the region's population will change, including:
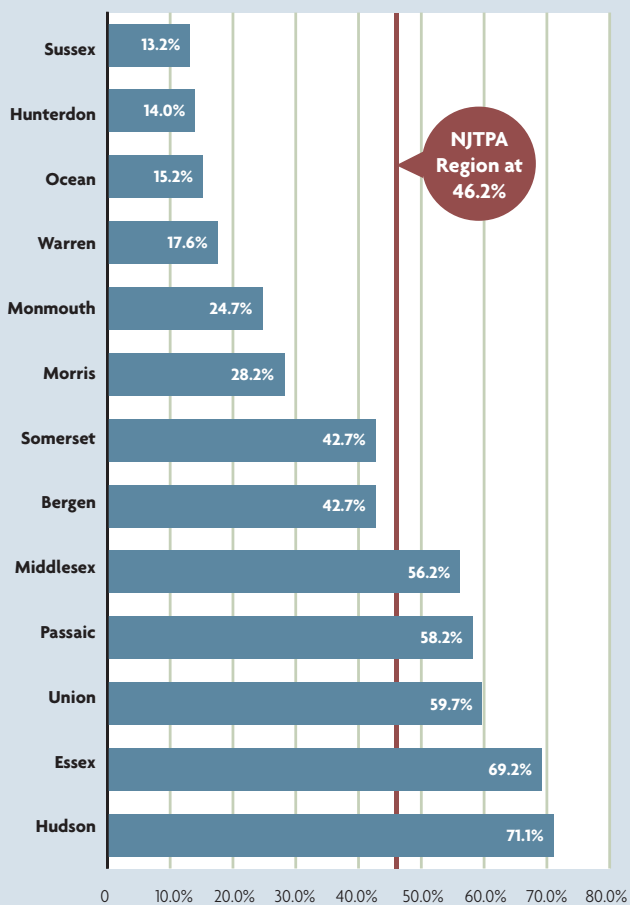
Aging population: In the short time frame between the 2010-2014 American Community Survey (ACS) and the 2015-2019 ACS, the NJTPA region saw the share of residents older than 54 years of age increase from 26 percent to 29 percent. (Figure 3-3) Ocean County has the highest concentration of seniors 65 or over at 22 percent. The aging population

Figure 3-3:
NJTPA Region: 5 Year Age Comparison

Figure 3-3:
NJTPA Region: 5 Year Age Comparison
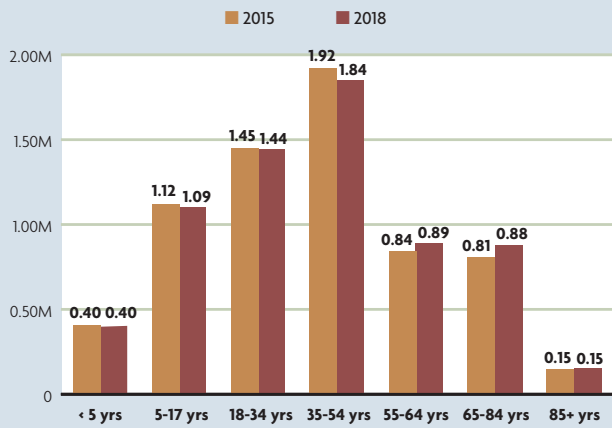
Source: ACS 2011-2015, 2014-2018

Figure 3-4:
Minority and Hispanic Population:
Percent of Total by County

County	Percent
Sussex	13.2%
Hunterdon	14.0%
Ocean	15.2%
Warren	17.6%
Monmouth	24.7%
Morris	28.2%
Somerset	42.7%
Bergen	42.7%
Middlesex	56.2%
Passaic	58.2%
Union	59.7%
Essex	69.2%
Hudson	71.1%

NJTPA Region at 46.2%

Source: ACS 2014-2018

contributes to slower population growth (with fewer children born per capita) and will require special transportation services and housing accommodations.

More Diversity: Mirroring national trends, the region's population is increasingly composed of racial and ethnic minorities (principally Asians, Blacks and Latinos). Minorities are more than half the population in five counties (Figure 3-4). Minority populations historically have had lower incomes and been concentrated in urban centers—though this is changing. These residents also rely more on transit for day-to-day mobility, raising equity concerns that have been brought into stark relief during the pandemic.

Immigration: Immigration has two components, domestic and international immigration. Except for Ocean County, the past decade has seen the region lose population to other regions of the U.S. However, New Jersey continues to attract immigrants from other countries (Figure 3-5). While international immigration declined recently due to changes in immigration policy and the impacts of the pandemic, this population is expected to grow again in the future as federal policies change. According to one estimate, New Jersey had the fifth largest immigrant population among states in 2015. Like minority populations, many of these immigrants have low incomes and depend on transit for daily travel needs.

Economic / Employment Trends

The current downturn accompanying the pandemic has caused considerable uncertainty for the region's economic future. However, in tandem with anticipated population growth, this plan looks toward an economic recovery over the next five to 10 years and resumption of prior economic growth rates. Overall, employment is forecast to grow 9.7 percent to 3.4 million jobs by 2050 (Figure 3-6).

The region's employment and Gross Domestic Product—defined as the value of the goods and services produced—increased substantially from the 2008 recession through 2019. The region was slower to recover in comparison with other places in the country, adding 405,600 jobs from February 2010 through February 2020, a recovery rate of 10.6 percent compared to the national recovery rate of 17.6 percent, according to a Rutgers University analysis.

But the pandemic brought a steep and dramatic decline. The state lost 717,200 jobs by April 2020—almost twice the number it had gained in the previous ten years—and by the end of April the unemployment rate had jumped to 16.6 percent (slightly higher than the national unemployment rate of 14.8 percent), from an unemployment rate of 3.7 percent in February 2020. However, the state gained back 54 percent (384,500) of the jobs it lost by March 2021, which is lower than the national recovery rate of 62 percent as of March 2021.

This plan assumes there will be a reassertion of previous growth trends but with changes likely in how and where growth occurs.

Shifting Growth Patterns

From 2017-2019, job growth was centered in urban core areas such as Hudson and Union counties, but Ocean County also saw an increase. Jobs grew by more than 5 percent in those three counties, while no other county had more than 3 percent job growth. Lower job growth trends in urbanized counties such as Bergen and Passaic and rural counties such as Sussex and Warren may change following the pandemic. Notably, Bergen's American Dream retail and entertainment complex and expected expansions in hospitals and health care will add to regional jobs. Health care has been one of the largest drivers of job growth in the region overall, with over 400,000 people employed in this sector.

But suburban and rural areas could draw growth from more urbanized parts of the region if companies restructure operations around remote work on a large scale and reduce reliance on central offices. A resulting spread of growth more widely throughout the region may lessen congestion caused by traditionally high peak hour commuting volumes but could lead to problems associated with sprawl.

Many downtowns also rely on office workers for daytime commerce and may suffer if operations move. Other factors in the long-term such as wide availability of automated vehicles could also drive renewed sprawl.

Rather than reacting to issues as they arise, the region now has an opportunity to shape trends. Prior to the pandemic, corporate leaders recognized the value of downtowns and walkable areas including

Flemington, Hunterdon County

Pandemic Housing Changes

With the start of the pandemic, many people were immediately locked into their locations, which in many cases turned into work-from-home facilities — the case for up to 60 percent of workers. As the months wore on, many families looked to change their living circumstances. Property values and sales activity jumped in suburban and rural areas, particularly as families sought more space for school- and work-at-home activities. However, this was largely confined to families with the income to afford the extra expenses of home purchases and moving. Many homeowners in these areas suddenly found their homes worth much more and have been enticed to upgrade their housing, downsize to condos or move elsewhere. At the same time, in denser urban areas, apartment rents declined and home sales slowed.

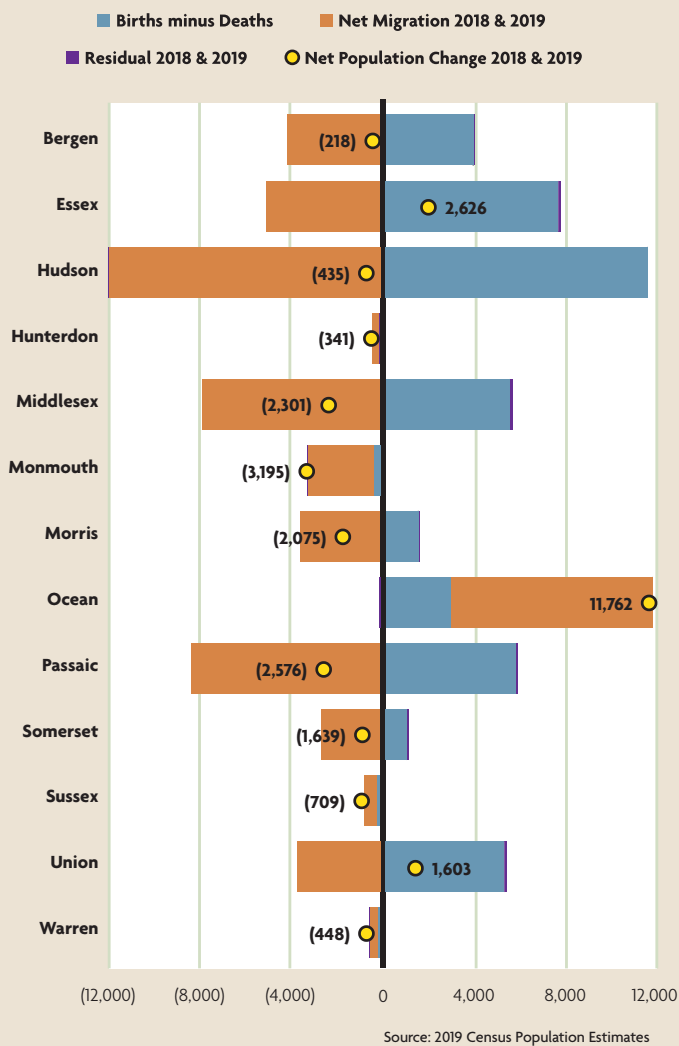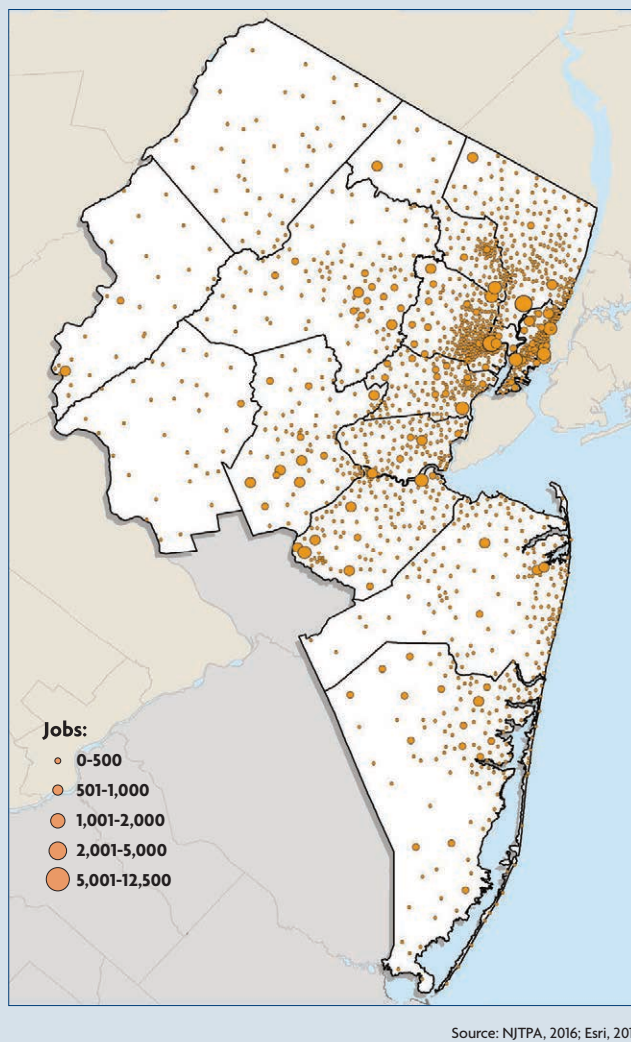## Figure 3-5:
County Change in Population 2018 and 2019

■ Births minus Deaths ■ Net Migration 2018 & 2019

■ Residual 2018 & 2019 ○ Net Population Change 2018 & 2019

Bergen (218)

Essex 2,626

Hudson (435)

Hunterdon (341)

Middlesex (2,301)

Monmouth (3,195)

Morris (2,075)

Ocean 11,762

Passaic (2,576)

Somerset (1,639)

Sussex (709)

Union 1,603

Warren (448)

(12,000) (8,000) (4,000) 0 4,000 8,000 12,000

Source: 2019 Census Population Estimates

Figure 3-6:
Employment Growth Forecast 2015-2050

Jobs:
- 0-500
- 501-1,000
- 1,001-2,000
- 2,001-5,000
- 5,001-12,500

Source: NJTPA, 2016; Esri, 2017

providing opportunities for creative collaboration and proximity to customers and business partners. This plan, in Chapter 5, points to a variety of strategies that can help channel development and land use into sustainable forms, such as supporting mixed-use development near transit stations. Programs such as complete streets and transportation demand management can reduce vehicle trips and provide travel alternatives throughout the region.

Creating the future this plan envisions requires more than transportation policies and investments. The work of Together North Jersey, NJTPA subregions and non-profits—such as New Jersey Future and Transportation Alternatives—is helping coordinate

improved transportation access with housing, arts, health, environmental and other policies. Attracting and retaining younger workers who favor walkable locations is particularly important, not only for employers but as the foundation for future economic growth and progress.

Changing Jobs

Over 300,000 people work in retail, one of the region's largest employment sectors, especially for low-skilled workers. Retail employment has been declining in recent years, a trend now compounded by the pandemic, which saw a massive shift to e-commerce. Online shopping grew 32.4 percent in 2020,

representing 21.6 percent of total sales, up from 17.8 percent in 2019. This is challenging downtowns and accelerating widespread reduction in mall shopping.

While job growth in other sectors will help ease some of this decline, it likely will not completely make up for it. Repurposing of malls and shopping centers will clearly become a larger issue during the next decade, with vacancies and disuse settling in. Plans to add residential, office and entertainment venues to the Monmouth Mall and the Garden State Plaza are examples of such repurposing. These shifts could create new transportation demands at these locations, with residences contributing to peak rush-hour traffic. Also, while e-commerce reduces shopping traffic, it places more trucks on the road and reshapes other freight movements.

In many respects, accelerated e-commerce is already reshaping New Jersey's economy and land use. While the state has long been a center of distribution to the northeast consumer market, there has been a surge in distribution facilities. In 2020 alone, 61 buildings, totaling more than 20 million square feet, were added or under construction. Amazon is now a major employer in the state. Warren County is starting to see major warehouse activity in Philipsburg and along the I-78/US-22 corridor, as is western Monmouth County at the Mercer County border along I-195/NJ Turnpike Interchange 7A. This shift to e-commerce has pushed many jobs from traditional retail, often located near public transit, to more remote warehouse areas not well served by transit. This is evident in the growth of warehousing and logistics operations in southern Middlesex County and other places.

Consumer-driven demand for faster deliveries has pushed the burgeoning industrial real estate market to seek locations near population centers. Development of warehouses and related facilities to meet this need are contributing to sprawl, encroaching on scarce open space and bringing other environmental impacts. But it also has led to the clean-up and reuse of brownfields and prospects for investment in a variety of other neglected properties in urban areas. The rise of e-commerce has added to the volume of goods handled through the North Jersey's port and air cargo facilities, as discussed in Chapter 5.

Over coming decades, the region must be prepared to adapt to shifts and changes in employment. After years of declines, manufacturing's share of total employment has stabilized at 5 to 6 percent; however, this is still a low- to no-growth sector of the region's economy. Among the major sectors of the economy with growth potential, as of 2019, are financial services with 222,000 employees; life sciences (including pharmaceuticals, biotechnology and medical devices) which employed 76,000 workers; and technology (including professional and technical services and information technology) employing 183,352,000 in 2019. Repurposing large campus style office complexes might help attract these businesses. For example, the Merck office complex in Hunterdon County was sold in 2018 to Unicom (the parent company of US Robotics), which created a science and technology park at the facility, and the expansive Bell Labs complex in Monmouth County has become Bell Works, home to dozens of small businesses.

In addition, the region's economic fortunes are still very much tied to those of New York City and the larger metropolitan area. In recent years, 10 percent or more of the region's working population has commuted to New York City. Investments in the Hudson River tunnels and larger Gateway program are needed to safeguard this crucial economic interdependence. But changes in work will likely alter commuting

Bell Works, Holmdel, Monmouth County


MATT BISANZ

Table 3.1

AVERAGE HOUSEHOLD INCOME	DOLLARS
Nationwide*	$85000
Statewide*	$110,000
NJTPA Region	$114,000
Black	$72,000
Hispanic	$76,000
White	$130,000
POVERTY RATES	**PERCENT**
Statewide	10%
NJTPA Region	10%
Black	18%
Hispanic	19%
White	8%
PANDEMIC UNEMPLOYMENT NATIONWIDE AS OF JANUARY 2021	**PERCENT**
Black	9.2%
Hispanic	8.6%
White	5.7%

* New Jersey Median Income = $79,000 vs Nationwide Median Income of $60,000
Source: 2014-2018 ACS, unemployment statistics from Bureau of Labor Statistics

patterns for many people, placing greater importance on improving intra-regional transit and flexible travel options.

Despite this and other uncertainties about the future, the region has substantial assets on which to rebuild from the pandemic and support continuing

Lambertville, Hunterdon County
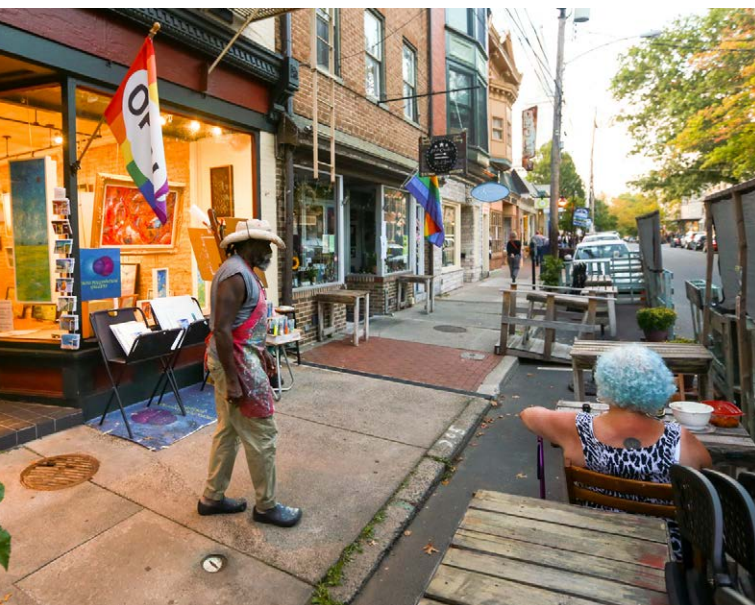
economic progress. These include an educated work force, good quality of life, a diverse population and extensive transit and highway facilities.

Income and Equity

New Jersey's median household income, according to the 2014-2018 ACS, was the second highest in the nation. However, this is somewhat offset by a higher cost of living, estimated in 2020 to be 25 percent greater than the national average (ninth highest).

Even with a higher-than-average median income, about one-tenth of the residents in the region live in poverty (Table 3-1). Poverty rates are highly correlated with race. The counties with poverty rate exceeding the statewide average all have substantial minority populations.

New Jersey's income disparities mean large numbers of residents face limited life choices. Low income and minority residents often live in substandard housing in communities with greater crime and struggling schools. They have less access to healthy food and face a host of disadvantages compared to wealthier locations. The pandemic has exposed and worsened these disparities, with these residents suffering greater economic hardship. Many have had no choice but to continue to travel to service jobs as essential workers while higher income workers work from home. Disease impacts were also unequal, with Blacks, Latinos, and Native Americans experiencing hospitalizations at rates 4.5 to 5.5 times higher than non-Hispanic whites, according to the federal Centers for Disease Control.

These disparities are rooted in the long legacy of racial discrimination which was institutionalized through such practices as redlining in the real estate industry, unfair hiring practices and unequal access to quality education and other resources. Protests against racial injustice during 2020 have sparked a reexamination of this legacy, its persistent impacts and steps needed to address them.

The transportation sector too has a history of discriminatory practices and disparate impacts. This includes past policies such as transportation investments favoring suburban communities, leaving many urban communities to bear disproportionate effects of cut-through highways dividing neighborhoods, limited

transit and access to jobs, and pollution from heavy truck traffic. The NJTPA, through this plan, is joining with its subregions and partner agencies to support more equitable investments and remedies for impacts of past policies. Of particular concern is providing improved access to employment, including jobs in the burgeoning distribution sector and other industries, as discussed in Chapter 5.

Environment

This plan includes a separate chapter (Chapter 6) focusing on environmental issues and the NJTPA's responses, including addressing climate change impacts and threats. However, the environment is very much a part of the context for long range planning discussed in this chapter. In brief, New Jersey is the most densely populated state in the nation, and North Jersey includes the state's most densely populated counties. Even so, much of the region is undeveloped, with large expanses of open space, including forests and preserved areas, parks, wetlands and farmland. Much of the undeveloped land is included in three special planning districts—the Highlands, the Pinelands, and the Meadowlands.

These preserved lands are important, not just as natural resources and wildlife habitats, but as part of the systems for recharging aquifers, ensuring water quality for residents, and to help counteract heat and poor air quality impacts of climate change. Identifying and preserving important natural resources helps focus growth in areas where infrastructure, including transportation facilities, can support it. How land is developed is a key determinant of the type and quality of transportation options available to residents. As
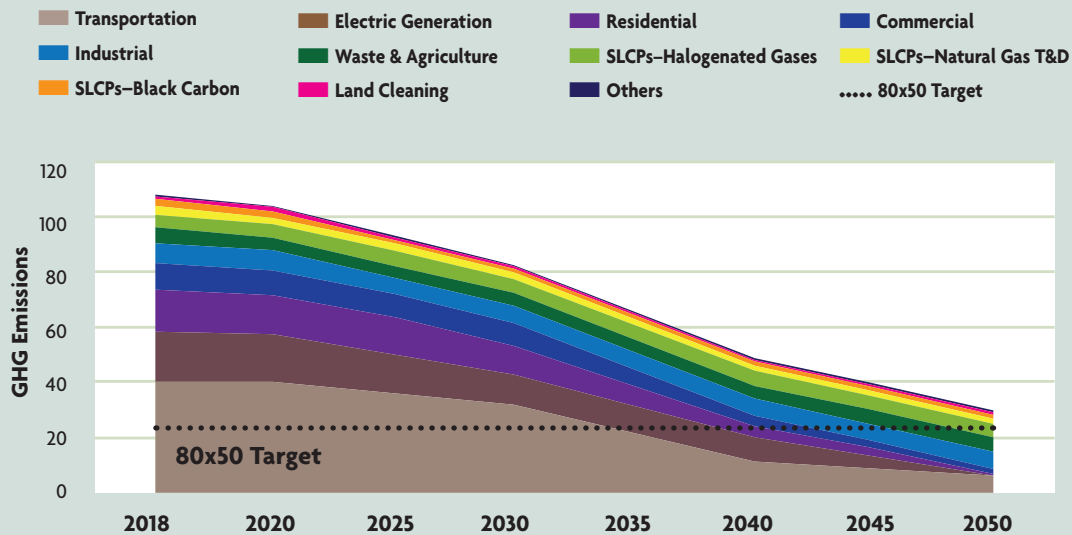
Figure 3-7: Annual Number Bad Air Quality Days
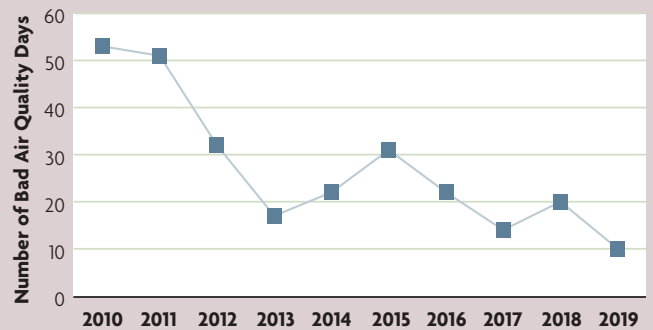
Source: USEPA 2020

Figure 3-8: Pathway to 2050: Greenhouse Gas Emissions Called for in 2020 New Jersey Global Warming Response Act 80x50 Report

The 2019 Energy Master Plan combined with non-energy strategies, and carbon sequestration (not shown) have the potential to reduce net emissions below the 80x50 target prior to 2050.

Legend: Transportation, Electric Generation, Residential, Commercial, Industrial, Waste & Agriculture, SLCPs–Halogenated Gases, SLCPs–Natural Gas T&D, SLCPs–Black Carbon, Land Cleaning, Others, ... 80x50 Target

Source: NJ Global Warming Response Act 80x50 Report

noted, NJTPA planning and programs help support development in forms and locations that offer travel alternatives, reduce trips, and minimize environmental impacts.

In addition, a variety of environmental factors must be considered in the transportation project development process, as required under the National Environmental Policy Act (NEPA). The NJTPA also has a direct role in air quality planning and oversight through the air quality conformity process. This process has supported steady improvement in air quality throughout the region (Figure 3-7).

Increasingly, the NJTPA is also involved in efforts to combat climate change, including supporting the state's targets for reducing greenhouse gas emissions by 80 percent by 2050 (Figure 3-8) and adapting infrastructure to be resilient to climate impacts. These and other efforts guide this plan and the NJTPA's contributions to broader regional progress as it focuses on transportation challenges through 2050.

TRENDS

POPULATION
7.7M
PEOPLE IN **2050** ↗ Up from **6.7M** in **2019**

EMPLOYMENT
3.4M jobs in **2050**
↗ Up from **3.1M** in **2019**

AGE
18% over **65 years old** in **2050**
↗ Up from **16**% in **2019**

DIVERSITY ↗
47% of the population are minorities in **2019** as compared to **36**% in **2000**

FREIGHT

431M
TONS IN **2050** ↗ Up **16**% from **372M** tons in **2020**

BREAKDOWN OF HOW IT MOVES

78% by truck

14% by pipeline

4% by freight rail

4% by domestic maritime

TRANSPORTATION MODE

Work commute trips by mode
SOURCE: *ACS 2014-2018*

SINGLE OCCUPANT VEHICLE
72% vs. **80**% national average

TRANSIT
14% vs. **5**% national average

FOOT OR BIKE
4% vs. **3**% national average

HIGH OCCUPANT VEHICLE
8% vs. **10**% national average

CRASH DATA (2019)

219,000
MOTOR VEHICLE CRASHES IN THE NJTPA REGION

361 FATALITIES
144 drivers; **96** passengers; **109** pedestrians; **12** cyclists

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