



## SECTION 3. COUNTY PROFILE

### 2024 HMP Update Changes

- The County Profile contains updated information regarding the County's physical setting, population and demographics and trends, general building stock, land use and trends, and critical facilities.
- Critical facilities are organized under FEMA's updated lifelines definitions.

This profile describes the general information of the County (physical setting, population and demographics, general building stock, and land use and population trends) and critical facilities located within Burlington County. In Section 5, specific profile information is presented and analyzed to develop an understanding of the study area, including the economic, structural, and population assets at risk and the particular concerns that may be present related to hazards analyzed (for example, a high percentage of vulnerable persons in an area).

### 3.1 GENERAL INFORMATION

Burlington County is located in the center of New Jersey, bordered to the north by Mercer and Monmouth County, east by Ocean County, to the south by Atlantic County, to the southwest by Camden County, and to the northwest by the Delaware River and Pennsylvania. According to the 2010 U.S. Census, the total population of the County is 448,734 and has a total land area of 820 square miles. The County is 43 miles long and has an average width of 20 miles. Burlington County ranks first in area and 11<sup>th</sup> in population among New Jersey's 21 counties. Figure 3-1 illustrates an overview of Burlington County.

The Lenni-Lenape Indians were the original aboriginal owners of Burlington County. In October 1677, a group of English debarked from the ship Kent and founded the Town of Burlington. Burlington County was later incorporated on May 17, 1694. The American Indians sold more and more of their lands to the new settlers until finally, in 1801, there remained less than 100 adult American Indians on the Indian Mills reservation, which was the first American Indian reservation in the U.S. and the American Indian's last dwelling place in Burlington County (Burlington County 2019).

The County's waterways were a principal factor in the early and successful seating of Burlington County. These transportation systems were vital at the time to trade, travel and provincial existence. Consequently, the earliest homes and the earliest settlements were on the waterways. Burlington, thriving at its river location, was the port of entry. Several of its early inhabitants moved on to establish farms in the fertile valleys, being generally careful to choose creek-valleys where a landing and a waterway insured easy transport to Burlington or Philadelphia (Burlington County 2019).



According to the 2020 U.S. Census data, the County’s population was 461,860. Burlington County is the 11th most populated county in New Jersey (U.S. Census 2021).

## 3.2 MAJOR PAST HAZARD EVENTS

Presidential disaster declarations are typically issued for hazard events that cause more damage than state and local governments can handle without assistance from the federal government, although no specific dollar loss threshold has been established for these declarations. A presidential disaster declaration puts federal recovery programs into motion to help disaster victims, businesses, and public entities. Some of the programs are matched by state programs. Review of presidential disaster declarations helps establish the probability of reoccurrence for each hazard and identify targets for risk reduction. Table 3-1 shows FEMA disaster declarations that included Burlington County through 2023 (records date back to 1954).

Table 3-1. History of FEMA Declarations in Burlington County, New Jersey

| Disaster Number | Event Date                | Declaration Date   | Incident Type    | Title   |
|-----------------|---------------------------|--------------------|------------------|---|
| <b>DR-205</b>   | August 18, 1965           | August 18, 1965    | Drought          | Water Shortage                                |
| <b>DR-310</b>   | September 4, 1971         | September 4, 1971  | Flood            | Heavy Rains & Flooding                        |
| <b>DR-477</b>   | July 23, 1975             | July 23, 1975      | Flood            | Heavy Rains, High Winds, Hail & Tornadoes     |
| <b>DR-528</b>   | February 8, 1977          | February 8, 1977   | Severe Ice Storm | Ice Conditions                                |
| <b>EM-3083</b>  | October 19, 1980          | October 19, 1980   | Drought          | Water Shortage                                |
| <b>EM-3106</b>  | March 13-17, 1993         | March 17, 1993     | Snow             | Severe Blizzard                               |
| <b>DR-1088</b>  | January 7-12, 1996        | January 13, 1996   | Snow             | Blizzard of 96 (Severe Snow Storm)            |
| <b>EM-3148</b>  | September 16-18, 1999     | September 17, 1999 | Hurricane        | Hurricane Floyd Emergency Declarations        |
| <b>EM-3156</b>  | May 30-November 1, 2000   | November 1, 2000   | Other            | West Nile Virus                               |
| <b>EM-3169</b>  | September 11, 2001        | September 19, 2001 | Fire             | Fires and Explosions                          |
| <b>EM-3181</b>  | February 16-17, 2003      | March 20, 2003     | Snow             | Snow  |
| <b>DR-1530</b>  | July 12-23, 2004          | July 16, 2004      | Severe Storm(s)  | Severe Storms and Flooding                    |
| <b>EM-3257</b>  | August 29-October 1, 2005 | September 19, 2005 | Hurricane        | Hurricane Katrina Evacuation                  |
| <b>DR-1694</b>  | April 14-20, 2007         | April 26, 2007     | Severe Storm(s)  | Severe Storms and Inland and Coastal Flooding |
| <b>FM-2695</b>  | May 15, 2007              | May 16, 2007       | Fire             | Warren Grove Fire                             |
| <b>DR-1873</b>  | December 19-20, 2009      | February 5, 2010   | Snow             | Snowstorm                                     |
| <b>DR-1889</b>  | February 5-6, 2010        | March 23, 2010     | Snow             | Severe Winter Storm and Snowstorm             |
| <b>DR-1897</b>  | March 12-April 15, 2010   | April 2, 2010      | Severe Storm(s)  | Severe Storms and Flooding                    |
| <b>DR-1954</b>  | December 26-27, 2010      | February 4, 2011   | Snow             | Severe Winter Storm and Snowstorm             |



| Disaster Number | Event Date                      | Declaration Date  | Incident Type   | Title                     |
|-----------------|---------------------------------|-------------------|-----------------|---------------------------|
| <b>DR-4021</b>  | August 27-September 5, 2011     | August 31, 2011   | Hurricane       | Hurricane Irene           |
| <b>DR-4086</b>  | October 26-November 8, 2012     | October 30, 2012  | Hurricane       | Hurricane Irene           |
| <b>DR-4231</b>  | June 23, 2015                   | July 22, 2015     | Hurricane       | Hurricane Sandy           |
| <b>DR-4264</b>  | January 22-24, 2016             | March 14, 2016    | Hurricane       | Hurricane Sandy           |
| <b>DR-4368</b>  | March 6-7, 2018                 | June 8, 2018      | Severe Storm(s) | Severe Storm              |
| <b>EM-3451</b>  | January 20, 2020 – May 11, 2023 | March 13, 2020    | Biological      | COVID-19 Pandemic         |
| <b>DR-4488</b>  | January 20, 2020 – May 11, 2023 | March 25, 2020    | Biological      | COVID-19 Pandemic         |
| <b>DR-4574</b>  | August 4, 2020                  | December 11, 2020 | Hurricane       | Tropical Storm Isaias     |
| <b>EM-3573</b>  | September 1-3, 2021             | September 2, 2021 | Hurricane       | Remnants of Hurricane Ida |
| <b>DR-4614</b>  | September 1-3, 2021             | September 5, 2021 | Hurricane       | Remnants of Hurricane Ida |

Source: FEMA 2023

## 3.3 PHYSICAL SETTING

This section presents the physical setting of the County, including location, hydrography and hydrology, topography and geology, climate, and land use/land cover.

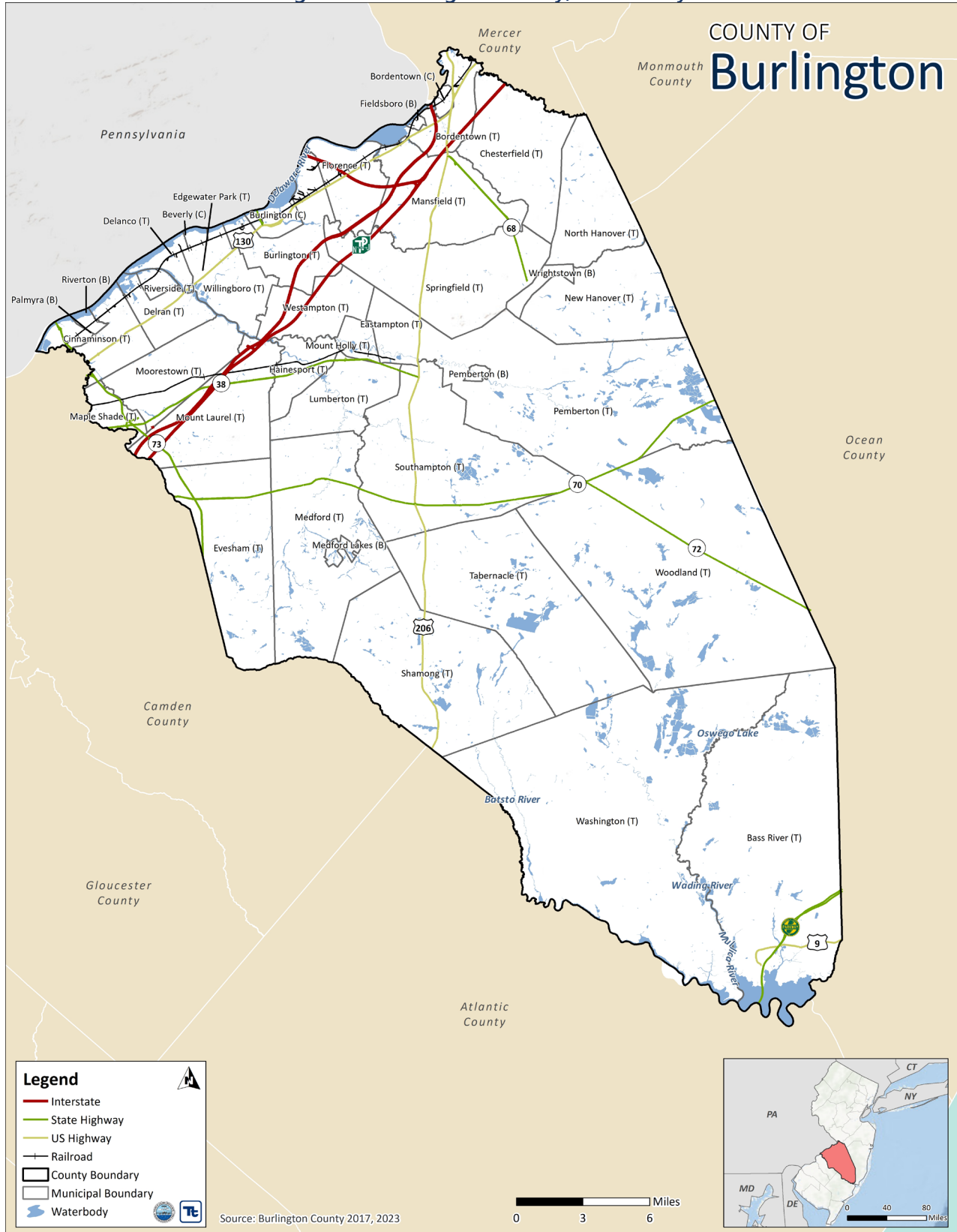
### 3.3.1 Location

Burlington County is the largest county in New Jersey, covering 827 square miles, and extends from the Delaware River to the Great Bay. Burlington County is bordered to the north by Mercer County, to the northeast by Monmouth County, to the east by Ocean County, to the southwest by Atlantic County and to the west by Camden County. The Delaware River separates Burlington County from Pennsylvania to the west. The County has a total area of 529,351 acres including 5,191 acres of water (Burlington County 2019). Figure 3-1 illustrates Burlington County and its surrounding area.

Forty municipalities exist within the County, consisting of three cities, six boroughs and 31 townships. The county seat is located in Mount Holly (Burlington County 2023). Burlington County is located within the Philadelphia-Camden-Wilmington Metropolitan Statistical Area (MSA). Burlington County features a variety of land uses including densely populated urban development to preserved open space and military use.



Figure 3-1. Burlington County, New Jersey

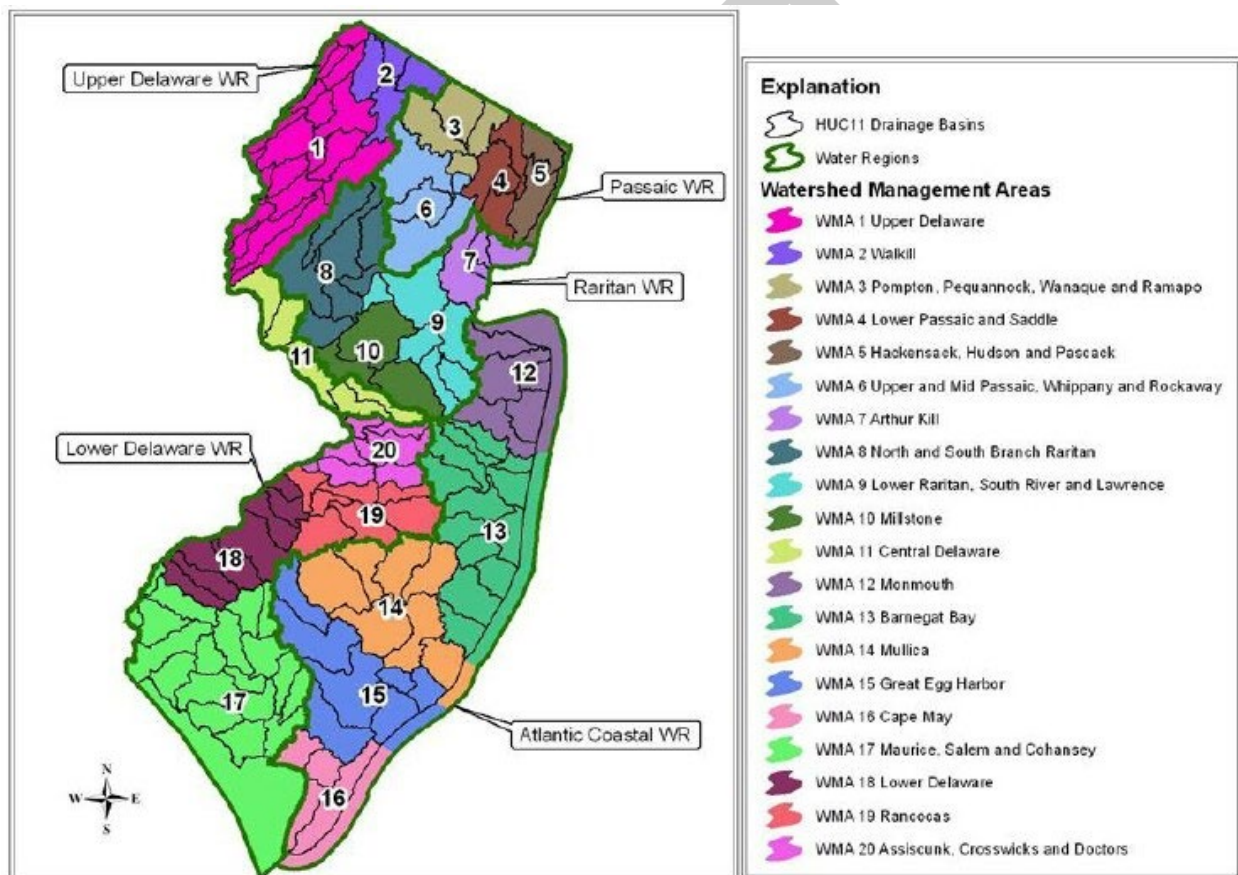




### 3.3.2 Hydrography and Hydrology

A watershed is the area of land that drains into a body of water such as a river, lake, stream, or bay. It is separated from other systems by high points in the area such as hills or slopes. It includes not only the waterway itself but also the entire land area that drains to it. Drainage basins generally refer to large watersheds that encompass the watersheds of many smaller rivers and streams. In New Jersey, the State is divided into 20 Watershed Management Areas (WMA), which are made up of smaller watersheds. Figure 3-2 depicts the 20 Watershed Management Areas (WMAs) and drainage basins found in New Jersey.

Figure 3-2. Watershed Management Areas of New Jersey



Source: *New Jersey Geological and Water Survey 2007*

According to the figure above and to Figure 3-3, Burlington County is located in five WMAs: WMA 13 (Barnegat Bay), WMA 14 (Mullica), WMA 18 (Lower Delaware), WMA 19 (Rancocas), and WMA 20 (Assiscunk, Crosswicks, Doctors).

WMA 13, Barnegat Bay, includes watersheds that drain the central Atlantic drainage of New Jersey. The Barnegat Bay Watershed is a 660 square mile area encompassing all of the land and water in Ocean County, as well as parts of Monmouth County. The area lies mostly in Ocean County and



includes the Barnegat Bay as well as the following subwatersheds: Metedeconk River, Toms River, Forked River, Cedar Creek (NJDEP 2021).

WMA 14, Mullica, includes watersheds draining portions of the Pinelands of New Jersey. It is approximately 561 square miles in size and approximately 80 percent of this watershed consists of state parks and forests. Major rivers include the Mullica, Wading River, Nochescatauxin Brook, Atsion Creek, Bass River, Batsto River, Nescochaque Creek, Landing Creek, Hammonton Creek, and the Oswego River. This Management Area lies in Burlington, Atlantic, and Ocean Counties and includes the watersheds of Mullica River, Mechescatauxin Creek, Wading River, Atsion Creek, Batsto River, and Doughty Creek. The Mullica River and its tributaries are considered the primary drainage system for the Pinelands (NJDEP 2021).

WMA 18, Lower Delaware, includes the Cooper River, Big Timber, Mantua, Newton, Oldmans, Pennsauken, Pompeston, Raccoon, Repaupo, and Woodbury Creeks, as well as Baldwin Run, Swede Run, and Maple Swamp. This management area covers all or parts of Burlington, Camden, and Gloucester counties, including 68 municipalities encompassing 391 square miles (NJDEP 2021).

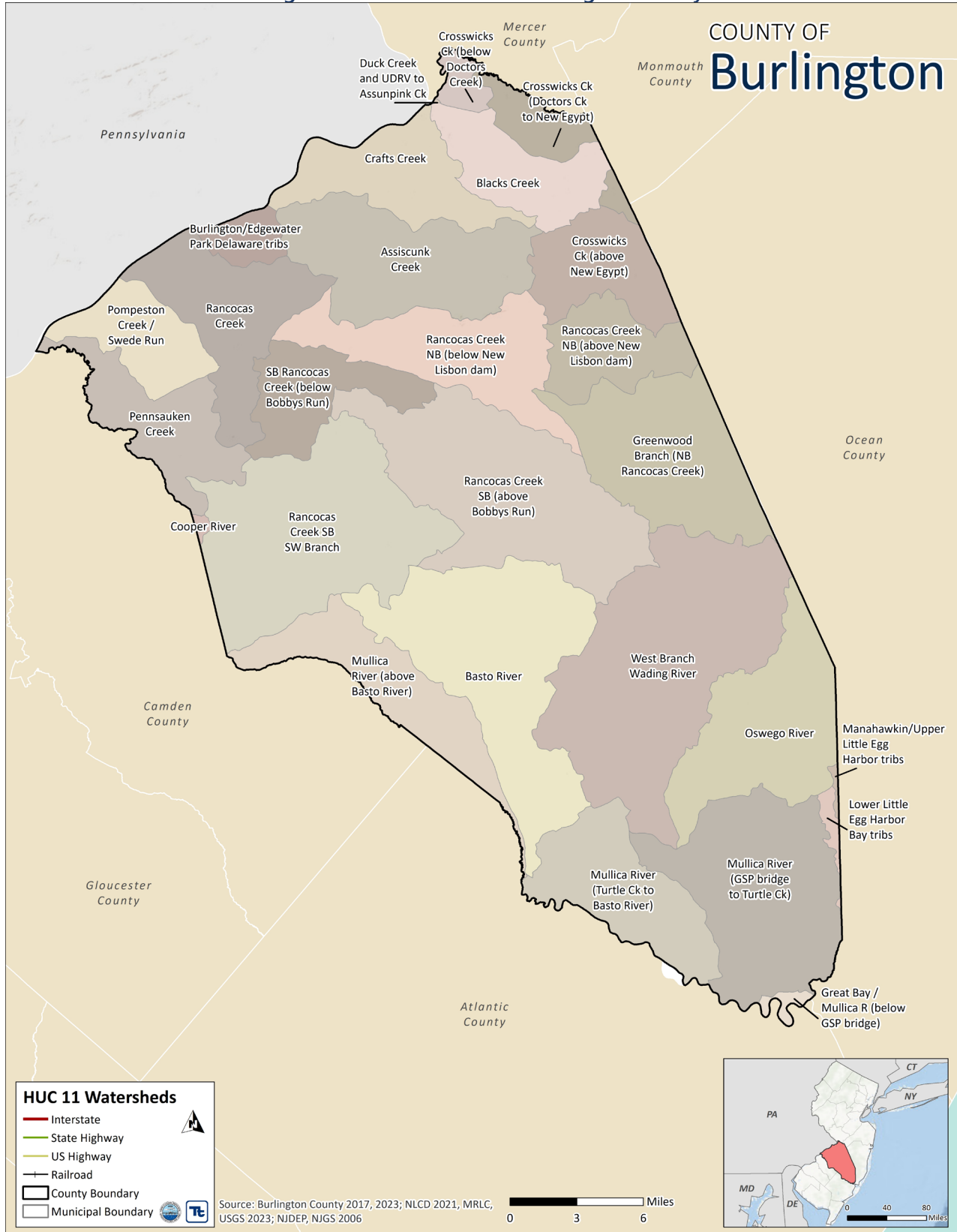
WMA 19, Rancocas, is the largest watershed in south-central New Jersey and is made up of the North and South Branch and the Main stem of the Rancocas Creek, including Mill Creek. Portions of Burlington, Camden, and Ocean Counties. Approximately 33 municipalities make up this management area and cover an area of 360 square miles. Of its total area, the North Branch drains 167 square miles and the South Branch drains 144 square miles. The North Branch is 31 miles long and is fed by the Greenwood Branch, McDonalads Branch, and Mount Misery Brook. The major tributaries to the South Branch include the Southwest Branch Rancocas Creek, Stop the Jade Run, Haynes Creek, and Friendship Creek (NJDEP 2021).

WMA 20, Assiscunk, Crosswicks, Doctors, includes the Assiscunk, Blacks, Crafts, Crosswicks, Doctors, Duck, and Mill Creeks. This management area includes 26 municipalities spanning four counties: Burlington, Mercer, Monmouth, and Ocean encompassing 253 square miles. Crosswicks Creek is 25 miles long and drains an area of 146 square miles to the Delaware River at Bordentown. Major tributaries include Jumping Brook, Lahaway Creek, North Run, and Doctors Creek. Tides affect this stream up to the Crosswicks Mill Dam (Delaware River Basin Commission 2023). Allentown Lake, Oakford Lake, Prospertown Lake, and Imlaystown Lake are major impoundments in the Crosswicks Creek Watershed (NJDEP 2021).

The WMA's can be further broken out into HUC 11 watersheds. There are over 25 HUC 11 watersheds that are contained within or partially located within Burlington County. These watersheds are displayed below in Figure 3-3.



Figure 3-3. Watersheds of Burlington County





## Delaware River Basin

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The Delaware River is the longest un-dammed river in the United States east of the Mississippi River. The Delaware extends 330 miles from the confluence of its East and West branches at Hancock, New York to the mouth of the Delaware Bay where it meets with the Atlantic Ocean. The Delaware River is fed by 216 tributaries, with the largest being the Schuylkill and Lehigh Rivers in Pennsylvania. Overall, the Delaware River Basin contains over 13,000 square miles and drains portions of Pennsylvania, New York State, New Jersey, and Delaware. Over 15 million people rely on the waters of the Delaware River Basin for drinking, agricultural use, and industrial use. New York City gets roughly half its water from three large reservoirs located on tributaries to the Delaware River (Delaware River Basin Commission 2023).

Three reaches of the Delaware River are included in the National Wild and Scenic Rivers System. One section extends 73 miles from the confluence of the River's East and West branches at Hancock, New York downstream to Millrift, Pennsylvania; the second stretches 40 miles just south of Port Jervis, New York downstream to the Delaware Water Gap near Stroudsburg, Pennsylvania. The Lower Delaware Wild and Scenic Rivers Act, signed into law on November 1, 2000, added a 38.9-mile section of the main stem Delaware (and about 28 miles of selected tributaries) to the national system, linking the Delaware Water Gap and Washington Crossing, Pennsylvania, just upstream of Trenton, New Jersey. Three-quarters of the non-tidal Delaware River is now included in the National Wild and Scenic Rivers System (Delaware River Basin Commission 2023).

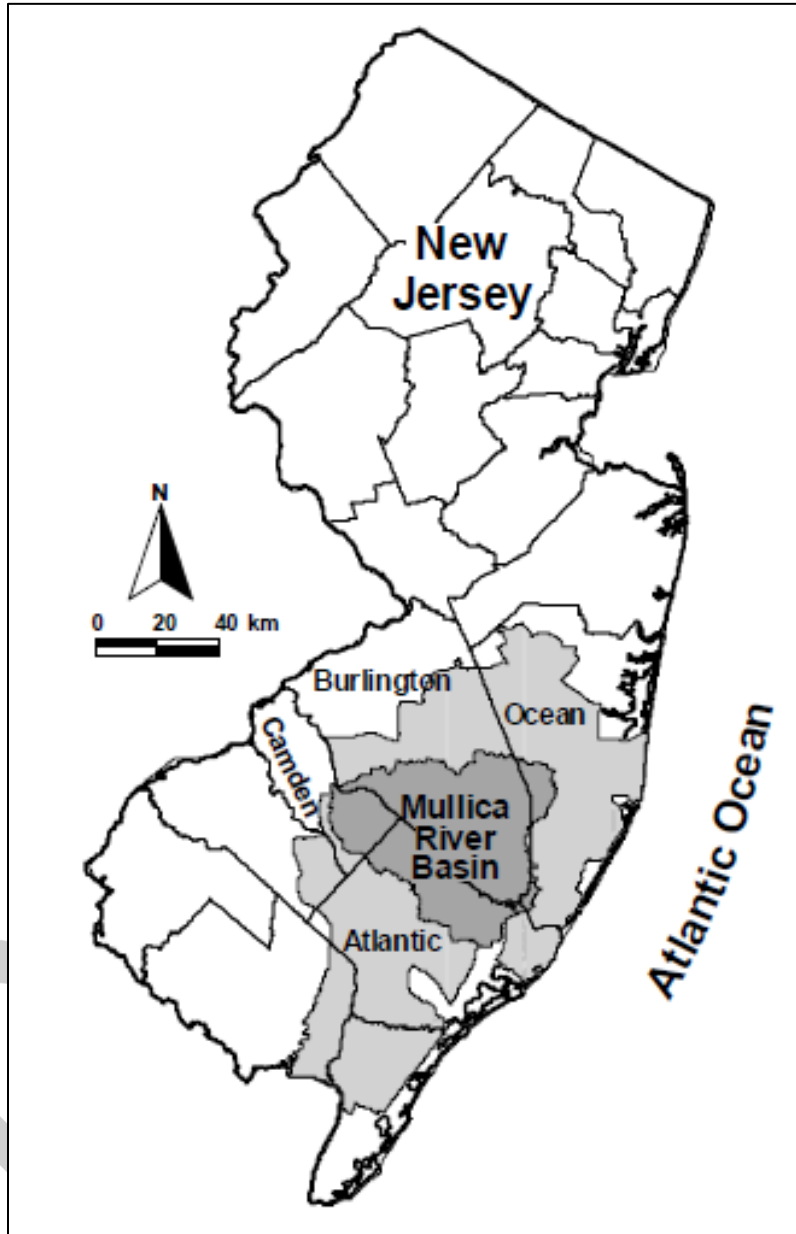
## Mullica River Basin

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The 1,474 square km Mullica River Basin drains 23 municipalities in Atlantic, Burlington, Camden, and Ocean Counties. The unconfined Kirkwood-Cohanset aquifer system underlies the basin. The Basin is dominated by undeveloped forest land, much of which is designated as state owned or wildlife management areas. The entire Basin lies within the Pinelands National Reserve. The Mullica River and its tributaries are renowned for their high-water quality and largely undisturbed ecosystems (Zampella and Bunnell 2000).

Figure 3-4 displays the Mullica River Basin. Figure 3-5 shows the waterways of Burlington County.

Figure 3-4. Regional Location of the Mullica River Basin in the Pinelands National Reserve

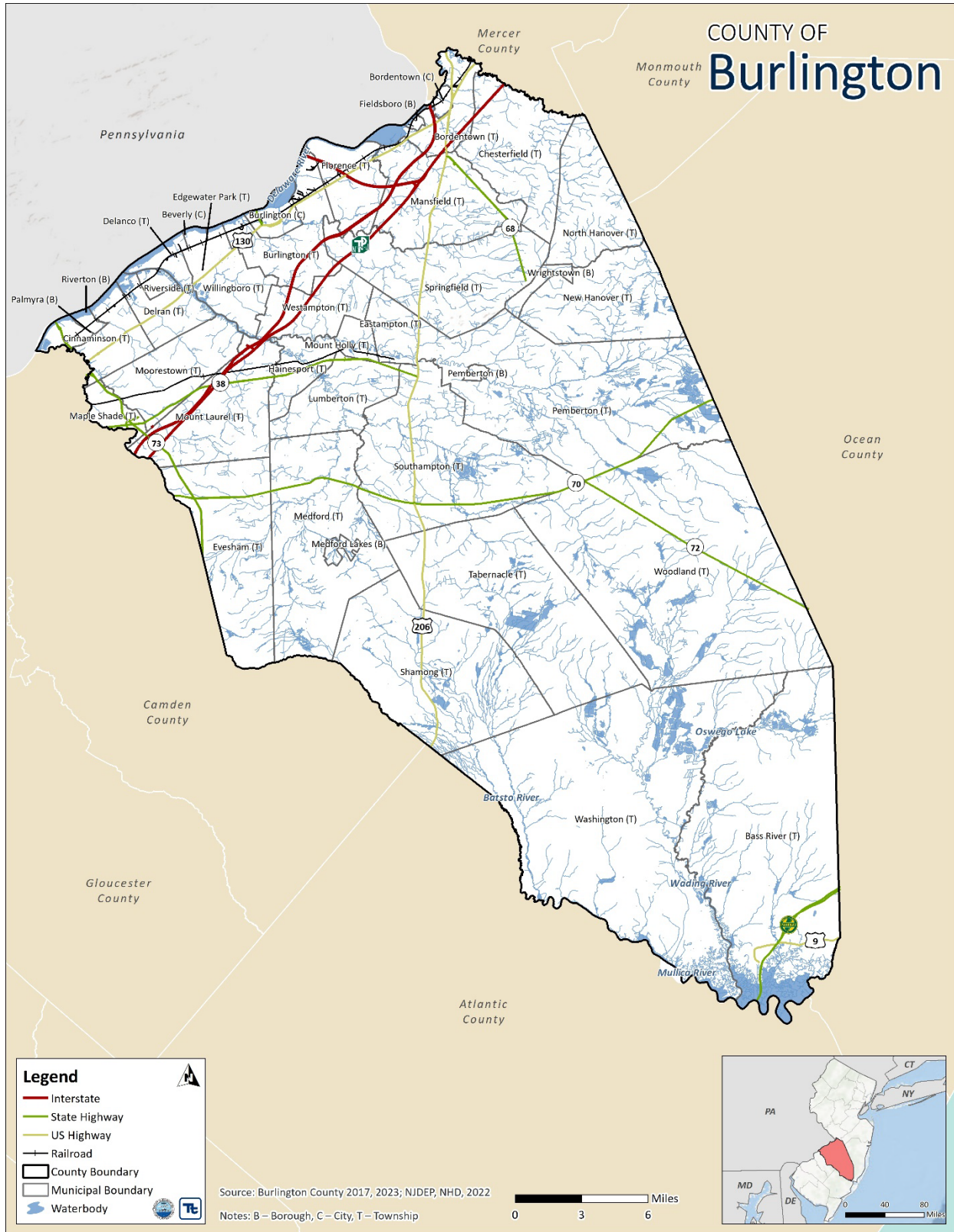


Source: Zampella and Bunnell 2000





Figure 3-5. Burlington County Waterways

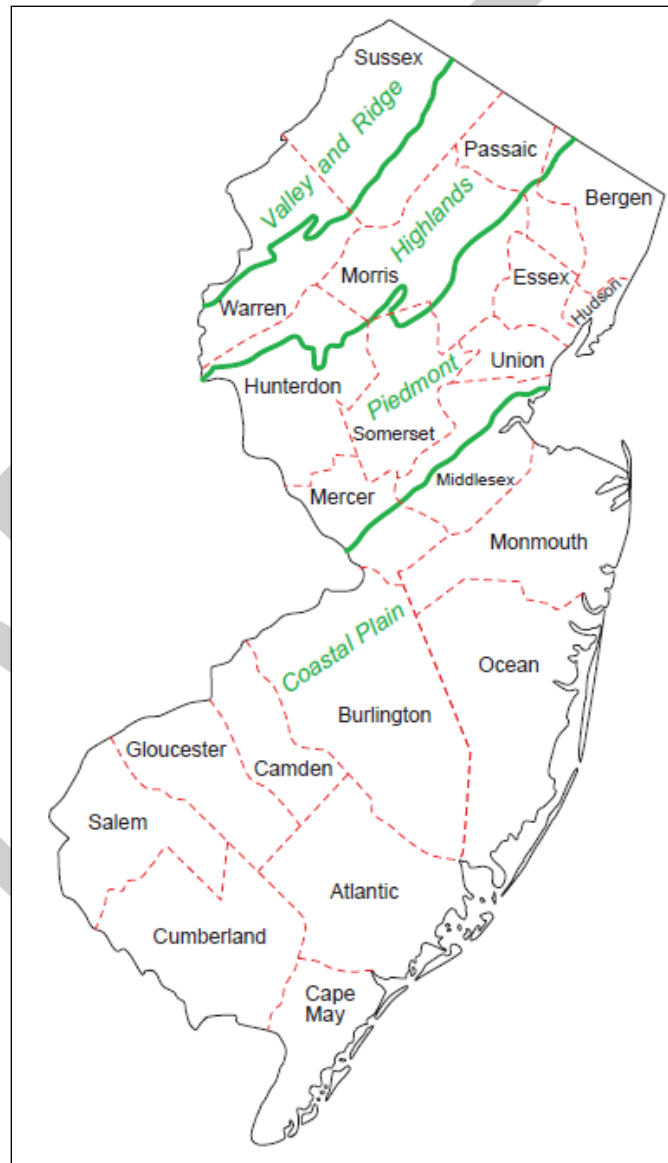




### 3.3.3 Topography and Geology

Burlington County lies within the Atlantic Coastal Plain, one of the four major physiographic regions of New Jersey (Figure 3-6). The lowest parts of the County are at sea level along the Delaware River and the County's southeastern border along the Mullica River. The highest point is Arneys Mount, located in the Township of Springfield, at an elevation of approximately 260 feet above sea level (FEMA 2019). The unconsolidated deposits of the Coastal Plain dip gently to the southeast and range in age from the upper Cretaceous to Miocene (90 to 10 million years old) (Dalton 2003).

Figure 3-6. Physiographic Provinces in Burlington County



Source: Dalton 2003

According to the New Jersey Geological Survey (NJGS), the Coastal Plain begins with a broad trough that extends along the southern border of the Piedmont Province from the Raritan Bay to Trenton.



The streams that flow northwest to the Delaware have narrow valleys, are shorter and have steeper gradients than streams that flow northwest to the Delaware which are shorter and have steeper gradients than the streams that flow southeast (Dalton 2003).

Like New Jersey, Burlington County has distinct geological regions within the County. The Coastal Plain is divided into three subdivisions including the inner lowland, the inner upland, and the outer lowland. In Burlington County the inner lowland is the area bordering the Delaware River, where elevations rarely exceed 100 feet above sea level. Streams in this inner lowland area drain to the Delaware River (Lucey 2001).

The inner upland forms the drainage divide in the county and is a narrow, slightly dissected cuesta with some elevations up to 200 feet. Erosional remnants form the prominent hills of Mount Holly, Juliustown, and Arney's Mount. The sands and gravel in these hills, in addition to having been protected by capping gravels, have frequently been partially cemented by iron-oxide precipitated by water percolating down through the ground (Lucey 2001).

Southern Burlington County lies within the outer lowland where elevations rarely exceed 50 feet. Streams within this subprovince empty into the Atlantic Ocean. Sloping gently towards the sea, the flat terrain of this area has been slightly modified by the Mullica, Wading, and Bass Rivers (Lucey 2001).

### 3.3.4 Climate

New Jersey is located about halfway between the equator and the North Pole, on the eastern coast of the U.S. Due to its geographic location, New Jersey is influenced by wet, dry, hot, and cold airstreams, creating a highly variable climate (ONJSC 1983). Five climate zones make up New Jersey – North, Central, Southwest, Pine Barrens, and Coastal.

As shown of Figure 3-7, Burlington County primarily located within the Pine Barrens zone, with the southeastern tip of the County located in the coastal climate zone and the north and northwest portions in the central and southwest climate regions. Details regarding these climate zones are described below.

- Pine Barrens Climate Zone - Scrub pine and oak forests dominate the interior southern portion of New Jersey, hence the name, Pine Barrens. Sandy soils, which are porous and not very fertile, have a major effect on the climate of this region. On clear nights, solar radiation absorbed during the day is quickly radiated back into space, resulting in surprisingly low minimum temperatures. Atlantic City Airport, which is surrounded by sandy soil, can be 15-20 degrees cooler than the Atlantic City Marina on the bay, which is only about thirteen miles away.

The porous soil permits any precipitation to rapidly infiltrate and leave surfaces quite dry. Drier conditions allow for a wider range between the daily maximum and minimum temperatures and make the area vulnerable to forest fires.



- Southwest Climate Zone – This zone lies between sea level and approximately 100 feet above sea level. The close proximity to Delaware Bay adds a maritime influence on the climate of this region. The Southwest has the highest average daily temperatures in the state and without sandy soils, tends to have higher nighttime minimum temperatures than in the neighboring Pine Barrens (ONJSC 1983).

This region receives less precipitation than the Northern and Central regions of the state as there are no orographic features and, it is farther away from the Great Lakes-St. Lawrence storm track. It is also far enough inland to be away from the heavier rains from some coastal storms, thus it receives less precipitation than the Coastal Zone (ONJSC 1983).

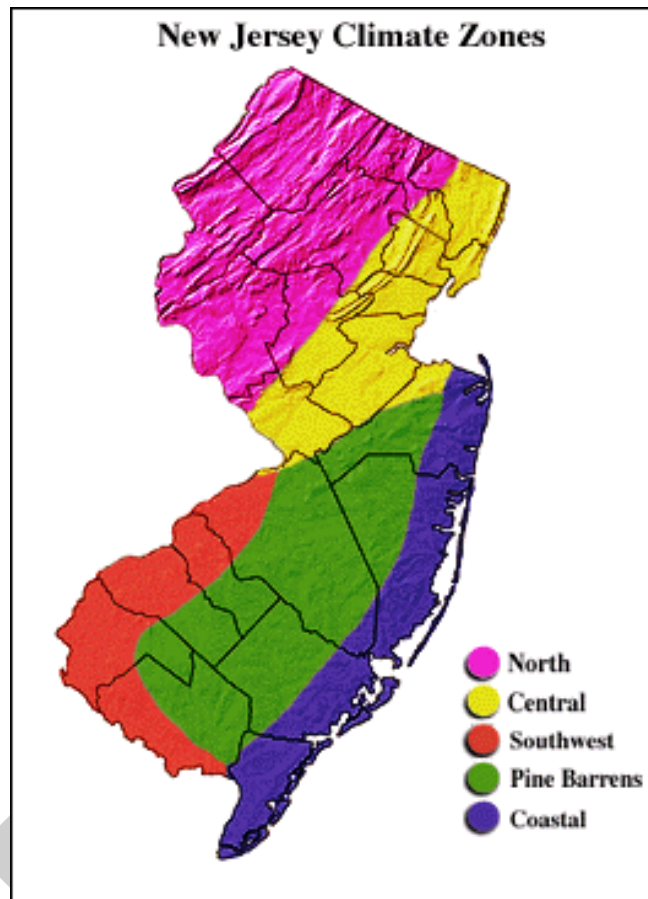
Prevailing winds are from the southwest, except in winter when west to northwest winds dominate. High humidity and moderate temperatures prevail when winds flow from the south or east. The moderating effect of the water also allows for a longer growing season. Autumn frosts usually occur about four weeks later here than in the North and the last spring frosts are about four weeks earlier, giving this region the longest growing season in New Jersey (ONJSC 1983).

- Coastal Climate Zone - In autumn and early winter, when the ocean is warmer than the land surface, the Coastal Zone will experience warmer temperatures than interior regions of the state. In the spring months, ocean breezes keep temperatures along the coast cooler. Being adjacent to the Atlantic Ocean, with its high heat capacity (compared to land), seasonal temperature fluctuations tend to be more gradual and less prone to extremes.

Sea breezes play a major role in the coastal climate. When the land is warmed by the sun, heated air rises, allowing cooler air at the ocean surface to spread inland. Sea breezes often penetrate 5-10 miles inland, but under more favorable conditions, can affect locations 25-40 miles inland. They are most common in spring and summer.

Burlington County has a temperate climate with warm summers and moderate winters. The annual precipitation averages approximately 43 inches, which is generally distributed evenly throughout the year (FEMA 2019).

Figure 3-7. Climate Zones in New Jersey



Source: ONJSC 1983

### 3.3.5 Land Use and Land Cover

Burlington County's land area is occupied and utilized in several different ways. This includes agricultural land, barren land, forested land, urban land, and wetlands. In 2021, the most recent data available showed 27.7 percent of the land in Burlington County was forested land, 12.5 percent was agricultural land, 32.1 percent was wetlands, 0.4 percent was barren land, 3.1 percent was rangeland, and 1.9 percent was water. Figure 3-8 and Table 3-2 displays the land use in Burlington County.





Figure 3-8. 2021 Land Use Land Cover for Burlington County

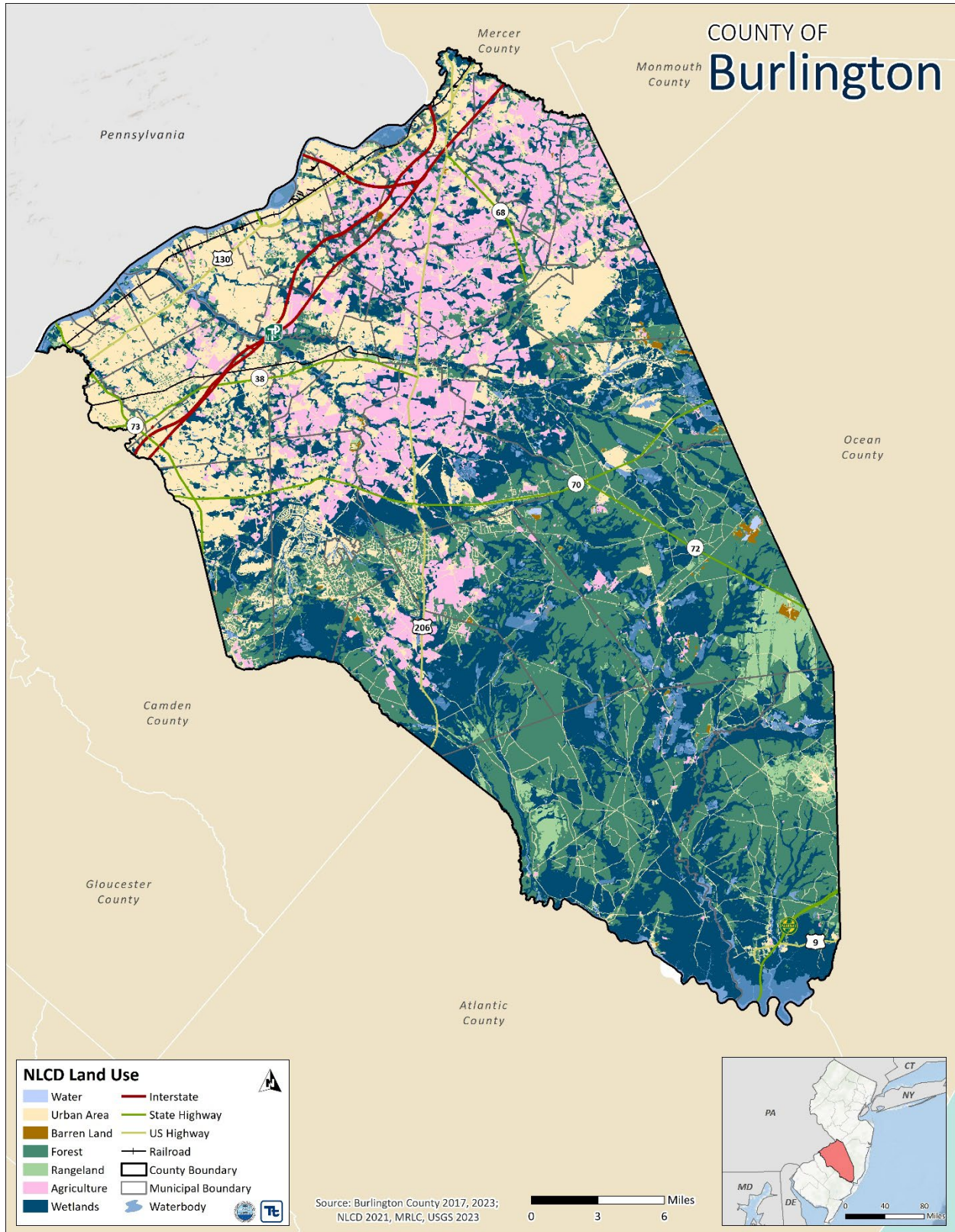




Table 3-2. Land Use Summary for Burlington County, 2021

| Land Use Category              | Acreage        | 2021 Data                    |
|--------------------------------|----------------|------------------------------|
|                                |                | Percent of Burlington County |
| Agriculture                    | 65,559         | 12.5%                        |
| Barren                         | 1,886          | 0.4%                         |
| Forest                         | 145,131        | 27.7%                        |
| Rangeland                      | 16,233         | 3.1%                         |
| Urban                          | 117,342        | 22.4%                        |
| Water                          | 9,923          | 1.9%                         |
| Wetlands                       | 168,130        | 32.1%                        |
| <b>Burlington County Total</b> | <b>524,204</b> | <b>100.0%</b>                |

Source: NLCD 2021, MRLC, USGS 2023

## Land Use Trends

Local zoning and planning authority is provided for under the New Jersey Municipal Land Use Law, which gives municipalities zoning and planning authority. DMA 2000 requires that communities consider land use trends, which can impact the need for, and priority of, mitigation options over time. Land use trends significantly impact exposure and vulnerability to various hazards. For example, significant development in a hazard area increases the building stock and population exposed to that hazard.

This plan provides a general overview of population and land use and types of development occurring within the study area. An understanding of these development trends can assist in planning for further development and ensuring that appropriate mitigation, planning, and preparedness measures are in place to protect human health and community infrastructure.

## Agriculture

Agriculture in Burlington County predates the arrival of European settlers. Native Americans farmed in the region, originally named Matinicum, at the time British Quakers arrived in the New World in the early 1600s. Native Americans cultivated several crops and, understanding the limitations of soils, rotated fields in order to prevent the depletion of soils. As early European settlers arrived, they were able to begin cultivation on small fields utilized by Native Americans immediately rather than having to clear forested lands. An abundance of good agricultural soils and proximity to major urban centers contributed significantly to the development of the county's early agricultural industry (Burlington County Resource Conservation 2022).

Agricultural land is used primarily for the production of food and fiber. This includes cropland, pastureland, and orchards. According to the NJDEP, agricultural land includes pasturelands and grazing lands associated with horse or cattle raising operations, orchards, vineyards, nurseries, and other horticultural areas. Other lands used in support of agricultural activities, such as farmsteads, associated barns, stables, and corrals, are also present throughout the County (NJDEP 2012).





Agriculture is an integral part of the natural landscapes that comprise the County. According to the 2017 Census of Agriculture, there were 96,256 acres of farmland in the County. This is slightly more than the 2012 survey which indicated that there were 95,899 acres of farmland. In 2017, there were 915 active farms in the County. The number of farms has increased 9 percent from 2012. Table 3-3 outlines the number of farms, average farm size and total acreage of farms in Burlington County from 1900 to 2012 (USDA 2019).

**Table 3-3. Farms in Burlington County, 1900 to 2017**

| Year | Number of Farms | Average Farm Size (acre) | Total Acreage |
|------|-----------------|--------------------------|---------------|
| 1900 | 2,549           | 135                      | 343,096       |
| 1910 | 2,389           | 121                      | 287,816       |
| 1920 | 2,172           | 125                      | 271,235       |
| 1925 | 2,132           | 86                       | 183,940       |
| 1930 | 1,948           | 94                       | 182,740       |
| 1935 | 2,122           | 103                      | 219,273       |
| 1940 | 1,847           | 171                      | 314,825       |
| 1945 | 1,629           | 108                      | 176,242       |
| 1950 | 1,905           | 111                      | 211,588       |
| 1954 | 1,835           | 113                      | 207,618       |
| 1959 | 1,351           | 137                      | 184,727       |
| 1964 | 1,070           | 154                      | 164,835       |
| 1969 | 857             | 166                      | 142,132       |
| 1974 | 708             | 202                      | 142,751       |
| 1978 | 717             | 181                      | 129,747       |
| 1982 | 743             | 152                      | 112,689       |
| 1987 | 834             | 124                      | 103,224       |
| 1992 | 816             | 119                      | 97,186        |
| 1997 | 857             | 121                      | 103,667       |
| 2002 | 906             | 123                      | 111,237       |
| 2007 | 922             | 93                       | 85,790        |
| 2012 | 838             | 114                      | 95,899        |
| 2017 | 915             | 105                      | 96,256        |

Source: USDA 2019

Table 3-4 outlines the top crop items grown in Burlington County, along with the number of acres devoted to these crops. The table indicates that soybeans for beans are the predominant crop in the County and ranks second in the State for total acres of soybeans.

**Table 3-4. Burlington County Farmland by Crop (Acres): 2012 and 2017**

| Crop Type  | 2012   | 2017   |
|--|--------|--------|
| Soybeans for beans   | 19,288 | 18,822 |
| Corn for grain   | 7,557  | 5,522  |
| Forage - land used for all hay and haylage, grass silage, and green chop | 4,663  | 4,910  |
| Land in berries  | 4,974  | 4,832  |
| Vegetables harvested for sale  | 5,071  | 3,845  |

Source: USDA 2019



With active agriculture extending from the Pinelands throughout northern Burlington County, the County has always been one of the leading agricultural counties in the nation. The largest blueberries in the world were developed and raised in Burlington County and the County is ranked as the second largest blueberry-producing and third largest cranberry-producing county in the U.S. There are more acres devoted to farming than any county in the state, primarily in vegetable, fruit, and timber production (Burlington County 2019).

Burlington County has adopted a Comprehensive Farmland Preservation Plan which lays out a strategy for preservation of this vital resource. Over 26,500 acres have been permanently protected from conversion to nonagricultural uses through permanent deed-restrictions. In addition, roughly 23,000 acres of land in agricultural planning areas of the state-regulated New Jersey Pinelands have been deed-restricted through the Pinelands Development Credit Program. In total, nearly 50,000 acres (roughly 45 percent of the existing agricultural land base) have been protected from conversion to non-agricultural uses (Burlington County Resource Conservation 2022).

### **Pinelands National Reserve**

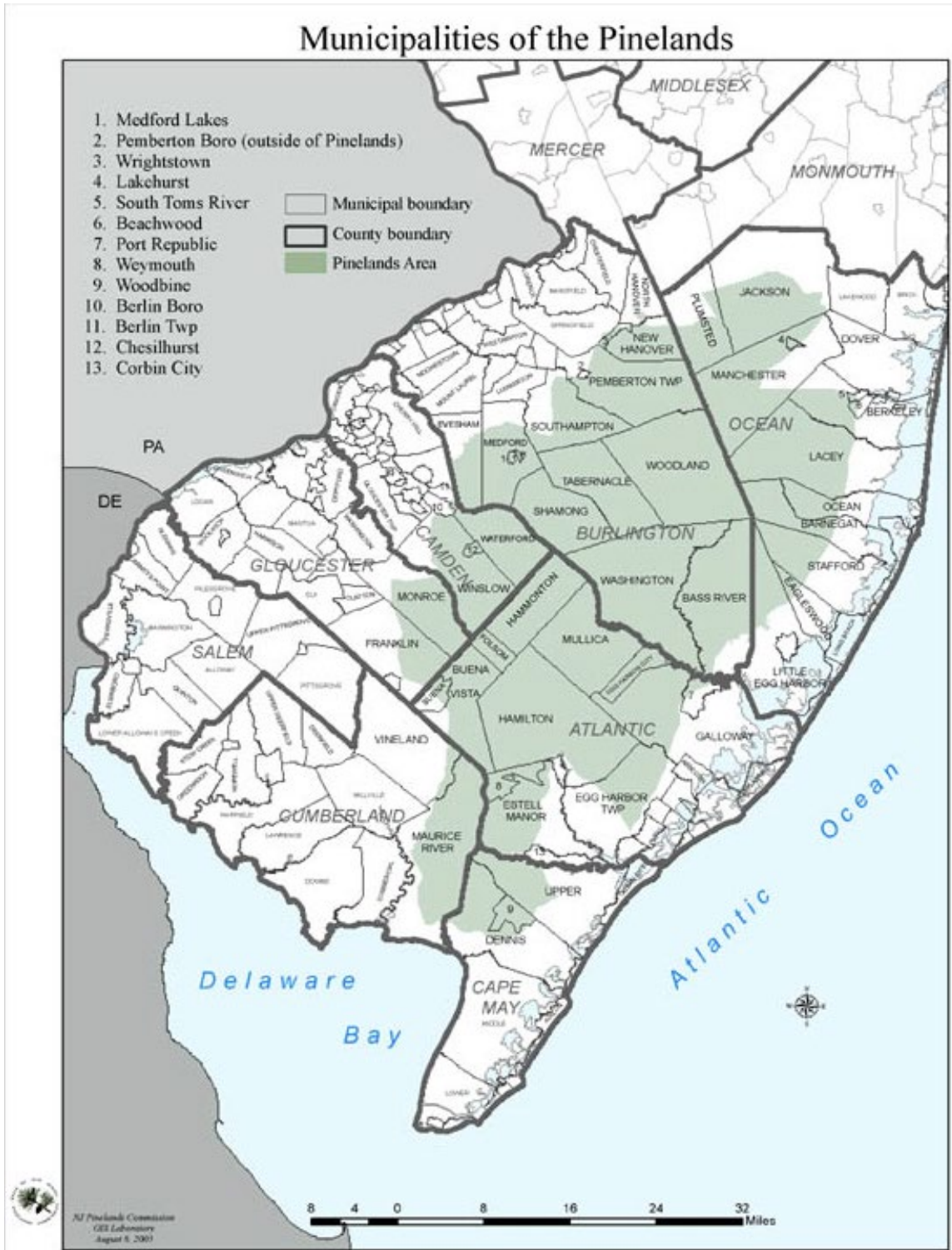
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The Pinelands National Reserve (PNR) was created by Congress under the National Parks and Recreation Act of 1978. The PNR is the first National Reserve in the nation. The PNR encompasses approximately 1.1 million acres covering portions of seven counties and all or parts of 56 municipalities (New Jersey Pinelands Commission 2022).

This internationally important ecological region is 1.1 million acres in size and occupies 22 percent of New Jersey's land area. It is the largest body of open space on the Mid-Atlantic seaboard between Richmond and Boston and is underlain by aquifers containing 17 trillion gallons of some of the purest water in the land (New Jersey Pinelands Commission 2022).

Approximately 64 percent of Burlington County's land area is under the jurisdiction of the New Jersey Pinelands Commission. Fourteen of Burlington County's 40 municipalities have area within the Pinelands. In its 2017 long-term economic monitoring report, the Pinelands Commission estimated that 21.5 percent of the County's population, were located within the Pinelands (New Jersey Pinelands Commission 2018). Figure 3-9 illustrates the location of and municipalities within the Pinelands.

Figure 3-9. Municipalities within the New Jersey Pinelands



Source: New Jersey Pinelands Commission 2018



## Barren Land

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Barren land is composed of rock or rock faces or lacks vegetation for other reasons. Burlington County has very limited barren land, amounting to less than 1 percent of the County's land cover.

## Metropolitan/Urban Area

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The Census Bureau classifies 'urban' as all territory, population, and housing units located within an urbanized area (UA) or an urban cluster (UC). It delineates UA and UC boundaries to encompass densely settled territory, which consist of core census block groups or blocks that have a population density of at least 1,000 people per square mile; and surrounding census blocks that over an overall density of at least 500 people per square mile. With a population of over 466,000 and a population density of approximately 580 people per square mile, Burlington County is not considered an urban area.

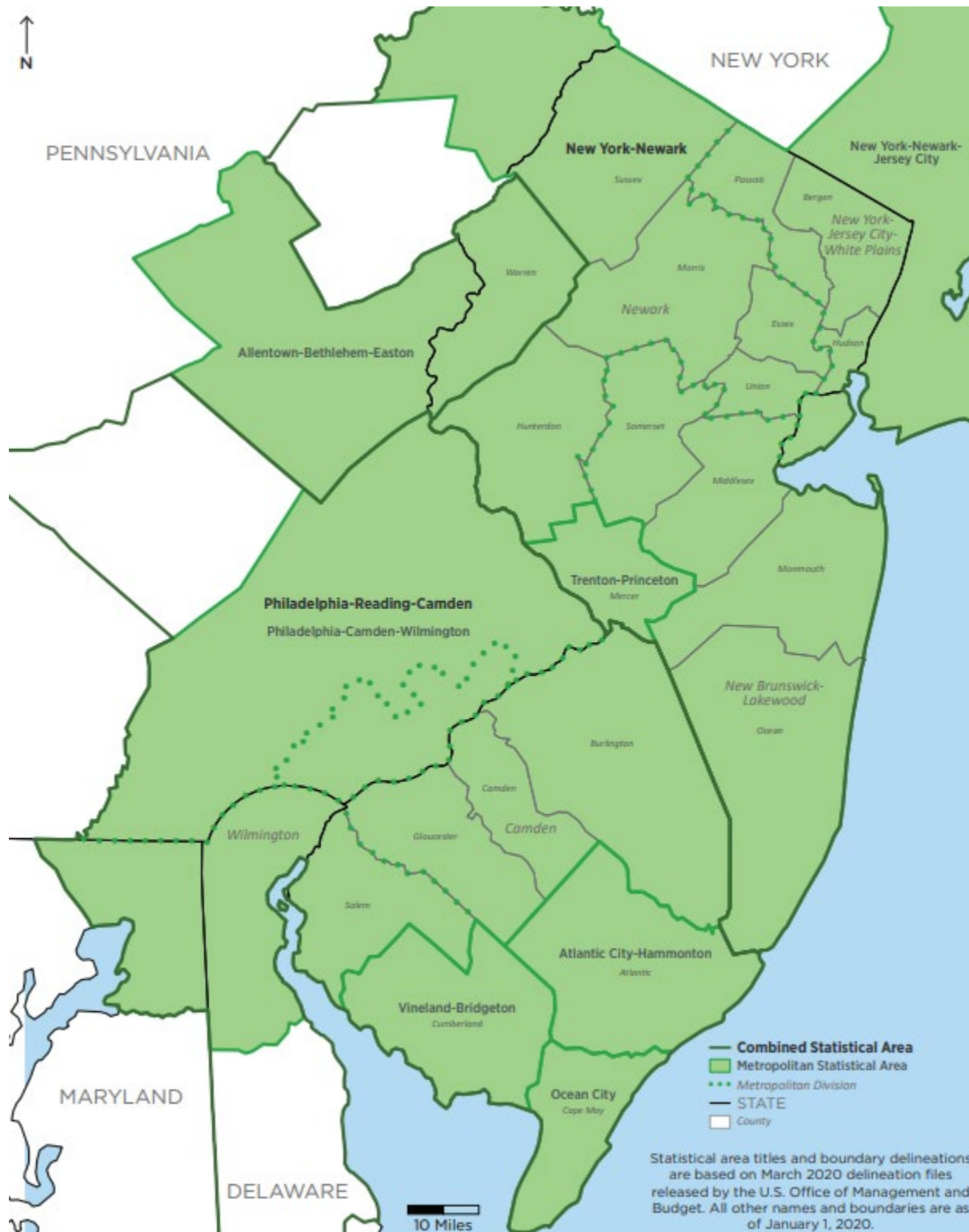
Burlington County is one of the 12 counties within the Philadelphia-Camden-Wilmington Metropolitan Statistical Area (MSA), which is the sixth most populous metropolitan area in the United States. The MSA has a 2022 American Community Survey 1-Year Estimate population of 6,241,164, which includes Burlington County. The MSA also has approximately 4,377 square miles of land (American Community Survey 2022). This metropolitan area is made up of 5 divisions as indicated in Figure 3-10.

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Figure 3-10. Philadelphia-Camden-Wilmington Metropolitan Statistical Area, PA-NJ-DE-MD  
Metropolitan Statistical Area



Source: (U.S. Census Bureau 2020)



## Water

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Numerous ponds, lakes, creeks, and rivers make up the waterscape of Burlington County, which lie within two drainage basins (Lower Delaware Basin and New Jersey Coastal Basin) and three sub-basins (Crosswicks-Neshaminy, Lower Delaware, and Mullica-Toms) (NJDEP, 2012; USEPA, 2013). A description of the drainage basins is discussed earlier in this section.

The major bodies of water and waterways within the County include Delaware River, Oswego River, Bass River, Batsto River, Mullica River, Wading River, West Branch Wading River, Rancocas Creek, North Branch Rancocas Creek, South Branch Rancocas Creek, Southwest Branch Rancocas Creek, Crosswicks Creek, Big Timber Creek, South Branch Mount Misery Brook, Shoal Branch, Greenwood Branch, and Great Bay (FEMA 2019). The County has numerous manmade small lakes and ponds created through modifying streams and creeks including Oswego Lake, Harrisville Lake, and Lake Absegami.

## Wetlands

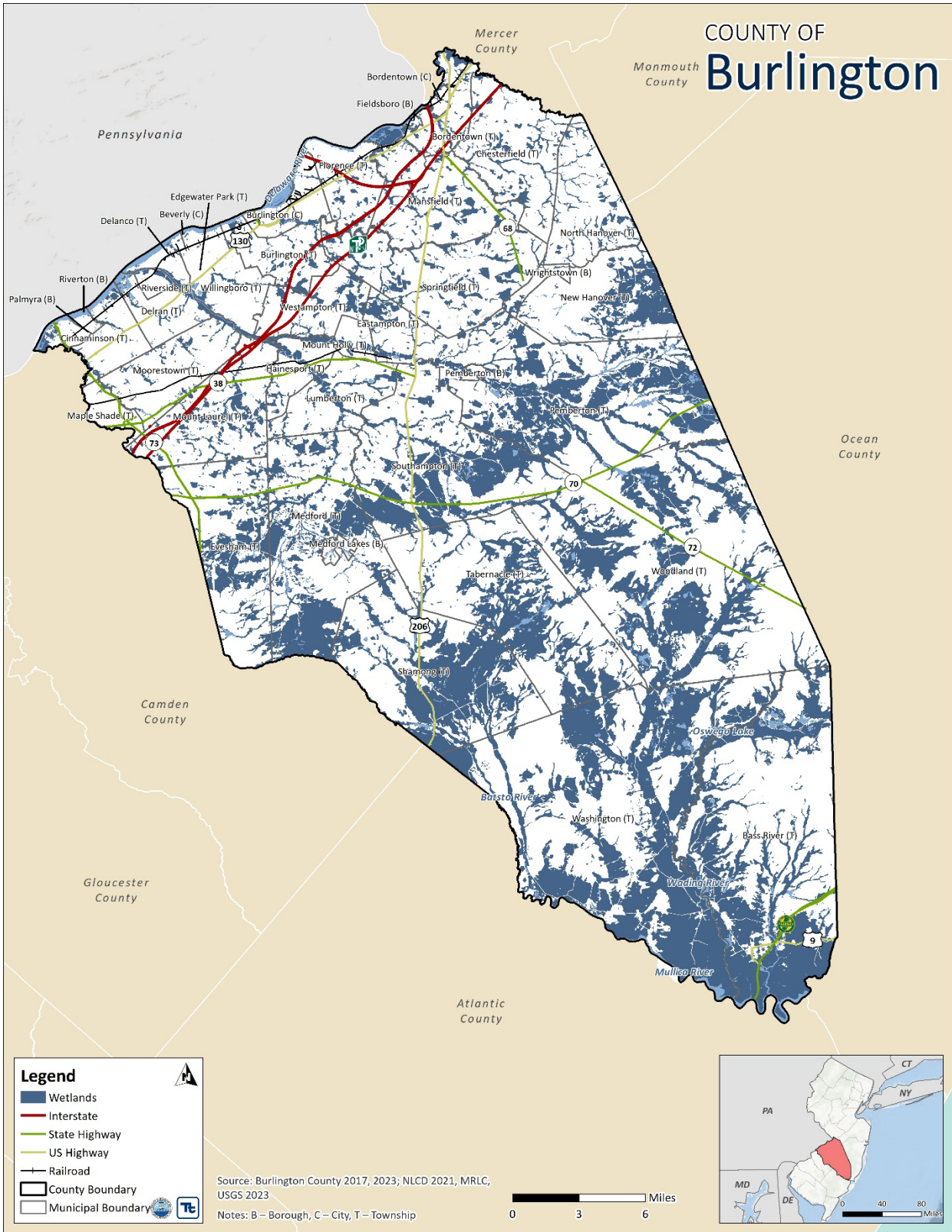
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In classifying land cover, wetlands are defined as all freshwater wetlands larger than one acre and all linear freshwater wetlands wider than 10 feet. Wetlands are lands that are inundated or saturated by surface or ground waters at a frequency and duration sufficient to support vegetation. Included in this category are natural vegetation swamps, marshes, bogs, and savannas. Wetlands make up a significant portion of Burlington County (~30 percent) and are found along many of the County's rivers, streams, and creeks.





Figure 3-11. Wetlands in Burlington County





## Open Space and Parkland

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Open space is defined as a portion of a site which is permanently set aside for public or private use and will not be developed. The space may be used for passive or active recreation or may be reserved to protect or buffer natural areas.

### Federal and State Parks and Management Areas

Burlington County has extensive areas that have been preserved as open space by state and federal agencies:

- Bass River State Forest
- Brendan T. Byrne State Forest
- Edwin B. Forsythe Wildlife Refuge
- Penn State Forest
- Rancocas State Park - Westampton
- Swan Bay Wildlife Management Area
- Wharton State Forest

The Jacques Cousteau National Estuarine Research Reserve (JC NERR) includes portions of southeastern Burlington County found within the Wharton State Forest, Swan Bay Wildlife Management Area, Bass River State Forest, and the Edwin B. Forsythe Wildlife Refuge (JC NERR 2017).

### Burlington County Park System

The Burlington County Park System has more than 1,000 acres of developed parkland, 3,500 acres of land slated for park development, and a regional trail system that will provide a link between parks in the future (Burlington County Parks 2023). Burlington County Commissioners have focused on expanding the parks system to include:

- Natural Resource Areas
- Regional Parks
- Recreation Areas
- Special Use Areas

Connectivity will be a high priority in park planning and design. Pathway facilities and linkages in the Burlington County Parks System will include:

- All terrain bike trails
- Bikeways
- Connector trails
- Cross-country ski trails
- Equestrian trails
- Park trails



- Water or canoe trails

Table 3-5 lists the 13 county parks within the Burlington County Park System and their acreage. These parks range from small to large and feature aquatic features and hiking trails.

**Table 3-5. County Parks in Burlington County**

| Park  | Total Acreage |
|---|---------------|
| Amico Island Park                               | 55            |
| Amphitheater                                    | Unknown       |
| Arneys Mount Park                               | Unknown       |
| Boundary Creek Natural Resource Area            | 34            |
| Burlington County Community Agricultural Center | Unknown       |
| County Fairgrounds                              | 61            |
| Crystal Lake Park                               | 370+          |
| Rainbow Meadow Park (formerly Laurel Run Park)  | 120           |
| Long Bridge Park                                | 115           |
| Pennington Park                                 | 140           |
| Smithville Park                                 | 312           |
| Rancocas Nature Center                          | 210           |
| Willingboro Lakes Park                          | 105           |

Source: Burlington County n.d.

## 3.4 POPULATION AND DEMOGRAPHICS

Knowledge of the population composition, how it has changed in the past, and how it may change in the future is needed to make informed decisions. Information about population is a critical part of planning because it directly relates to needs such as housing, industry, stores, public facilities and services, and transportation. The following sections discuss general population characteristics, vulnerable populations, and population trends in Burlington County.

### 3.4.1 General Population Characteristics

According to the 2020 U.S. Census, Burlington County had a population of 461,860 people. Table 3-6 presents the 2010 and 2020 U.S. Census population statistics for Burlington County by municipality. Figure 3-12 shows the distribution of the general population density (persons per square mile) by Census block. For the purposes of this plan update, 2020 Census data available in HAZUS-MH are used to assess risk. This data is considered appropriate given the relatively small population increase between 2010 and 2020.

**Table 3-6. Burlington County Population Statistics (2010 and 2020 U.S. Census)**

| Municipality            | Census 2010 Total Population | Census 2020 Total Population | Change in Population |
|-------------------------|------------------------------|------------------------------|----------------------|
| Bass River, Township of | 1,443                        | 1,355                        | -88                  |
| Beverly, City of        | 2,577                        | 2,499                        | -78                  |
| Bordentown, City of     | 3,924                        | 3,993                        | +69                  |



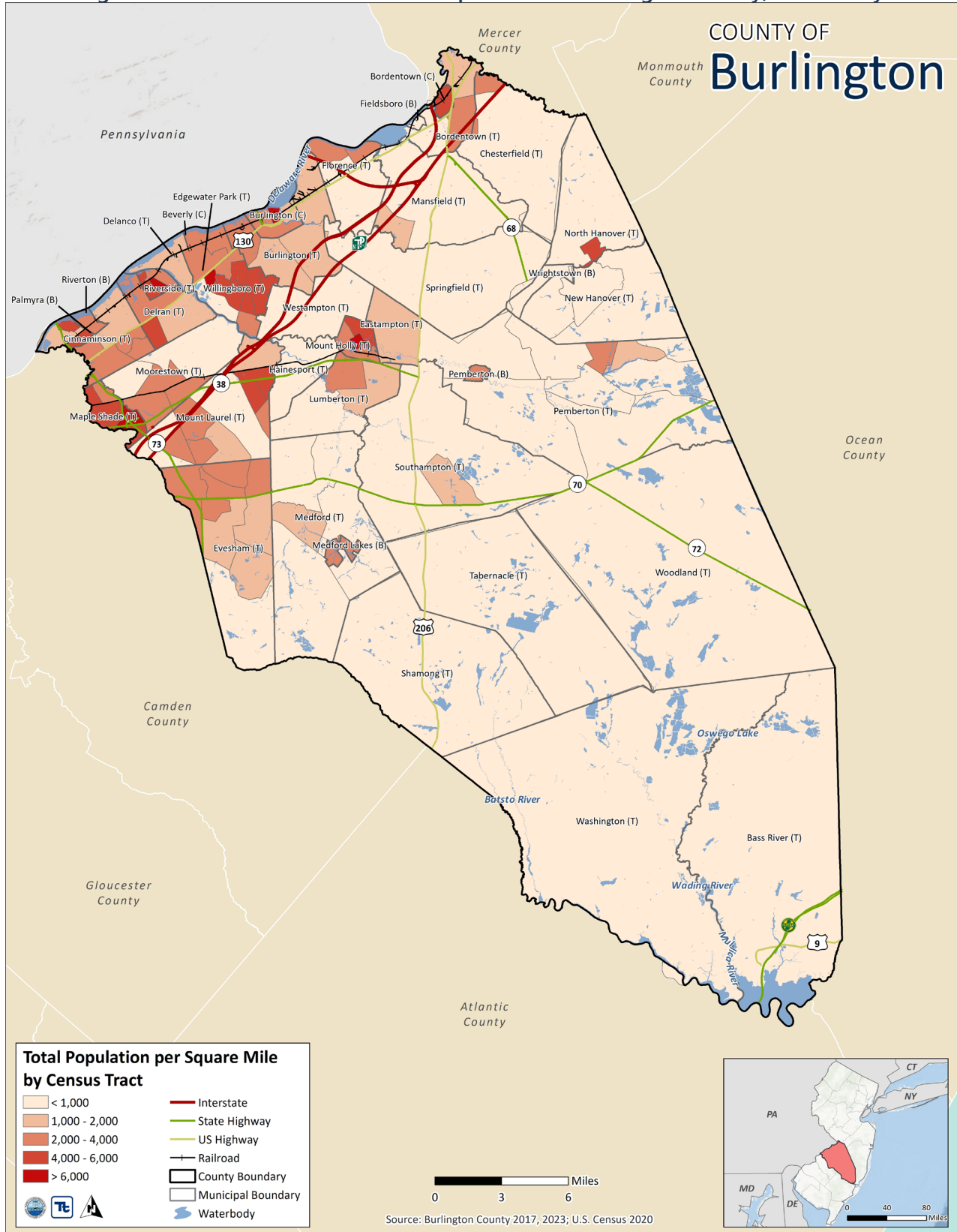
| Municipality                | Census 2010 Total Population | Census 2020 Total Population | Change in Population |
|-----------------------------|------------------------------|------------------------------|----------------------|
| Bordentown, Township of     | 11,367                       | 11,791                       | +424                 |
| Burlington, City of         | 9,920                        | 9,743                        | -177                 |
| Burlington, Township of     | 22,594                       | 23,983                       | +1,389               |
| Chesterfield, Township of   | 7,699                        | 9,422                        | +1,723               |
| Cinnaminson, Township of    | 15,569                       | 17,064                       | +1,495               |
| Delanco, Township of        | 4,283                        | 4,824                        | +541                 |
| Delran, Township of         | 16,896                       | 17,882                       | +986                 |
| Eastampton, Township of     | 6,069                        | 6,191                        | +122                 |
| Edgewater Park, Township of | 8,881                        | 8,930                        | +49                  |
| Evesham, Township of        | 45,538                       | 46,826                       | +1,288               |
| Fieldsboro, Borough of      | 540                          | 526                          | -14                  |
| Florence, Township of       | 12,109                       | 12,812                       | +703                 |
| Hainesport, Township of     | 6,110                        | 6,035                        | -75                  |
| Lumberton, Township of      | 12,559                       | 12,803                       | +244                 |
| Mansfield, Township of      | 8,544                        | 8,897                        | +353                 |
| Maple Shade, Township of    | 19,131                       | 19,980                       | +849                 |
| Medford Lakes, Borough of   | 4,146                        | 24,497                       | +20,351              |
| Medford, Township of        | 23,033                       | 4,264                        | -18,769              |
| Moorestown, Township of     | 20,726                       | 21,355                       | +629                 |
| Mount Laurel, Township of   | 41,864                       | 9,981                        | -31,883              |
| Mt. Holly, Township of      | 9,536                        | 44,633                       | +35,097              |
| New Hanover, Township of    | 7,385                        | 6,367                        | -1,018               |
| North Hanover, Township of  | 7,678                        | 7,963                        | +285                 |
| Palmyra, Borough of         | 7,398                        | 7,438                        | +40                  |
| Pemberton, Borough of       | 1,409                        | 1,371                        | -38                  |
| Pemberton, Township of      | 27,912                       | 26,903                       | -1,009               |
| Riverside, Township of      | 8,079                        | 8,003                        | -76                  |
| Riverton, Borough of        | 2,779                        | 2,764                        | -15                  |
| Shamong, Township of        | 6,490                        | 6,460                        | -30                  |
| Southampton, Township of    | 10,464                       | 10,317                       | -147                 |
| Springfield, Township of    | 3,414                        | 3,245                        | -169                 |
| Tabernacle, Township of     | 6,949                        | 6,776                        | -173                 |
| Washington, Township of     | 687                          | 693                          | +6                   |
| Westampton, Township of     | 8,813                        | 9,121                        | +308                 |
| Willingboro, Township of    | 31,629                       | 31,889                       | +260                 |
| Woodland, Township of       | 1,788                        | 1,544                        | -244                 |
| Wrightstown, Borough of     | 802                          | 720                          | -82                  |
| <b>Burlington County</b>    | <b>448,734</b>               | <b>461,860</b>               | <b>+13,126</b>       |

Source: U.S. Census Bureau 2020, 2021





Figure 3-12. Distribution of General Population for Burlington County, New Jersey





### 3.4.2 Vulnerable Populations

Identifying concentrations of vulnerable populations can assist communities in targeting preparedness, response, and mitigation actions. Populations with a higher level of vulnerability may be more seriously affected during the course of an emergency or disaster. Vulnerable populations have unique needs which need to be taken into consideration by public officials to help ensure the safety of demographics with a higher level of risk. For the purposes of this planning process, vulnerable populations in Burlington County include children, elderly, low-income, the physically or mentally disabled, non-English speakers, and the medically or chemically dependent. Table 3-7 shows the total amount of socially vulnerable populations in Burlington County by jurisdiction. Figure 3-13 displays the locations of socially vulnerable populations in Burlington County.

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Table 3-7. Socially Vulnerable Populations in Burlington County

| Jurisdiction       | Total Population (Decennial Population 2020) | Percent of County Total | American Community Survey 5-Year Population Estimates (2021) |         |         |                               |                      |                               |            |                               |               |                               |
|--------------------|--|-------------------------|--|---------|---------|-------------------------------|----------------------|-------------------------------|------------|-------------------------------|---------------|-------------------------------|
|                    |  |                         | Percent of Jurisdiction Total                                | Over 65 | Under 5 | Percent of Jurisdiction Total | Non-English Speaking | Percent of Jurisdiction Total | Disability | Percent of Jurisdiction Total | Poverty Level | Percent of Jurisdiction Total |
| Bass River (T)     | 1,355  | 0.3%                    | 248  | 18.3%   | 67      | 4.9%                          | 0                    | 0.0%                          | 175        | 12.9%                         | 95            | 7.0%                          |
| Beverly (C)        | 2,499  | 0.5%                    | 292  | 11.7%   | 183     | 7.3%                          | 0                    | 0.0%                          | 249        | 10.0%                         | 300           | 12.0%                         |
| Bordentown (C)     | 3,993  | 0.9%                    | 772  | 19.3%   | 216     | 5.4%                          | 16                   | 0.4%                          | 422        | 10.6%                         | 227           | 5.7%                          |
| Bordentown (T)     | 11,791                                       | 2.6%                    | 1,601  | 13.6%   | 472     | 4.0%                          | 289                  | 2.4%                          | 1,092      | 9.3%                          | 194           | 1.6%                          |
| Burlington (C)     | 9,743  | 2.1%                    | 1,301  | 13.4%   | 661     | 6.8%                          | 208                  | 2.1%                          | 1,251      | 12.8%                         | 1,422         | 14.6%                         |
| Burlington (T)     | 23,983                                       | 5.2%                    | 3,526  | 14.7%   | 1,497   | 6.2%                          | 385                  | 1.6%                          | 2,366      | 9.9%                          | 2,185         | 9.1%                          |
| Chesterfield (T)   | 9,422  | 2.0%                    | 760  | 8.1%    | 578     | 6.1%                          | 153                  | 1.6%                          | 423        | 4.5%                          | 165           | 1.8%                          |
| Cinnaminson (T)    | 17,064                                       | 3.7%                    | 3,103  | 18.2%   | 929     | 5.4%                          | 208                  | 1.2%                          | 1,661      | 9.7%                          | 584           | 3.4%                          |
| Delanco (T)        | 4,824  | 1.0%                    | 1,297  | 26.9%   | 191     | 4.0%                          | 42                   | 0.9%                          | 676        | 14.0%                         | 322           | 6.7%                          |
| Delran (T)         | 17,882                                       | 3.9%                    | 2,570  | 14.4%   | 1,047   | 5.9%                          | 723                  | 4.0%                          | 1,548      | 8.7%                          | 902           | 5.0%                          |
| Eastampton (T)     | 6,191  | 1.3%                    | 557  | 9.0%    | 264     | 4.3%                          | 0                    | 0.0%                          | 478        | 7.7%                          | 488           | 7.9%                          |
| Edgewater Park (T) | 8,930  | 1.9%                    | 1,571  | 17.6%   | 700     | 7.8%                          | 367                  | 4.1%                          | 1,465      | 16.4%                         | 1,645         | 18.4%                         |
| Evesham (T)        | 46,826                                       | 10.1%                   | 8,574  | 18.3%   | 2,237   | 4.8%                          | 749                  | 1.6%                          | 4,504      | 9.6%                          | 1,476         | 3.2%                          |
| Fieldsboro (B)     | 526  | 0.1%                    | 82   | 15.6%   | 64      | 12.2%                         | 0                    | 0.0%                          | 62         | 11.8%                         | 36            | 6.8%                          |
| Florence (T)       | 12,812                                       | 2.8%                    | 2,122  | 16.6%   | 645     | 5.0%                          | 260                  | 2.0%                          | 1,460      | 11.4%                         | 827           | 6.5%                          |
| Hainesport (T)     | 6,035  | 1.3%                    | 1,327  | 22.0%   | 58      | 1.0%                          | 0                    | 0.0%                          | 744        | 12.3%                         | 250           | 4.1%                          |
| Lumberton (T)      | 12,803                                       | 2.8%                    | 2,048  | 16.0%   | 661     | 5.2%                          | 107                  | 0.8%                          | 1,490      | 11.6%                         | 805           | 6.3%                          |
| Mansfield (T)      | 8,897  | 1.9%                    | 2,506  | 28.2%   | 394     | 4.4%                          | 330                  | 3.7%                          | 1,465      | 16.5%                         | 181           | 2.0%                          |
| Maple Shade (T)    | 19,980                                       | 4.3%                    | 2,897  | 14.5%   | 1,159   | 5.8%                          | 694                  | 3.5%                          | 2,433      | 12.2%                         | 1,971         | 9.9%                          |
| Medford (T)        | 24,497                                       | 5.3%                    | 5,151  | 21.0%   | 1,085   | 4.4%                          | 31                   | 0.1%                          | 2,775      | 11.3%                         | 724           | 3.0%                          |
| Medford Lakes (B)  | 4,264  | 0.9%                    | 879  | 20.6%   | 211     | 4.9%                          | 0                    | 0.0%                          | 407        | 9.5%                          | 26            | 0.6%                          |
| Moorestown (T)     | 21,355                                       | 4.6%                    | 3,480  | 16.3%   | 837     | 3.9%                          | 603                  | 2.8%                          | 1,654      | 7.7%                          | 807           | 3.8%                          |
| Mount Holly (T)    | 9,981  | 2.2%                    | 1,199  | 12.0%   | 454     | 4.5%                          | 133                  | 1.3%                          | 1,624      | 16.3%                         | 958           | 9.6%                          |

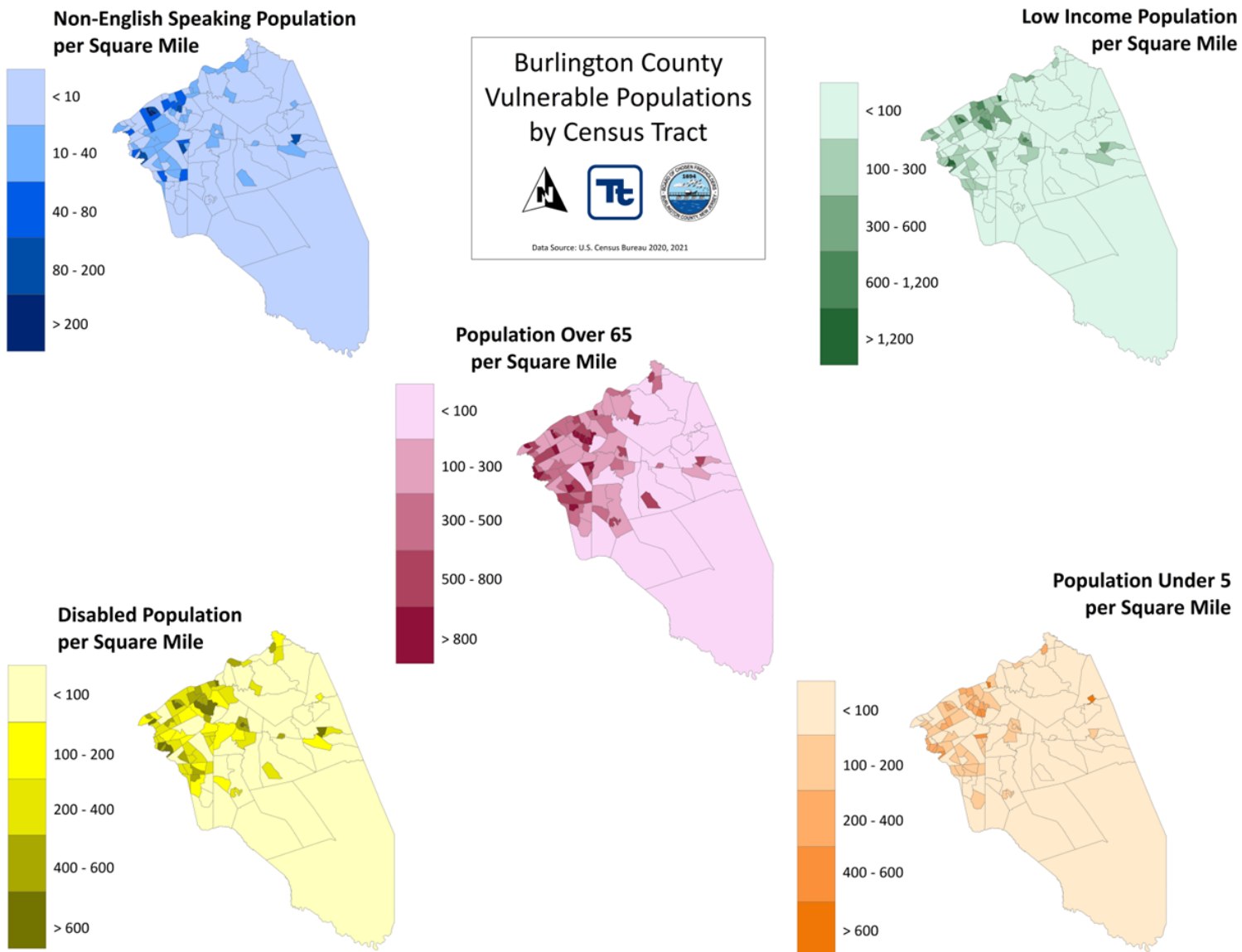


| Jurisdiction                   | Total Population (Decennial Population 2020) | Percent of County Total | American Community Survey 5-Year Population Estimates (2021) |              |               |                               |                      |                               |               |                               |               |                               |
|--------------------------------|--|-------------------------|--|--------------|---------------|-------------------------------|----------------------|-------------------------------|---------------|-------------------------------|---------------|-------------------------------|
|                                |  |                         | Percent of Jurisdiction Total                                | Over 65      | Under 5       | Percent of Jurisdiction Total | Non-English Speaking | Percent of Jurisdiction Total | Disability    | Percent of Jurisdiction Total | Poverty Level | Percent of Jurisdiction Total |
| <b>Mount Laurel (T)</b>        | 44,633                                       | 9.7%                    | 8,299  | 18.6%        | 2,011         | 4.5%                          | 889                  | 2.0%                          | 4,203         | 9.4%                          | 1,689         | 3.8%                          |
| <b>New Hanover (T)</b>         | 6,367  | 1.4%                    | 311  | 4.9%         | 214           | 3.4%                          | 29                   | 0.4%                          | 192           | 3.0%                          | 116           | 1.8%                          |
| <b>North Hanover (T)</b>       | 7,963  | 1.7%                    | 532  | 6.7%         | 975           | 12.2%                         | 125                  | 1.6%                          | 631           | 7.9%                          | 481           | 6.0%                          |
| <b>Palmyra (B)</b>             | 7,438  | 1.6%                    | 1,077  | 14.5%        | 190           | 2.6%                          | 44                   | 0.6%                          | 961           | 12.9%                         | 616           | 8.3%                          |
| <b>Pemberton (B)</b>           | 1,371  | 0.3%                    | 282  | 20.6%        | 56            | 4.1%                          | 47                   | 3.4%                          | 308           | 22.5%                         | 140           | 10.2%                         |
| <b>Pemberton (T)</b>           | 26,903                                       | 5.8%                    | 4,306  | 16.0%        | 1,429         | 5.3%                          | 1,092                | 4.1%                          | 4,006         | 14.9%                         | 2,518         | 9.4%                          |
| <b>Riverside (T)</b>           | 8,003  | 1.7%                    | 1,039  | 13.0%        | 354           | 4.4%                          | 754                  | 9.4%                          | 972           | 12.1%                         | 1,257         | 15.7%                         |
| <b>Riverton (B)</b>            | 2,764  | 0.6%                    | 554  | 20.0%        | 80            | 2.9%                          | 5                    | 0.2%                          | 187           | 6.8%                          | 72            | 2.6%                          |
| <b>Shamong (T)</b>             | 6,460  | 1.4%                    | 1,313  | 20.3%        | 324           | 5.0%                          | 0                    | 0.0%                          | 671           | 10.4%                         | 136           | 2.1%                          |
| <b>Southampton (T)</b>         | 10,317                                       | 2.2%                    | 3,153  | 30.6%        | 293           | 2.8%                          | 125                  | 1.2%                          | 1,551         | 15.0%                         | 589           | 5.7%                          |
| <b>Springfield (T)</b>         | 3,245  | 0.7%                    | 479  | 14.8%        | 129           | 4.0%                          | 65                   | 2.0%                          | 311           | 9.6%                          | 160           | 4.9%                          |
| <b>Tabernacle (T)</b>          | 6,776  | 1.5%                    | 1,524  | 22.5%        | 380           | 5.6%                          | 0                    | 0.0%                          | 747           | 11.0%                         | 233           | 3.4%                          |
| <b>Washington (T)</b>          | 693  | 0.2%                    | 138  | 19.9%        | 8             | 1.2%                          | 8                    | 1.1%                          | 87            | 12.6%                         | 21            | 3.0%                          |
| <b>Westampton (T)</b>          | 9,121  | 2.0%                    | 1,139  | 12.5%        | 263           | 2.9%                          | 81                   | 0.9%                          | 802           | 8.8%                          | 268           | 2.9%                          |
| <b>Willingboro (T)</b>         | 31,889                                       | 6.9%                    | 5,707  | 17.9%        | 1,916         | 6.0%                          | 538                  | 1.7%                          | 5,100         | 16.0%                         | 2,685         | 8.4%                          |
| <b>Woodland (T)</b>            | 1,544  | 0.3%                    | 319  | 20.7%        | 49            | 3.2%                          | 0                    | 0.0%                          | 627           | 40.6%                         | 363           | 23.5%                         |
| <b>Wrightstown (B)</b>         | 720  | 0.2%                    | 58   | 8.1%         | 69            | 9.6%                          | 5                    | 0.7%                          | 119           | 16.5%                         | 13            | 1.8%                          |
| <b>Burlington County Total</b> | <b>461,860</b>                               | <b>100.0%</b>           | <b>78,093</b>  | <b>16.9%</b> | <b>23,350</b> | <b>5.1%</b>                   | <b>9,103</b>         | <b>2.0%</b>                   | <b>51,899</b> | <b>11.2%</b>                  | <b>27,947</b> | <b>6.1%</b>                   |

Source: U.S. Census Bureau 2020, 2021  
Note: Persons per household = 2.6



Figure 3-13. Distribution of Socially Vulnerable Populations in Burlington County, New Jersey





## Age

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Children are considered vulnerable to hazard events because they are dependent on others to safely access resources during emergencies and may experience increased health risks from hazard exposure. The elderly are more apt to lack the physical and economic resources necessary for response to hazard events and are more likely to suffer health-related consequences. Elderly populations living on their own may have more difficulty evacuating their homes. The elderly are also more likely to live in senior care and living facilities where emergency preparedness occurs at the discretion of facility operators.

According to the 2017-2021 American Community Survey 5-Year Estimates, the median age in Burlington County was 41.5 years. The U.S. Census Bureau reports 5.1 percent of the 2020 Burlington County population is under the age 5 and 16.9 percent of the County's population is age 65 and older. Figure 3-13 shows the distribution of persons over age 65 under the age of 5 and in Burlington County.

## Income

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The 2017-2021 American Community Survey 5-Year Estimates find that the median household income in Burlington County was \$100,478, and the per capita income was \$47,065. The U.S. Census Bureau identifies households with two adults and two children with an annual household income below \$29,678 per year as "low income" (US Census Bureau 2023). The 2017-2021 American Community Survey 5-Year Estimates indicates a total of 6.6 percent of Burlington County is below the poverty level.

It is noted that the spatial U.S. Census data for household income provided in HAZUS-MH includes two ranges (less than \$10,000 and \$10,000-\$20,000/year) that were totaled to provide the "low-income" data used in this study. This does not correspond exactly with the "poverty" thresholds established by the 2023 U.S. Census Bureau data. This difference is not believed to be significant for the purposes of this planning effort; therefore, for the exposure and loss estimations in the risk assessment, the 2020 U.S. Census data in HAZUS is reported. Figure 3-13 shows the distribution of the low-income population in Burlington County.

## Physically or Mentally Disabled

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Persons with a disability include those who have long-term physical, mental, intellectual or sensory (such as hearing or vision) impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others (CDC 2020). These impairments may increase the level of difficulty that individuals may face during an emergency. Cognitive impairments may reduce an individual's capacity to receive, process, and respond to emergency information or warnings. Individuals with a physical or sensory disability may face issues of mobility, sight, hearing, or reliance on specialized medical equipment. According to the 2017-



2021 American Community Survey, 12.6 percent of residents in Burlington County are living with a disability.

Figure 3-13 shows the geographic distribution of disabled individuals throughout Burlington County. This includes individuals with hearing, vision, cognitive, ambulatory, self-care, and independent living difficulties.

### Non-English Speakers

Individuals who are not fluent or working proficiency in English are vulnerable because they may have difficulty with understanding hazard mitigation guidance and emergency information being conveyed to them. Cultural differences can also add complexity to how information is being conveyed to populations with limited proficiency of English. According to the 2017-2021 American Community Survey, 13.9 percent of the County's population over the age of 5 primarily speaks a language other than English at home. This is significantly less than the State average of 31.9 percent. Of the County's population, 4.4 percent speak Spanish and 6.4 percent speak other Indo-European languages. Figure 3-13 shows the geographic distribution of individuals who speak a language other than English.

### 3.4.3 Population Trends

This section discusses population trends to use as a basis for estimating future changes of the population and significantly change the character of the area. Population trends can provide a basis for making decisions on the type of mitigation approaches to consider and the locations in which these approaches should be applied. This information can also be used to support planning decisions regarding future development in vulnerable areas.

According to the U.S. Census Bureau, Burlington County's 2020 population was 461,860 persons, which is a 2.9 percent increase from the 2010 Census population of 448,734. From 1900 to 2020, the County has experienced a constant growth in population. The largest increase was seen between the years 1950 to 1960, when the County experienced a 65.2 percent (88,589 persons) population increase. Table 3-8 displays the population and population differences from 1900 to 2020 in Burlington County. Table 3-9 displays the population of the County's municipalities from 1940 to 2020.

Table 3-8. Burlington County Population Trends, 1900 to 2020

| Year | Population | Change in Population | Percent (%)<br>Population Change |
|------|------------|----------------------|----------------------------------|
| 1900 | 58,241     | -                    | -                                |
| 1910 | 66,565     | 8,324                | 14.3                             |
| 1920 | 81,770     | 15,205               | 22.8                             |
| 1930 | 93,541     | 11,771               | 14.4                             |
| 1940 | 97,013     | 3,472                | 3.7                              |





| Year | Population | Change in Population | Percent (%)<br>Population Change |
|------|------------|----------------------|----------------------------------|
| 1950 | 135,910    | 38,897               | 40.1                             |
| 1960 | 224,499    | 88,589               | 65.2                             |
| 1970 | 323,132    | 98,633               | 43.9                             |
| 1980 | 362,542    | 39,410               | 12.2                             |
| 1990 | 395,066    | 32,524               | 9.0                              |
| 2000 | 423,394    | 28,328               | 7.2                              |
| 2010 | 448,734    | 25,340               | 6.0                              |
| 2020 | 461,860    | 13,126               | 2.9                              |

Source: U.S. Census Bureau, 2020, 2021

Note: Change in population and percent in population change was calculated from available data

**Table 3-9. Burlington County Resident Population by Municipality: 1970-2020**

| Municipality                | 1970   | 1980   | 1990   | 2000   | 2010   | 2020   | Percent Change<br>2010 - 2020 |
|-----------------------------|--------|--------|--------|--------|--------|--------|-------------------------------|
| Bass River, Township of     | 815    | 1,344  | 1,580  | 1,510  | 1,443  | 1,355  | -6.10%                        |
| Beverly, City of            | 3,105  | 2,919  | 2,973  | 2,661  | 2,577  | 2,499  | -3.03%                        |
| Bordentown, City of         | 4,490  | 4,441  | 4,341  | 3,969  | 3,924  | 3,993  | +1.76%                        |
| Bordentown, Township of     | 7,303  | 7,170  | 7,683  | 8,380  | 11,367 | 11,791 | +3.73%                        |
| Burlington, City of         | 12,010 | 10,246 | 9,835  | 9,736  | 9,920  | 9,743  | -1.78%                        |
| Burlington, Township of     | 10,621 | 11,527 | 12,454 | 20,294 | 22,594 | 23,983 | +6.15%                        |
| Chesterfield, Township of   | 3,190  | 3,867  | 5,152  | 5,955  | 7,699  | 9,422  | +22.38%                       |
| Cinnaminson, Township of    | 16,962 | 16,072 | 14,583 | 14,595 | 15,569 | 17,064 | +9.60%                        |
| Delanco, Township of        | 4,157  | 3,730  | 3,316  | 3,237  | 4,283  | 4,824  | +12.63%                       |
| Delran, Township of         | 13,178 | 15,536 | 13,178 | 15,536 | 16,896 | 17,882 | +5.84%                        |
| Eastampton, Township of     | 2,284  | 3,814  | 4,962  | 6,202  | 6,069  | 6,191  | +2.01%                        |
| Edgewater Park, Township of | 7,412  | 9,273  | 8,388  | 7,864  | 8,881  | 8,930  | +0.55%                        |
| Evesham, Township of        | 13,477 | 21,508 | 35,309 | 42,275 | 45,538 | 46,826 | +2.83%                        |
| Fieldsboro, Borough of      | 615    | 597    | 579    | 522    | 540    | 526    | -2.59%                        |
| Florence, Township of       | 8,560  | 9,084  | 10,266 | 10,746 | 12,109 | 12,812 | +5.81%                        |
| Hainesport, Township of     | 2,990  | 3,236  | 3,249  | 4,126  | 6,110  | 6,035  | -1.23%                        |
| Lumberton, Township of      | 3,945  | 5,236  | 6,705  | 10,461 | 12,559 | 12,803 | +1.94%                        |
| Mansfield, Township of      | 2,597  | 2,523  | 3,874  | 5,090  | 8,544  | 8,897  | +4.13%                        |
| Maple Shade, Township of    | 16,464 | 20,525 | 19,211 | 19,079 | 19,131 | 19,980 | +4.44%                        |
| Medford, Township of        | 8,292  | 17,622 | 20,526 | 22,253 | 23,033 | 24,497 | +6.36%                        |
| Medford Lakes, Borough of   | 4,792  | 4,958  | 4,462  | 4,173  | 4,146  | 4,264  | +2.85%                        |
| Moorestown, Township of     | 15,577 | 15,596 | 16,116 | 19,017 | 20,726 | 21,355 | +3.03%                        |
| Mt. Holly, Township of      | 12,713 | 10,818 | 10,639 | 10,728 | 9,536  | 9,981  | +6.61%                        |
| Mount Laurel, Township of   | 11,221 | 17,614 | 30,270 | 40,221 | 41,864 | 44,633 | +4.67%                        |
| New Hanover, Township of    | 27,410 | 14,258 | 9,546  | 9,744  | 7,385  | 6,367  | -13.78%                       |
| North Hanover, Township of  | 9,858  | 9,050  | 9,994  | 7,347  | 7,678  | 7,963  | +3.71%                        |
| Palmyra, Borough of         | 6,969  | 7,085  | 7,056  | 7,091  | 7,398  | 7,438  | +0.54%                        |



| Municipality             | 1970   | 1980   | 1990   | 2000   | 2010   | 2020   | Percent Change<br>2010 - 2020 |
|--------------------------|--------|--------|--------|--------|--------|--------|-------------------------------|
| Pemberton, Borough of    | 1,344  | 1,198  | 1,367  | 1,210  | 1,409  | 1,371  | -2.70%                        |
| Pemberton, Township of   | 19,754 | 29,720 | 31,342 | 28,691 | 27,912 | 26,903 | -3.61%                        |
| Riverside, Township of   | 8,591  | 7,941  | 7,974  | 7,911  | 8,079  | 8,003  | -0.94%                        |
| Riverton, Borough of     | 3,412  | 3,068  | 2,775  | 2,759  | 2,779  | 2,764  | -0.54%                        |
| Shamong, Township of     | 1,318  | 4,537  | 5,765  | 6,462  | 6,490  | 6,460  | -0.46%                        |
| Southampton, Township of | 4,982  | 8,808  | 10,202 | 10,388 | 10,464 | 10,317 | -1.40%                        |
| Springfield, Township of | 2,244  | 2,691  | 3,028  | 3,227  | 3,414  | 3,245  | -4.95%                        |
| Tabernacle, Township of  | 2,103  | 6,236  | 7,360  | 7,170  | 6,949  | 6,776  | -2.49%                        |
| Washington, Township of  | 673    | 808    | 805    | 621    | 687    | 693    | +0.87%                        |
| Westampton, Township of  | 2,680  | 3,383  | 6,004  | 7,217  | 8,813  | 9,121  | +3.49%                        |
| Willingboro, Township of | 43,386 | 39,912 | 36,291 | 33,008 | 31,629 | 31,889 | +0.82%                        |
| Woodland, Township of    | 2,032  | 2,285  | 2,063  | 1,170  | 1,788  | 1,544  | -13.65%                       |
| Wrightstown, Borough of  | 2,719  | 3,031  | 3,843  | 746    | 802    | 720    | -10.22%                       |

Source: U.S. Census of Population and Housing, Date Unknown.

Between 1990 and 2020, 16 of the 40 municipalities experienced an overall decrease in their population. All other of the municipalities saw an increase in their populations from 2000 to 2020. The municipalities which experienced population decreases were the Townships of Bass River, Hainesport, New Hanover, Pemberton, Riverside, Shamong, Southampton, Springfield, Tabernacle, the Cities of Beverly and Burlington, and the Boroughs of Fieldsboro, Pemberton, Riverton, and Wrightstown. The Township of New Hanover experienced the greatest loss of population, losing 13.78 percent of its population from 2010. The Township of Chesterfield experienced a population increase of 22.38 percent. Table 3-10 displays the 2020 Census population for the ten largest municipalities by population in Burlington County.

**Table 3-10. Ten Largest Municipalities in Burlington County**

| Rank | Municipality              | Population |
|------|---------------------------|------------|
| 1    | Evesham, Township of      | 46,826     |
| 2    | Mount Laurel, Township of | 44,633     |
| 3    | Willingboro, Township of  | 31,889     |
| 4    | Pemberton, Township of    | 26,903     |
| 5    | Medford, Township of      | 24,497     |
| 6    | Burlington, Township of   | 23,983     |
| 7    | Moorestown, Township of   | 21,355     |
| 8    | Maple Shade, Township of  | 19,980     |
| 9    | Delran, Township of       | 17,882     |
| 10   | Cinnaminson, Township of  | 17,064     |

Source: U.S. Census Bureau 2020, 2021

Over the next 15 years, from 2019 to 2034, Burlington County has a projected population growth of 5.3 percent. Based on New Jersey Department of Labor 2014 population projections (the most recent projections available for this HMP update), the county population is expected to reach



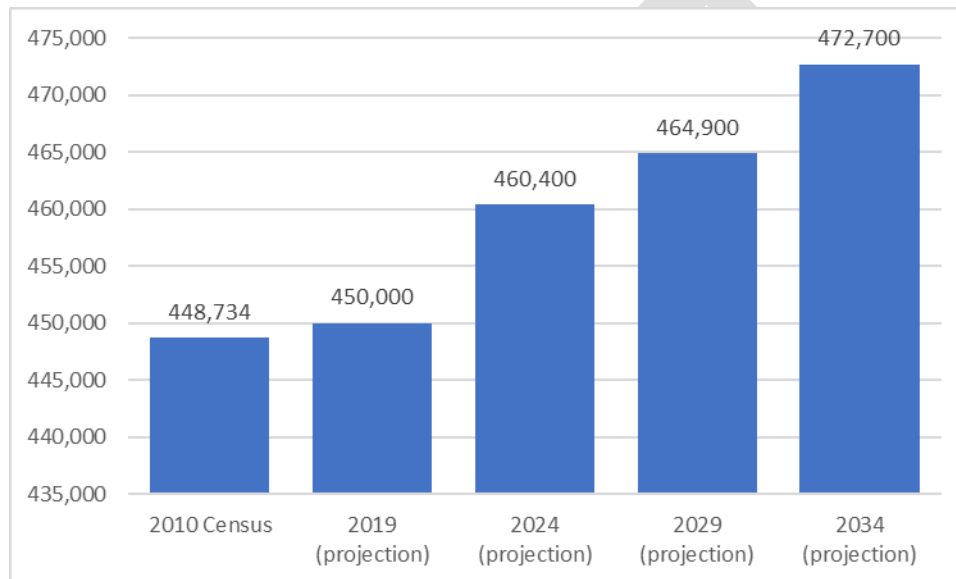
460,400 by 2024 and 472,700 by 2034 (Table 3-11, Figure 3-14). It should be noted that these projections likely underestimate population growth as the projected population for 2024 (460,400) was already surpassed by the 2020 Census generated population (461,860).

**Table 3-11. Burlington County Population Projections, 2019 to 2034**

| Year                     | Population | Change in Population |
|--------------------------|------------|----------------------|
| <b>2010 Census</b>       | 448,734    | -                    |
| <b>2019 (projection)</b> | 450,000    | 0.28%                |
| <b>2024 (projection)</b> | 460,400    | 2.31%                |
| <b>2029 (projection)</b> | 464,900    | 0.98%                |
| <b>2034 (projection)</b> | 472,700    | 1.68%                |

Source: New Jersey Department of Labor and Workforce Development 2014

**Figure 3-14. Burlington County Population Projections, 2010 to 2034**



Source: New Jersey Department of Labor and Workforce Development 2014

### 3.5 GENERAL BUILDING STOCK

The 2018-2022 ACS 5-year estimates data identifies 174,454 households and 186,192 housing units in Burlington County (U.S. Census Bureau 2023). U.S. Census defines household as all the persons who occupy a housing unit, and a housing unit as a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Therefore, you may have more than one household per housing unit. The median price of a single-family home in Burlington County was estimated at \$304,600 in 2022 (U.S. Census Bureau 2023).

For this update, the default general building stock in HAZUS v6 was updated and replaced with a custom-building inventory for Burlington County both at the aggregate and structure level. The



updated building inventory was built using detailed the building footprints, parcels, and structure-specific building attributes. Burlington County has a total building replacement value (structure and content) of greater than \$167 billion. The residential value makes up approximately 42.12 percent of the total replacement value. Table 3-12 presents replacement value statistics by occupancy class for Burlington County.

The 2021 U.S. Census Bureau's County Business Patterns data identified 10,438 business establishments employing 180,387 people in Burlington County. The industry with the greatest number of employees (29,150) is the health care and social assistance industry, followed by the retail trade industry (24,171).

Figure 3-15 through Figure 3-17 show the distribution and exposure density of residential, commercial, and industrial buildings in Burlington County. Exposure density is the dollar value of structures per unit area, including building content value. Generally, contents for residential structures are valued at about 50 percent of the building's value. For commercial facilities, the value of the content is generally about equal to the building's structural value. Actual content value varies widely depending on the usage of the structure. The densities are shown in units of \$1,000,000 (\$M) per square mile.

Viewing exposure distribution maps can assist communities in visualizing areas of high exposure and in evaluating aspects of the study area in relation to the specific hazard risks.

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Table 3-12. Replacement Value by Occupancy Class

| Municipality                | All Occupancies |                  |                    | Residential                                    |        | Commercial                                     |       | Industrial                                     |       |  |
|-----------------------------|-----------------|------------------|--------------------|--|--------|--|-------|--|-------|--|
|                             | Count           | Structural Value | Estimated Contents | Total Replacement Cost (Structural + Contents) | Count  | Total Replacement Cost (Structural + Contents) | Count | Total Replacement Cost (Structural + Contents) | Count | Total Replacement Cost (Structural + Contents) |
| Bass River, Township of     | 719             | \$483,881,130    | \$397,541,907      | \$881,423,037                                  | 579    | \$259,670,056                                  | 96    | \$543,313,007                                  | 0     | \$0  |
| Beverly, City of            | 939             | \$669,929,481    | \$548,860,852      | \$1,218,790,333                                | 863    | \$432,319,481                                  | 40    | \$616,625,900                                  | 18    | \$107,501,383                                  |
| Bordentown, City of         | 1,041           | \$1,479,824,214  | \$1,314,249,979    | \$2,794,074,193                                | 916    | \$706,670,430                                  | 87    | \$1,635,106,800                                | 10    | \$329,370,171                                  |
| Bordentown, Township of     | 3,389           | \$3,186,141,590  | \$2,680,343,840    | \$5,866,485,430                                | 3,086  | \$1,766,729,960                                | 217   | \$3,517,905,557                                | 49    | \$380,690,072                                  |
| Burlington, City of         | 3,165           | \$3,145,969,808  | \$2,667,342,597    | \$5,813,312,405                                | 2,765  | \$1,518,510,304                                | 299   | \$3,500,557,703                                | 10    | \$137,714,451                                  |
| Burlington, Township of     | 6,525           | \$4,634,035,930  | \$4,185,447,965    | \$8,819,483,895                                | 6,048  | \$2,934,257,367                                | 237   | \$2,386,745,363                                | 129   | \$2,607,169,818                                |
| Chesterfield, Township of   | 2,673           | \$1,303,855,975  | \$939,319,829      | \$2,243,175,804                                | 2,126  | \$1,103,061,825                                | 47    | \$347,053,060                                  | 4     | \$2,787,311                                    |
| Cinnaminson, Township of    | 5,833           | \$3,434,863,845  | \$2,771,169,719    | \$6,206,033,564                                | 5,429  | \$2,731,582,306                                | 226   | \$2,021,885,178                                | 117   | \$1,229,164,620                                |
| Delanco, Township of        | 1,717           | \$985,026,322    | \$792,402,612      | \$1,777,428,934                                | 1,614  | \$841,361,930                                  | 59    | \$419,325,074                                  | 25    | \$437,002,078                                  |
| Delran, Township of         | 5,008           | \$3,051,288,422  | \$2,291,350,984    | \$5,342,639,406                                | 4,727  | \$2,668,403,916                                | 199   | \$1,600,206,655                                | 34    | \$626,527,091                                  |
| Eastampton, Township of     | 1,947           | \$749,463,463    | \$474,495,345      | \$1,223,958,808                                | 1,834  | \$874,691,882                                  | 70    | \$166,158,619                                  | 8     | \$65,396,932                                   |
| Edgewater Park, Township of | 2,210           | \$1,387,987,910  | \$1,003,689,830    | \$2,391,677,740                                | 2,081  | \$1,278,170,463                                | 78    | \$801,318,205                                  | 24    | \$208,793,710                                  |
| Evesham, Township of        | 13,368          | \$6,510,994,305  | \$4,617,372,226    | \$11,128,366,531                               | 12,701 | \$5,930,712,659                                | 435   | \$3,873,745,449                                | 31    | \$399,304,776                                  |
| Fieldsboro, Borough of      | 224             | \$135,036,357    | \$106,487,900      | \$241,524,257                                  | 198    | \$110,749,114                                  | 9     | \$81,006,201                                   | 14    | \$41,839,575                                   |
| Florence, Township of       | 4,084           | \$3,528,711,900  | \$3,053,611,216    | \$6,582,323,116                                | 3,701  | \$2,350,465,686                                | 172   | \$1,581,677,655                                | 70    | \$1,498,738,868                                |
| Hainesport, Township of     | 2,546           | \$1,785,836,114  | \$1,497,815,806    | \$3,283,651,920                                | 2,287  | \$1,086,125,466                                | 145   | \$1,636,784,252                                | 44    | \$370,107,567                                  |
| Lumberton, Township of      | 3,724           | \$2,390,626,131  | \$1,914,047,617    | \$4,304,673,748                                | 3,216  | \$1,812,943,463                                | 188   | \$1,406,090,443                                | 46    | \$635,400,986                                  |
| Mansfield, Township of      | 3,805           | \$2,003,311,609  | \$1,395,018,415    | \$3,398,330,024                                | 3,364  | \$1,858,477,945                                | 117   | \$947,329,277                                  | 3     | \$53,246,942                                   |
| Maple Shade, Township of    | 5,120           | \$3,235,266,889  | \$2,599,911,292    | \$5,835,178,181                                | 4,713  | \$2,068,249,243                                | 341   | \$3,283,684,244                                | 35    | \$270,304,084                                  |
| Medford, Township of        | 8,792           | \$5,812,040,470  | \$4,230,185,586    | \$10,042,226,056                               | 8,027  | \$4,901,417,210                                | 424   | \$3,967,624,253                                | 32    | \$237,286,364                                  |
| Medford Lakes, Borough of   | 1,804           | \$621,483,458    | \$345,754,770      | \$967,238,228                                  | 1,770  | \$835,521,941                                  | 17    | \$86,031,441                                   | 5     | \$7,010,830                                    |
| Moorestown, Township of     | 7,173           | \$6,671,888,749  | \$5,560,574,376    | \$12,232,463,125                               | 6,514  | \$4,438,790,790                                | 343   | \$4,816,222,006                                | 126   | \$1,821,346,199                                |
| Mount Holly, Township of    | 2,987           | \$2,062,906,178  | \$1,700,392,140    | \$3,763,298,318                                | 2,676  | \$1,178,094,611                                | 209   | \$2,105,277,964                                | 17    | \$134,813,134                                  |





| Municipality                      | All Occupancies |                  |                    |  | Residential |  | Commercial |  | Industrial                                     |                  |
|-----------------------------------|-----------------|------------------|--------------------|--|-------------|--|------------|--|--|------------------|
|                                   | Count           | Structural Value | Estimated Contents | Total Replacement Cost (Structural + Contents) | Count       | Total Replacement Cost (Structural + Contents) | Count      | Total Replacement Cost (Structural + Contents) | Total Replacement Cost (Structural + Contents) |                  |
| <b>Mount Laurel, Township of</b>  | 13,150          | \$8,580,722,190  | \$6,837,746,789    | \$15,418,468,979                               | 12,354      | \$5,967,010,088                                | 545        | \$7,446,607,450                                | 77   | \$1,102,248,340  |
| <b>New Hanover, Township of</b>   | 1,068           | \$1,454,681,464  | \$1,414,258,123    | \$2,868,939,587                                | 295         | \$121,270,024                                  | 41         | \$366,498,051                                  | 0  | \$0              |
| <b>North Hanover, Township of</b> | 2,176           | \$1,320,455,662  | \$1,084,214,685    | \$2,404,670,347                                | 1,486       | \$717,750,341                                  | 73         | \$635,193,370                                  | 1  | \$2,498,774      |
| <b>Palmyra, Borough of</b>        | 2,482           | \$1,222,466,403  | \$910,640,737      | \$2,133,107,140                                | 2,340       | \$1,069,114,169                                | 95         | \$772,733,661                                  | 26   | \$214,159,975    |
| <b>Pemberton, Borough of</b>      | 519             | \$405,485,181    | \$330,656,310      | \$736,141,491                                  | 460         | \$249,199,271                                  | 42         | \$397,861,568                                  | 4  | \$36,898,496     |
| <b>Pemberton, Township of</b>     | 9,729           | \$4,061,985,822  | \$2,911,257,017    | \$6,973,242,839                                | 8,863       | \$3,653,826,405                                | 230        | \$1,769,740,069                                | 21   | \$89,020,654     |
| <b>Riverside, Township of</b>     | 2,532           | \$1,350,008,041  | \$1,109,946,125    | \$2,459,954,166                                | 2,331       | \$773,639,516                                  | 134        | \$1,461,350,211                                | 32   | \$89,089,618     |
| <b>Riverton, Borough of</b>       | 989             | \$644,201,505    | \$452,528,093      | \$1,096,729,598                                | 938         | \$588,701,595                                  | 35         | \$355,954,948                                  | 1  | \$14,089,970     |
| <b>Shamong, Township of</b>       | 2,494           | \$1,491,241,787  | \$1,013,684,949    | \$2,504,926,736                                | 2,144       | \$1,462,605,155                                | 69         | \$446,950,399                                  | 10   | \$41,322,428     |
| <b>Southampton, Township of</b>   | 5,368           | \$2,659,445,297  | \$1,933,572,958    | \$4,593,018,255                                | 4,687       | \$2,260,892,149                                | 231        | \$1,462,121,392                                | 33   | \$138,876,772    |
| <b>Springfield, Township of</b>   | 1,826           | \$1,185,123,238  | \$955,394,082      | \$2,140,517,320                                | 1,199       | \$689,187,469                                  | 128        | \$670,084,855                                  | 0  | \$0              |
| <b>Tabernacle, Township of</b>    | 2,938           | \$1,305,660,575  | \$894,779,662      | \$2,200,440,237                                | 2,620       | \$1,246,359,444                                | 103        | \$526,604,504                                  | 4  | \$5,723,888      |
| <b>Washington, Township of</b>    | 538             | \$323,371,754    | \$280,713,195      | \$604,084,949                                  | 390         | \$163,324,082                                  | 18         | \$215,449,707                                  | 22   | \$52,730,969     |
| <b>Westampton, Township of</b>    | 2,795           | \$2,386,264,842  | \$2,234,027,803    | \$4,620,292,645                                | 2,458       | \$1,265,684,407                                | 202        | \$1,506,024,338                                | 42   | \$1,330,946,890  |
| <b>Willingboro, Township of</b>   | 10,830          | \$5,456,305,158  | \$3,333,129,001    | \$8,789,434,159                                | 10,529      | \$6,486,858,226                                | 152        | \$1,325,032,834                                | 30   | \$193,452,399    |
| <b>Woodland, Township of</b>      | 782             | \$661,123,288    | \$672,372,543      | \$1,333,495,831                                | 602         | \$269,628,815                                  | 89         | \$751,176,335                                  | 11   | \$60,274,879     |
| <b>Wrightstown, Borough of</b>    | 296             | \$388,229,854    | \$360,642,569      | \$748,872,423                                  | 185         | \$94,109,208                                   | 55         | \$475,166,687                                  | 5  | \$18,912,252     |
| <b>Burlington County</b>          | 149,305         | \$94,167,142,311 | \$73,816,951,444   | \$167,984,093,755                              | 135,116     | \$70,766,138,412                               | 6,297      | \$61,926,224,685                               | 1,170  | \$14,991,763,266 |

Source: Burlington County, 2023; NJOGIS 2023; Microsoft BING 2022; RS Means 2022



Figure 3-15. Distribution of Residential Building Stock Replacement Cost Value in Burlington County

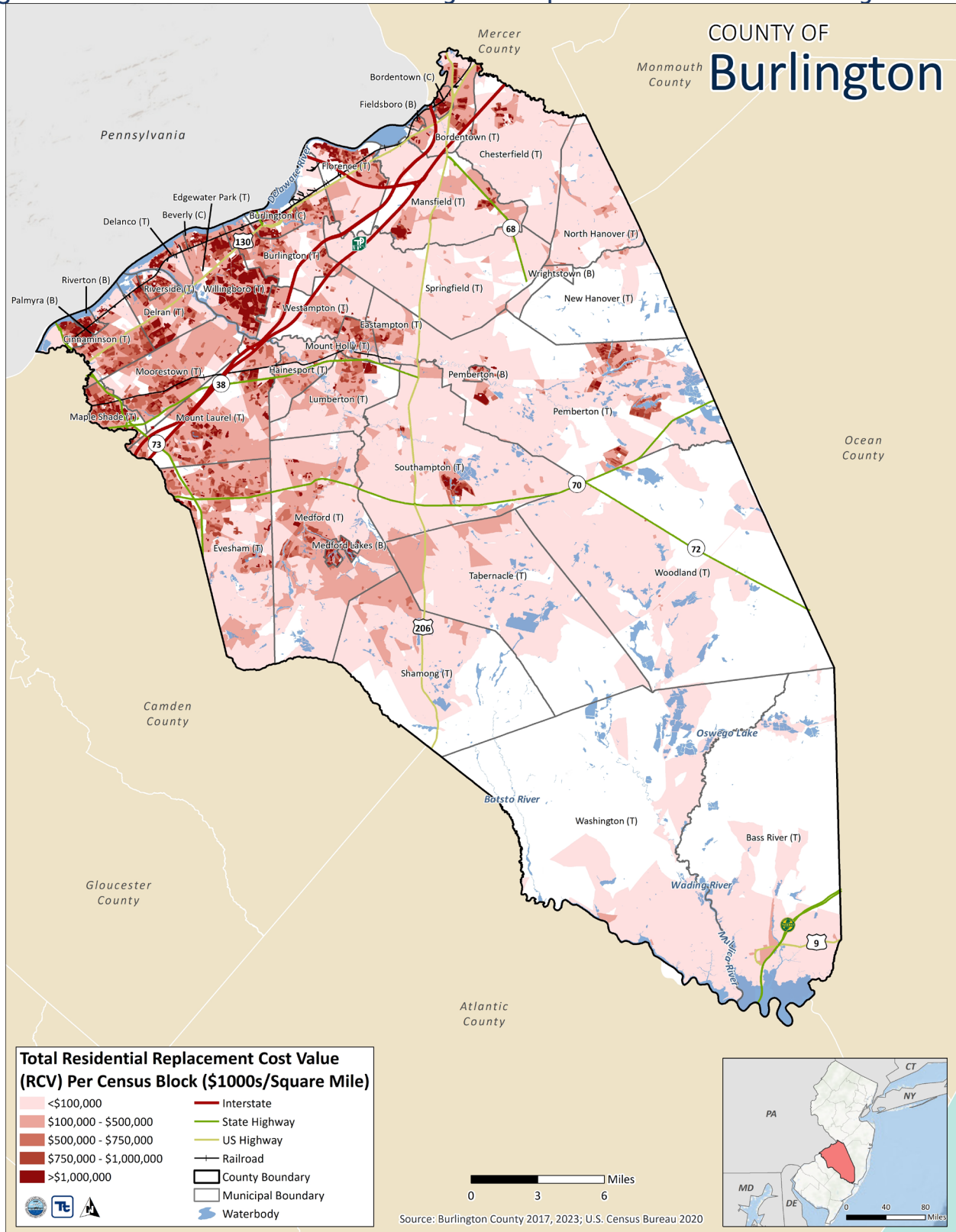




Figure 3-16. Distribution of Commercial Building Stock Replacement Value in Burlington County

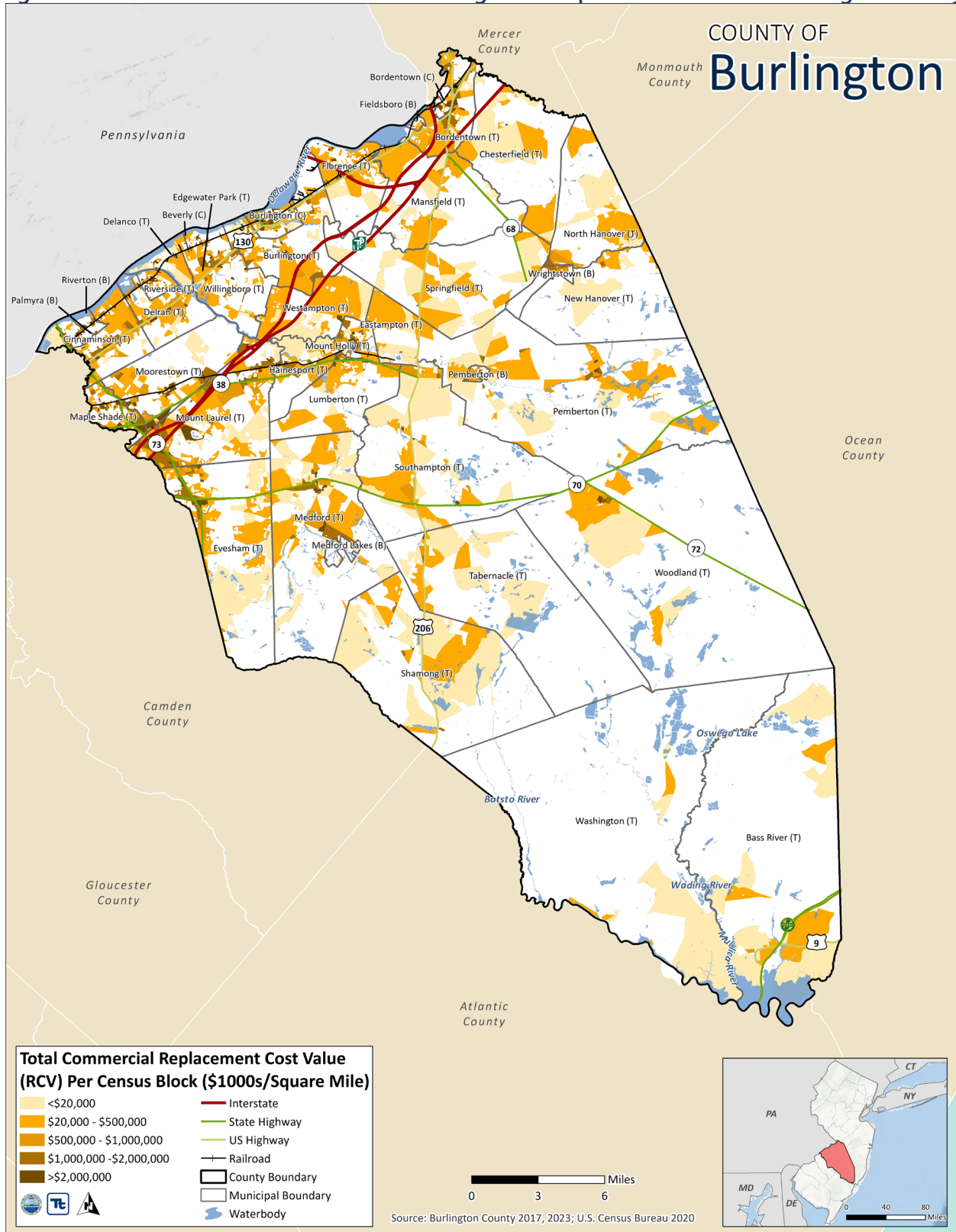
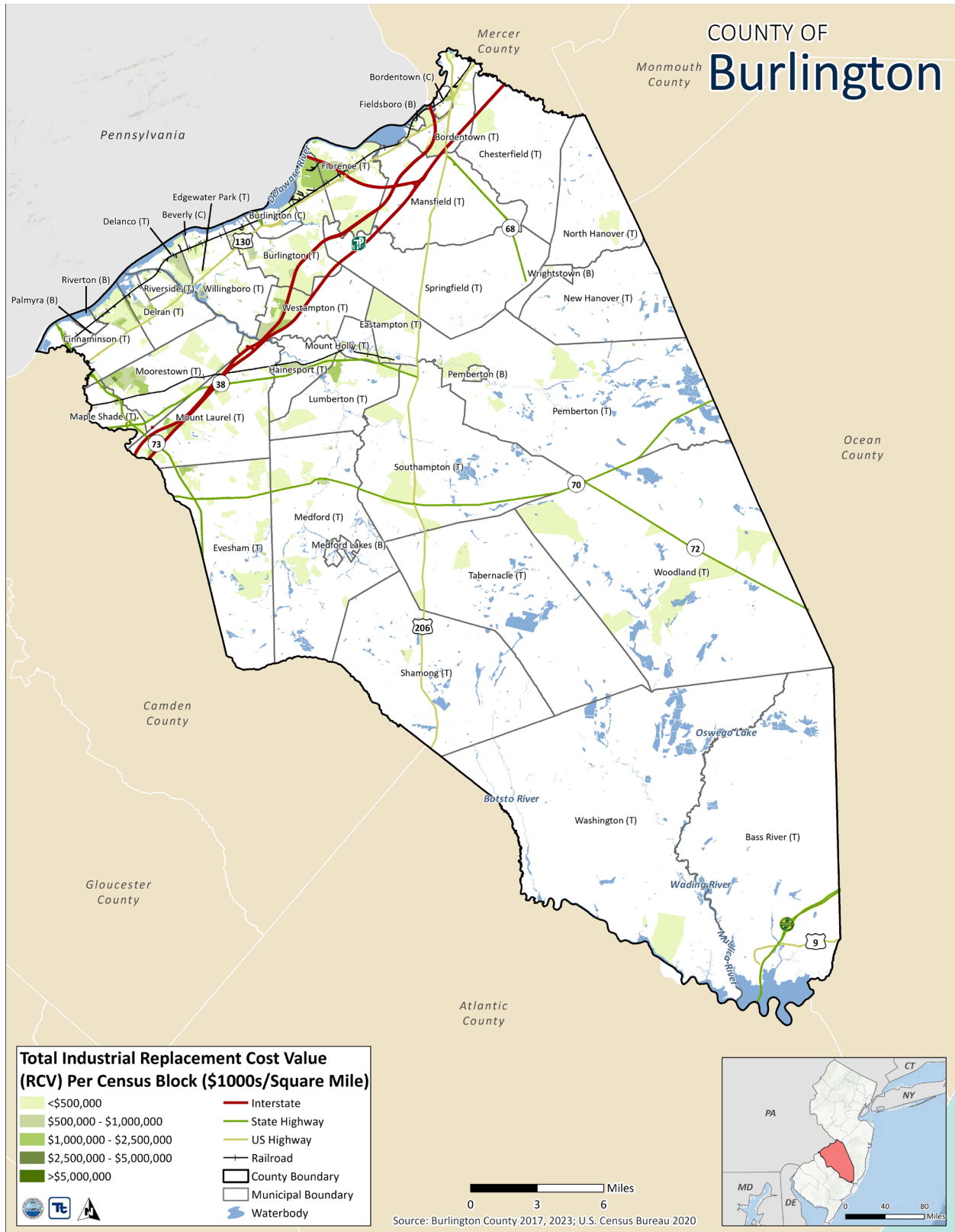




Figure 3-17. Distribution of Industrial Building Replacement Cost Value in Burlington County







### 3.5.1 Development Trends and New Development

Local zoning and planning authority is provided for under the New Jersey Municipal Land Use Law, which gives municipalities zoning and planning authority. The DMA 2000 requires that communities consider land use trends, which can impact the need for, and priority of, mitigation options over time. Land use trends significantly impact exposure and vulnerability to various hazards. For example, significant development in a hazard area increases the building stock and population exposed to that hazard.

This plan provides a general overview of population and land use, and types of development occurring within the study area. An understanding of these development trends can assist in planning for future development and ensuring that appropriate mitigation, planning, and preparedness measures are in place to protect human health and community infrastructure. For municipal identified new development, refer to the municipal annexes in Section 9.

## 3.6 LIFELINES FACILITIES

Critical infrastructure and facilities are those that are essential to the health and welfare of the population. These facilities are especially important after any hazard event. Critical facilities are those that maintain essential and emergency functions and are typically defined to include police and fire stations, schools, and emergency operations centers. Critical infrastructure can include the roads and bridges that provide ingress and egress and allow emergency vehicles access to those in need and the utilities that provide water, electricity, and communication services to the community. Also included are Tier II facilities (hazardous materials) and rail yards; rail lines hold or carry significant amounts of hazardous materials with a potential to impact public health and welfare in a hazard event (FEMA 1997).

Beginning in 2017, FEMA developed a new construct to increase effectiveness for disaster operations and position response to catastrophic incidents. This construct, known as “community lifelines”, represents the most fundamental services in the community that, when stabilized, enable all other aspects of society. Following a disaster event, intervention is required to stabilize community lifelines. Lifelines are divided into seven categories which include:

- Safety and Security
- Food, Hydration, Shelter
- Health and Medical
- Energy
- Communications
- Transportation
- Hazardous Materials
- Water Systems (FEMA 2023)





To facilitate consistency with the National Response Framework, FEMA Strategic Plan, and guidance for the Building Resilient Infrastructure and Communities grant program, critical facilities in Burlington County are discussed in terms of lifelines.

A comprehensive inventory of lifelines in Burlington County was developed from the Burlington County Department of Information Technology, GIS Division. The inventory of lifelines presented in this section represents the current state of this effort at the time of publication of the HMP and was used for the risk assessment in Section 4.

The inventory of lifelines identified for the HMP is considered sensitive information. It is protected by the Protected Critical Infrastructure Information (PCII) program and under New Jersey Executive Order 21. Therefore, individual facility names and addresses are not provided in this HMP. A summary of the facility types used for the risk assessment are presented further in this section.

### 3.6.1 Safety and Security



This section provides information on safety and security lifelines. Components of this lifeline category include law enforcement/security, fire services, search and rescue services, government services, and community safety (e.g., dams). Figure 3-18 illustrates the general location of facilities in Burlington County.

#### Emergency Facilities

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The County has a highly coordinated and interconnected network of emergency facilities and services at the county and municipal level. The Burlington County OEM serves as the primary coordinating agency between local, state, and federal agencies. In response to an emergency event, the Burlington County OEM will work with county and municipal health agencies and healthcare providers, emergency facilities, and the County Sheriff's Office to provide aid to residents of the County.

Each municipality is responsible for maintaining its own fire department; however, not every municipality maintains their own police department or emergency medical services facility. All municipalities except Bass River Township, Hainesport Township, Shamong Township, Southampton Township, Tabernacle Township, Woodland Township, and Wrightstown Borough maintain their own police department and those who do not are covered by the State Police. The Burlington County Sheriff's Office and NJ State Police also provide emergency support to the municipalities. The City of Beverly, Bordentown City, Burlington City, Chesterfield Township, Cinnaminson Township, Delanco Township, Delran Township, Eastampton Township, Evesham Township, Florence Township, Hainesport Township, Lumberton Township, Mansfield Township, Maple Shade Township, Medford Township, Moorestown Township, Mount Holly Township, Mount Laurel Township, New Hanover Township, North Hanover Township, Palmyra Borough, Pemberton Township, Shamong Township, Southampton Township, Springfield Township, Tabernacle Township, Washington Township, Westampton Township, Willingboro Township, and Woodland Township maintain their own EMS facilities and provide support to surrounding municipalities.



Overall, there are 412 local, county, and state law enforcement facilities, 122 fire and EMS facilities, 41 police facilities, and 75 EOCs in Burlington County. The EOC total includes all municipal halls, fire departments, department of public work buildings, and others that were identified as EOCs by the municipalities.

## Military Installations

Burlington County is home to the United States Defense Department’s only tri-service installation, Joint Base McGuire-Dix-Lakehurst (JB MDL) is home to five wings spanning 42,000 acres. JB MDL’s host wing, the 87th Air Base Wing, supports 88 mission partners by providing unrivaled installation support to all mission commanders and sustaining mission-ready expeditionary service members (Joint Base MDL n.d.). There are five military installations in Burlington County.

## Dams and Levees

According to the New Jersey Department of Environmental Protection (NJDEP), there are four hazard classifications of dams in New Jersey. The classifications relate to the potential for property damage and/or loss of life should the dam fail:

- Class I (High-Hazard Potential) - Failure of the dam may result in probable loss of life and/or extensive property damage
- Class II (Significant-Hazard Potential) - Failure of the dam may result in significant property damage; however, loss of life is not envisioned.
- Class III (Low-Hazard Potential) - Failure of the dam is not expected to result in loss of life and/or significant property damage.
- Class IV (Small-Dam Low-Hazard Potential) - Failure of the dam is not expected to result in loss of life or significant property damage. Dam must also meet the requirements of a Class IV dam above.

According to the United States Army Corps of Engineers (USACE) National Inventory of Dams, the following dams and their classifications are located in Burlington County (Table 3-13). 10 dams have a high hazard classification. Figure 3-18 illustrates the locations of these dams.

Table 3-13. Dams in Burlington County

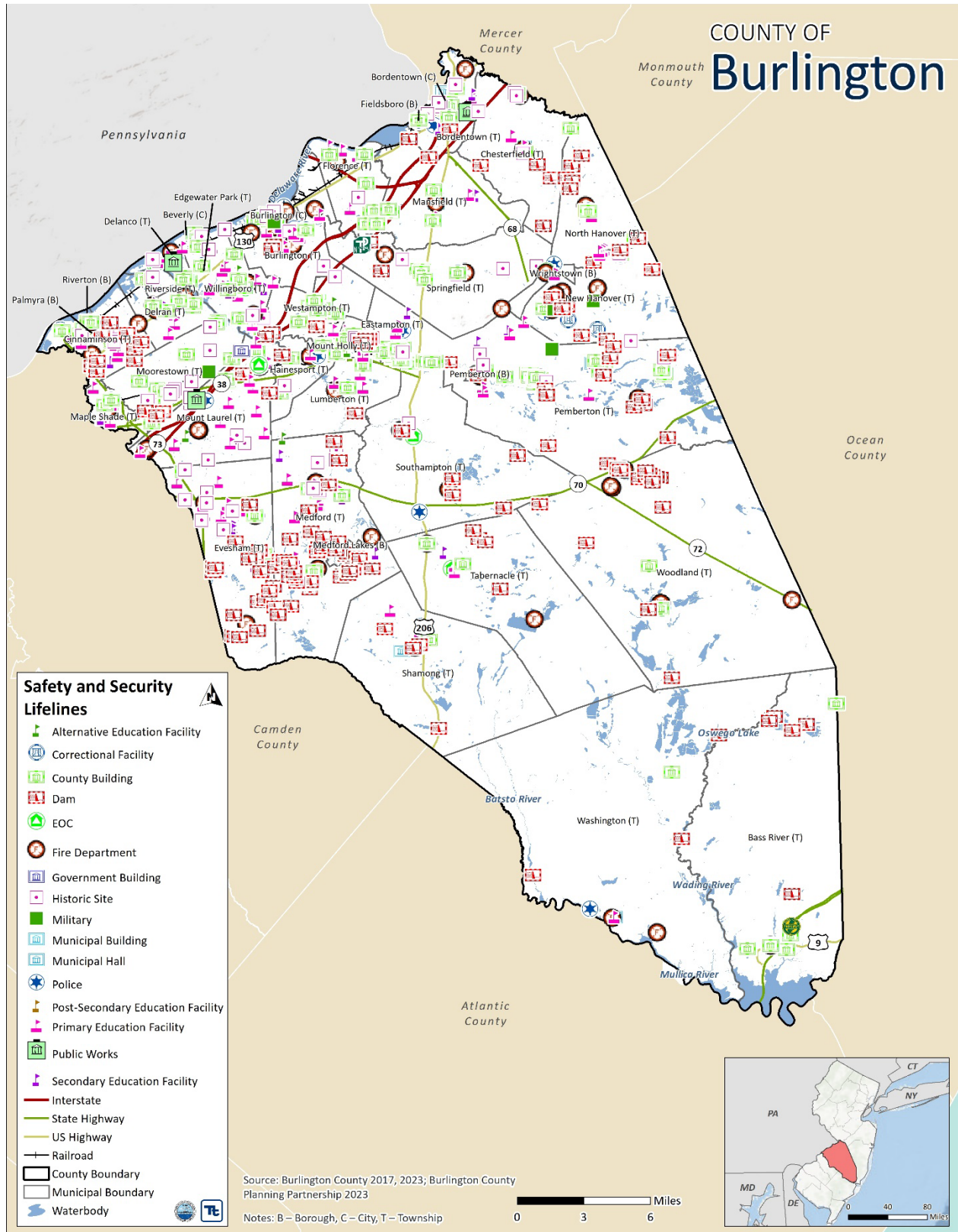
| County     | Total Count | Class I | Class II | Class III | Class IV |
|------------|-------------|---------|----------|-----------|----------|
| Burlington | 74          | 10      | 40       | 24        | 0        |

Source: USACE 2023

According to the USACE National Levee Database, there are no levees located in Burlington County (USACE 2024).



Figure 3-18. Safety and Security Lifelines in Burlington County





### 3.6.2 Food, Hydration, Shelter



This section provides information on food, hydration, and shelter lifelines. Components of this lifeline category include agricultural lifelines. Figure 3-19 illustrates the general location of facilities in Burlington County.

#### Shelters

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With support and cooperation of the American Red Cross and local jurisdictions, the County references an inventory of suitable shelter locations and can assist with the coordination and communication of shelter availability as necessitated by the execution of local municipal emergency operation plans.

There were 139 shelters identified within Burlington County. Many schools, community centers, and municipal buildings could serve as a shelter during an emergency.

#### Schools

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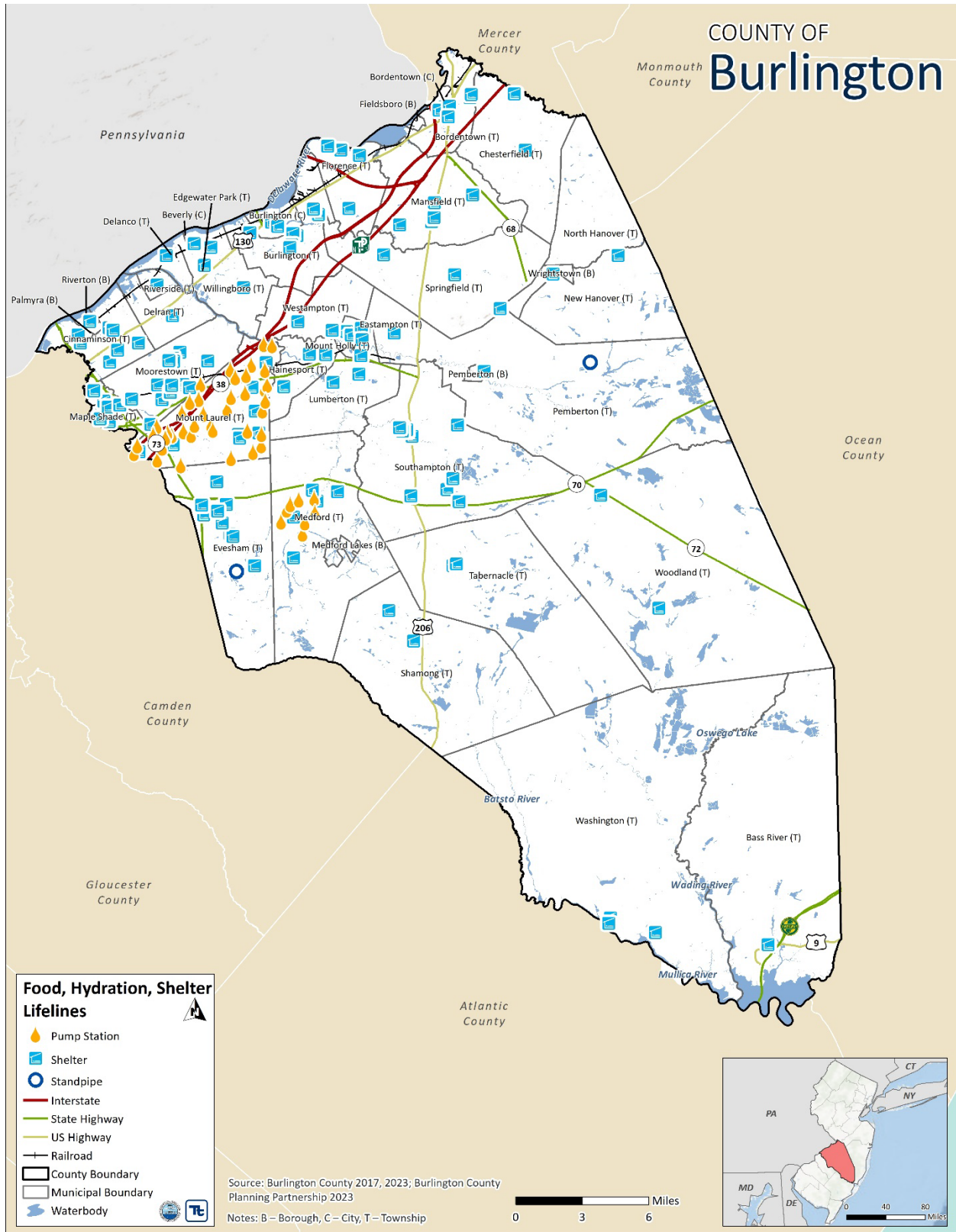
There are 85 schools, ranging from elementary to post-secondary education, which service the county. Several municipalities throughout the county have their own school systems, while other municipalities are served by regional school districts. In addition to the number of public schools throughout the county, there are several private education facilities. In times of need, schools can function as shelters and are an important resource to the community.

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Figure 3-19. Food, Hydration, Shelter Lifelines in Burlington County



COUNTY OF  
**Burlington**





### 3.6.3 Health and Medical



This section provides information on health and medical lifelines. Components of this lifeline category include medical care, public health, patient movement, medical supply chain, and fatality management. Figure 3-20 illustrates the general location of facilities in Burlington County.

#### Hospitals and Medical Facilities

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Burlington County has a dynamic health care industry that includes hospitals, rehabilitation centers, and behavioral health facilities. There are 15 hospital and medical facilities located in Burlington County.

#### Senior Care and Living Facilities

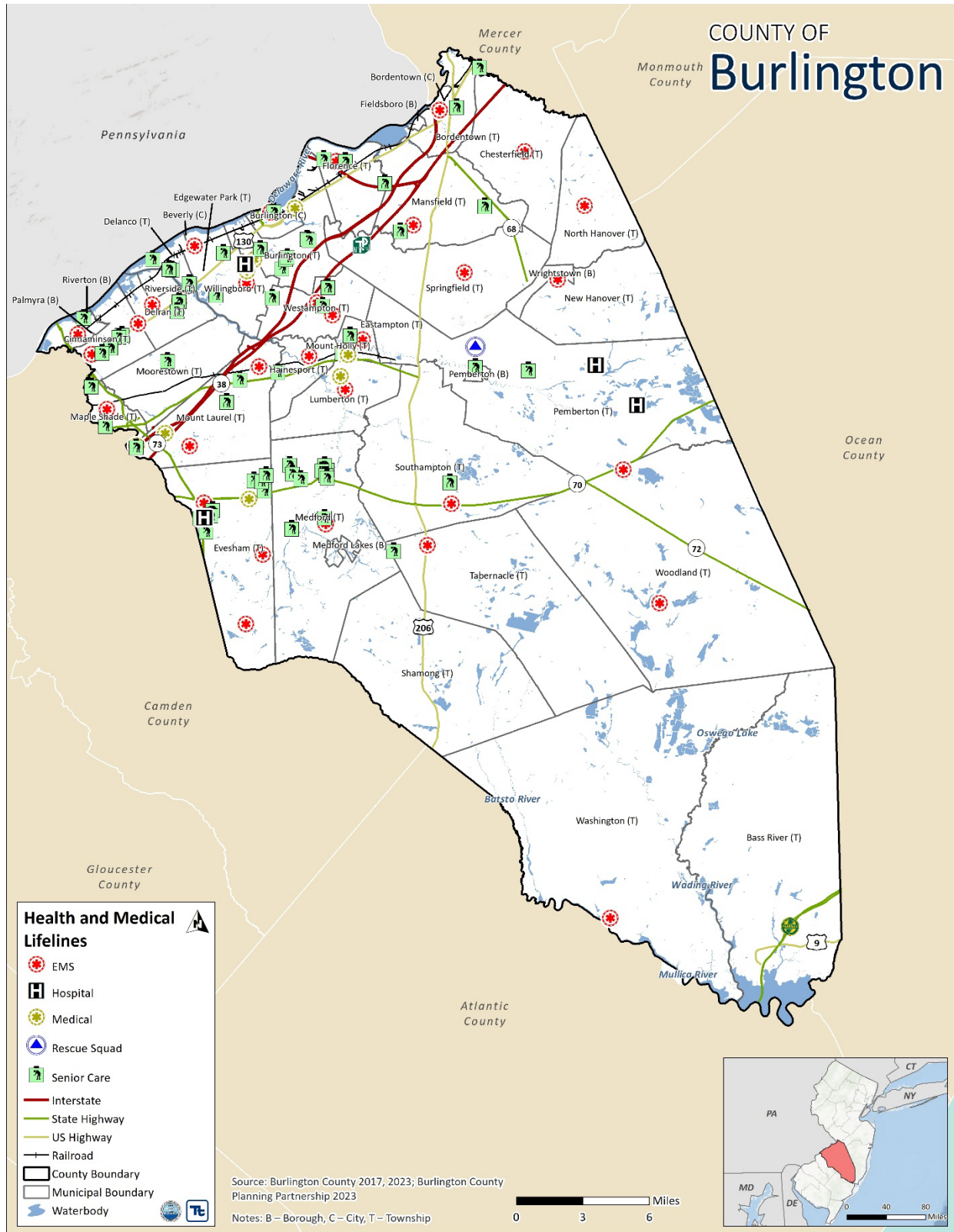
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The County has an extensive system of programs and services for the senior population, including 65 senior care facilities. These facilities are highly vulnerable to potential impacts from disasters and knowing the location and numbers of these types of facilities will be effective in managing a response plan pre- and post-disaster.

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Figure 3-20. Health and Medical Lifelines in Burlington County





### 3.6.4 Energy



This section provides information on energy lifelines. Components of this lifeline category include power grids and fuel supplies. Figure 3-21 illustrates the general location of facilities in Burlington County.

#### Energy Resources

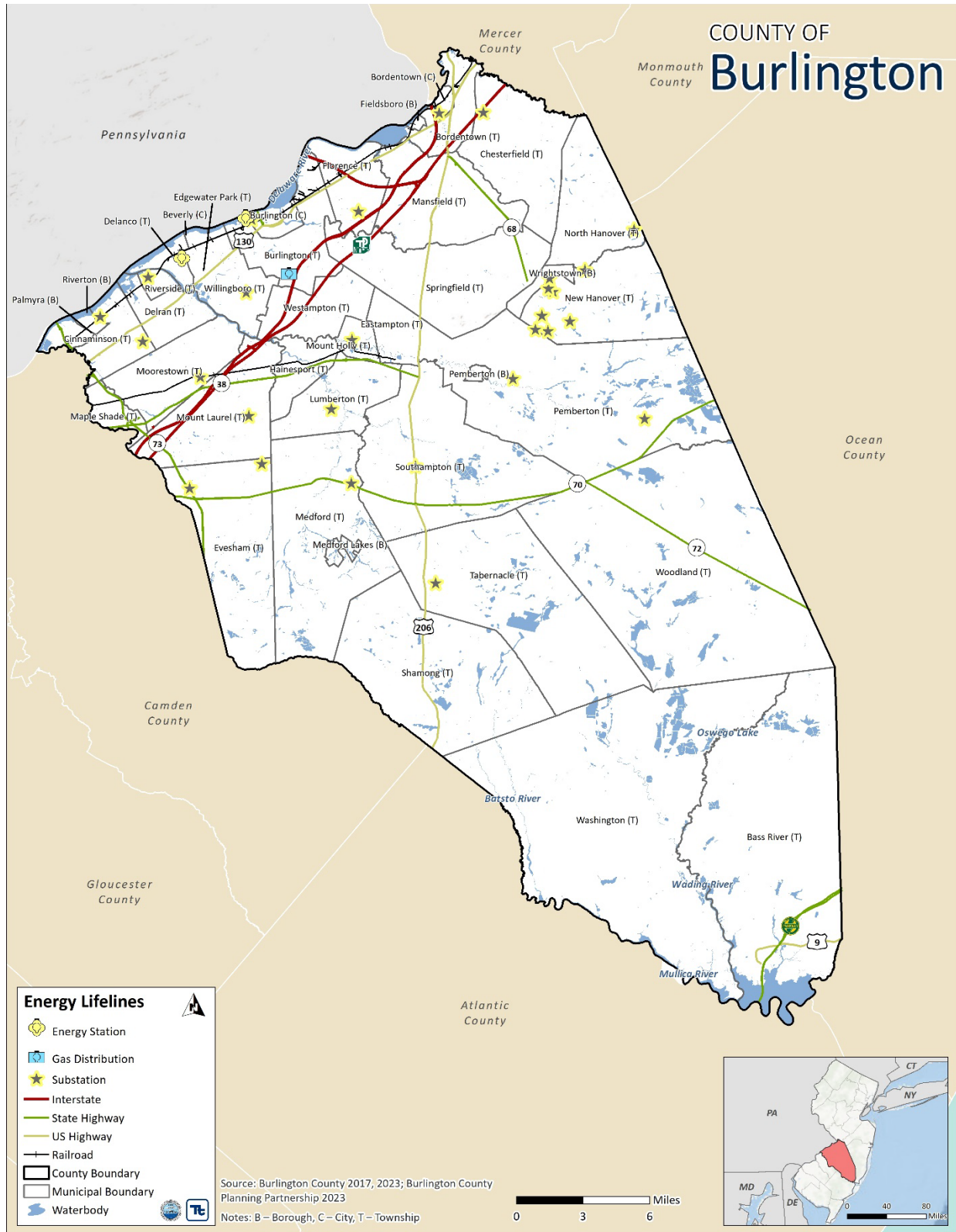
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JCP&L and PSE&G are the primary electric and gas utility companies in Burlington County. In addition, South Jersey Gas provides natural gas service to Burlington County. Verizon is the primary provider of landline service in Burlington County. Homes in the County are heated by many different sources, with a majority using natural gas or fuel oil.

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Figure 3-21. Energy Lifelines in Burlington County





### 3.6.5 Communications



This section provides information on communications lifelines. Components of this lifeline category include communications infrastructure; responder communications; alerts, warnings, and messages; finance; 911; and dispatch. Figure 3-22 illustrates the general location of facilities in Burlington County.

#### Emergency Warnings and Responder Communications

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Burlington County OEM operates an Emergency Operations Center in the Township of Westampton, which is a specially designed facility where public organizations and private-sector agencies meet to decide and coordinate emergency response to community-wide disasters.

Additionally, Burlington County has a Central Communications, which serves as the Public Safety Answering point which dispatches all public safety services throughout the county.

#### Communications

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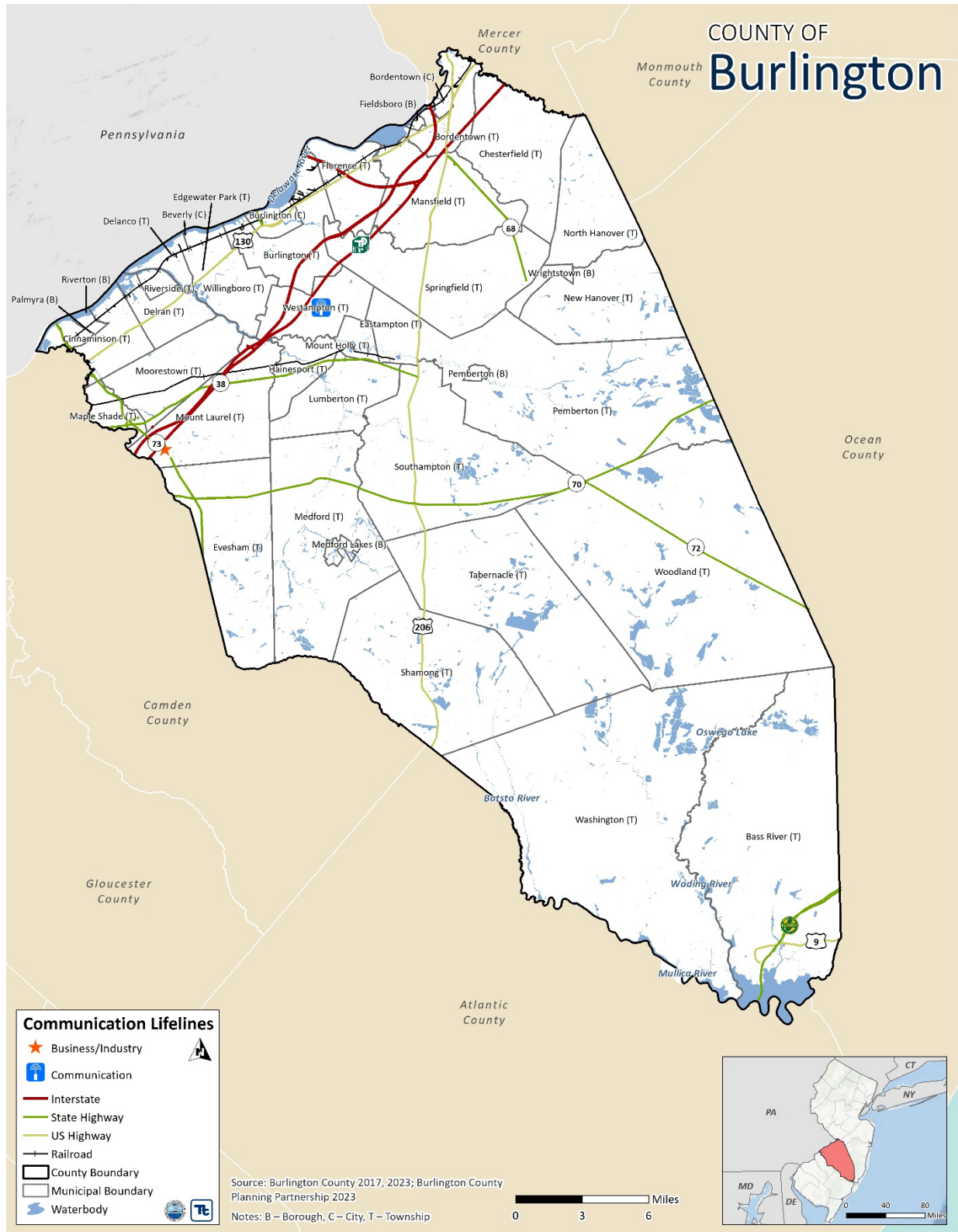
Burlington County is served by a variety of communications systems, including traditional land line, fiber optic, and cellular service provided by multiple companies, such as Verizon, Direct TV, and Comcast and AT&T. Each carrier has individual plans for emergency situations during hazard events and post-disaster recovery efforts. In addition to land line, fiber optic and cellular communications systems, Burlington County has an extensive radio communications network that is utilized by emergency services agencies, hospitals, law enforcement, public works, transportation, and other supporting organizations. There are two communication facilities in Burlington County identified as critical facilities.

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Figure 3-22. Communication Lifelines in Burlington County





### 3.6.6 Transportation



This section provides information on transportation lifelines. Components of this lifeline category include highway, roadway, and motor vehicle networks; mass transit; railway; aviation; and maritime facilities. Figure 3-23 shows regional transportation lifelines serving the County.

#### Highway, Roadways, and Associated Systems

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Interstates 295 and 95 are the major north-south routes that pass through the County. These routes are vital northeast corridors which connect major cities of the east coast. Additionally, a small portion of Interstate 276 connects Interstates 95 and 295 to northern Philadelphia and the Pennsylvania Turnpike's Northeast Extension. Along the eastern edge of the County the Garden State Parkway (US Route 9), another north-south route passes through the County. The Garden State Parkway extends from New York to the tip of Cape May County. Other important routes in Burlington County are U.S. Route 206 (north-south), U.S. Route 130 (north-south), NJ Route 70 (east-west), and NJ Route 72 (east-west).

#### Evacuation Routes

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The County has identified evacuation zones for severe weather and can assist with the coordination and communication of evacuation routing as necessitated by the execution of local municipal emergency operation plans. Evacuation routes utilized are determined based on the specific hazard events.

#### Bus and Other Transit Facilities

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Burlington County is served primarily by New Jersey Transit bus and rail lines. The NJ Transit River Line connects to Amtrak's Northeast Corridor at Trenton and to PATCO which connects Philadelphia to Camden. These lines provide the connection between Burlington County and other major cities such as Washington D.C., Baltimore, MD, Wilmington, DE, Philadelphia, PA, and New York, NY. Rail service extends to points north and south.

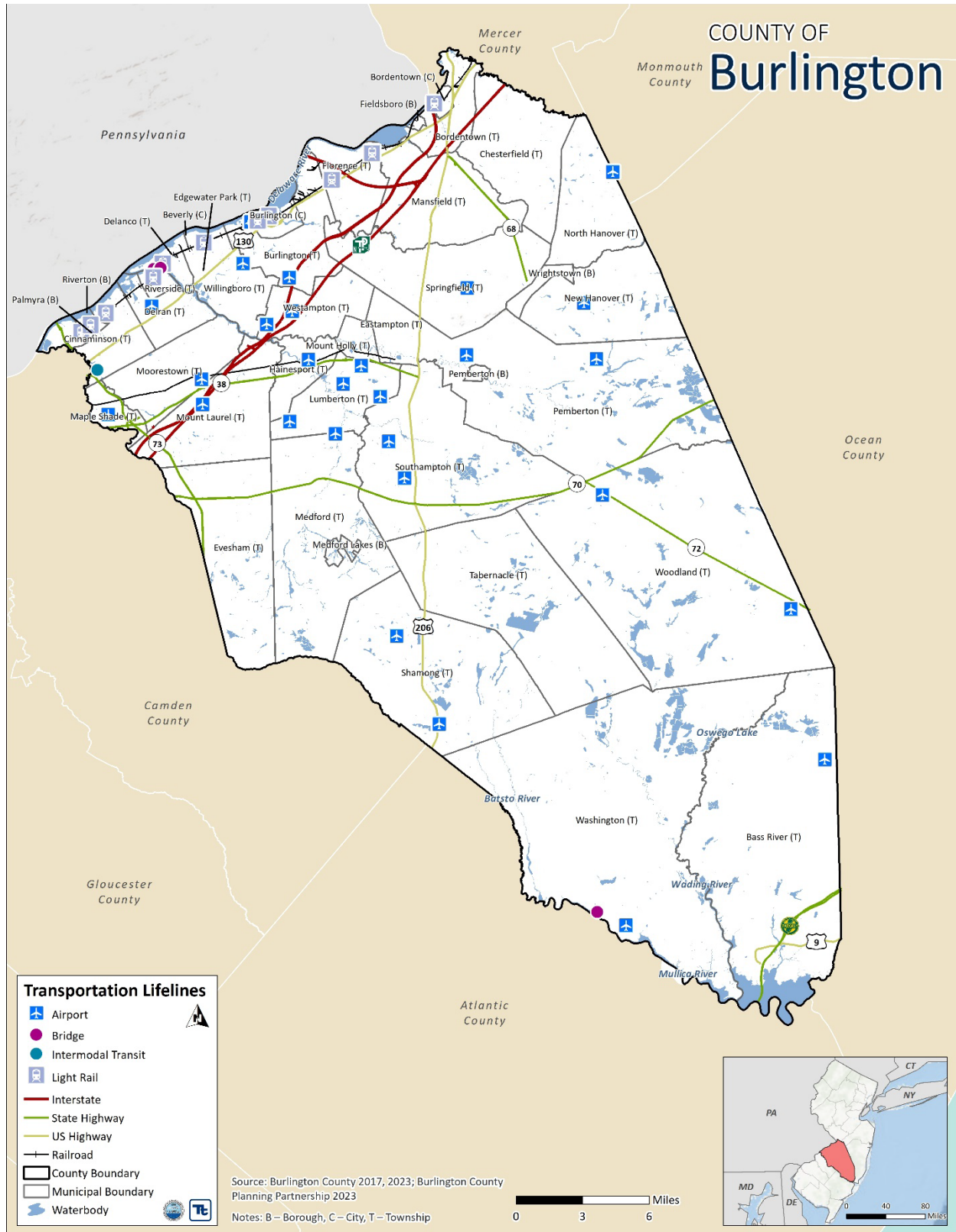
#### Air

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There were 28 air facilities identified within the County. These facilities include both airports and heliports which are utilized for public, private, medical, and military purposes.



Figure 3-23. Transportation Lifelines in Burlington County





### 3.6.7 Hazardous Materials



This section presents data and information on hazardous materials lifelines. Components of this lifeline category include hazardous materials facilities, HAZMAT, pollutants, and contaminants. Due to heightened security concerns, local hazardous materials lifeline data sufficient to complete the analysis have only partially been obtained. Figure 3-24 shows regional transportation lifelines serving the County.

#### Hazardous Material Facilities

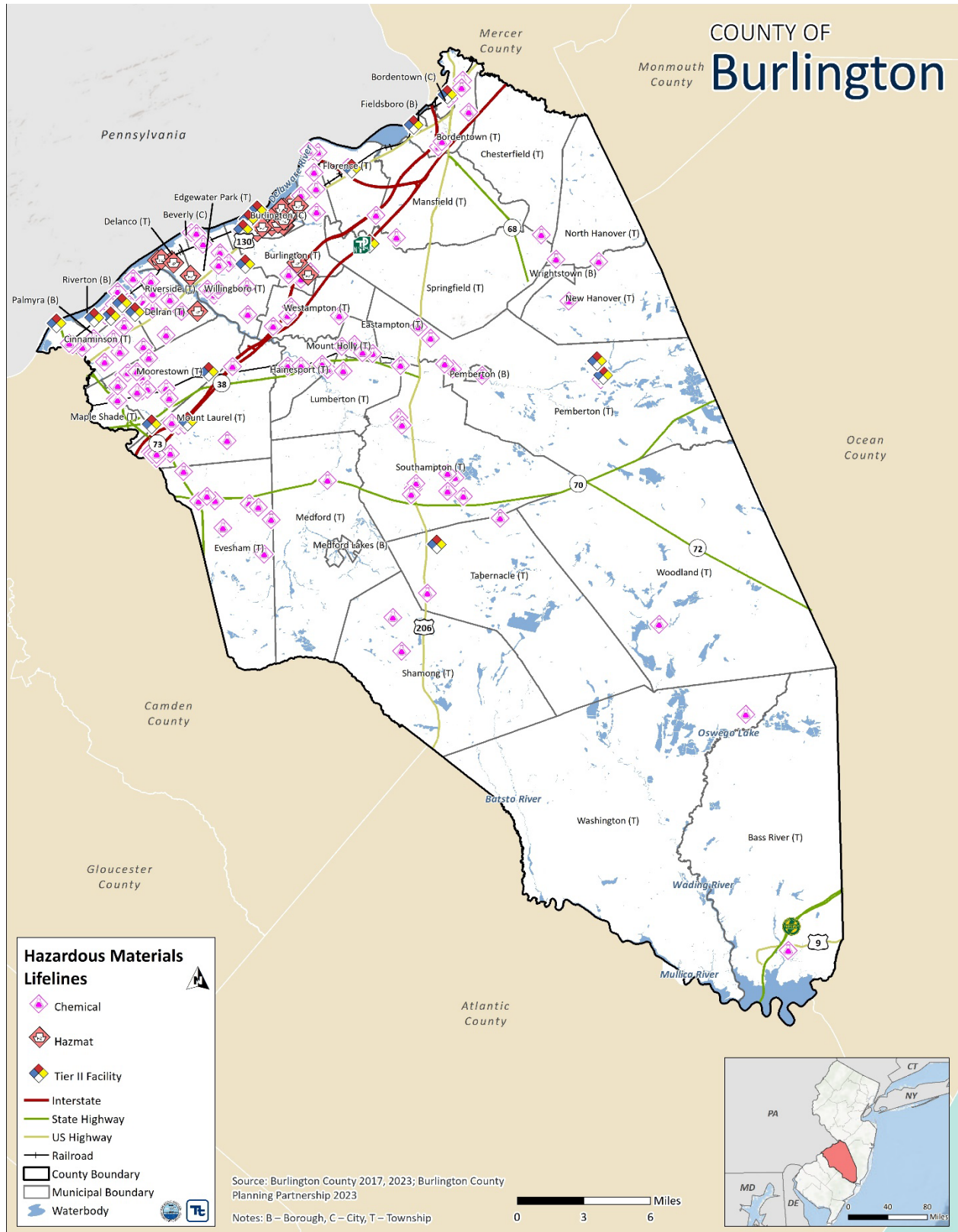
The U.S. Environmental Protection Agency's (EPA) 2023 Toxics Release Inventory (TRI) database indicates there are 20 TRI facilities in Burlington County. TRI facilities are those required to report on chemical storage and use based on particular volumes of specified chemicals stored and used (US EPA 2023). NJDEP Bureau of Release Prevention identifies facilities in the County where an extraordinarily hazardous substance may be present or generated above regulatory levels that are subject to the Toxic Catastrophe Prevention Act, (N.J.S.A. 13:1K-19 et seq.) and the regulations arising from the Act as codified in N.J.A.C. 7:31 (NJDEP Compliance and Enforcement 2018).

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Figure 3-24. Hazardous Material Lifelines in Burlington County







### 3.6.8 Water Systems



This section presents data and information on water system lifelines. Components of this lifeline category include potable water infrastructure and wastewater management. Figure 3-25 shows regional transportation lifelines serving the County.

#### Potable Water

New Jersey American Water (NJAW) serves more than 80,000 people in 20 communities in Burlington County and more than two million people in the Garden State. NJAW’s main production facility in the region is the Delaware River Water Treatment Plant (DRWTP), located in Delran. The DRWTP produces an average of 22 million gallons of water per day and serves customers in Burlington, Camden, and Gloucester counties. The largest water purveyor in the state, NJAW is a wholly owned subsidiary of American Water, the largest private water services provider in North America. Headquartered in Voorhees, American Water employs more than 6,500 professionals who provide high quality water, wastewater, and other related services to more than 14 million people in 24 states (American Water 2023).

Aqua America New Jersey provides drinking water and wastewater services to 150,000 residents in 18 municipalities in nine New Jersey counties (State of New Jersey 2012).

Burlington County’s water is predominately from surface water sources. Additionally, a small portion of the water supply is well water from well fields distributed throughout the system.

#### Wastewater Facilities

Table 3-14 lists the wastewater treatment facilities in the County.

**Table 3-14. Burlington County Wastewater Treatment Facilities**

| Name  | Municipalities Served  |
|---|--|
| <b>A.C. Wagner Youth Correctional Institution</b>   | Chesterfield Township  |
| <b>Beverly Sewerage Authority</b>                   | Beverly City and Delanco Township  |
| <b>Bordentown Sewerage Authority</b>                | Bordentown City, Bordentown Township   |
| <b>Burlington City Sewerage Authority</b>           | Burlington City, Burlington Township   |
| <b>Central Avenue Sewerage Treatment Plant</b>      | Burlington Township, Springfield Township  |
| <b>Camden County Municipal Utilities Authority</b>  | Portions of Mount Laurel Township and Evesham Township   |
| <b>Cinnaminson Township Sewerage Authority</b>      | Cinnaminson Township   |
| <b>Delran Sewerage Authority</b>                    | Delran Township, Moorestown Township   |
| <b>Edgewater Park Sewerage Authority</b>            | Edgewater Park Township, portion of Delanco Township   |
| <b>Evesham Township MUA</b>                         | Evesham Township, portions of Mount Laurel Township, portions of Medford Township                |
| <b>Florence Sewerage Treatment Plant</b>            | Florence Township, portion of Burlington Township  |
| <b>Maple Shade Township</b>                         | Maple Shade Township and a portion of Cinnaminson Township                                       |
| <b>Medford Lakes Sewerage Authority</b>             | Medford Lakes Borough and a portion of Medford Township  |
| <b>Medford Township MUA</b>                         | Medford Township   |
| <b>Moorestown Township Sewerage Treatment Plant</b> | Moorestown Township  |
| <b>Mount Holly Municipal Utility Authority</b>      | Mount Holly, Eastampton, a portion of Westampton, Hainesport, Lumberton, a portion of Moorestown |



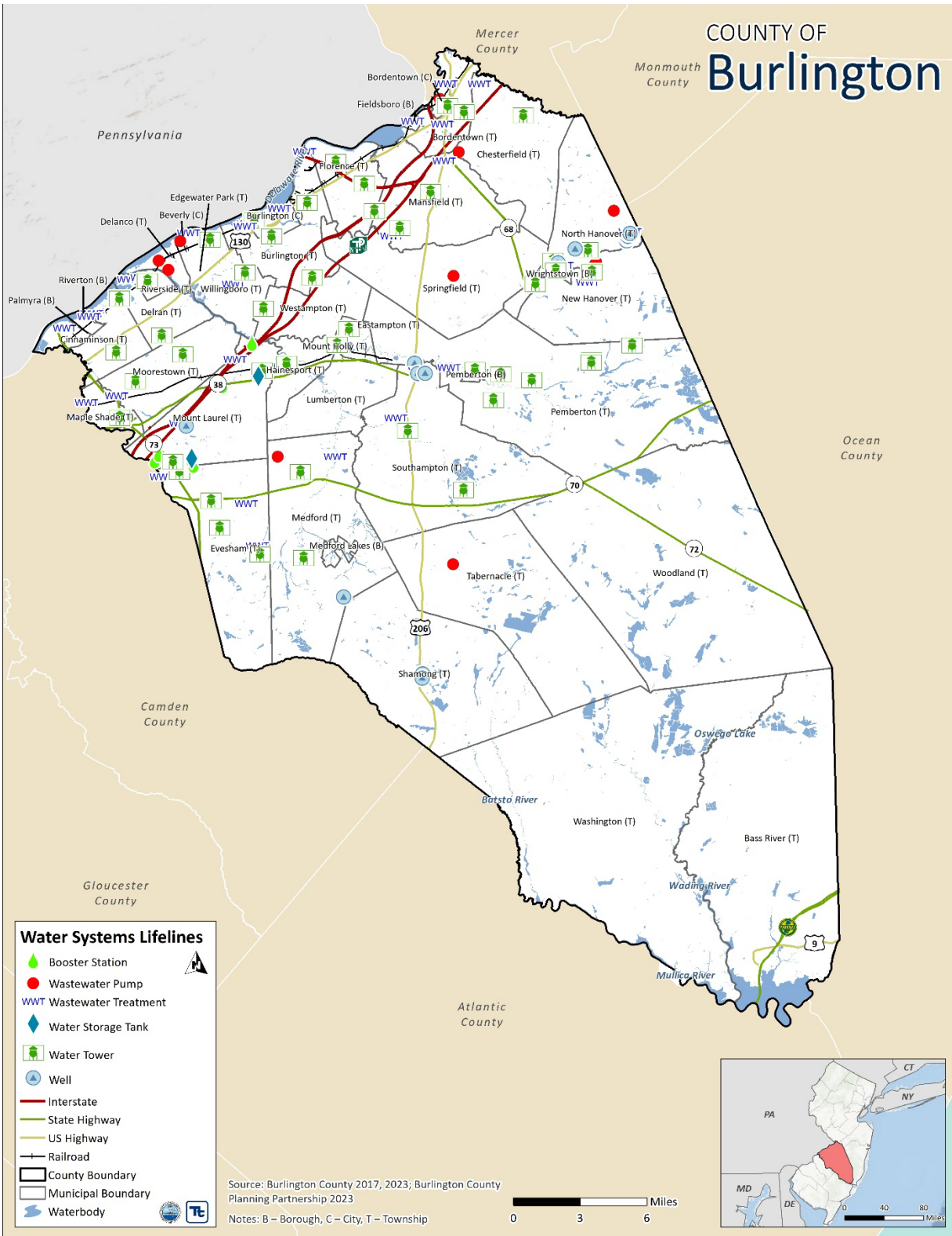
| Name  | Municipalities Served   |
|---|---|
| <b>Mount Laurel Municipal Utilities Authority</b>       | Mount Laurel, Evesham   |
| <b>Palmyra Sewerage Treatment Plant</b>                 | Palmyra Township and a portion of Riverton Borough  |
| <b>Pemberton Township Municipal Utilities Authority</b> | Pemberton Township and Pemberton Borough  |
| <b>Pinelands Wastewater Company</b>                     | Southampton Township  |
| <b>Riverside Township Sewerage Treatment Plant</b>      | Riverside Township and a portion of Delran Township   |
| <b>US Army Fort Dix/McGuire Air Force Base</b>          | Military installation in each of the following: New Hanover, Pemberton, North Hanover Townships                   |
| <b>Willingboro Municipal Sewerage Treatment Plant</b>   | Willingboro Township, Edgewater Park Township, a portion of Delanco Township and a portion of Westampton Township |
| <b>Wrightstown Municipal Utilities Authority</b>        | Wrightstown and a portion of Springfield Township   |

Source: (Burlington County Department of Resource Conservation 2017)

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Figure 3-25. Water System Lifelines in Burlington County



Source: Burlington County Department of Information Technology



### 3.6.9 Other Lifeline Facilities

The Planning Partnership identified additional lifeline facilities (user-defined facilities) as critical including libraries, daycares, businesses, and recreation. These facilities were included in the risk assessment conducted for the County. Figure 3-26 illustrates the locations of these facilities. These facilities have been incorporated into the Burlington County inventory and the hazard analyses performed for this plan.

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Figure 3-26. Additional Lifeline Facilities in Burlington County

