10. FLOOD

10.1 HAZARD PROFILE

10.1.1 Hazard Description

A flood is an overflow of water from oceans, rivers, groundwater, or rainfall that submerges areas that are usually dry. This natural phenomenon can occur during any season and can be exacerbated by features of the built environment.

Flooding in Cape May County can be the result of heavy rainfall produced by hurricanes moving up the coast, large frontal storms from the west and south, and local thunderstorms (FEMA FIS 2015). Flooding can also result from the failure of a water control structure, such as a dam or levee (NWS 2019). Flood can be exacerbated by other hazards such as sea level rise. Flooding commonly includes one or more of the following scenarios (NWS 2019):

- Riverine overbank flooding
- Flash floods
- Alluvial fan floods
- Mudflows or debris floods
- Dam- and levee-break floods
- Local draining or high groundwater levels
- Fluctuating lake levels
- Ice-jams

For the purpose of this HMP and as deemed appropriate by the Cape May County Steering Committee, the main flood types of concern are riverine, flash flooding, storm surge, stormwater/urban, ice jam, and erosion.

Riverine Flooding

Riverine floods are the most common flood type. They occur along the channels of rivers, creeks, streams, or ditches. When a channel receives too much water, the excess water flows over its banks and inundates low-lying areas (FEMA 2019). The inundated area is called the floodplain (NWS n.d.). Floodplains are typically flat land adjacent to a watercourse that is subject to periodic inundation. A floodplain is made up of the following components (refer to Figure 10-1) (FEMA 2019, US DHS 2019):

- **Floodway:** the channel of a river or other waterway and the adjacent land areas that are under water or reserved to carry and discharge the overflow of water caused by flooding.
- **Flood Fringe:** the area within the floodplain but outside the floodway; this area extends from the outer banks of a floodway to the river valley, where the elevation begins to rise.

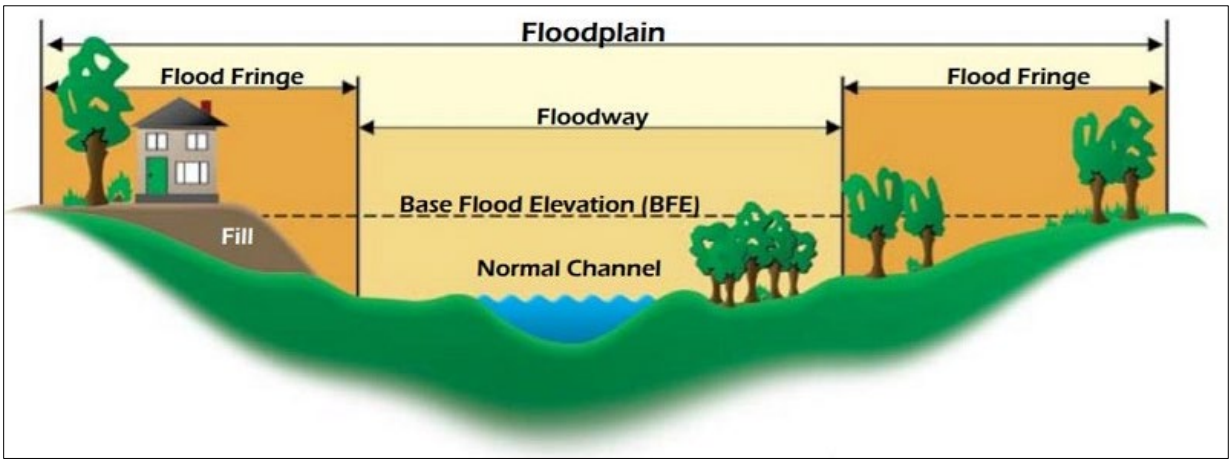
Riverine flooding is measured by how frequently a given level of flooding occurs. The 1 percent annual chance flood, also referred to as the base flood or 100-year flood, is a flood with a level that has a 1 percent chance of being equaled or exceeded in any given year. Though commonly called the 100-year flood, this flood can occur more than once in a relatively short period of time. Similarly, the flood with a 0.2 percent chance of being equaled or exceeded each year is often called the 500-year flood but can occur more frequently than that (FEMA 2020).

FEMA prepare maps of the expected floodplains along water courses, based on historical riverine and coastal flooding conditions. In FEMA flood maps, the floodplain inundated by the 1 percent annual chance flood is identified as Special Flood Hazard Area (SFHA). This is the area where flood insurance and floodplain management requirements apply (FEMA 2020).

- **Special Hazard Flood Areas (SFHAs)—**Labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30.
- **Zone B or Zone X (shaded)—**Moderate flood hazard areas. These are the areas between the limits of the base flood and the 0.2 percent annual chance (or 500-year) flood.
- **Zone C or Zone X (unshaded)—**Areas of minimal flood hazard, outside the SFHA and at higher elevations than the elevation of the 0.2 percent annual chance flood.

Mapped floodplain boundaries may require updating as a result of changes in land use or the amount of impervious surface, the placement of obstructing structures in floodways, changes in precipitation and runoff patterns, improvements in technology for measuring topographic features, or new hydrologic modeling techniques (USGS 2016). Flooding outside of the SFHA area may include stormwater or urban flooding and flash flooding. Urban and stormwater flooding and future conditions (e.g., sea level rise and rainfall areas) are not reflected in FEMA floodplain mapping. As such, FEMA floodplain maps may underestimate flood risk in many areas.

Figure 10-1. Characteristics of a Floodplain



Source: FEMA 2022

Flash Flooding

Flash floods are floods caused by heavy rainfall in a short period of time, generally less than 6 hours (NWS 2009). These floods are usually characterized by raging torrents after heavy rains that rip through riverbeds, urban streets, or mountain canyons. They can occur within minutes or a few hours of excessive rainfall.

Stormwater/Urban Flooding

Urban stormwater flooding is flooding caused by local drainage issues and high groundwater levels in areas other than delineated floodplains or along recognizable channels. It is generally the result of increased water runoff due to urban development and inadequate drainage systems. If local conditions cannot accommodate intense precipitation through a combination of infiltration and surface runoff, water may accumulate and cause flooding problems. During winter and spring, frozen ground and snow accumulations may contribute to inadequate drainage and localized ponding. Flooding of this nature generally occurs in areas with flat gradients and generally increases with urbanization, which speeds the accumulation of floodwaters because of impervious areas. Shallow street flooding can occur unless channels have been improved to account for increased flows. Urban flooding can inundate streets, underpasses, low lying areas, or storm drains (FEMA 2007).

Drainage systems are designed to remove surface water from developed areas as quickly as possible to prevent flooding on streets and other urban areas. Such systems often make use of a closed conveyance system that channels water away from an urban area to surrounding streams. This bypasses the natural processes of water filtration through the ground, containment, and evaporation of excess water. Because drainage systems reduce the amount of time the surface water takes to reach surrounding streams, flooding in those streams can occur more quickly and reach greater depths than prior to development in that area (Harris 2008). The growing number of extreme rainfall events that produce intense precipitation are resulting in increased urban flooding (Center for Disaster Resilience 2016).

High groundwater levels can cause problems even where there is no surface flooding. Basements are susceptible to high groundwater levels. Seasonally high groundwater is common in many areas, though it often occurs only after a long period of above-average precipitation (USGS 2016).

Ice Jam Flooding

An ice jam occurs when pieces of floating ice are carried with a stream's current and accumulate behind an obstruction to the stream flow. Obstructions may include river bends, mouths of tributaries, points where the river slope decreases, dams, or bridges. The water held back by this obstruction can cause flooding upstream, and if the obstruction suddenly breaks, flash flooding can occur (NESEC 2021). The formation of ice jams depends on the weather and physical condition of the river and stream channels. They are most likely to occur where the channel slope naturally decreases, in culverts, and along shallows where channels may freeze solidly.

There are two different types of ice jams: freeze-up and breakup. Freeze-up jams occur in the early to mid-winter when floating ice may slow or stop due to a change in water slope as it reaches an obstruction to movement. Breakup jams occur during periods of thaw, generally in late winter and early spring. The breakup of the ice cover is usually associated with a rapid increase in runoff and corresponding river discharge due to a heavy rainfall, snowmelt, or warmer temperatures (FEMA 2023).

Coastal Flooding and Erosion

Coastal flooding may cause beach erosion; loss or submergence of wetlands and other coastal ecosystems; high water tables; loss of coastal recreation areas, beaches, protective sand dunes, parks, and open space; and loss of coastal structures. Coastal structures can include sea walls, piers, bulkheads, bridges, or buildings (FEMA 2011).

There are several forces that occur with coastal flooding (FEMA 2011):

- ***Hydrostatic forces*** against a structure are created by standing or slowly moving water. Flooding can cause vertical hydrostatic forces, or flotation. These types of forces are one of the main causes of flood damage.
- ***Hydrodynamic forces*** on buildings are created when coastal floodwaters move at high velocities. These high-velocity flows are capable of destroying solid walls and dislodging buildings with inadequate foundations. High-velocity flows can also move large quantities of sediment and debris that can cause additional damage.
    - Wave run-up flowing landward through breaks in sand dunes or across low-lying areas
    - Strong currents parallel to the shoreline driven by waves produced from a storm
    - High-velocity flows

High-velocity flows can be created or exacerbated by the presence of manmade or natural obstructions along the shoreline and by weak points formed by roads and access paths that cross dunes, bridges or canals, channels, or drainage features (FEMA 2011).

- ***Waves*** can affect coastal buildings from breaking waves, wave run-up, wave reflection and deflection, and wave uplift. The most severe damage is caused by breaking waves. The force created by these types of waves breaking against a vertical surface is often at least 10 times higher than the force created by high winds during a storm.
- ***Flood-borne debris*** produced by coastal flooding events and storms typically includes decks, steps, ramps, breakaway wall panels, portions of or entire houses, heating oil and propane tanks, cars, boats, decks and pilings from piers, fences, erosion control structures, and many other types of smaller objects. Debris from floods are capable of destroying unreinforced masonry walls, light wood-frame construction, and small-diameter posts and piles.

As waves approach a shoreline, they crest and break, losing some initial energy. The remaining wave runs up the beach before pulling back down. Depending on the size of the wave, angle of wave “attack,” and the wave period, waves can cause erosion or accretion of sediment. Seasonal high temperatures and seiches contribute to elevated lake levels allowing larger waves to reach the shoreline. Greater water depths near shore also result in less loss of wave energy from shoaling.

Coastal erosion is the geological process in which earthen materials are worn away and transported by natural forces such as wind or water. Most erosion is performed by liquid water, wind, or ice. Liquid water is the major agent of erosion. Rain, rivers, floods, and lakes carry away bits of soil and sand and slowly wash away the sediment (National Geographic 2023).

10.1.2 Location

Flooding potential is influenced by climatology, meteorology, and topography. Extensive development can impact flooding potential, as it leaves fewer natural surfaces available to absorb rainwater, forcing water directly into streams, rivers, and existing drainage systems and swelling them more than when natural surfaces are available to buffer the runoff. Areas that are more likely to have an increased risk of flooding include the following:

- Areas with poor drainage
- Locations on or near construction projects
- The FEMA defined SFHA
- Developed areas with excess amounts of impermeable surfaces

Riverine Flooding

Riverine flooding is most severe around major creeks and riverbeds, including Bidwell Creek, Holmes Creek, Spicer Creek, Skeeter Island Creek, Mickels Run, Fulling Mill Stream, Pond Creek, Beach Creek, Cedar Swamp Creek, Cape Island Creek, Bennett Creek, Mill Creek, and Cox Hall Creek. According to the County’s Flood Insurance Study (FIS), major floods can occur in Cape May County at any time of year, often resulting from heavy rainfall or coastal storms. Flood problems are most visible in low-lying areas, where high water periodically inundates primary residences and vacation homes. Notably, significant flooding events have been recorded during hurricanes and nor'easters, which have caused extensive damage and highlighted the vulnerability of these areas (FEMA 2008).

Additionally, the Cape May County floodplain areas, such as those along the Delaware Bay and the Atlantic Ocean, are extensive and prone to frequent flooding. Smaller magnitude flooding can occur in areas like the Great Egg

Harbor River basin; the lack of elevation in many of these regions hinders drainage, causing water to back up during heavy rainfall. The wetlands and low-lying areas throughout the county also experience routine flooding due to their location within the floodplain.

Flood Mapping

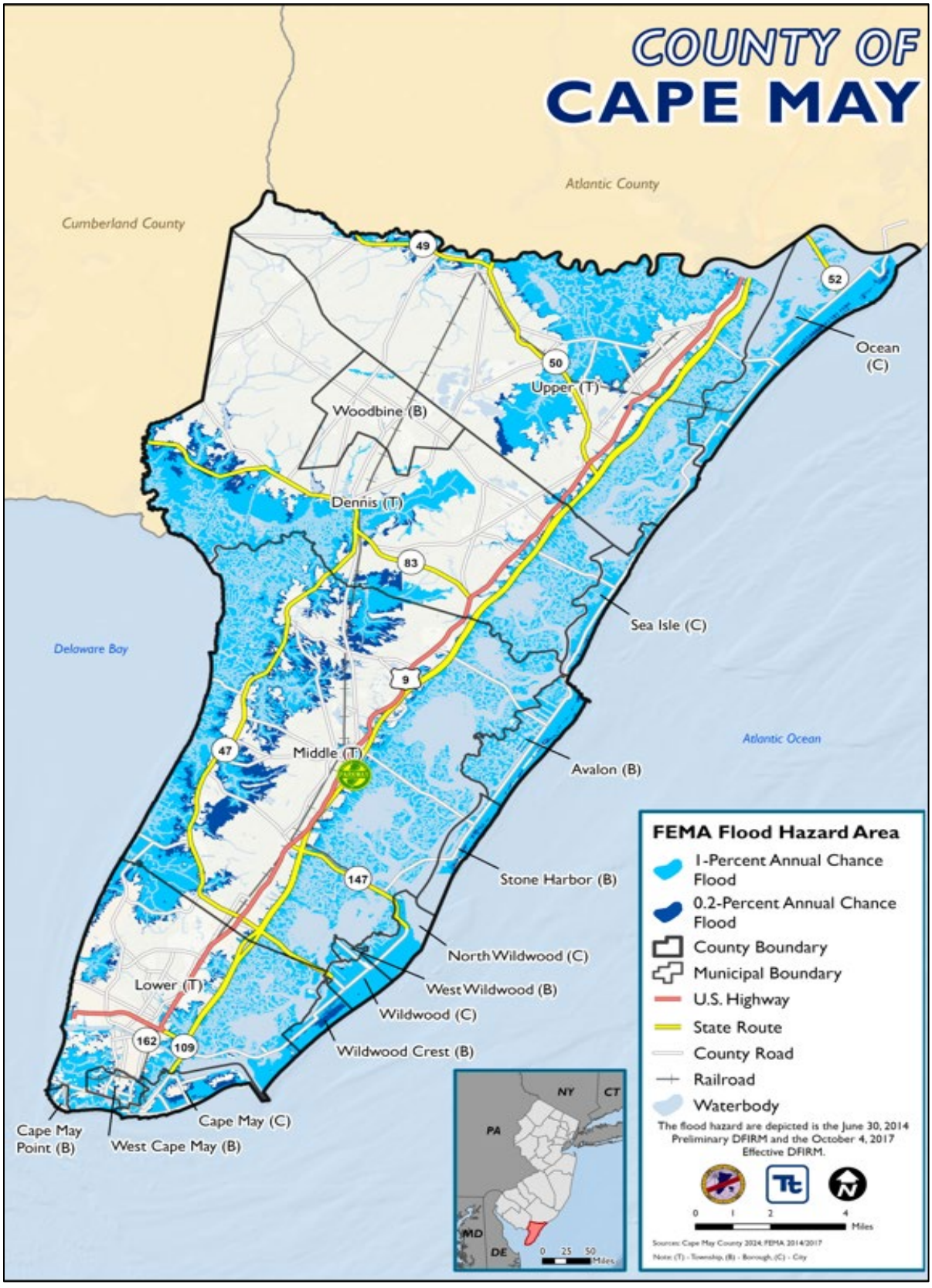
Locations of flood zones in Cape May County as depicted on the FEMA preliminary Digital Flood Insurance Rate Map (DFIRM) are illustrated in Figure 10-2 and the total land area in the floodplain, exclusive of water bodies, is summarized in Table 10-1. Refer to Volume II for a map of floodplains in each jurisdiction.

Table 10-1. Number of Acres in Cape May County Exposed to 1-Percent and 0.2-Percent Annual Chance Flood

Jurisdiction	Total Acres of Land Area	Total Acres of Land Area (Excluding Waterbodies) Located in the Flood Hazard Areas			
		Total Acres Located in the 1-Percent Flood Event	Percent of Total	Total Acres Located in the 0.2-Percent Flood Event	Percent of Total
Avalon (B)	2,573	2,444	95.0%	2,529	98.3%
Cape May (C)	1,564	951	60.8%	1,237	79.1%
Cape May Point (B)	178	140	79.1%	165	92.6%
Dennis (T)	38,202	12,241	32.0%	13,844	36.2%
Lower (T)	17,255	7,322	42.4%	8,187	47.4%
Middle (T)	43,846	22,373	51.0%	26,814	61.2%
North Wildwood (C)	1,087	1,078	99.2%	1,081	99.5%
Ocean (C)	4,536	4,321	95.3%	4,508	99.4%
Sea Isle (C)	1,395	1,347	96.6%	1,373	98.5%
Stone Harbor (B)	923	822	89.0%	907	98.3%
Upper (T)	38,957	15,570	40.0%	16,621	42.7%
West Cape May (B)	748	413	55.3%	510	68.2%
West Wildwood (B)	182	181	99.6%	182	100.0%
Wildwood (C)	978	965	98.7%	972	99.5%
Wildwood Crest (B)	853	692	81.2%	853	100.0%
Woodbine (B)	5,105	131	2.6%	131	2.6%
Cape May County	**158,380**	**70,991**	**44.8%**	**79,914**	**50.5%**

Source: Cape May County 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Figure 10-2. FEMA Flood Hazard Areas in Cape May County



Flood Gages

The USGS National Water Information System (NWIS) collects surface water data from more than 850,000 stations across the country. The time-series data describes stream levels, streamflow (discharge), reservoir and lake levels, surface water quality, and rainfall. The data is collected by automatic recorders and manual field measurements at the gage locations. USGS uses stream gages to determine the severity of flood at different points along a body of water. There is one gage located in Cape May County, in addition to others just outside of the County's boundary, that provide critical flood data for waterways affecting the County.

There is one stream gage in the County at Tuckahoe River. Table 12-2 shows the stream gage in the County and details information about the gage. The USGS website provides details about all of the gages throughout U.S. (https://waterwatch.usgs.gov/index.php) and the gage heights of flooding events. The NWS provides the different flood stages for the gages (https://water.weather.gov/ahps/).

Table 10-2. Gages in Cape May County as of April 2025

Gage Site Number	Site Name	Latest Discharge (cubic ft/sec)	Latest Flood Height (ft)
01411300	Tuckahoe River at Head of River NJ	20.5	4.07

Source: USGS 2025

Flash Flooding

Flash flooding, like riverine flooding, occurs throughout the County, primarily along the bodies of water that flow through it.

Stormwater/Urban Flooding

Stormwater/urban flooding is not mapped by the State or FEMA but is most likely to occur in highly developed areas with high percentages of impervious coverage that contribute to high rates of runoff. Locations that have undersized stormwater components or stormwater components that are prone to becoming clogged or failing often experience stormwater flooding.

Ice Jam Flooding

Ice jams are common in the northeast United States, and New Jersey is not an exception. However, according to the U.S. Army Corps of Engineers (USACE) Ice Jam Database, New Jersey ranks relatively low in the total number of ice jams compared to other states (USACE 2025).

The Ice Jam Database, maintained by the Ice Engineering Group at the USACE Cold Regions Research and Engineering Laboratory (CRREL), currently consists of over 19,000 records from across the United States. According to the USACE-CRREL. Ice jams in Cape May County, NJ, are rare but can occur in the Delaware Bay during extreme cold weather conditions. These ice jams can lead to significant disruptions and pose risks to navigation and local infrastructure.

Coastal Flooding and Erosion

The coastline along the Atlantic Ocean and Delaware Bay is the major shoreline in Cape May County, making it the primary area for notable coastal flooding. Cape May County features approximately 30 miles of shoreline, which

increases residential risk from erosion and wave action, threatens local infrastructure, compromises sensitive environmental features, and contributes to general flooding events. Moreover, the geography along the coast increases the likelihood of training thunderstorms (i.e., thunderstorms repeatedly moving across the same area), particularly along coastal fronts.

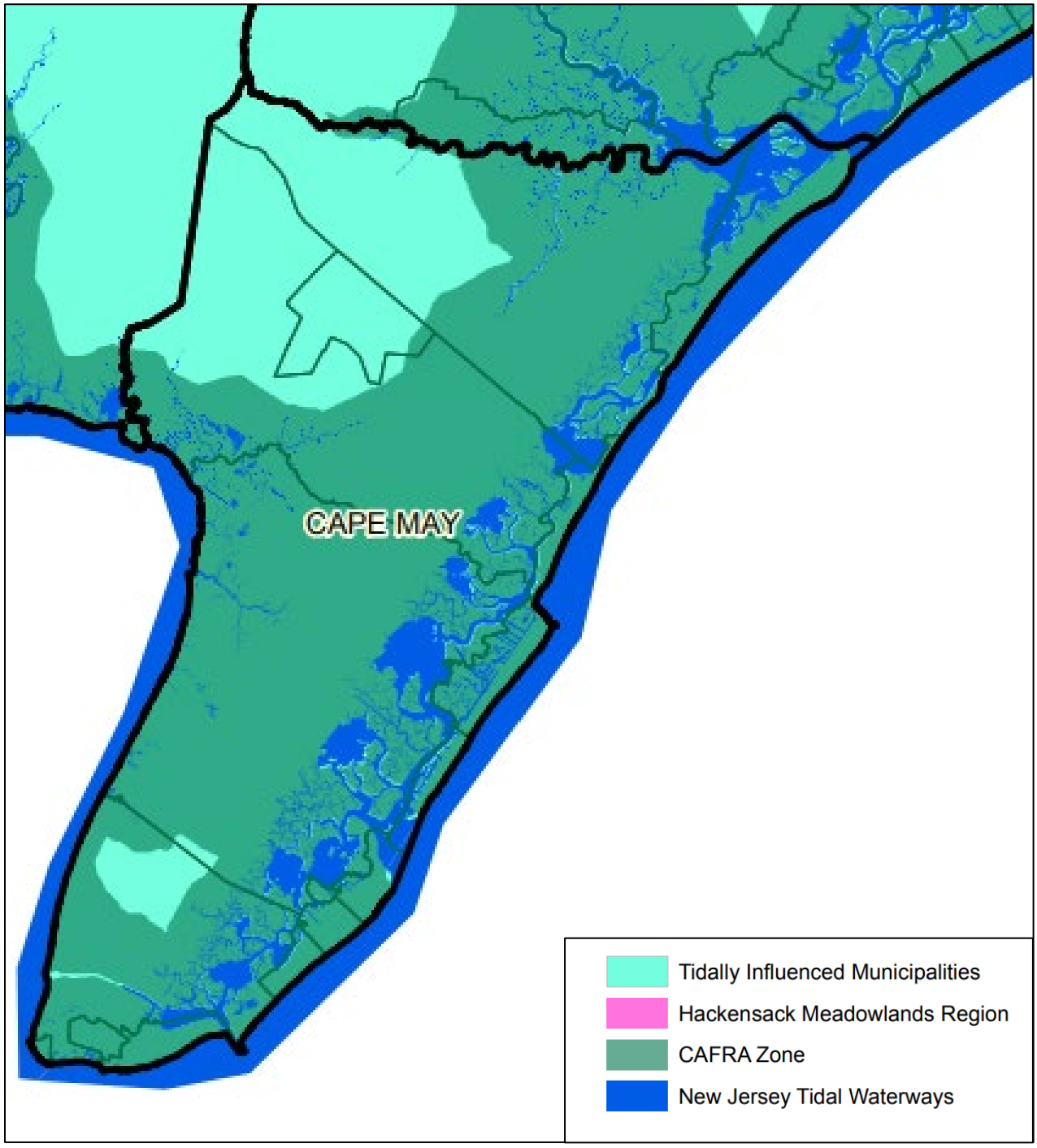
Water levels in the Atlantic Ocean and Delaware Bay have long-term, annual, and short-term variations. Long-term variations depend on precipitation and water storage over many years. Annual variations occur with the changing seasons, with an annual high in the late spring and a low in the winter. These changes can be measured in feet per month (NOAA 2020). The most damaging floods in Cape May County occur when water levels are high or during severe storms. Both scenarios create a temporary rise in water levels and wave run-ups. Although these floods may occur throughout the year, they are most probable during the spring (FEMA 2008).

The Coastal Area Facility Review Act (CAFRA) is a law that regulates development and protects coastal resources in New Jersey by requiring permits-by-rule for certain projects in the coastal zone of New Jersey. Figure 10-3 illustrates the CAFRA areas along with the tidally influenced waters located in Cape May County. Because of the consistent coastal erosion problems along the New Jersey coastline, the State Legislature passed CAFRA (New Jersey Statutes at N.J.S.A. 13:19-1 et seq.). Under this act (NJDEP 2025):

- Development within the coastal zone requires a CAFRA permit
- Regulates site preparation activities such as grading, filling, or excavation of beaches and dunes
- Evaluates the environmental impact of proposed developments to ensure protection of coastal resources
- Ensures public access to beaches and waterfronts is maintained
- Requires effective stormwater management practices to minimize runoff and protect water quality
- Protects habitats for wildlife and preserves natural coastal features
- Implements measures to control coastal erosion and safeguard infrastructure
- Addresses flood hazards and requires mitigation measures to reduce flood risks.

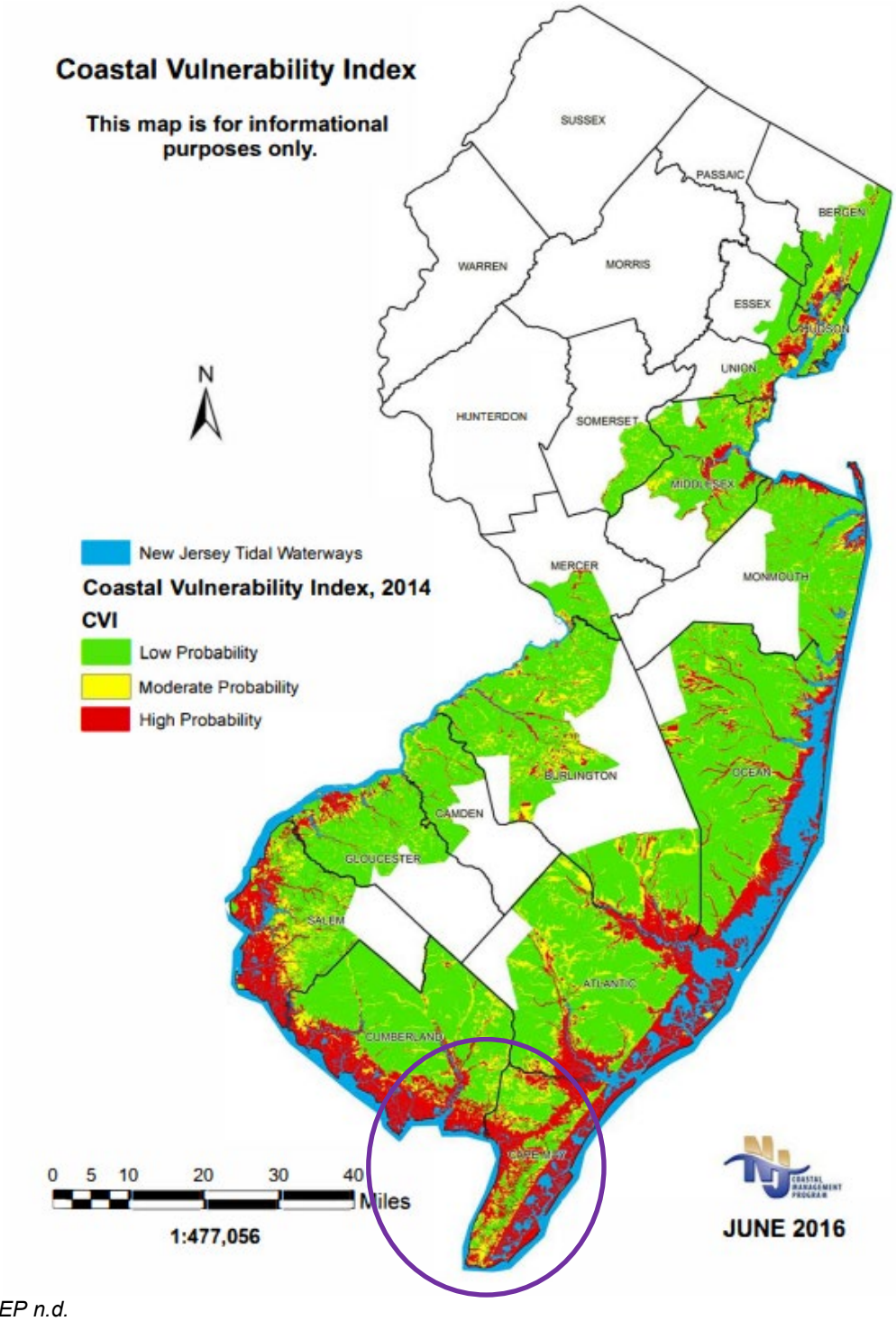
Cape May County has coastlines designated as areas at risk to coastal erosion from natural and human activities. These areas are regulated under New Jersey's Coastal Management Program (NJCMP). The NJCMP addresses coastal erosion risks and implements measures to protect and manage these vulnerable areas (NJCMP 2025). The Coastal Vulnerability Index (CVI) mapping developed by the NJCMP identifies and assesses the vulnerability of coastal communities to natural hazards, including erosion (NJDEP n.d.). Figure 10-4 illustrates the NJDEP Coastal Vulnerability Index for New Jersey. Much of Cape May County is shaded in red which indicates high probability of coastal vulnerability.

Figure 10-3. CAFRA Areas and with Tidally Influenced Waters in Cape May County



Source: NJCMP 2025

Figure 10-4. NJDEP Coastal Vulnerability Index Map of New Jersey



Source: NJDEP n.d.
Note: Purple circle indictaes the approximate locatin of Cape May County.

Additionally, the Wetlands Act of 1970 and the Flood Hazard Area Control Act provide further regulations to safeguard coastal and flood-prone areas. The Wetlands Act of 1970 (NJDEP 2016):

- Requires the creation of maps showing the boundaries of all tidal wetlands within New Jersey

- Regulates activities such as dredging, filling, removing, or altering wetlands, requiring permits for these actions
- Aims to preserve the ecological balance of wetlands and prevent their deterioration and destruction
- Protects public and private property, wildlife, and marine fisheries from adverse impacts
- Grants the commissioner authority to adopt, amend, modify, or repeal orders regulating coastal wetlands
- Defines coastal wetlands as any bank, marsh, swamp, meadow, flat, or other low land subject to tidal action

10.1.3 Extent

The severity of a flood event is typically determined by a combination of several factors depending on the type of flooding event.

Riverine Flooding

The severity of riverine flooding is determined by a combination of several factors including stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and degree of vegetative clearing and impervious surface. Generally, floods are long-term events that may last for several days. Severity depends not only on the amount of water that accumulates in a period, but also on the land's ability to manage this water. One element is the size of rivers and streams in an area; but an equally important factor is the land's absorbency. When it rains, the soil acts as a sponge. When the land is saturated or frozen, infiltration into the ground slows and any more water that accumulates must flow as runoff (Harris 2008).

The frequency and severity of riverine flooding are measured using a discharge probability, which is the probability that a certain river discharge (flow) level will be equaled or exceeded in a given year. Flood studies use historical records to determine the probability of occurrence for the different discharge levels.

In the case of riverine or flash flooding, once a river reaches flood stage, the flood extent or severity categories used by the NWS include minor flooding, moderate flooding, and major flooding. Each category has a definition based on property damage and public threat (NWS 2011):

- ***Minor Flooding*** – minimal or no property damage, but possibly some public threat or inconvenience.
- ***Moderate Flooding*** – some inundation of structures and roads near streams. Some evacuations of people and/or transfer of property to higher elevations are necessary.
- ***Major Flooding*** – extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations.

Flash Flooding

The extent of a flash flood is consistent with that of a riverine flood as described above.

Stormwater/ Urban Flooding

Locations that have undersized stormwater components or stormwater components that are prone to becoming clogged or failing often experience stormwater flooding. Currently, there is no measurement used to further define the frequency and severity of urban stormwater flooding.

Ice Jam Flooding

Ice jam flooding events often occur suddenly and are difficult to predict, allowing for little time to prepare for and warn of an event. Many factors will control the extent of an ice jam including the size of the snowpack, the rate of snowmelt, the size and flow of the river, and how quickly the jam releases (Rokaya 2018).

Coastal Flooding and Erosion

The extent of coastal flooding due to storms is determined by three factors: 1) the nature of the storm with respect to intensity, duration, and path; 2) astronomical tide conditions at the time the seiche or storm surge wave reaches the shore; and 3) the physical geometry and bathymetry of a particular area, which affects the time and passage of the seiche or surge wave.

Erosion is typically expressed as a rate: rate of linear retreat (feet of shoreline recession per year) or volumetric loss (cubic yards of eroded sediment per linear foot of shoreline frontage per year). Erosion rates are cited as positive numbers, with corresponding shoreline change rates as negative numbers. For example, an erosion rate of two feet per year is equivalent to a shoreline change rate of “-2 feet per year”. Accretion rates are stated as positive numbers, with corresponding shoreline change rates as positive numbers. For example, an accretion rate of two feet per year is equivalent to a shoreline change rate of “2 feet per year”.

Erosion rates are usually computed and cited as long-term, average annual rates. However, erosion rates are not uniform in time or space and can vary substantially, including from one location along the shoreline to another (even when the two locations are only a short distance apart), over time at a single location, or seasonally.

10.1.4 Previous Occurrences

FEMA Major Disaster and Emergency Declarations

Between 1954 and 2025, Cape May County was included in seven major disaster (DR) or emergency (EM) declarations for flood-related events (FEMA 2025). Table 10-3 lists these declarations.

Table 10-3. FEMA Declarations for Flood Events in Cape May County (1954 to 2025)

FEMA Declaration Number	Date(s) of Event	Date of Declaration	Event Type
DR-310-NJ	September 4, 1971	September 4, 1971	Heavy Rains and Flooding
DR-519-NJ	August 21, 1976	August 21, 1976	Severe Storms, High Winds and Flooding
DR-701-NJ	March 28 – April 8, 1984	April 12, 1984	Coastal Storms and Flooding
DR-973-NJ	December 10-17, 1992	December 18, 1992	Coastal Storm, High Tides, Heavy Rain, and Flooding
DR-1206-NJ	February 4-8, 1998	March 3, 1998	Severe Winter Coastal Storm, High Winds, and Flooding
DR-1867-NJ	November 11-15, 2009	December 22, 2009	Severe Storms and Flooding associated with Tropical Depression Ida and a Nor’easter
DR-1897-NJ	March 12 – April 15, 2010	April 2, 2010	Severe Storms and Flooding

Sources: FEMA 2025

USDA Declarations

The Secretary of Agriculture from the U.S. Department of Agriculture (USDA) is authorized to designate counties as disaster areas to make emergency loans to producers suffering losses in those counties and in contiguous counties. August 2019 and March 2025, Cape May County was not included in any USDA flood-related agricultural disaster declarations (USDA 2025).

Previous Events

Known hazard events that impacted Cape May County between August 2019 and March 2025 are discussed in Table 10-4. For events prior to 2019, refer to the 2019 Cape May County HMP.

Table 10-4. Flood Events in Cape May County (2019 to 2025)

Event Date	Declaration or Proclamation Number	Cape May County included in declaration?	Location Impacted	Description
October 10-11, 2019	N/A	N/A	County	Several consecutive high tide cycles caused coastal flooding in the County. The tidal gauge at Ocean City reached up to 6.5 ft MLLW, Sea Isle City reached 7.1 ft MLLW, Stone Harbor reached 7.2 ft MLLW, Cape May Harbor reached 7.4 ft MLLW, Cape May Ferry Terminal reached 7.9 ft MLLW.
July 1, 2020	N/A	N/A	Regional, State, and County	Heavy rain caused flooding of several roadways including Evergreen Drive in Seaville. The Emergency Manager stated that this road is rarely ever flooded. Up to 3 inches of rainfall was recorded.
July 6, 2020	N/A	N/A	State and County	Thunderstorms throughout the state caused flash flooding within the County. Several vehicles were trapped in flood waters in Ocean City on intersection of West Avenue and Third Street and on Asbury Avenue.
July 10, 2020	N/A	N/A	Regional, State, and County	Tropical Storm Fay caused flash flooding throughout the County. NJ Route 47 was closed due to flash flooding near the George Redding Bridge in Wildwood and also near US Route 9 in Middle Township. Widespread flash flooding also occurred in Stone Harbor causing many streets to be impassable. Flash floods were also seen throughout Avalon causing streets to be impassable there as well. Several vehicles were stranded in flood waters. Sea Isle City also had flash flood concerns on all roadways.
August 7, 2020	N/A	N/A	State and County	Severe thunderstorms caused flash flooding in the County. NJ Route 147 was closed at Maryland Avenue in North Wildwood due to flash flooding.

Event Date	Declaration or Proclamation Number	Cape May County included in declaration?	Location Impacted	Description
October 30, 2020	N/A	N/A	County	Widespread coastal flooding occurred at high tide in the County. Roads were flooded during high tide. This resulted in road closures. The tide gauge at Ocean City reached 6.3 ft MLLW, Avalon reached 6.9 ft MLLW, Stone Harbor reached 7 ft MLLW, Cape May Harbor reached 7.2 ft MLLW, and Cape May Ferry Terminal reached 7.8 ft MLLW.
February 1, 2021	N/A	N/A	State and County	A brisk onshore flow resulted in two consecutive high tide cycled which resulted in coastal flooding along the entire state of New Jersey coastline. Tidal communities within the County experienced coastal flooding resulting in road closures. Ocean City tide gauge reached 6.7 ft MLLW, Sea Isle City reached 7.4 ft MLLW, Avalon reached 7.3 ft MLLW, and Stone Harbor reached 7.4 ft MLLW.
August 29, 2021	N/A	N/A	County	Thunderstorms caused localized flooding throughout the County. Ocean City experienced multiple road closures due to flash flooding. Some vehicles were trapped in flood waters.
January 3, 2021	N/A	N/A	County	Onshore flow caused moderate flooding along the tidal areas of Cape May County. Roads were closed as a result. The tide gauge at Sea Isle City reached 6.7 ft MLLW, Stone Harbor reached 7.1 ft MLLW, Cape May Harbor reached 7.5 ft MLLW, and Cape May Ferry Terminal reached 8 ft MLLW.
April 18, 2022	N/A	N/A	County	Onshore flow caused coastal flooding throughout the State. Widespread roadway flooding caused by coastal flooding was seen throughout the County. The tide gauge at Sea Isle City reached 7.4 ft MLLW, Avalon reached 7.7 ft MLLW, Stone Harbor reached 7.6 ft MLLW, Cape May Harbor reached 7.5 ft MLLW, and Cape May Ferry terminal reached 8.1 ft MLLW.
October 2-3, 2022	N/A	N/A	State and County	A low maintained onshore flow along the state caused coastal flooding throughout. Widespread roadway flooding was seen throughout the coastal communities in Cape May County. The Tide gauge at Ocean City reached 6.4 ft MLLW, Sea Isle reached 7.2 ft MLLW, Avalon reached 7.5 ft MLLW, and Stone Harbor reached 7.4 ft MLLW.
December 23, 2022	N/A	N/A	State and County	Moderate to major tidal flooding in New Jersey caused coastal flooding throughout. Widespread roadway flooding was seen throughout the coastal communities in Cape May County. Flood waters affected vulnerable

Event Date	Declaration or Proclamation Number	Cape May County included in declaration?	Location Impacted	Description
				buildings. The tide gauges at Ocean City reached 6.6 ft MLLW, Sea Isle City reached 7 ft MLLW, Avalon reached 7.3 ft MLLW, Stone Harbor reached 7.2 ft MLLW, Cape May Harbor reached 7.2 ft MLLW, and the Cape May Ferry Terminal reached 7.8 ft MLLW.
June 3, 2023	N/A	N/A	State and County	Steady onshore winds and moderate tidal flooding occurred throughout the southern portion of the State. Widespread roadway flooding was seen throughout the coastal communities in the County. The tide gauge at Ocean City reached 6.4 ft MLLW, Sea Isle City reached 7 ft MLLW, Stone Harbor reached 7.3 ft MLLW, Cape May Harbor reached 7.3 ft MLLW, and Cape May Ferry Terminal reached 8 ft MLLW.
September 23-26, 2023	N/A	N/A	Regional, State, and County	Tropical Storm Ophelia caused coastal flooding and flooding throughout the region. Widespread flooding was seen to roads in coastal communities in Cape May County. There were several road closures due to coastal flooding. Many homes and buildings were surrounded by flood waters. Some minor property damage was recorded. The tide gauge at Ocean city reached 6.4 ft MLLW, Sea Isle City reached 7 ft MLLW, Avalon reached 7 ft MLLW, and Stone Harbor reached 7.3 ft MLLW.
January 13, 2024	N/A	N/A	State and County	Strong southeast winds resulted in widespread tidal flooding. Widespread roadway flooding was seen across the coastal communities of Cape May County. The flood waters affected vulnerable buildings. The tide gauges at Ocean City reached 6.4 ft MLLW, Sea Isle City reached 6.8 ft MLLW, Avalone reached 7.2 ft MLLW, Stone Harbor reached 7.2 ft MLLW, Cape May Harbor reached 7.3 ft MLLW, and Cape May Ferry Terminal reached 7.9 ft MLLW.
February 13, 2024	N/A	N/A	State and County	A strong coastal system caused surge values up to 3 ft above the astronomical tides which resulted in widespread coastal flooding. Roadway flooding occurred throughout the coastal communities of the County. Flood waters affected vulnerable buildings. The tide gauge at Sea Isle City reached 6.7 ft MLLW, Avalon reached 7 ft MLLW, Stone Harbor reached 7.1 ft MLLW, and Cape May Ferry Terminal reached 7.7 ft MLLW.
September 20, 2024	N/A	N/A	State and County	Prolonged period of onshore flow due to an offshore coastal storm and a full moon resulted

Event Date	Declaration or Proclamation Number	Cape May County included in declaration?	Location Impacted	Description
				in high tides and coastal flooding in New Jersey. Roadway flooding was seen throughout the coastal communities in the County. The flood waters affected vulnerable buildings. The tide gauge at Cape May Harbor reached 7.2 ft MLLW, and Cape May Ferry Terminal reached 7.8 ft MLLW.
November 15, 2024	N/A	N/A	State and County	High astronomical tides associated with the full moon and a light onshore flow resulted in moderate tidal flooding along the state coast. Roadway flooding was seen throughout the coastal communities of Cape May County. The flood waters affected vulnerable buildings. The tide gauge at Cape May Harbor reached 7.3 ft MLLW, and Cape May Ferry Terminal reached 7.9 ft MLLW.

Sources:NOAA NCEI 2024; FEMA 2025

10.1.5 Probability of Future Occurrences

Information on previous flood occurrences in the County was used to calculate the probability of future occurrence of such events, as summarized in Table 10-5. The probability of occurrence, or likelihood of the event, is one parameter used for hazard rankings. In Chapter 20, the identified hazards of concern for Genesee County were ranked. The probability of occurrence, or likelihood of the event, is one parameter used for hazard rankings. Based on historical records and input from the Steering Committee, the probability of occurrence for flood in the County is considered "*frequent*".

Table 10-5. Probability of Future Flood Events in Cape May County

Hazard Type	Number of Occurrences Between 1950 and 2025	Percent Chance of Occurring in Any Given Year
Coastal Flood	86	100.00%
Flash Flood	16	21.33%
Flood	31	41.33%
Total	**133**	**100.00%**

Sources: NOAA NCEI 2024

Notes: Due to limitations in data, not all drought events occurring between 1950 and 2025 are accounted for in the tally of occurrences. As a result, the number of hazard occurrences is calculated using the number of occurrences between 1950 and 2025.

100% probability indicates that it is statistically likely for an event to occur every year. It does not indicate that the occurrence of an event is a certainty in any given year.

Climate Change Projections

Projections of climate change for New Jersey predict more intense rainfall events and increases in total annual precipitation. This could result in an increased probability of flood events. In New Jersey, extreme storms typically

include coastal nor'easters, snowstorms, spring and summer thunderstorms, tropical storms, and on rare occasions hurricanes. Most of these events occur in the warmer months between April and October, with nor'easters occurring between September and April.

10.1.6 Cascading Impacts on Other Hazards

Erosion and Landslides

Riverine flooding often results in bank erosion. This is especially true in the upper courses of rivers with steep gradients, where floodwaters may pass quickly, scouring the banks and edging properties closer to the floodplain or causing them to fall in. Flooding is also responsible for hazards such as landslides when high flows over-saturate soils on steep slopes, causing them to fail.

Public Health

Floodwaters also can be contaminated by pollutants such as sewage, human and animal feces, pesticides, fertilizers, oil, asbestos, and rusting building materials. Common public health risks associated with flood events include the following (FEMA 2022):

- Unsafe food
- Contaminated drinking and washing water and poor sanitation
- Mosquitos and animals
- Carbon monoxide poisoning
- Secondary hazards associated with re-entering and cleaning flooded structures
- Mental stress and fatigue

After flood events, excess moisture and standing water contribute to the growth of mold in buildings. Mold may present a health risk to building occupants, especially infants, children, older people, pregnant women, and those with already compromised immune systems. Mold spores can grow in as little as 24 hours in wet and damaged areas of buildings that have not been properly cleaned. Very small mold spores can be inhaled, creating the potential for allergic reactions and respiratory problems (CDC 2020).

The best mitigation for these impacts is to be aware that they can occur, educate the public on prevention, and be prepared to deal with them in flood disaster response.

Utility Disruption

Floodwater picks up debris, bacteria, sewage, and other industrial waste and chemicals and can contaminate private drinking water sources, such as wells and springs. Excess water also makes it more difficult for water treatment plants to treat water adequately. Contamination in the water supply puts consumers at risk of exposure to toxins that could result in serious harm. In extreme cases, death may occur (Andrew 2021).

Consumers without access to clean water are unable to cook or clean in their homes. Depending on the severity of the flood and the storm, this could last for days, weeks, or months. Cconsumers ultimately become reliant on bottled water, which is especially detrimental in impoverished communities where residents may not have the economic means to purchase bottled water. Moreover, in a flood, retail locations are often inaccessible or low on water supply (Andrew 2021).

Flooded buildings may have their power disrupted if the service panel, generator, meter, etc. are not elevated above the flood level. Oversaturated soils from periods of heavy rain and flooding may cause utility poles to tip over or fall completely, interrupting the power grid for a potentially large area, especially if a transformer is impacted.

Dam Failure

Flooding can result in large quantities of rain upstream of a dam that raise water levels behind the dam, potentially leading to overtopping of the dam or flooding of properties upstream of the dam. Should the flooding result in a dam failure, the water behind the dam, including flood waters, may inundate jurisdictions downstream of the dam.

10.2 VULNERABILITY AND IMPACT ASSESSMENT

The 1-percent and 0.2-percent chance flood events were examined to evaluate Cape May County's risk and vulnerability to the coastal and riverine flood hazard. These flood events are generally those considered by planners and evaluated under federal programs such as the NFIP.

The effective Cape May County FEMA Digital Flood Insurance Rate Map (DFIRM) published in 2017 and the preliminary DFIRM published in 2014 was used to evaluate exposure and determine potential future losses. A depth grid for the 1-percent annual chance flood event was generated using the effective and preliminary DFIRMs and the 2014 post Sandy 1-meter resolution Digital Elevation Model (DEM). To estimate exposure to the 1-percent and 0.2-percent annual chance flood events, the DFIRM flood boundaries were overlaid on centroids of updated assets (population, building stock, and critical facilities). Centroids that intersected the flood boundaries were totaled to estimate the building replacement cost value and population vulnerable to the flood inundation areas. A Level 2 Hazus coastal and riverine flood analysis was performed.

The best available data was used to assess Cape May County's vulnerability to coastal erosion. To help understand the geographic distribution of coastal risk, the Limit of Moderate Wave Action (LiMWA) boundary was referenced from FEMA's 2014 Preliminary DFIRM and 2017 Effective DFIRM flood data.

Projected sea level rise 2022 data (in one-foot increments) available from the NOAA Office of Coastal Management (https://coast.noaa.gov/slrdata/) was used to understand the assets at risk of future sea level rise per each jurisdiction. Please note these sea level rise projections do not include additional storm surge due to a hurricane or Nor'easter.

10.2.1 Life, Health, and Safety

Overall Population

The impact of flooding on life, health, and safety is influenced by several factors, including the severity of the event and the adequacy of warning time provided to residents. Hazard exposure encompasses the population living in or near floodplain areas that could be affected by a flood event. It is important to consider not only those residing within a defined hazard zone but also all individuals who may be impacted by the event (e.g., people at risk while traveling in flooded areas or those whose access to emergency services is compromised).

Floodwaters can cause injuries, displace individuals, or necessitate the need for shelter. Additionally, continued residence in a flooded home may expose occupants to mold and other health hazards. The degree of impact varies and is not strictly measurable.

The total number of injuries and casualties resulting from flooding is generally limited based on advance weather forecasting, blockades, and warnings. Therefore, injuries and deaths generally are not anticipated if proper warning and precautions are in place. Ongoing mitigation efforts should help to avoid the most likely cause of injury, which results from persons trying to cross flooded roadways or channels during a flood.

To estimate population exposure to the 1-percent- and 0.2-percent annual chance flood events, the DFIRM flood boundaries were used. Based on the spatial analysis, there are an estimated 36,026 residents living in the Special Flood Hazard Area (SFHA, or 1-percent annual chance floodplain), or 37.8-percent of the County's total population. There are an estimated 43,345 residents living in the 0.2-percent annual chance floodplain, or 45.5-percent of the County's total population. Ocean City has the greatest number of residents living in the 1-percent annual chance flood hazard area with approximately 10,144 residents. Ocean City also has the highest number of residents living in the 0.2-percent annual chance flood area, approximately 11,226 people. Table 10-6 summarizes the population exposed to the flood hazard by jurisdiction.

Coastal erosion is not generally considered an imminent threat to public safety when the changes are gradual over many years. However, drastic changes to the shoreline may occur as a result of a single storm event which can threaten homes and public safety. The population exposed, or located in the estimated hazard area, is also considered vulnerable to this hazard. The analysis indicates that 1,403 people are located in the estimated coastal erosion hazard area. Please note this table (Table 10-7) does not account for an increase in seasonal population along the County's coastal shores.

Based on the spatial analysis, there are an estimated 737 residents living in the Sea Level Rise +1 Foot Hazard Area, or 0.8-percent of the County's total population; 3,126 residents living in the Sea Level Rise +2 Foot Hazard Area (3.3-percent); 10,283 residents living in the Sea Level Rise +3 Foot Hazard Area (10.8-percent); and 18,574 residents living in the Sea Level Rise +4 Foot Hazard Area (19.5-percent). Table 10-8 summarizes the population exposed to the Sea Level Rise Hazard Areas by jurisdiction.

Table 10-6. Cape May County Population Exposed to the 1-Percent and 0.2-Percent Flood Hazard Area

Jurisdiction	Total Population	Population Exposed to the 1-Percent Annual Chance Flood Event Hazard Area		Population Exposed to the 0.2-Percent Annual Chance Flood Event Hazard Area	
		Number of People	Percent Total	Number of People	Percent Total
Avalon (B)	1,243	1,111	89.4%	1,229	98.9%
Cape May (C)	2,768	1,533	55.4%	2,009	72.6%
Cape May Point (B)	305	225	73.8%	280	91.8%
Dennis (T)	6,285	66	1.1%	224	3.6%
Lower (T)	22,057	3,508	15.9%	5,518	25.0%
Middle (T)	20,380	3,338	16.4%	5,238	25.7%
North Wildwood (C)	3,621	3,613	99.8%	3,615	99.8%
Ocean (C)	11,229	10,144	90.3%	11,226	100.0%
Sea Isle (C)	2,104	1,986	94.4%	2,093	99.5%
Stone Harbor (B)	796	619	77.8%	770	96.7%
Upper (T)	12,539	1,466	11.7%	1,741	13.9%
West Cape May (B)	1,010	377	37.3%	606	60.0%
West Wildwood (B)	540	540	100.0%	540	100.0%
Wildwood (C)	5,157	5,156	100.0%	5,156	100.0%
Wildwood Crest (B)	3,101	2,344	75.6%	3,100	100.0%
Woodbine (B)	2,128	0	0.0%	0	0.0%
Cape May County	**95,263**	**36,026**	**37.8%**	**43,345**	**45.5%**

Source: U.S. Census Bureau 2020; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-7. Cape May County Population Exposed to the Coastal Erosion Hazard

Jurisdiction	Total Population	Population Exposed to the Coastal Erosion Hazard	
		Number of People	Percent Total
Avalon (B)	1,243	10	0.8%
Cape May (C)	2,768	40	1.4%
Cape May Point (B)	305	0	0.0%
Dennis (T)	6,285	14	0.2%
Lower (T)	22,057	199	0.9%
Middle (T)	20,380	507	2.5%
North Wildwood (C)	3,621	8	0.2%
Ocean (C)	11,229	255	2.3%
Sea Isle (C)	2,104	14	0.7%
Stone Harbor (B)	796	52	6.5%
Upper (T)	12,539	141	1.1%
West Cape May (B)	1,010	0	0.0%
West Wildwood (B)	540	99	18.3%
Wildwood (C)	5,157	26	0.5%
Wildwood Crest (B)	3,101	38	1.2%
Woodbine (B)	2,128	0	0.0%
Cape May County	**95,263**	1,403	1.5%

Source: U.S. Census Bureau 2020; FEMA Preliminary/Effective DFIRMs, LiMWA Lines 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-8. Population in the Sea Level Rise Hazard Areas

Jurisdiction	Total Population (U.S. Census Bureau 2020 Decennial)	Sea Level Rise +1 Foot Hazard Area		Sea Level Rise +2 Foot Hazard Area		Sea Level Rise +3 Foot Hazard Area		Sea Level Rise +4 Foot Hazard Area	
		Number of Persons	% of Jurisdiction Total	Number of Persons	% of Jurisdiction Total	Number of Persons	% of Jurisdiction Total	Number of Persons	% of Jurisdiction Total
Avalon (B)	1,243	1	0.1%	11	0.9%	154	12.4%	418	33.6%
Cape May (C)	2,768	16	0.6%	34	1.2%	233	8.4%	733	26.5%
Cape May Point (B)	305	0	0.0%	64	21.0%	64	21.0%	110	36.1%
Dennis (T)	6,285	2	<0.1%	5	0.1%	22	0.4%	40	0.6%
Lower (T)	22,057	83	0.4%	160	0.7%	666	3.0%	1,405	6.4%
Middle (T)	20,380	271	1.3%	676	3.3%	1,406	6.9%	2,224	10.9%
North Wildwood (C)	3,621	18	0.5%	321	8.9%	1,379	38.1%	2,167	59.8%
Ocean (C)	11,229	31	0.3%	766	6.8%	2,910	25.9%	5,429	48.3%
Sea Isle (C)	2,104	4	0.2%	55	2.6%	477	22.7%	1,192	56.7%
Stone Harbor (B)	796	0	0.0%	18	2.3%	134	16.8%	285	35.8%
Upper (T)	12,539	15	0.1%	89	0.7%	241	1.9%	559	4.5%
West Cape May (B)	1,010	0	0.0%	8	0.8%	132	13.1%	254	25.1%
West Wildwood (B)	540	240	44.4%	473	87.6%	522	96.7%	535	99.1%
Wildwood (C)	5,157	55	1.1%	425	8.2%	1,799	34.9%	2,737	53.1%
Wildwood Crest (B)	3,101	1	<0.1%	21	0.7%	144	4.6%	486	15.7%
Woodbine (B)	2,128	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May County	**95,263**	**737**	**0.8%**	**3,126**	**3.3%**	**10,283**	**10.8%**	**18,574**	**19.5%**

Source: U.S. Census Bureau 2020; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

The Hazus riverine model estimates the potential sheltering needs as a result of a 1 percent annual chance flood event. The demographic data in Hazus has not been updated and the estimated sheltering needs are based on 2020 U.S. Census data. Hazus estimates 34,138 persons may be displaced and 1,315 people may seek short-term shelter within the 1 Percent Annual Chance Flood; 1,948 persons may be displaced and 123 people may seek short-term shelter within the 1 Percent Annual Chance Flood (Riverine); and 30,311 persons may be displaced and 1,193 people may seek short-term shelter within the 1 Percent Annual Chance Flood (Coastal). These statistics, by jurisdiction, are presented in Table 10-9. The estimated displaced population and number of persons seeking short-term shelter differs from the number of persons exposed to the 1 percent annual chance flood, because the displaced population numbers take into consideration that not all residents will be impacted enough to be displaced or to require short-term shelter during a flood event.

Table 10-9. Population Displaced or Needing Short-Term Shelter from the 1 Percent Annual Chance Flood Events

	Total Population (2020 Decennial)	1 Percent Annual Chance Flood		1-Percent Annual Chance Flood (Riverine)		1-Percent Annual Chance Flood (Coastal)	
		Displaced Population	Persons Seeking Short-Term Shelter	Displaced Population	Persons Seeking Short-Term Shelter	Displaced Population	Persons Seeking Short-Term Shelter
Avalon (B)	1,243	1,175	3	0	0	1,088	3
Cape May (C)	2,768	1,159	55	1,158	54	3	0
Cape May Point (B)	305	232	0	229	0	1	0
Dennis (T)	6,285	181	21	38	8	128	14
Lower (T)	22,057	2,798	200	27	13	2,565	185
Middle (T)	20,380	2,407	251	106	35	2,238	234
North Wildwood (C)	3,621	3,487	83	0	0	3,490	83
Ocean (C)	11,229	10,635	143	1	0	9,592	133
Sea Isle (C)	2,104	2,051	13	0	0	2,012	13
Stone Harbor (B)	796	711	0	0	0	631	0
Upper (T)	12,539	712	111	15	5	658	103
West Cape May (B)	1,010	372	5	371	5	0	0
West Wildwood (B)	540	538	3	0	0	538	3
Wildwood (C)	5,157	5,041	370	0	0	5,003	370
Wildwood Crest (B)	3,101	2,636	54	0	0	2,364	52
Woodbine (B)	2,128	3	3	3	3	0	0
Cape May County	**95,263**	**34,138**	**1,315**	1,948	123	30,311	1,193

Source: Hazus v6.1; Census Bureau 2020; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Socially Vulnerable Population

Economically disadvantaged populations are more vulnerable because they are likely to lack financial resources to evacuate. The population over the age of 65 is more vulnerable because they are more likely to need medical attention, which may not be available due to isolation during a flood event, and they may have more difficulty evacuating. Special consideration should be taken when planning for disaster preparation, response, and recovery for these vulnerable groups.

Table 10-10 and Table 10-11 present the estimated socially vulnerable populations living in the 1- and 0.2-percent annual chance flood hazard areas. There are 11,828 persons over the age of 65 years, 995 persons under the age of 5 years, 571 non-English speakers, 5,588 persons with a disability, and 3,485 living in poverty located in the 1-percent annual chance flood hazard area. There are 14,027 persons over the age of 65 years, 1,285 persons under the age of 5 years, 653 non-English speakers, 6,652 persons with a disability, and 4,128 living in poverty located in the 0.2-percent annual chance flood hazard area.

Table 10-12 presents the estimated socially vulnerable populations living in the Coastal Erosion Hazard Area. There are 402 persons over the age of 65 years, 55 persons under the age of 5 years, 14 non-English speakers, 195 persons with a disability, and 109 living in poverty within this hazard area.

Table 10-16 highlights the distribution of socially vulnerable populations residing within the Sea Level Rise +4 Foot Hazard Area. The City of Ocean City has the highest number of persons over the age of 65 (1,847), persons with a disability (714), and persons living in poverty (552), within the SLOSH Category 4 hazard area. The Township of Middle has the highest number of persons under the age of 5 years (104) and non-English speaking persons (54) within the SLOSH Category 4 hazard area. For Sea Level Rise +1-, +2-, and +3-Foot Hazard Areas, refer to Table 10-13, Table 10-14, and Table 10-15, respectively.

The New Jersey 2024 Hazard Mitigation Plan suggests that changes in sea level rise will be a key indicator to understanding the impacts climate change is having on the State (NJOEM 2024). Based on the projections provided in the state hazard mitigation plan, climate change may exacerbate the effects of sea level rise in the State. Persons that are living in the projected inundation areas caused by future sea level rise may experience greater risk due to the fluctuations in climate and areas bordering inundation areas may be at higher risk to flooding events.

Table 10-10. Total Number of Vulnerable Persons Located in the 1-Percent Annual Chance Flood Hazard Area

Jurisdiction	Persons Over 65	Percent of Total	Persons Under 5	Percent of Total	Non-English Speaking Persons	Percent of Total	Persons with a Disability	Percent of Total	Persons in Poverty	Percent of Total
Avalon (B)	683	89.4%	18	85.7%	0	0.0%	143	89.4%	63	88.7%
Cape May (C)	428	55.3%	77	55.4%	23	53.2%	92	55.1%	77	55.4%
Cape May Point (B)	87	73.7%	0	0.0%	0	0.0%	31	72.1%	19	73.1%
Dennis (T)	13	1.0%	5	1.0%	0	0.0%	6	1.0%	3	0.9%
Lower (T)	877	15.9%	176	15.8%	34	15.6%	577	15.9%	376	15.9%
Middle (T)	791	16.4%	156	16.3%	81	16.3%	486	16.4%	292	16.4%
North Wildwood (C)	1,689	99.8%	0	0.0%	0	0.0%	700	99.7%	266	99.6%
Ocean (C)	3,451	90.3%	186	90.3%	37	90.2%	1,334	90.3%	1,031	90.3%
Sea Isle (C)	970	94.4%	5	83.3%	12	92.6%	248	94.3%	106	93.8%
Stone Harbor (B)	354	77.8%	14	73.7%	0	0.0%	64	77.1%	44	77.2%
Upper (T)	354	11.7%	82	11.6%	7	10.8%	137	11.6%	25	11.3%
West Cape May (B)	137	37.3%	15	35.7%	4	37.0%	47	37.3%	10	37.0%
West Wildwood (B)	179	100.0%	34	97.1%	0	0.0%	106	99.1%	17	94.4%
Wildwood (C)	798	99.9%	185	100.0%	373	99.8%	1,109	99.9%	902	99.9%
Wildwood Crest (B)	1,017	75.6%	42	75.0%	0	0.0%	508	75.5%	254	75.6%
Woodbine (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May County	**11,828**	**44.6%**	**995**	**24.2%**	**571**	**40.5%**	**5,588**	**39.8%**	**3,485**	**41.3%**

Source: U.S. Census Bureau, American Community Survey 2018-2022; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-11. Total Number of Vulnerable Persons Located in the 0.2-Percent Annual Chance Flood Hazard Area

Jurisdiction	Persons Over 65	Percent of Total	Persons Under 5	Percent of Total	Non-English Speaking Persons	Percent of Total	Persons with a Disability	Percent of Total	Persons in Poverty	Percent of Total
Avalon (B)	755	98.8%	20	95.2%	0	0.0%	158	98.8%	70	98.6%
Cape May (C)	561	72.5%	100	71.9%	31	71.8%	121	72.5%	100	71.9%
Cape May Point (B)	108	91.5%	0	0.0%	0	0.0%	39	90.7%	23	88.5%
Dennis (T)	46	3.5%	17	3.5%	1	2.9%	21	3.5%	11	3.4%
Lower (T)	1,380	25.0%	277	24.9%	54	24.8%	908	25.0%	592	25.0%
Middle (T)	1,242	25.7%	245	25.6%	127	25.6%	763	25.7%	458	25.7%
North Wildwood (C)	1,690	99.8%	0	0.0%	0	0.0%	700	99.7%	266	99.6%
Ocean (C)	3,820	100.0%	205	99.5%	40	97.5%	1,476	99.9%	1,141	99.9%
Sea Isle (C)	1,022	99.4%	5	83.3%	12	92.6%	261	99.2%	112	99.1%
Stone Harbor (B)	440	96.7%	18	94.7%	0	0.0%	80	96.4%	55	96.5%
Upper (T)	421	13.9%	98	13.8%	9	13.9%	163	13.8%	30	13.6%
West Cape May (B)	220	59.9%	25	59.5%	6	55.6%	75	59.5%	16	59.3%
West Wildwood (B)	179	100.0%	34	97.1%	0	0.0%	106	99.1%	17	94.4%
Wildwood (C)	798	99.9%	185	100.0%	373	99.8%	1,109	99.9%	902	99.9%
Wildwood Crest (B)	1,345	99.9%	56	100.0%	0	0.0%	672	99.9%	335	99.7%
Woodbine (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May County	**14,027**	**52.9%**	**1,285**	**31.2%**	**653**	**46.4%**	**6,652**	**47.3%**	**4,128**	**48.9%**

Source: U.S. Census Bureau, American Community Survey 2018-2022; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-12. Estimated Number of Vulnerable Persons Located in the Coastal Erosion Hazard Area

Jurisdiction	Persons Over 65	Percent of Total	Persons Under 5	Percent of Total	Non-English Speaking Persons	Percent of Total	Persons with a Disability	Percent of Total	Persons in Poverty	Percent of Total
Avalon (B)	6	0.8%	0	0.0%	0	0.0%	1	0.6%	0	0.0%
Cape May (C)	11	1.4%	2	1.4%	0	0.0%	2	1.2%	2	1.4%
Cape May Point (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Dennis (T)	2	0.2%	1	0.2%	0	0.0%	1	0.2%	0	0.0%
Lower (T)	49	0.9%	10	0.9%	1	0.5%	32	0.9%	21	0.9%
Middle (T)	120	2.5%	23	2.4%	12	2.4%	74	2.5%	44	2.5%
North Wildwood (C)	4	0.2%	0	0.0%	0	0.0%	1	0.1%	0	0.0%
Ocean (C)	87	2.3%	4	1.9%	0	0.0%	33	2.2%	26	2.3%
Sea Isle (C)	6	0.6%	0	0.0%	0	0.0%	1	0.4%	0	0.0%
Stone Harbor (B)	30	6.6%	1	5.3%	0	0.0%	5	6.0%	3	5.3%
Upper (T)	34	1.1%	8	1.1%	0	0.0%	13	1.1%	2	0.9%
West Cape May (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
West Wildwood (B)	33	18.4%	6	17.1%	0	0.0%	19	17.8%	3	16.7%
Wildwood (C)	4	0.5%	0	0.0%	1	0.3%	5	0.5%	4	0.4%
Wildwood Crest (B)	16	1.2%	0	0.0%	0	0.0%	8	1.2%	4	1.2%
Woodbine (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May County	**402**	**1.5%**	**55**	**1.3%**	**14**	**1.0%**	**195**	**1.4%**	**109**	**1.3%**

Source: U.S. Census Bureau, American Community Survey 2018-2022; FEMA Preliminary/Effective DFIRMs, LiMWA Lines 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-13. Estimated Number of Vulnerable Persons Located in the Sea Level Rise +1 Foot Hazard Area

Jurisdiction	Persons Over 65	Percent of Total	Persons Under 5	Percent of Total	Non-English Speaking Persons	Percent of Total	Persons with a Disability	Percent of Total	Persons in Poverty	Percent of Total
Avalon (B)	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May (C)	4	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May Point (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Dennis (T)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Lower (T)	20	0.4%	4	0.4%	0	0.0%	13	0.4%	8	0.3%
Middle (T)	64	1.3%	12	1.3%	6	1.2%	39	1.3%	23	1.3%
North Wildwood (C)	8	0.5%	0	0.0%	0	0.0%	3	0.4%	1	0.4%
Ocean (C)	10	0.3%	0	0.0%	0	0.0%	4	0.3%	3	0.3%
Sea Isle (C)	2	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Stone Harbor (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Upper (T)	3	0.1%	0	0.0%	0	0.0%	1	0.1%	0	0.0%
West Cape May (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
West Wildwood (B)	79	44.1%	15	42.9%	0	0.0%	47	43.9%	8	44.4%
Wildwood (C)	8	1.0%	1	0.5%	4	1.1%	11	1.0%	9	1.0%
Wildwood Crest (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Woodbine (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May County	**199**	**0.8%**	**32**	**0.8%**	**10**	**0.7%**	**118**	**0.8%**	**52**	**0.6%**

Source: U.S. Census Bureau, American Community Survey 2018-2022; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

Table 10-14. Estimated Number of Vulnerable Persons Located in the Sea Level Rise +2 Foot Hazard Area

Jurisdiction	Persons Over 65	Percent of Total	Persons Under 5	Percent of Total	Non-English Speaking Persons	Percent of Total	Persons with a Disability	Percent of Total	Persons in Poverty	Percent of Total
Avalon (B)	7	0.9%	0	0.0%	0	0.0%	1	0.6%	0	0.0%
Cape May (C)	9	1.2%	1	0.7%	0	0.0%	2	1.2%	1	0.7%
Cape May Point (B)	24	20.3%	0	0.0%	0	0.0%	9	20.9%	5	19.2%
Dennis (T)	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Lower (T)	40	0.7%	8	0.7%	1	0.5%	26	0.7%	17	0.7%
Middle (T)	160	3.3%	31	3.2%	16	3.2%	98	3.3%	59	3.3%
North Wildwood (C)	150	8.9%	0	0.0%	0	0.0%	62	8.8%	23	8.6%
Ocean (C)	260	6.8%	14	6.8%	2	4.9%	100	6.8%	77	6.7%
Sea Isle (C)	27	2.6%	0	0.0%	0	0.0%	6	2.3%	2	1.8%
Stone Harbor (B)	10	2.2%	0	0.0%	0	0.0%	1	1.2%	1	1.8%
Upper (T)	21	0.7%	5	0.7%	0	0.0%	8	0.7%	1	0.5%
West Cape May (B)	3	0.8%	0	0.0%	0	0.0%	1	0.8%	0	0.0%
West Wildwood (B)	157	87.7%	30	85.7%	0	0.0%	93	86.9%	15	83.3%
Wildwood (C)	65	8.1%	15	8.1%	30	8.0%	91	8.2%	74	8.2%
Wildwood Crest (B)	9	0.7%	0	0.0%	0	0.0%	4	0.6%	2	0.6%
Woodbine (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May County	**943**	**0.0%**	**104**	**2.5%**	**49**	**3.5%**	**502**	**3.6%**	**277**	**3.3%**

Source: U.S. Census Bureau, American Community Survey 2018-2022; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

Table 10-15. Estimated Number of Vulnerable Persons Located in the Sea Level Rise +3 Foot Hazard Area

Jurisdiction	Persons Over 65	Percent of Total	Persons Under 5	Percent of Total	Non-English Speaking Persons	Percent of Total	Persons with a Disability	Percent of Total	Persons in Poverty	Percent of Total
Avalon (B)	94	12.3%	2	9.5%	0	0.0%	19	11.9%	8	11.3%
Cape May (C)	65	8.4%	11	7.9%	3	6.9%	14	8.4%	11	7.9%
Cape May Point (B)	24	20.3%	0	0.0%	0	0.0%	9	20.9%	5	19.2%
Dennis (T)	4	0.3%	1	0.2%	0	0.0%	2	0.3%	1	0.3%
Lower (T)	166	3.0%	33	3.0%	6	2.8%	109	3.0%	71	3.0%
Middle (T)	333	6.9%	65	6.8%	34	0.0%	205	6.9%	123	6.9%
North Wildwood (C)	644	38.0%	0	0.0%	0	0.0%	267	38.0%	101	37.8%
Ocean (C)	990	25.9%	53	25.7%	10	24.4%	382	25.9%	296	25.9%
Sea Isle (C)	233	22.7%	1	16.7%	2	15.4%	59	22.4%	25	22.1%
Stone Harbor (B)	76	16.7%	3	15.8%	0	0.0%	14	16.9%	9	15.8%
Upper (T)	58	1.9%	13	1.8%	1	1.5%	22	1.9%	4	1.8%
West Cape May (B)	48	13.1%	5	11.9%	1	9.3%	16	12.7%	3	11.1%
West Wildwood (B)	173	96.6%	33	94.3%	0	0.0%	103	96.3%	17	94.4%
Wildwood (C)	278	34.8%	64	34.6%	130	34.8%	387	34.9%	315	34.9%
Wildwood Crest (B)	62	4.6%	2	3.6%	0	0.0%	31	4.6%	15	4.5%
Woodbine (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May County	**3,248**	**12.2%**	**286**	**6.9%**	**187**	**13.3%**	**1,639**	**11.7%**	**1,004**	**11.9%**

Source: U.S. Census Bureau, American Community Survey 2018-2022; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

Table 10-16. Estimated Number of Vulnerable Persons Located in the Sea Level Rise +4 Foot Hazard Area

Jurisdiction	Persons Over 65	Percent of Total	Persons Under 5	Percent of Total	Non-English Speaking Persons	Percent of Total	Persons with a Disability	Percent of Total	Persons in Poverty	Percent of Total
Avalon (B)	257	33.6%	7	33.3%	0	0.0%	53	33.1%	23	32.4%
Cape May (C)	205	26.5%	36	25.9%	11	25.5%	44	26.3%	36	25.9%
Cape May Point (B)	42	35.6%	0	0.0%	0	0.0%	15	34.9%	9	34.6%
Dennis (T)	8	0.6%	3	0.6%	0	0.0%	3	0.5%	2	0.6%
Lower (T)	351	6.4%	70	6.3%	13	6.0%	231	6.4%	150	6.3%
Middle (T)	527	10.9%	104	10.9%	54	10.9%	324	10.9%	194	10.9%
North Wildwood (C)	1,013	59.8%	0	0.0%	0	0.0%	420	59.8%	159	59.6%
Ocean (C)	1,847	48.3%	99	48.1%	19	46.3%	714	48.3%	552	48.3%
Sea Isle (C)	582	56.6%	3	50.0%	7	54.0%	149	56.7%	64	56.6%
Stone Harbor (B)	162	35.6%	6	31.6%	0	0.0%	29	34.9%	20	35.1%
Upper (T)	135	4.4%	31	4.4%	2	3.1%	52	4.4%	9	4.1%
West Cape May (B)	92	25.1%	10	23.8%	2	18.5%	31	24.6%	6	22.2%
West Wildwood (B)	177	98.9%	34	97.1%	0	0.0%	106	99.1%	17	94.4%
Wildwood (C)	424	53.1%	98	53.0%	198	53.0%	589	53.1%	479	53.0%
Wildwood Crest (B)	211	15.7%	8	14.3%	0	0.0%	105	15.6%	52	15.5%
Woodbine (B)	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Cape May County	**6,033**	**22.7%**	**509**	**12.4%**	**306**	**21.7%**	**2,865**	**20.4%**	**1,772**	**21.0%**

Source: U.S. Census Bureau, American Community Survey 2018-2022; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

10.2.2 General Building Stock

There are 62,032 buildings located in the 1-percent annual chance flood hazard area with an estimated $143 billion of replacement cost value (i.e., building and content replacement costs). In total, this represents approximately 47.7-percent of the County's total general building stock inventory. In addition, there are 73,033 buildings located in the 0.2-percent annual chance flood boundary with an estimated $168 billion of building stock and contents exposed. This represents approximately 56.2-percent of the County's total general building stock inventory. Refer to Table 10-17 for more information.

There are 2,252 buildings located in the Coastal Erosion Hazard Area with an estimated $5.4 billion of replacement cost value (i.e., building and content replacement costs). In total, this represents approximately 1.7-percent of the County's total general building stock inventory. Refer to Table 10-18 for more information.

There are 962 buildings located in the Sea Level Rise +1 Foot Hazard Area with an estimated $929 million of replacement cost value (i.e., building and content replacement costs). In total, this represents approximately 0.7-percent of the County's total general building stock inventory. In addition, there are 4,596 buildings located in the Sea Level Rise +2 Foot Hazard Area with an estimated $6 billion of building stock and contents exposed. This represents approximately 3.5-percent of the County's total general building stock inventory. Refer to Table 10-19 for more information.

There are 16,458 buildings located in the Sea Level Rise +3 Foot Hazard Area with an estimated $26.9 billion of replacement cost value (i.e., building and content replacement costs). In total, this represents approximately 12.7-percent of the County's total general building stock inventory. In addition, there are 31,452 buildings located in the Sea Level Rise +4 Foot Hazard Area with an estimated $60.7 billion of building stock and contents exposed. This represents approximately 24.2-percent of the County's total general building stock inventory. Refer to Table 10-20 for more information.

Table 10-21 displays the buildings by general occupancy located within the 1- or 0.2-percent annual chance flood hazard areas. For the 1-percent annual chance flood hazard area, Ocean City has the highest number of residential buildings (16,102) at risk, followed by the City of Sea Isle (6,281). Ocean City also has the highest number of commercial buildings (1,181) at risk. The City of Wildwood leads in industrial buildings (10). Ocean City also leads in government, religion, agricultural, and education buildings (142) at risk of the 1-percent annual chance flood event. For the 0.2-percent annual chance flood hazard area, Ocean City has the highest number of residential buildings (17,820) at risk, followed by the City of Sea Isle (6,621). The Township of Lower has the highest number of commercial buildings (1,598) at risk. While the City of Wildwood leads in industrial buildings (10). The Township of Middle leads in government, religion, agricultural, and education buildings (287) at risk of the 0.2-percent annual chance flood event.

Table 10-22 displays the buildings by general occupancy located within the Coastal Erosion Hazard Area. The City of Ocean City has the highest number of residential buildings (406) at risk, followed by the Township of Middle (366). The Township of Middle also has the highest number of commercial buildings (136) at risk. The City of Wildwood leads in government, religion, agricultural, and education buildings (40) at risk.

Table 10-23 displays the buildings by general occupancy located within the Sea Level Rise +1- and +2-Foot Hazard Areas. For the Sea Level Rise +1-Foot Hazard Areas, The Borough of West Wildwood has the highest number of residential buildings (349) at risk, followed by the Township of Middle (196). The Township of Middle and the Borough of West Wildwood both have the highest number of commercial buildings (50) at risk. The City of Ocean City and Township of Middle lead in government, religion, agricultural, and education buildings (5) at risk. For the

+2 Foot Hazard Area, The City Ocean City has the highest number of residential buildings (1,217) at risk, followed by the Borough of West Wildwood (689). The Township of Middle has the highest number of commercial buildings (180) at risk. While the City of Wildwood leads in industrial buildings (1). The Township of Middle leads in government, religion, agricultural, and education buildings (23) at risk.

Table 10-24 displays the buildings by general occupancy located within the Sea Level Rise +3- and +4-Foot Hazard Areas. For the Sea Level Rise +3-Foot Hazard Area, the City of Ocean City has the highest number of residential buildings (4,620) at risk, followed by the City of North Wildwood (1,752). The City of Ocean City also has the highest number of commercial buildings (521) at risk. The City of Wildwood leads in industrial buildings (6). The Township of Middle leads in government, religion, agricultural, and education buildings (64) at risk. For the Sea Level Rise 4-Foot Hazard Area, the City of Ocean City has the highest number of residential buildings (8,619) at risk, followed by the City of Sea Isle City (3,771). The City of Ocean City also has the highest number of commercial buildings (856) at risk. While the City of Wildwood leads in industrial buildings (8). The Township of Middle leads in government, religion, agricultural, and education buildings (89) at risk.

Table 11-25 shows the total acres of land use type category in Cape May County (Residential Land Use, Non-Residential Land Use, Natural Land Use Type) that is exposed to the 1- or 0.2-percent annual chance flood hazard areas.

Table 11-26 shows the total acres of land use type category in Cape May County (Residential Land Use, Non-Residential Land Use, Natural Land Use Type) that is exposed to the Sea Level Rise +1-, +2-, +3-, and +4-Foot Hazard Areas.

The Hazus flood model estimated potential damage to buildings. Table 10-27 shows estimated losses by jurisdiction for the 1 percent annual chance flood. The countywide total is $508 million or 0.2 percent of the total building replacement cost value. The City of Ocean City has the greatest estimated building loss—$149.6 million (0.3 percent of the total replacement cost value).

The Hazus flood (riverine) model estimated potential damage to buildings. Table 10-28 shows estimated losses by jurisdiction for the 1 percent annual chance flood (riverine). The countywide total is $27.8 million or less than 0.1 percent of the total building replacement cost value. The City of Cape May has the greatest estimated building loss—$27 million (0.2 percent of the total replacement cost value).

The Hazus flood (coastal) model estimated potential damage to buildings. Table 10-29 shows estimated losses by jurisdiction for the 1 percent annual chance flood (coastal). The countywide total is $424 million or 0.2 percent of the total building replacement cost value. The City of Ocean City has the greatest estimated building loss—$140 million (0.3 percent of the total replacement cost value).

Table 10-17. Estimated General Building Stock Located in the 1- and 0.2- Percent Annual Chance Flood Hazard Area

Jurisdiction	Jurisdiction Total Buildings		1-Percent Annual Chance Flood Event Hazard Area				0.2-Percent Annual Chance Flood Event Hazard Area			
			Number of Buildings		Replacement Cost Value		Number of Buildings		Replacement Cost Value	
	Count	Replacement Cost Value	Count	% of Total	Value	% of Total	Count	% of Total	Value	% of Total
Avalon (B)	6,696	$25,723,512,232	6,013	89.8%	$22,434,373,831	87.2%	6,627	99.0%	$25,217,276,746	98.0%
Cape May (C)	4,650	$16,203,622,284	2,524	54.3%	$8,846,661,221	54.6%	3,322	71.4%	$11,741,693,695	72.5%
Cape May Point (B)	850	$1,686,539,666	634	74.6%	$1,280,915,618	75.9%	787	92.6%	$1,553,685,740	92.1%
Dennis (T)	8,700	$8,299,131,210	95	1.1%	$129,008,313	1.6%	297	3.4%	$354,083,208	4.3%
Lower (T)	25,387	$22,775,836,898	4,094	16.1%	$4,090,274,098	18.0%	6,369	25.1%	$5,868,274,252	25.8%
Middle (T)	20,691	$27,392,475,766	3,291	15.9%	$2,928,395,138	10.7%	5,172	25.0%	$5,459,029,776	19.9%
North Wildwood (C)	5,843	$11,753,681,214	5,831	99.8%	$11,722,993,203	99.7%	5,836	99.9%	$11,726,921,424	99.8%
Ocean (C)	19,235	$44,649,077,467	17,426	90.6%	$38,552,291,730	86.3%	19,227	100.0%	$44,592,069,754	99.9%
Sea Isle (C)	7,416	$23,896,778,328	7,010	94.5%	$22,439,414,266	93.9%	7,370	99.4%	$23,812,873,841	99.6%
Stone Harbor (B)	4,202	$8,177,015,155	3,289	78.3%	$6,186,445,094	75.7%	4,076	97.0%	$7,826,304,389	95.7%
Upper (T)	10,936	$14,864,714,357	1,127	10.3%	$1,855,594,147	12.5%	1,431	13.1%	$2,192,104,210	14.7%
West Cape May (B)	1,760	$2,893,441,733	630	35.8%	$1,012,145,135	35.0%	980	55.7%	$1,646,974,414	56.9%
West Wildwood (B)	920	$1,064,788,340	919	99.9%	$1,060,817,700	99.6%	920	100.0%	$1,064,788,340	100.0%
Wildwood (C)	4,460	$12,875,631,194	4,460	100.0%	$12,875,631,193	100.0%	4,460	100.0%	$12,875,631,193	100.0%
Wildwood Crest (B)	6,159	$11,797,908,652	4,689	76.1%	$8,390,731,419	71.1%	6,159	100.0%	$11,797,908,653	100.0%
Woodbine (B)	2,107	$3,249,453,892	0	0.0%	$0	0.0%	0	0.0%	$0	0.0%
Cape May County	**130,012**	**$237,303,608,388**	**62,032**	**47.7%**	**$143,805,692,106**	**60.6%**	**73,033**	**56.2%**	**$167,729,619,635**	**70.7%**

Source: Cape May County 2024; RS Means 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-18. Estimated General Building Stock Located in the Coastal Erosion Hazard Area

Jurisdiction	Jurisdiction Total Buildings		Coastal Erosion Hazard Area			
			Number of Buildings		Replacement Cost Value	
	Count	Replacement Cost Value	Count	% of Total	Value	% of Total
Avalon (B)	6,696	$25,723,512,232	56	0.8%	$300,929,189	1.2%
Cape May (C)	4,650	$16,203,622,284	81	1.7%	$295,134,272	1.8%
Cape May Point (B)	850	$1,686,539,666	2	0.2%	$3,676,198	0.2%
Dennis (T)	8,700	$8,299,131,210	14	0.2%	$25,134,896	0.3%
Lower (T)	25,387	$22,775,836,898	305	1.2%	$551,401,208	2.4%
Middle (T)	20,691	$27,392,475,766	418	2.0%	$463,679,190	1.7%
North Wildwood (C)	5,843	$11,753,681,214	93	1.6%	$407,319,208	3.5%
Ocean (C)	19,235	$44,649,077,467	444	2.3%	$1,121,946,810	2.5%
Sea Isle (C)	7,416	$23,896,778,328	50	0.7%	$210,432,548	0.9%
Stone Harbor (B)	4,202	$8,177,015,155	264	6.3%	$608,867,485	7.4%
Upper (T)	10,936	$14,864,714,357	115	1.1%	$325,123,788	2.2%
West Cape May (B)	1,760	$2,893,441,733	0	0.0%	$0	0.0%
West Wildwood (B)	920	$1,064,788,340	173	18.8%	$213,304,486	20.0%
Wildwood (C)	4,460	$12,875,631,194	161	3.6%	$742,254,970	5.8%
Wildwood Crest (B)	6,159	$11,797,908,652	76	1.2%	$165,158,780	1.4%
Woodbine (B)	2,107	$3,249,453,892	0	0.0%	$0	0.0%
Cape May County	**130,012**	**$237,303,608,388**	**2,252**	**1.7%**	**$5,434,363,029**	**2.3%**

Source: Cape May County 2024; RS Means 2024; FEMA Preliminary/Effective DFIRMs, LiMWA Lines 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-19. Estimated General Building Stock Located in the Sea Level Rise +1- and +2-Foot Hazard Area

Jurisdiction	Jurisdiction Total Buildings		Sea Level Rise +1 Foot Hazard Area				Sea Level Rise +2 Foot Hazard Area			
			Number of Buildings		Replacement Cost Value		Number of Buildings		Replacement Cost Value	
	Count	Replacement Cost Value	Count	% of Total	Value	% of Total	Count	% of Total	Value	% of Total
Avalon (B)	6,696	$25,723,512,232	11	0.2%	$13,415,814	87.2%	62	0.9%	$194,854,187	0.8%
Cape May (C)	4,650	$16,203,622,284	27	0.6%	$110,183,997	54.6%	57	1.2%	$185,945,847	1.1%
Cape May Point (B)	850	$1,686,539,666	0	0.0%	$0	75.9%	181	21.3%	$382,392,108	22.7%
Dennis (T)	8,700	$8,299,131,210	3	<0.1%	$4,877,808	1.6%	9	0.1%	$18,169,827	0.2%
Lower (T)	25,387	$22,775,836,898	95	0.4%	$61,964,890	18.0%	197	0.8%	$135,290,151	0.6%
Middle (T)	20,691	$27,392,475,766	251	1.2%	$148,609,275	10.7%	691	3.3%	$417,670,086	1.5%
North Wildwood (C)	5,843	$11,753,681,214	27	0.5%	$38,436,393	99.7%	496	8.5%	$650,106,155	5.5%
Ocean (C)	19,235	$44,649,077,467	59	0.3%	$75,197,487	86.3%	1,369	7.1%	$1,974,955,805	4.4%
Sea Isle (C)	7,416	$23,896,778,328	20	0.3%	$37,010,579	93.9%	189	2.5%	$422,551,142	1.8%
Stone Harbor (B)	4,202	$8,177,015,155	0	0.0%	$0	75.7%	92	2.2%	$175,361,527	2.1%
Upper (T)	10,936	$14,864,714,357	18	0.2%	$17,320,249	12.5%	72	0.7%	$113,764,704	0.8%
West Cape May (B)	1,760	$2,893,441,733	0	0.0%	$0	35.0%	14	0.8%	$11,556,369	0.4%
West Wildwood (B)	920	$1,064,788,340	403	43.8%	$352,791,247	99.6%	805	87.5%	$832,181,586	78.2%
Wildwood (C)	4,460	$12,875,631,194	45	1.0%	$68,687,228	100.0%	325	7.3%	$438,156,972	3.4%
Wildwood Crest (B)	6,159	$11,797,908,652	3	<0.1%	$921,784	71.1%	37	0.6%	$69,967,745	0.6%
Woodbine (B)	2,107	$3,249,453,892	0	0.0%	$0	0.0%	0	0.0%	$0	0.0%
Cape May County	**130,012**	**$237,303,608,388**	**962**	**0.7%**	**$929,416,751**	**60.6%**	**4,596**	**3.5%**	**$6,022,924,211**	**2.5%**

Source: Cape May County 2024; RS Means 2024; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

Table 10-20. Estimated General Building Stock Located in the Sea Level Rise +3- and +4-Foot Hazard Area

Jurisdiction	Jurisdiction Total Buildings		Sea Level Rise +3 Foot Hazard Area				Sea Level Rise +4 Foot Hazard Area			
			Number of Buildings		Replacement Cost Value		Number of Buildings		Replacement Cost Value	
	Count	Replacement Cost Value	Count	% of Total	Value	% of Total	Count	% of Total	Value	% of Total
Avalon (B)	6,696	$25,723,512,232	824	12.3%	$2,558,198,184	9.9%	2,270	33.9%	$7,271,639,956	28.3%
Cape May (C)	4,650	$16,203,622,284	398	8.6%	$1,005,648,725	6.2%	1,215	26.1%	$3,658,784,055	22.6%
Cape May Point (B)	850	$1,686,539,666	181	21.3%	$382,392,108	22.7%	306	36.0%	$695,760,283	41.3%
Dennis (T)	8,700	$8,299,131,210	29	0.3%	$37,602,960	0.5%	55	0.6%	$93,930,162	1.1%
Lower (T)	25,387	$22,775,836,898	826	3.3%	$610,870,858	2.7%	1,721	6.8%	$1,519,791,629	6.7%
Middle (T)	20,691	$27,392,475,766	1,447	7.0%	$1,076,849,419	3.9%	2,242	10.8%	$1,857,756,477	6.8%
North Wildwood (C)	5,843	$11,753,681,214	2,171	37.2%	$2,981,782,433	25.4%	3,435	58.8%	$5,125,289,580	43.6%
Ocean (C)	19,235	$44,649,077,467	5,189	27.0%	$8,074,374,292	18.1%	9,553	49.7%	$17,254,595,218	38.6%
Sea Isle (C)	7,416	$23,896,778,328	1,667	22.5%	$4,789,446,700	20.0%	4,193	56.5%	$12,784,945,948	53.5%
Stone Harbor (B)	4,202	$8,177,015,155	725	17.3%	$1,334,251,438	16.3%	1,541	36.7%	$2,810,523,878	34.4%
Upper (T)	10,936	$14,864,714,357	191	1.7%	$303,193,304	2.0%	441	4.0%	$833,826,211	5.6%
West Cape May (B)	1,760	$2,893,441,733	214	12.2%	$340,994,083	11.8%	423	24.0%	$656,989,484	22.7%
West Wildwood (B)	920	$1,064,788,340	885	96.2%	$986,848,742	92.7%	909	98.8%	$1,043,039,260	98.0%
Wildwood (C)	4,460	$12,875,631,194	1,451	32.5%	$1,975,233,224	15.3%	2,230	50.0%	$3,426,273,937	26.6%
Wildwood Crest (B)	6,159	$11,797,908,652	260	4.2%	$520,447,504	4.4%	918	14.9%	$1,725,994,995	14.6%
Woodbine (B)	2,107	$3,249,453,892	0	0.0%	$0	0.0%	0	0.0%	$0	0.0%
Cape May County	**130,012**	**$237,303,608,388**	**16,458**	**12.7%**	**$26,978,133,974**	**11.4%**	**31,452**	**24.2%**	**$60,759,141,073**	**25.6%**

Source: Cape May County 2024; RS Means 2024; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

Table 10-21. Buildings in the 1- and 0.2- Percent Annual Chance Flood Hazard Areas, by General Occupancy Class

	1-Percent Annual Chance Flood Event Hazard Area				0.2-Percent Annual Chance Flood Event Hazard Area			
	Residential	Commercial	Industrial	Other	Residential	Commercial	Industrial	Other
Avalon (B)	5,200	772	0	41	87	38	0	1
Cape May (C)	2,247	218	0	59	111	61	9	0
Cape May Point (B)	576	49	0	9	25	19	2	0
Dennis (T)	61	23	0	11	65	89	12	1
Lower (T)	2,974	1,053	0	67	635	143	19	3
Middle (T)	2,407	758	0	126	34	11	0	0
North Wildwood (C)	4,591	1,144	0	96	133	61	9	6
Ocean (C)	16,102	1,181	1	142	1,075	246	37	20
Sea Isle (C)	6,281	693	0	36	931	86	10	2
Stone Harbor (B)	2,964	304	0	21	15	5	0	0
Upper (T)	930	183	0	14	31	13	1	1
West Cape May (B)	515	103	0	12	436	87	16	2
West Wildwood (B)	785	123	0	11	79	13	0	0
Wildwood (C)	3,270	1,067	10	113	920	453	29	14
Wildwood Crest (B)	4,076	605	0	8	219	43	1	4
Woodbine (B)	0	0	0	0	453	157	10	1
Cape May County	**52,979**	**8,276**	**11**	**766**	**5,249**	**1,525**	**155**	**55**

Source: Cape May County 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township
Other = Government, Religion, Agricultural, and Education

Table 10-22. Buildings in the Coastal Erosion Hazard Area, by General Occupancy Class

	Coastal Erosion Hazard Area			
	Residential	Commercial	Industrial	Other
Avalon (B)	51	1	0	4
Cape May (C)	59	6	0	16
Cape May Point (B)	2	0	0	0
Dennis (T)	13	0	0	1
Lower (T)	169	136	0	0
Middle (T)	366	49	0	3
North Wildwood (C)	11	66	0	16
Ocean (C)	406	23	0	15
Sea Isle (C)	45	4	0	1
Stone Harbor (B)	251	8	0	5
Upper (T)	90	20	0	5
West Cape May (B)	0	0	0	0
West Wildwood (B)	145	25	0	3
Wildwood (C)	17	104	0	40
Wildwood Crest (B)	67	6	0	3
Woodbine (B)	0	0	0	0
Cape May County	**1,692**	**448**	**0**	**112**

Source: Cape May County 2024; FEMA Preliminary/Effective DFIRMs, LiMWA Lines 2014/2017
Note: (B) Borough; (C) City; (T) Township
Other = Government, Religion, Agricultural, and Education

Table 10-23. Buildings in the Sea Level Rise +1- and +2-Foot Hazard Areas, by General Occupancy Class

	Sea Level Rise +1 Foot Hazard Area				Sea Level Rise +2 Foot Hazard Area			
	Residential	Commercial	Industrial	Other	Residential	Commercial	Industrial	Other
Avalon (B)	8	2	0	1	54	7	0	1
Cape May (C)	24	2	0	1	50	6	0	1
Cape May Point (B)	0	0	0	0	165	15	0	1
Dennis (T)	2	1	0	0	5	3	0	1
Lower (T)	71	23	0	1	136	56	0	5
Middle (T)	196	50	0	5	488	180	0	23
North Wildwood (C)	23	4	0	0	409	85	0	2
Ocean (C)	50	4	0	5	1,217	131	0	21
Sea Isle (C)	14	6	0	0	175	12	0	2
Stone Harbor (B)	0	0	0	0	87	5	0	0
Upper (T)	10	6	0	2	57	13	0	2
West Cape May (B)	0	0	0	0	12	0	0	2
West Wildwood (B)	349	50	0	4	689	107	0	9
Wildwood (C)	35	7	0	3	270	51	1	3
Wildwood Crest (B)	3	0	0	0	37	0	0	0
Woodbine (B)	0	0	0	0	0	0	0	0
Cape May County	**785**	**155**	**0**	**22**	**3,851**	**671**	**1**	**73**

Source: Cape May County 2024; NOAA 2022
Note: (B) Borough; (C) City; (T) Township
Other = Government, Religion, Agricultural, and Education

Table 10-24. Buildings in the Sea Level Rise +3- and +4-Foot Hazard Areas, by General Occupancy Class

	Sea Level Rise +3 Foot Hazard Area				Sea Level Rise +4 Foot Hazard Area			
	Residential	Commercial	Industrial	Other	Residential	Commercial	Industrial	Other
Avalon (B)	722	99	0	3	1,957	304	0	9
Cape May (C)	342	52	0	4	1,075	123	0	17
Cape May Point (B)	165	15	0	1	281	23	0	2
Dennis (T)	21	7	0	1	37	13	0	5
Lower (T)	565	245	0	16	1,191	490	0	40
Middle (T)	1,014	369	0	64	1,604	549	0	89
North Wildwood (C)	1,752	409	0	10	2,753	646	0	36
Ocean (C)	4,620	521	0	48	8,619	856	1	77
Sea Isle (C)	1,511	151	0	5	3,771	405	0	17
Stone Harbor (B)	644	80	0	1	1,363	173	0	5
Upper (T)	153	35	0	3	355	78	0	8
West Cape May (B)	181	27	0	6	347	68	0	8
West Wildwood (B)	760	115	0	10	779	119	0	11
Wildwood (C)	1,141	291	6	13	1,736	441	8	45
Wildwood Crest (B)	252	7	0	1	846	67	0	5
Woodbine (B)	0	0	0	0	0	0	0	0
Cape May County	**13,843**	**2,423**	**6**	**186**	**26,714**	**4,355**	**9**	**374**

Source: Cape May County 2024; NOAA 2022
Note: (B) Borough; (C) City; (T) Township
Other = Government, Religion, Agricultural, and Education

Table 11-25. Land Use Exposed to the 1- and 0.2- Percent Annual Chance Flood Hazard Areas

Land Use Type	Total Acres of Land Use Type Category	1-percent Annual Chance of Flood Event	Percent of Total Acres	0.2-percent Annual Chance of Flood Event	Percent of Total Acres
Residential Land Use Type	22,646	6,871	30.3%	8,390	37.0%
Non-Residential Land Use Type	160,458	87,216	54.4%	94,796	59.1%
Natural Land Use Type	142,219	81,986	57.6%	88,378	62.1%
Cape May County	**183,126**	**94,087**	**51.4%**	**103,186**	**56.3%**

Source: Cape May County 2024; NJDEP 2020; FEMA Preliminary/Effective DFIRMs 2014/2017

Table 11-26. Land Use Exposed to the Sea Level Rise +1-, +2-, +3-, and +4-Foot Hazard Areas

Land Use Type	Total Acres of Land Use Type Category	Sea Level Rise + 1-foot Hazard Area	Percent of Total Acres	Sea Level Rise + 2-foot Hazard Area	Percent of Total Acres	Sea Level Rise + 3-foot Hazard Area	Percent of Total Acres	Sea Level Rise + 4-foot Hazard Area	Percent of Total Acres
Residential Land Use Type	22,646	161	0.7%	780	3.4%	2,190	9.7%	3,727	16.5%
Non-Residential Land Use Type	160,458	66,473	41.4%	71,672	44.7%	75,872	47.3%	80,050	49.9%
Natural Land Use Type	142,219	65,712	46.2%	70,581	49.6%	74,133	52.1%	77,586	54.6%
Cape May County	**183,126**	**66,634**	**36.4%**	**72,452**	**39.6%**	**78,062**	**42.6%**	**83,777**	**45.7%**

Source: Cape May County 2024; NOAA 2022

Table 10-27. Estimated General Building Stock Potential Loss to the 1 Percent Annual Chance Flood Event

Jurisdiction	Total Replacement Cost Value	1 Percent Annual Chance Flood Event Impact on Buildings				
		Estimated Loss for All Occupancies	Percent of Total	Estimated Loss for Residential Properties	Estimated Loss for Commercial Properties	Estimated Loss for All Other Occupancies
Avalon (B)	$25,723,512,232	$19,481,055	0.1%	$19,015,779	$70,537	$394,739
Cape May (C)	$16,203,622,284	$26,684,896	0.2%	$22,651,926	$3,964,054	$68,916
Cape May Point (B)	$1,686,539,666	$176,690	<0.1%	$176,232	$458	$0
Dennis (T)	$8,299,131,210	$1,914,944	<0.1%	$1,914,944	$0	$0
Lower (T)	$22,775,836,898	$16,610,981	0.1%	$11,320,113	$5,252,014	$38,854
Middle (T)	$27,392,475,766	$20,348,968	0.1%	$18,659,527	$1,547,205	$142,235
North Wildwood (C)	$11,753,681,214	$40,789,902	0.3%	$28,000,501	$9,158,736	$3,630,666
Ocean (C)	$44,649,077,467	$149,662,146	0.3%	$138,448,075	$9,540,396	$1,673,674
Sea Isle (C)	$23,896,778,328	$57,748,206	0.2%	$57,007,480	$732,547	$8,178
Stone Harbor (B)	$8,177,015,155	$25,467,384	0.3%	$25,330,820	$136,565	$0
Upper (T)	$14,864,714,357	$16,670,326	0.1%	$12,567,864	$2,274,636	$1,827,827
West Cape May (B)	$2,893,441,733	$690,440	<0.1%	$689,854	$586	$0
West Wildwood (B)	$1,064,788,340	$59,908,423	5.6%	$56,893,233	$1,734,933	$1,280,257
Wildwood (C)	$12,875,631,194	$71,053,969	0.6%	$37,694,733	$12,207,078	$21,152,158
Wildwood Crest (B)	$11,797,908,652	$1,336,885	<0.1%	$1,336,885	$0	$0
Woodbine (B)	$3,249,453,892	$0	0.0%	$0	$0	$0
Cape May County	**$237,303,608,388**	**$508,545,216**	**0.2%**	**$431,707,966**	**$46,619,745**	**$30,217,504**

Source: Hazus v6.1; Cape May County 2024; RS Means 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-28. Estimated General Building Stock Potential Loss to the 1 Percent Annual Chance Flood (Riverine) Event

Jurisdiction	Total Replacement Cost Value	1-Percent Annual Chance Flood (Riverine) Impacts on Buildings				
		Estimated Loss for All Occupancies	Percent of Total	Estimated Loss for Residential Properties	Estimated Loss for Commercial Properties	Estimated Loss for All Other Occupancies
Avalon (B)	$25,723,512,232	$0	<0.1%	$0	$0	$0
Cape May (C)	$16,203,622,284	$27,060,613	0.2%	$22,586,752	$4,400,817	$73,045
Cape May Point (B)	$1,686,539,666	$174,116	<0.1%	$173,901	$215	$0
Dennis (T)	$8,299,131,210	$0	0.0%	$0	$0	$0
Lower (T)	$22,775,836,898	$0	0.0%	$0	$0	$0
Middle (T)	$27,392,475,766	$13,477	<0.1%	$13,477	$0	$0
North Wildwood (C)	$11,753,681,214	$0	0.0%	$0	$0	$0
Ocean (C)	$44,649,077,467	$0	0.0%	$0	$0	$0
Sea Isle (C)	$23,896,778,328	$0	0.0%	$0	$0	$0
Stone Harbor (B)	$8,177,015,155	$0	0.0%	$0	$0	$0
Upper (T)	$14,864,714,357	$0	0.0%	$0	$0	$0
West Cape May (B)	$2,893,441,733	$649,607	<0.1%	$649,004	$603	$0
West Wildwood (B)	$1,064,788,340	$0	0.0%	$0	$0	$0
Wildwood (C)	$12,875,631,194	$0	0.0%	$0	$0	$0
Wildwood Crest (B)	$11,797,908,652	$0	0.0%	$0	$0	$0
Woodbine (B)	$3,249,453,892	$0	0.0%	$0	$0	$0
Cape May County	**$237,303,608,388**	**$27,897,813**	**<0.1%**	**$23,423,133**	**$4,401,635**	**$73,045**

Source: Hazus v6.1; Cape May County 2024; RS Means 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-29. Estimated General Building Stock Potential Loss to the 1 Percent Annual Chance Flood (Coastal) Event

Jurisdiction	Total Replacement Cost Value	1-Percent Annual Chance Flood (Coastal) Impacts on Buildings				
		Estimated Loss for All Occupancies	Percent of Total	Estimated Loss for Residential Properties	Estimated Loss for Commercial Properties	Estimated Loss for All Other Occupancies
Avalon (B)	$25,723,512,232	$9,384,624	<0.1%	$8,884,664	$84,539	$415,421
Cape May (C)	$16,203,622,284	$0	0.0%	$0	$0	$0
Cape May Point (B)	$1,686,539,666	$0	0.0%	$0	$0	$0
Dennis (T)	$8,299,131,210	$3,930,976	<0.1%	$3,930,976	$0	$0
Lower (T)	$22,775,836,898	$19,741,396	0.1%	$14,555,410	$5,048,344	$137,643
Middle (T)	$27,392,475,766	$30,365,979	0.1%	$28,638,454	$1,577,919	$149,607
North Wildwood (C)	$11,753,681,214	$27,073,954	0.2%	$14,433,685	$9,424,390	$3,215,879
Ocean (C)	$44,649,077,467	$140,839,074	0.3%	$129,396,698	$9,702,737	$1,739,640
Sea Isle (C)	$23,896,778,328	$39,490,938	0.2%	$38,849,076	$633,909	$7,954
Stone Harbor (B)	$8,177,015,155	$10,766,913	0.1%	$10,654,959	$111,954	$0
Upper (T)	$14,864,714,357	$17,867,372	0.1%	$13,672,478	$2,233,182	$1,961,712
West Cape May (B)	$2,893,441,733	$0	0.0%	$0	$0	$0
West Wildwood (B)	$1,064,788,340	$61,179,985	5.7%	$58,095,784	$1,777,082	$1,307,119
Wildwood (C)	$12,875,631,194	$62,944,168	0.5%	$29,564,755	$12,056,629	$21,322,785
Wildwood Crest (B)	$11,797,908,652	$487,507	<0.1%	$487,507	$0	$0
Woodbine (B)	$3,249,453,892	$0	0.0%	$0	$0	$0
Cape May County	**$237,303,608,388**	**$424,072,887**	**0.2%**	**$351,164,445**	**$42,650,684**	**$30,257,758**

Source: Hazus v6.1; Cape May County 2024; RS Means 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

NFIP Statistics

Participating in the NFIP is voluntary and to join, a community must complete an application; adopt a resolution of intent to participate and cooperate with FEMA; and adopt and submit a floodplain management ordinance that meets or exceeds the minimum NFIP criteria, and the ordinance must also adopt any FIRM or FHBM for the community. By participating, communities agree to adopt and implement local floodplain management regulations that protect lives and reduce risk from future flooding. In return, the federal government makes flood insurance available to property owners throughout the community (FEMA 2020, FEMA 2022).

Table 10-30 summarizes NFIP claims, payments, and repetitive loss statistics for Cape May County. Locations of the properties with policies, claims, and repetitive and severe repetitive flooding were geocoded by FEMA with the understanding that differences were possible between listed longitude and latitude coordinates of properties and actual locations of property addresses—namely, that indications of some locations were more accurate than others. Table 10-31 summarizes the Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties by jurisdiction and occupancy class.

Table 10-30. NFIP Claims, Payments, and Repetitive Loss Statistics for Cape May County

Jurisdiction	Total Claims	Total Payments	Number of NFIP RL Properties	Number of FMA RL Properties	Number of NFIP SRL Properties	Number of FMA SRL Properties
Avalon (B)	745	$15,793,038.46	106	5	17	33
Cape May (C)	441	$5,773,051.77	61	0	6	10
Cape May Point (B)	43	$333,147.05	8	0	0	0
Dennis (T)	4	$969,216.22	2	0	0	0
Lower (T)	72	$3,038,325.72	7	1	3	4
Middle (T)	368	$5,222,015.86	75	2	13	15
North Wildwood (C)	2,055	$31,962,755.43	542	18	86	97
Ocean (C)	2,808	$72,025,255.46	535	11	52	74
Sea Isle (C)	1,153	$23,216,000.01	194	9	27	61
Stone Harbor (B)	724	$14,898,473.53	124	2	24	40
Upper (T)	176	$5,076,431.66	31	1	6	8
West Cape May (B)	50	$361,541.68	15	0	1	2
West Wildwood (B)	1,599	$24,055,797.36	315	24	97	119
Wildwood (C)	1,168	$22,507,049.74	236	11	59	78
Wildwood Crest (B)	127	$2,114,999.49	24	0	3	3
Woodbine (B)	N/A	N/A	N/A	N/A	N/A	N/A
Cape May County	**11,533**	**$227,347,099.44**	**2,275**	**84**	**394**	**544**

Source: FEMA 2024
Note: (B) Borough; (C) City; (T) Township
Information for the Borough of Woodbine was not provided in the data from FEMA

Table 10-31. Summary of Repetitive Loss Properties by Jurisdiction

Jurisdiction	NFIP Repetitive Loss Properties					NFIP Severe Repetitive Loss Properties				
	Single Family	2-4 Family	Business	Other Residential	Other Non-Residential	Single Family	2-4 Family	Business	Other Residential	Other Non-Residential
Avalon (B)	55	17	17	2	15	5	1	8	1	2
Cape May (C)	33	5	0	4	19	1	0	0	0	5
Cape May Point (B)	6	2	0	0	0	0	0	0	0	0
Dennis (T)	1	0	1	0	0	0	0	0	0	0
Lower (T)	3	0	3	0	1	0	0	2	0	1
Middle (T)	73	1	0	0	1	12	1	0	0	0
North Wildwood (C)	291	155	24	18	54	41	23	8	5	9
Ocean (C)	217	194	22	64	38	30	8	6	4	4
Sea Isle (C)	45	95	16	23	15	3	10	6	5	3
Stone Harbor (B)	61	16	20	7	20	5	5	7	2	5
Upper (T)	21	7	2	0	1	4	1	1	0	0
West Cape May (B)	12	2	1	0	0	75	1	0	0	0
West Wildwood (B)	251	55	1	1	7	0	21	0	0	1
Wildwood (C)	132	61	12	9	22	28	21	4	1	5
Wildwood Crest (B)	13	6	2	2	1	1	2	0	0	0
Woodbine (B)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cape May County	**1,214**	**616**	**121**	**130**	**194**	**205**	**94**	**42**	**18**	**35**

Source: FEMA 2024
Note: (B) Borough; (C) City; (T) Township
Information for the Borough of Woodbine was not provided in the data from FEMA

10.2.3 Community Lifelines and Other Critical Facilities

Critical services during and after a flood event may not be available if critical facilities are directly damaged or transportation routes to access these critical facilities are impacted. Roads that are blocked or damaged can isolate residents and can prevent access throughout the planning area to many service providers needing to get to vulnerable populations or to make repairs. Utilities such as overhead power, cable, and phone lines could also be vulnerable due to utility poles damaged by standing water or the surge of water from a dam failure event. Loss of these utilities could create additional isolation issues for dam inundation zones (refer to Chapter 7 Dam Failure).

Community lifelines are essential services that enable the continuous operation of critical government and business functions and are crucial to human health and safety or economic security.

In cases where short-term functionality is impacted by flooding, other facilities of neighboring municipalities may need to increase support response functions during a disaster event. Mitigation planning should consider means to reduce flood impacts to critical facilities and ensure sufficient emergency and school services remain when a significant event occurs.

Storm surge can severely impact roads and roadway infrastructure, which are included in the transportation lifeline. Table 10-32 shows the total miles of evacuation routes within the County that is exposed to the Category 1, 2, 3 and 4 SLOSH Hazard Areas.

Storm surge can severely impact roads and roadway infrastructure, which are included in the transportation lifeline. Table 10-33 shows the total miles of evacuation routes within the County that is exposed to the Category 1, 2, 3 and 4 SLOSH Hazard Areas.

Storm surge can severely impact roads and roadway infrastructure, which are included in the transportation lifeline. Table 10-34 shows the total miles of evacuation routes within the County that is exposed to the Category 1, 2, 3 and 4 SLOSH Hazard Areas.

Table 10-35 and Table 10-36 summarizes the number of community lifelines exposed to the 1-percent and 0.2-percent flood inundation areas by jurisdiction. Of the 396 community lifelines located in the 1-percent annual chance flood event boundary, the majority of these were identified as other critical facilities (125). Similarly, out of the 452 community lifelines located in the 0.2-percent annual chance flood event boundary, the majority were identified as other critical facilities (137).

Table 10-37 summarizes the number of community lifelines exposed to the Coastal Erosion Hazard Area by jurisdiction. Overall, Cape May County has 72 facilities located in Coastal Erosion hazard areas, representing 9.3 percent of the County's total facilities.

Table 10-38 through Table 10-41 provide detailed information on the distribution and risk levels of various community lifelines within different Sea Level Rise hazard categories across Cape May County. Overall, Cape May County has 70 facilities located in Sea Level Rise +1-Foot hazard areas, representing 9 percent of the County's total facilities. In Sea Level Rise +2-Foot, there are 106 facilities (13.7 percent), in Sea Level Rise +3-Foot, there are 168 facilities (21.6 percent), and in Sea Level Rise +4-Foot, there are 240 facilities (30.9 percent). The Water Systems lifeline has the highest number of facilities in all SLOSH Hazard categories; Category 1 (110), Category 2 (133), Category 3 (153) and Category 4 (175).

Table 10-32. Evacuation Routes Exposed to the 1- and 0.2- Percent Annual Chance Flood Hazard Areas

Total Miles of Evacuation Routes in the County	Hazard Area Type	Total Miles of Evacuation Routes Exposed	Percent of Total
224	1-percent Annual Chance of Flood Event	81	36.4%
	0.2-percent Annual Chance of Flood Event	101	45.0%

Source: Cape May County 2024; FEMA Preliminary/Effective DFIRMs 2014/2017

Table 10-33. Evacuation Routes Exposed to the Coastal Erosion Hazard Area

Total Miles of Evacuation Routes in the County	Hazard Area Type	Total Miles of Evacuation Routes Exposed	Percent of Total
224	Coastal Erosion	15	6.6%

Source: Cape May County 2024; FEMA Preliminary/Effective DFIRMs, LiMWA Lines 2014/2017

Table 10-34. Evacuation Routes Exposed to the Sea Level Rise +1-, +2-, +3-, and +4-Foot Hazard Areas

Total Miles of Evacuation Routes in the County	Hazard Area Type	Total Miles of Evacuation Routes Exposed	Percent of Total
224	Sea Level Rise + 1 foot	3	1.5%
	Sea Level Rise + 2 foot	8	3.4%
	Sea Level Rise + 3 foot	23	10.3%
	Sea Level Rise + 4 foot	36	16.1%

Source: Cape May County 2024; NOAA 2022

Table 10-35. Number of Facilities in the 1- Percent Annual Chance Flood Hazard Area, by Lifeline Category

Jurisdiction	Number of Facilities in the 1- Percent Annual Chance Flood Hazard Area, by Lifeline Category									Total Facilities in Hazard Area	
	Communications	Energy	Food, Hydration, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Water Systems	Other Critical Facilities	Count	% of Total
Avalon (B)	1	0	0	0	1	6	3	12	7	30	93.8%
Cape May (C)	0	0	0	1	1	2	0	10	5	19	45.2%
Cape May Point (B)	0	0	0	0	0	2	0	3	1	6	60.0%
Dennis (T)	3	0	0	0	0	2	2	1	2	10	17.2%
Lower (T)	0	0	2	1	0	1	4	20	17	45	36.9%
Middle (T)	2	0	0	1	0	7	9	7	11	37	24.0%
North Wildwood (C)	6	0	1	0	3	13	0	4	8	35	100.0%
Ocean (C)	1	0	0	3	8	10	6	16	29	73	94.8%
Sea Isle (C)	0	0	0	1	2	5	1	11	9	29	100.0%
Stone Harbor (B)	5	0	0	0	0	2	1	6	5	19	73.1%
Upper (T)	1	0	0	0	0	5	7	2	6	21	29.2%
West Cape May (B)	0	0	0	0	1	0	1	0	0	2	28.6%
West Wildwood (B)	0	0	0	0	0	2	0	1	6	9	90.0%
Wildwood (C)	0	1	2	2	7	10	2	6	15	45	100.0%
Wildwood Crest (B)	8	0	0	0	1	1	0	2	4	16	55.2%
Woodbine (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Cape May County	**27**	**1**	**5**	**9**	**24**	**68**	**36**	**101**	**125**	**396**	**51.0%**

Source: Cape May County 2022,2024; HIFLD 2024; USACE 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-36. Number of Facilities in the 0.2- Percent Annual Chance Flood Hazard Area, by Lifeline Category

Jurisdiction	Number of Facilities in the 0.2- Percent Annual Chance Flood Hazard Area, by Lifeline Category									Total Facilities in Hazard Area	
	Communications	Energy	Food, Hydration, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Water Systems	Other Critical Facilities	Count	% of Total
Avalon (B)	1	0	0	0	1	6	3	12	9	32	100.0%
Cape May (C)	0	0	0	3	2	4	0	10	7	26	61.9%
Cape May Point (B)	0	0	0	0	0	3	0	5	1	9	90.0%
Dennis (T)	3	0	0	0	1	4	2	1	2	13	22.4%
Lower (T)	0	0	2	1	0	1	4	24	17	49	40.2%
Middle (T)	3	0	0	2	0	11	9	10	11	46	29.9%
North Wildwood (C)	6	0	1	0	3	13	0	4	8	35	100.0%
Ocean (C)	2	0	0	3	8	11	6	16	31	77	100.0%
Sea Isle (C)	0	0	0	1	2	5	1	11	9	29	100.0%
Stone Harbor (B)	5	0	0	0	1	5	1	7	7	26	100.0%
Upper (T)	1	0	0	2	0	5	7	3	6	24	33.3%
West Cape May (B)	0	0	0	0	1	0	1	0	0	2	28.6%
West Wildwood (B)	0	0	0	0	0	3	0	1	6	10	100.0%
Wildwood (C)	0	1	2	2	7	10	2	6	15	45	100.0%
Wildwood Crest (B)	14	0	0	0	1	4	0	2	8	29	100.0%
Woodbine (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Cape May County	**35**	**1**	**5**	**14**	**27**	**85**	**36**	**112**	**137**	**452**	**58.2%**

Source: Cape May County 2022,2024; HIFLD 2024; USACE 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-37. Number of Facilities in the Coastal Erosion Hazard Area, by Lifeline Category

Jurisdiction	Number of Facilities in the Coastal Erosion Hazard Area, by Lifeline Category									Total Facilities in Hazard Area	
	Communications	Energy	Food, Hydration, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Water Systems	Other Critical Facilities	Count	% of Total
Avalon (B)	0	0	0	0	0	0	0	1	2	3	9.4%
Cape May (C)	0	0	0	0	0	0	0	0	0	0	0.0%
Cape May Point (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Dennis (T)	1	0	0	0	0	0	2	0	0	3	5.2%
Lower (T)	0	0	0	0	0	0	0	2	14	16	13.1%
Middle (T)	1	0	0	0	0	0	7	1	8	17	11.0%
North Wildwood (C)	0	0	1	0	0	1	0	0	0	2	5.7%
Ocean (C)	0	0	0	1	0	0	2	3	5	11	14.3%
Sea Isle (C)	0	0	0	0	0	0	1	0	3	4	13.8%
Stone Harbor (B)	0	0	0	0	0	0	0	0	1	1	3.8%
Upper (T)	0	0	0	0	0	0	4	0	3	7	9.7%
West Cape May (B)	0	0	0	0	0	0	0	0	0	0	0.0%
West Wildwood (B)	0	0	0	0	0	0	0	0	3	3	30.0%
Wildwood (C)	0	0	0	1	0	0	0	0	3	4	8.9%
Wildwood Crest (B)	0	0	0	0	0	0	0	0	1	1	3.4%
Woodbine (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Cape May County	**2**	**0**	**1**	**2**	**0**	**1**	**16**	**7**	**43**	**72**	**9.3%**

Source: Cape May County 2022,2024; HIFLD 2024; USACE 2024; FEMA Preliminary/Effective DFIRMs, LiMWA Lines 2014/2017
Note: (B) Borough; (C) City; (T) Township

Table 10-38. Number of Facilities in the Sea Level Rise +1-Foot, by Lifeline Category

Jurisdiction	Number of Facilities in the Sea Level Rise +1-Foot Hazard Area, by Lifeline Category									Total Facilities in Hazard Area	
	Communications	Energy	Food, Hydration, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Water Systems	Other Critical Facilities	Count	% of Total
Avalon (B)	0	0	0	0	0	0	3	0	2	5	15.6%
Cape May (C)	0	0	0	0	0	2	0	4	1	7	16.7%
Cape May Point (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Dennis (T)	1	0	0	0	0	0	2	0	0	3	5.2%
Lower (T)	0	0	0	0	0	0	3	0	9	12	9.8%
Middle (T)	0	0	0	0	0	0	9	1	6	16	10.4%
North Wildwood (C)	0	0	0	0	0	0	0	0	0	0	0.0%
Ocean (C)	0	0	0	0	0	0	1	2	4	7	9.1%
Sea Isle (C)	0	0	0	0	0	0	1	1	1	3	10.3%
Stone Harbor (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Upper (T)	0	0	0	0	0	0	5	0	3	8	11.1%
West Cape May (B)	0	0	0	0	0	0	1	0	0	1	14.3%
West Wildwood (B)	0	0	0	0	0	0	0	0	5	5	50.0%
Wildwood (C)	0	0	0	0	0	0	0	1	1	2	4.4%
Wildwood Crest (B)	0	0	0	0	0	0	0	0	1	1	3.4%
Woodbine (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Cape May County	**1**	**0**	**0**	**0**	**0**	**2**	**25**	**9**	**33**	**70**	**9.0%**

Source: Cape May County 2022,2024; HIFLD 2024; USACE 2024; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

Table 10-39. Number of Facilities in the Sea Level Rise +2-Foot, by Lifeline Category

Jurisdiction	Number of Facilities in the Sea Level Rise +2-Foot Hazard Area, by Lifeline Category									Total Facilities in Hazard Area	
	Communications	Energy	Food, Hydration, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Water Systems	Other Critical Facilities	Count	% of Total
Avalon (B)	0	0	0	0	0	0	3	4	2	9	28.1%
Cape May (C)	0	0	0	0	0	2	0	4	1	7	16.7%
Cape May Point (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Dennis (T)	1	0	0	0	0	0	2	0	0	3	5.2%
Lower (T)	0	0	0	0	0	0	3	2	12	17	13.9%
Middle (T)	0	0	0	0	0	0	9	1	7	17	11.0%
North Wildwood (C)	1	0	0	0	0	0	0	1	1	3	8.6%
Ocean (C)	0	0	0	2	1	0	2	8	7	20	26.0%
Sea Isle (C)	0	0	0	0	0	0	1	3	1	5	17.2%
Stone Harbor (B)	0	0	0	0	0	0	0	0	2	2	7.7%
Upper (T)	0	0	0	0	0	0	5	1	3	9	12.5%
West Cape May (B)	0	0	0	0	0	0	1	0	0	1	14.3%
West Wildwood (B)	0	0	0	0	0	2	0	0	6	8	80.0%
Wildwood (C)	0	0	0	0	1	0	1	1	1	4	8.9%
Wildwood Crest (B)	0	0	0	0	0	0	0	0	1	1	3.4%
Woodbine (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Cape May County	**2**	**0**	**0**	**2**	**2**	**4**	**27**	**25**	**44**	**106**	**13.7%**

Source: Cape May County 2022,2024; HIFLD 2024; USACE 2024; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

Table 10-40. Number of Facilities in the Sea Level Rise +3-Foot, by Lifeline Category

Jurisdiction	Number of Facilities in the Sea Level Rise +3-Foot Hazard Area, by Lifeline Category									Total Facilities in Hazard Area	
	Communications	Energy	Food, Hydration, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Water Systems	Other Critical Facilities	Count	% of Total
Avalon (B)	0	0	0	0	0	1	3	6	3	13	40.6%
Cape May (C)	0	0	0	0	0	2	0	6	1	9	21.4%
Cape May Point (B)	0	0	0	0	0	0	0	1	0	1	10.0%
Dennis (T)	1	0	0	0	0	0	2	0	0	3	5.2%
Lower (T)	0	0	0	0	0	0	3	8	13	24	19.7%
Middle (T)	1	0	0	0	0	0	9	2	11	23	14.9%
North Wildwood (C)	1	0	0	0	0	2	0	1	3	7	20.0%
Ocean (C)	0	0	0	3	4	1	4	13	13	38	49.4%
Sea Isle (C)	0	0	0	1	1	0	1	5	3	11	37.9%
Stone Harbor (B)	2	0	0	0	0	0	1	1	4	8	30.8%
Upper (T)	0	0	0	0	0	0	5	1	5	11	15.3%
West Cape May (B)	0	0	0	0	0	0	1	0	0	1	14.3%
West Wildwood (B)	0	0	0	0	0	2	0	0	6	8	80.0%
Wildwood (C)	0	1	0	0	1	0	1	3	3	9	20.0%
Wildwood Crest (B)	1	0	0	0	0	0	0	0	1	2	6.9%
Woodbine (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Cape May County	**6**	**1**	**0**	**4**	**6**	**8**	**30**	**47**	**66**	**168**	**21.6%**

Source: Cape May County 2022,2024; HIFLD 2024; USACE 2024; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

Table 10-41. Number of Facilities in the Sea Level Rise +4-Foot, by Lifeline Category

Jurisdiction	Number of Facilities in the Sea Level Rise +4-Foot Hazard Area, by Lifeline Category									Total Facilities in Hazard Area	
	Communications	Energy	Food, Hydration, Shelter	Hazardous Materials	Health & Medical	Safety & Security	Transportation	Water Systems	Other Critical Facilities	Count	% of Total
Avalon (B)	1	0	0	0	0	2	3	10	4	20	62.5%
Cape May (C)	0	0	0	0	0	2	0	8	1	11	26.2%
Cape May Point (B)	0	0	0	0	0	1	0	1	1	3	30.0%
Dennis (T)	2	0	0	0	0	0	2	0	1	5	8.6%
Lower (T)	0	0	1	1	0	0	3	11	14	30	24.6%
Middle (T)	2	0	0	0	0	1	9	3	11	26	16.9%
North Wildwood (C)	2	0	0	0	3	6	0	2	6	19	54.3%
Ocean (C)	0	0	0	3	6	4	4	14	21	52	67.5%
Sea Isle (C)	0	0	0	1	1	3	1	8	7	21	72.4%
Stone Harbor (B)	2	0	0	0	0	1	1	4	4	12	46.2%
Upper (T)	0	0	0	0	0	1	5	1	6	13	18.1%
West Cape May (B)	0	0	0	0	1	0	1	0	0	2	28.6%
West Wildwood (B)	0	0	0	0	0	2	0	0	6	8	80.0%
Wildwood (C)	0	1	0	0	1	1	1	4	6	14	31.1%
Wildwood Crest (B)	2	0	0	0	0	0	0	1	1	4	13.8%
Woodbine (B)	0	0	0	0	0	0	0	0	0	0	0.0%
Cape May County	**11**	**1**	**1**	**5**	**12**	**24**	**30**	**67**	**89**	**240**	**30.9%**

Source: Cape May County 2022,2024; HIFLD 2024; USACE 2024; NOAA 2022
Note: (B) Borough; (C) City; (T) Township

10.2.4 Economy

Flood events can significantly impact the local and regional economy. This includes but is not limited to general building stock damages and associated tax loss, impacts to utilities and infrastructure, business interruption, impacts on tourism, and impacts on the tax base to Cape May County. In areas that are directly flooded, renovations of commercial and industrial buildings may be necessary, disrupting associated services. Other economic components such as loss of facility use, functional downtime and socio-economic factors are less measurable with a high degree of certainty.

Flooding can cause extensive damage to public utilities and disruptions to delivery of services. Loss of power and communications may occur, and drinking water and wastewater treatment facilities may be temporarily out of operation.

Debris management can be costly and impact the local economy. Hazus estimates the debris produced as result of the 1-Percent Annual Chance Flood Events. Table 10-42 summarizes the estimated debris by jurisdiction. The estimates do not include debris generated by wind, so this is likely a conservative estimate and could be higher if multiple impacts occur. For all events, debris production from Finish is the greatest, with the Flood creating an estimated 441,917 tons of debris, Riverine Flood creating approximately 21,727 tons, and Coastal Flood creating approximately 421,116 tons.

Table 10-42. Debris Production for the 1-Percent Annual Chance Flood (Riverine, Coastal) Events

Jurisdiction	Total (tons)			Finish (tons)			Structure (tons)			Foundation (tons)		
	Flood	Riverine	Coastal	Flood	Riverine	Coastal	Flood	Riverine	Coastal	Flood	Riverine	Coastal
Avalon (B)	66,265	3	67,442	44,154	3	44,531	12,737	0	13,198	9,374	0	9,712
Cape May (C)	28,979	24,228	5,023	19,349	18,259	1,180	5,742	3,583	2,263	3,888	2,386	1,580
Cape May Point (B)	1,777	1,771	6	1,761	1,754	6	10	10	0	6	7	0
Dennis (T)	937	33	905	588	19	569	213	9	205	136	5	131
Lower (T)	16,533	1	16,498	10,425	1	10,410	3,284	0	3,274	2,825	0	2,814
Middle (T)	35,847	105	35,423	20,288	34	20,199	9,285	26	9,105	6,274	45	6,119
North Wildwood (C)	57,758	0	58,103	43,469	0	43,548	8,814	0	8,992	5,474	0	5,563
Ocean (C)	191,421	0	192,456	136,913	0	137,174	32,376	0	32,815	22,132	0	22,467
Sea Isle (C)	103,104	0	103,237	83,682	0	83,764	11,171	0	11,204	8,251	0	8,268
Stone Harbor (B)	18,053	0	18,214	14,422	0	14,475	2,178	0	2,242	1,452	0	1,497
Upper (T)	23,881	1	23,866	10,708	1	10,704	8,032	0	8,024	5,141	0	5,137
West Cape May (B)	1,795	1,783	1	1,660	1,651	1	83	80	0	53	51	0
West Wildwood (B)	25,824	0	25,837	9,889	0	9,895	9,757	0	9,758	6,178	0	6,183
Wildwood (C)	36,071	0	36,273	31,677	0	31,741	2,653	0	2,730	1,741	0	1,801
Wildwood Crest (B)	14,955	4	14,958	12,932	4	12,919	1,221	0	1,228	802	0	811
Woodbine (B)	0	<1	0	0	<1	0	0	0	0	0	0	0
Cape May County	**623,201**	**27,929**	**598,240**	**441,917**	**21,727**	**421,116**	**107,557**	**3,707**	**105,040**	**73,727**	**2,495**	**72,084**

Source: Hazus v6.1; Cape May County 2024; FEMA Preliminary/Effective DFIRMs 2014/2017
Note: (B) Borough; (C) City; (T) Township

10.2.5 Natural, Historic and Cultural Resources

Natural

As Cape May County communities grow, flood events may increase in frequency and severity due to land use changes, the construction of more structures, and the expansion of impervious surfaces. Additionally, the flood extents for the 1-percent and 0.2-percent annual flood events will continue to evolve alongside natural occurrences such as climate change and the increasing severity of storms. These flood events will impact Cape May County's natural and local environment.

The environmental impacts of a flood can include significant water quality and debris-disposal issues. Floodwaters can back up sanitary sewer systems and inundate wastewater treatment plants, causing raw sewage to contaminate residential and commercial buildings and the flooded waterway. Unsecured containers of oil, fertilizers, pesticides, and other chemicals can add their contents to the floodwaters, releasing hazardous materials that may be widely distributed across the floodplain. Water supply and wastewater treatment facilities could be offline for weeks. After the floodwaters subside, contaminated and flood-damaged building materials and contents must be properly disposed of, and contaminated sediment must be removed from buildings, yards, and properties. Severe erosion is also likely, which can negatively impact local ecosystems. The erosion of sediment can deteriorate riverbanks, causing additional flooding impacts in areas that might not have otherwise experienced such conditions.

Parks and recreational areas, although often located near waterways and designed with flooding in mind, are also vulnerable. Flood events can lead to closures of parks, recreation, and community spaces, disrupting residents' lives and hindering access to critical community services.

Coastal erosion is a natural process which defines and shapes coastal ecosystems. While disruptive, some species rely on the impacts of coastal erosion such as numerous nesting shorebirds. Severe coastal erosion events can lead to the destruction of current ecosystems. However, the destruction of one ecosystem leads to the creation of a different ecosystem (i.e. dune systems convert to sand flats or overwash fans). Negative overall impacts to the environment occur when coastal erosion eliminates critical habitat that is unlikely to be restored over time. Elimination of critical habitat is more likely to occur when shore-parallel structures like seawalls obstruct the natural evolution of shoreline ecosystems.

Table 10-43 shows the total acres of land in Cape May County that is exposed to the Category 1, 2, 3 and 4 SLOSH Hazard Areas.

Table 10-43. Acres of Land Exposed to the Sea Level Rise +1-, +2-, +3-, and +4-Foot Hazard Areas

Total Acres in County	Hazard Area Type	Number of Acres Exposed	Percent of Total
183,126	Sea Level Rise + 1 foot	44,095	24.1%
	Sea Level Rise + 2 foot	49,577	27.1%
	Sea Level Rise + 3 foot	55,050	30.1%
	Sea Level Rise + 4 foot	60,688	33.1%

Source: Cape May County 2024; NOAA 2022

Table 10-43 shows the total acres of land in Cape May County that is exposed to the Category 1, 2, 3 and 4 SLOSH Hazard Areas.

Table 10-44. Acres of Wetlands in Cape May County

Jurisdiction	Total Acres	Wetland Acres	Percentage of Wetlands
Avalon (B)	3,179	1,633	51.4%
Cape May (C)	1,845	649	35.2%
Cape May Point (B)	192	87	45.2%
Dennis (T)	40,820	21,435	52.5%
Lower (T)	19,852	8,405	42.3%
Middle (T)	52,934	28,550	53.9%
North Wildwood (C)	1,594	154	9.7%
Ocean (C)	7,553	2,043	27.1%
Sea Isle (C)	1,765	761	43.1%
Stone Harbor (B)	1,480	470	31.8%
Upper (T)	43,784	21,427	48.9%
West Cape May (B)	757	534	70.6%
West Wildwood (B)	233	158	67.7%
Wildwood (C)	1,058	56	5.3%
Wildwood Crest (B)	948	326	34.3%
Woodbine (B)	5,132	1,619	31.5%
Cape May County	**183,124**	**88,306**	**48.2%**

Source: Cape May County 2024; NJDEP 2020
Note: (B) Borough; (C) City; (T) Township

Historic

Historic resources, such as historic places, community facilities, and religious institutions, are all vulnerable to impacts from flooding because they often are not built to modern building code requirements, including design flood elevation and construction standards. Historic resources and structures were often built closely to waterways, increasing their flood risk. Depending on severity, flood events affecting the County could bring devastating loss of life and property to the area in and around historical landmarks.

Additionally, historic buildings subject to landmark laws can pose significant challenges in restoring buildings to their pre-flood status. These laws often require adherence to strict preservation standards, which can complicate and prolong the recovery process. Ensuring that repairs and restorations meet these standards can be costly and time-consuming, further delaying the return of these important structures to their original condition.

Cultural

Cultural resources, such as community facilities and religious institutions, face significant risks of damage because they are not easily replaceable. These facilities often serve multiple functions, acting as communal spaces for different groups, which makes their loss particularly impactful. Flood events can lead to closures of these vital community spaces, disrupting residents' lives and hindering access to critical services. The unique role these cultural facilities play in fostering community cohesion and providing essential services makes their preservation crucial. If severely damaged or destroyed by a flood, these cultural resources are difficult to recreate, leading to a profound loss for the community.

10.3 FUTURE CHANGES THAT MAY AFFECT RISK

Understanding future changes that affect vulnerability can assist in planning for future development and ensure establishment of appropriate mitigation, planning, and preparedness measures. The following sections examine potential conditions that may affect hazard vulnerability.

10.3.1 Potential or Planned Development

The ability of new development to withstand flooding impacts can be enhanced through land use practices and consistent enforcement of codes and regulations for new construction. New development changes the landscape, where buildings, roads, and other infrastructure potentially replace open land and vegetation. This transformation of pervious surfaces (including vegetation) to impervious surfaces increases runoff and the potential for flooding. Proper planning and implementation of green infrastructure can help mitigate these effects by promoting natural water absorption and reducing the risk of flood events. Specific areas of recent and new development are indicated in tabular form and/or on the hazard maps included in the jurisdictional annexes in Volume II (Jurisdictional Annexes) of this plan.

Cape May County has already begun mitigation projects to help reduce the future impacts sea level rise will have on future development. The New Jersey State Hazard Mitigation Plan lists several projects that have been proposed, are ongoing, or have been complete in Cape May County such as beach nourishment projects, inlet flood reduction projects, and coastal habitat restoration and protection projects.

10.3.2 Projected Changes in Population

Changes in population density can significantly alter the ability of residents in the County to mobilize or receive essential services during severe flood events, as there could be a decrease in emergency response staff to provide services which can overwhelm infrastructure and emergency response systems. Refer to Chapter 3 (County Profile), which includes a more thorough discussion about population trends for the County. The County has a highly variable seasonal population that is estimated to be an eight-fold increase from its year-round population. These population increases are most noticeable in barrier island communities such as Ocean City. Increases in seasonal population will increase the overall number of persons at risk to future impacts.

10.3.3 Climate Change

Most studies project that the State of New Jersey will see an increase in average annual temperatures and precipitation. Annual precipitation amounts in the region are projected to increase, primarily in the form of heavy rainfalls, which have the potential to increase the risk of flash flooding and riverine flooding, and flood critical transportation corridors and infrastructure. Increases in precipitation may alter and expand the floodplain boundaries and runoff patterns, resulting in the exposure of populations, buildings, and critical facilities and infrastructure that were previously outside the floodplain. This increase in exposure would result in an increased risk to life and health, an increase in structural losses, a diversion of additional resources to response and recovery efforts, and an increase in business closures affected by future flooding events due to loss of service or access.

Impacts of climate change can lead to shoreline erosion, coastal flooding, and water pollution, affecting man-made coastal infrastructure and coastal ecosystems. Coastal areas may be impacted by climate change in different ways. Coastal areas are sensitive to sea level rise, changes in the frequency and intensity of storms, increase in precipitation, and warmer ocean temperatures. Additionally, oceans are absorbing more carbon dioxide from the

rising atmospheric concentrations of the gas, resulting in oceans becoming more acidic. This could have significant impacts on coastal and marine ecosystems. As the coastline recedes inland as a result of climate change and sea level rise, the County's vulnerability to other hazards, including hurricanes and coastal erosion, may increase.

10.3.4 Other Identified Conditions

Most studies project that the County will see an increase in average annual temperatures and precipitation. Increased severe storm and heavy rainfall are likely to increase the occurrence and severity of flooding in Cape May County. It is anticipated that the County will continue to experience direct and indirect impacts of flooding annually that may induce secondary hazards such as infrastructure deterioration or failure, utility failures, power outages, water quality and supply concerns, transportation delays, accidents, and inconveniences.