



Resilient NJ Emergency Evacuation Preparedness Guide

Table of Contents

Section 0: Guide for Using this Document	1-2
Section 1: Evacuation Preparedness Overview	3-6
Section 2: Hazard Profiles	
Flooding	8-10
Rip Current	11-12
Storm Surge	13-15
Tornado	16-17
Tropical Storms & Hurricanes	18-19
Section 3: Socially Vulnerable Populations	20
People with Disabilities	21
People without Housing	22
Limited English Proficiency	23
Senior or Older Adults	24
Low-Income Residents	25
Youth & Institutions	26
Section 4: Transportation	27
Section 5: Evacuation Checklists	28-29
Section 6: Municipal Maps	30-44
Section 7: References	45-48

This work is made possible with financial assistance from the New Jersey Department of Environmental Protection and the U.S. Department of Housing and Urban Development through the National Disaster Resilience Competition.

The environmental assessments, data, and actions in this plan do not represent guidance or policy of the New Jersey Department of Environmental Protection or the U.S. Department of Housing and Urban Development and do not replace the need for regulatory review by the appropriate local, state, and federal agencies.

If English is not your primary language, you may request language translation services for housing program documents that are available to the public. These translation services are available free of charge. For more information, please call 1-800-822-5552. The agent will connect you with an interpreter or arrange for an interpreter to return your call at your convenience.

This information is available in the following languages upon request:

Español • 中文:繁體版 • Việt-ngữ • 한국어 • Português • فيبرعلا • Kreyòl • ગુજરાતી • Italiano • Polski

www.renewjerseystronger.org

This two-page summary document accompanies the Emergency Evacuation Preparedness Guide and is intended to provide local emergency managers and community planners high-level talking points on the guide when engaging New Jersey residents, especially those who are socially vulnerable. The guide is broken into sections that can act as standalone documents but function as a cohesive set of evacuation information. It is divided into sections related to the following topics:

Hazards

- Flooding
- Rip Current
- Tornado
- Tropical Storms & Hurricanes
- Storm Surge

Socially Vulnerable Populations (SVPs)

- Overview of SVPs
- Limited English Proficiency
- Senior or Older Adults
- Youth & Institutions
- Low-Income Residents
- People with Disabilities
- People without Housing

Additional Resources

- Evacuation Planning Overview
- Transportation
- Checklists

For professionals who assist, guide, or participate in evacuation efforts during a New Jersey disaster, it is important to consider the following:

Information and Contact Resources

- Have a repository of information that is easy for the community to access.
- Consider holding monthly information sessions about resources and programs available for disaster preparation and assistance. More information needs to be readily available about where people can access vital things like food, oxygen tanks, insulin, medicine, blankets, and showers in the event of a disaster.
- There is a need to distribute information through non-digital channels, improve knowledge about resources, and better distribute aid.
- Consider a specialized bilingual team to help distribute evacuation information to individuals with limited English proficiency.
- Launch a program of support that helps residents learn how to keep all important documents and other essentials secure and easily accessible in case of an evacuation.
- Establish a trusted group to notify people without housing that an evacuation is necessary and provide information on how to evacuate if they lack access to transportation.

Transportation

- Make sure all evacuation vehicles can accommodate people with medical issues or medical devices (like a walker). Even when advance notice is given, sometimes medical transport services cannot accommodate these needs.
- Provide all transportation services during the event of an evacuation.
- Establish who can use what forms of public transit in an evacuation.
- Create a map with all public transit options that may be available during an evacuation for those not affected by accessibility issues due to disaster damage.
- Identify paratransit options.

Relief & Recovery

- Evacuation personnel should be trained in how to properly move medical devices.
- There should be specialized evacuation planning for older adults who live in high-rise buildings.
- Have a plan for contactless delivery of meals to seniors during disasters.
- Know how to lift a person with a disability and how to move a wheelchair into an evacuation vehicle.



Image Source: New Jersey Department of Environmental Protection, 2022

Section 1: Evacuation Preparedness

Disasters can strike at any time and any place, resulting in damage to property and infrastructure, as well as personal injuries and loss of life. Disaster preparedness helps reduce the impacts of an event and enables response teams to assist communities more effectively. Preparedness takes place at the individual, household, community, and organizational levels. Being prepared to evacuate is a key component of any preparedness program, from the level of an individual household to a larger organization. This guide provides resources to better prepare all community members for an emergency evacuation.

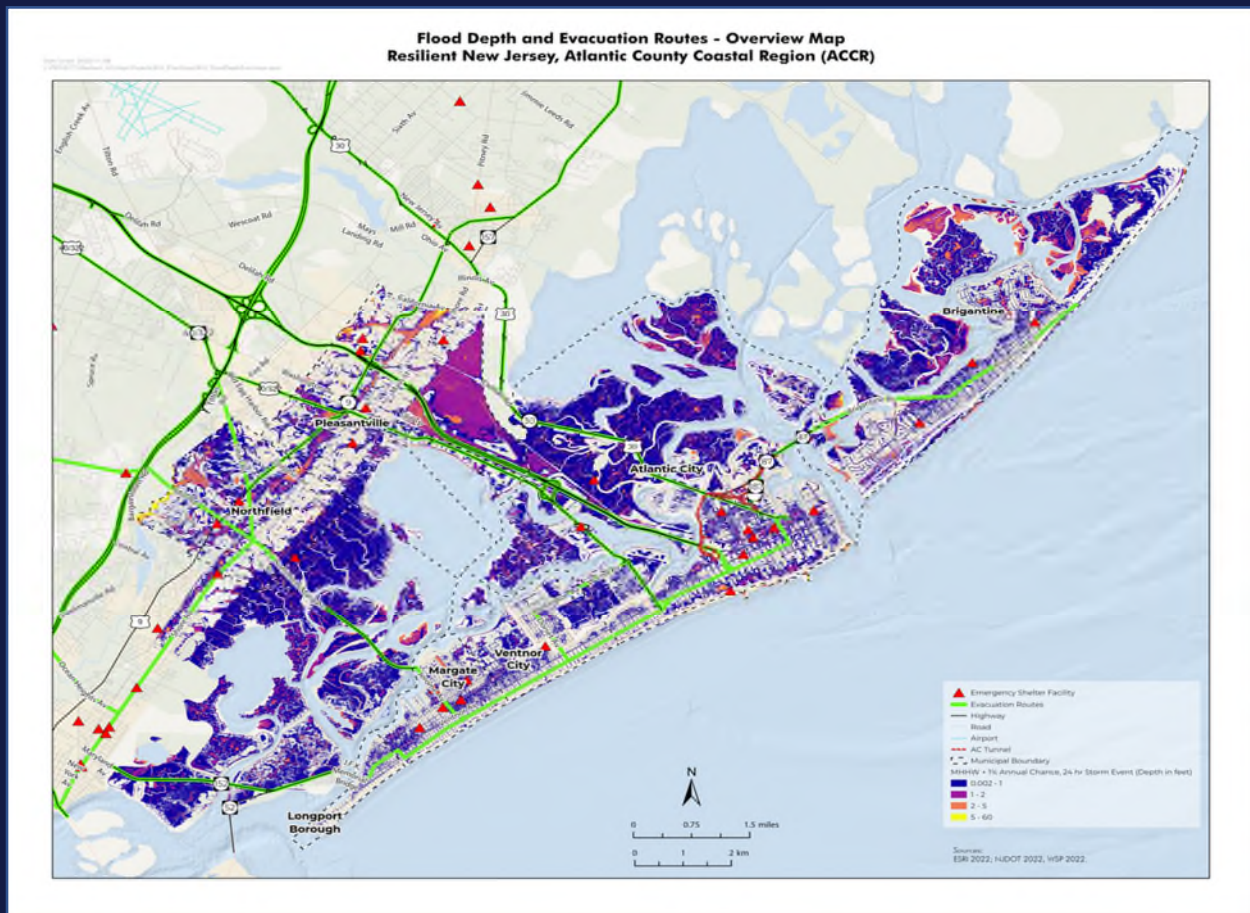
An emergency evacuation is the process of leaving your home or workplace during a state of emergency, such as a super storm. The Atlantic County Office of Emergency Management is responsible for coordinating emergency responses, including emergency evacuations, and works with municipal emergency management coordinators to ensure rapid, well-coordinated responses and to avoid unnecessary duplications of service. Evacuation- and other emergency-related notifications will be communicated using the resources in the table at the end of this section. Should an emergency evacuation notification be issued, you should check these resources for guidance prior to evacuating; guidance may include evacuation timelines, evacuation routes, sheltering, etc. If you do not have access to a vehicle, mass transportation and other evacuation resources available to you should be communicated via the resources listed in the table.

This document is intended to provide you, your household, and your community with the resources to better prepare for an emergency evacuation. In addition to the emergency communications resources noted above, the document contains subsections tailored specifically to socially vulnerable populations as defined in the greater Resilient New Jersey project:

Socially vulnerable populations are defined by Sapam Singh, et al. (2014) as individuals and groups of people who are challenged in their capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard based on physical or socioeconomic factors. Key characteristics can include but are not limited to: age (elderly and very young); low income; language other than English spoken at home; limited access to transportation; inadequate housing/shelter; low educational attainment; ethnic minorities; physically and mentally challenged; and special medical needs (Singh et al., 2014).



*New Jersey Office of Emergency Management
Urban Search and Rescue Team 2021.*



Evacuations

Preparing for an evacuation is essential in New Jersey because of the area’s exposure to an array of hazards. When a disaster event is approaching or occurs, many residents may wonder what to do. State, local, and county emergency managers will guide your evacuations, but there are necessary steps you can take to improve evacuation effectiveness and efficiency. To best prepare yourself, loved ones, friends, neighbors, and pets, create an evacuation plan that is tailored to your specific needs in an emergency. This guide provides hazard profiles to identify which disasters may affect your area and safety tips to prepare for specific scenarios, in-depth considerations for socially vulnerable groups, checklists to guide the development of your evacuation plan, and contact resources for evacuation messages and preparedness information.

When it is time to evacuate during a disaster event, your main sources of information will be local radio stations, TV broadcasts, and emergency alert messages through your phone or email. Local emergency managers will keep residents updated on when and where to evacuate. The map above displays the state roads that have been identified as potential evacuation routes in New Jersey. These routes are flexible and may change to accommodate a specific event; in the event of a disaster, the routes will ultimately be identified by local or county authorities. Municipal-level maps are included in Section 6 of this document. It is important to familiarize yourself with both local and state evacuation routes and include them in your evacuation plan.

Special Considerations

There are unique scenarios that may require additional evacuation planning if you live in a basement, high-rise building, trailer, or mobile home. Table 1 provides evacuation tips for these household types.

Table 1. Considerations for households that reside in a basement, high-rise, trailer, or mobile home.

Household Type	Considerations for Evacuation
Basements	If you live or work in a basement unit, you may experience additional risks even if you live outside an evacuation zone. Many areas can experience flooding due to heavy rainfall from hurricanes or other weather events. If you live in a basement, be prepared to shelter in place in an above-ground shelter.
High Rise Buildings	If you live or work in a high-rise building, stay away from windows, especially above the 10 th floor, because strong storm winds can cause windows to shatter. It can be very difficult to evacuate large numbers of people from elevated floors, so follow your building's evacuation routes and be sure to look them over periodically to be more prepared. It may be useful to practice your evacuation route from time to time if your building has not done an evacuation drill recently (FEMA, 2022c).
Trailers or Mobile Homes	Trailers and mobile homes are the most vulnerable residences in the event of severe weather such as a hurricane. One of the main defenses for this type of residence in the event of a hurricane is to properly tie down or anchor your home. In the event of a disaster, residences in these home types may be called to evacuate when other homeowners are not. If so, it is best to take shelter in a permanent, sturdy home or building, if there is one nearby, on the ground floor away from any windows. Make sure you can get into this building 24 hours a day—a relative or friend's house may be a good option.

Contact Resources

The next page provides a comprehensive list of evacuation resources, weather updates, and contacts for both general and socially vulnerable populations. Having these resources on hand can keep you informed for both warnings of a disaster and updates when disaster impacts your area.

Contact & Informational Resources			
Origin	Source	Type	Description
Federal Agency	National Weather Services Philadelphia/Mt. Holly	Website & Radio	Provides weather updates via website or radio for storm watches and warnings. (www.weather.gov/phi/)
	National Weather Service NYC (for NE NJ Counties)	Website & Radio	Provides weather updates via website or radio for storm watches and warnings. (www.weather.gov/okx/)
	Federal Emergency Management	Website	Learn how to prepare for an emergency, different weather events that would lead to an emergency or evacuation, emergency plans specific to businesses and childcare, and resources to assist in recovery from disasters. (www.ready.gov)
	Community Mobile Alert System	Phone	Nationwide system deployed by the National Weather Service to transmit weather warnings (not watches) to your cell phone. (https://www.fcc.gov/emergency-alert-system)
	Federal Emergency Management	Website	Provides low- and no-cost preparedness tips. (https://community.fema.gov/PreparednessConnect/s/article/FEMA-Data-Digest-Low-and-No-Cost-Ways-to-Prepare)
State Agency	NJOEM Facebook Page	Social Media	Find emergency management updates and weather updates via Facebook. (https://www.facebook.com/READYNEWJERSEY/)
	NJOEM Twitter	Social Media	Find emergency management updates and weather updates via Twitter. (twitter.com/ReadyNJ)
	NJ State Police Facebook	Social Media	Find New Jersey State Police updates on Facebook. (https://www.facebook.com/NewJerseyStatePolice/)
	Subscribe to NJ State Texts on Nixle	Phone	New Jersey residents can register to receive messages by sending a text message with their zip code to 888777 (data rates may apply). (http://local.nixle.com/new-jersey-state-police/)
	NJ Alert	Phone	A free, voluntary, and confidential emergency alerting system that allows the New Jersey Office of Emergency Management officials to send email or text messages to cell phones and other email-enabled devices during an emergency event. Register to receive messages by sending a text message with your zip code to 888777.
	N.J Office of Emergency Management	Website	Plan & prepare for emergencies, get current weather and traffic updates, and receive information on how to stay informed during evacuation events. (https://nj.gov/njoem/)
	ReadyNJ Alerts & Updates Blog	Website	ReadyNJ weather and evacuation alerts. (https://readynj.wordpress.com/)
	Reverse 911	Phone	This a public telephone alert system that notifies New Jersey residents in emergency situations.
	New Jersey's Special Needs Registry for Disasters	Website	Allows New Jersey residents with disabilities or access and functional needs, and their families, friends, caregivers, and associates, an opportunity to provide information to emergency response agencies so emergency responders can better plan to serve them in a disaster or other emergency. (https://www13.state.nj.us/SpecialNeeds/Signin?ReturnUrl=%2fSpecialNeeds%2f)
	Dial 911 followed by the space bar	Phone & Teletypewriter (TTY) Device	When you dial 911, tap the space bar to indicate a TDD (Telecommunications Device for the Deaf) call.
	NJ 211	Phone	New Jersey residents can dial 211, toll-free, for preparedness and disaster-related information 24/7; translation services are available, as well as resources for the houseless population.
New Jersey Homeless Shelter Directory	Website	Comprehensive list of shelters for houseless individuals in New Jersey. (https://www.homelessshelterdirectory.org/state/new-jersey.html)	
Nonprofit Agency	American Red Cross	Website	Get tips on preparing for an evacuation, evacuation aid, local updates on disasters, and where to find a shelter near you. (https://www.redcross.org/get-help/disaster-relief-and-recovery-services/find-an-open-shelter.html)
	American Red Cross Hurricane App	App	Download free to your smartphone to know what to do before, during, and after disasters. Features include first aid, shelter locator, and "I'm Safe" one-touch notification.

Section 2: Hazard Profiles



Image Source: New Jersey Department of Environmental Protection, 2022

Flooding is the partial or complete inundation of normally dry land and typically occurs as a secondary hazard resulting from rain, snow, coastal storms, storm surge, and overflow of dams or other water systems (Ready.gov, 2022a). The two main types of flooding are high tide flooding and inland flooding (FEMA, 2020).

High tide flooding occurs when water levels are pushed above normal high tide marks by sea level rise and local factors such as prevailing winds, ocean currents, and strong tidal forces (NOAA, 2022f).

Inland flooding is caused by a buildup of moderate rainfall over time, an intense rain event, or a river overflow due to ice, debris, or dam or levee failure (NSSL, 2022).

Flood zones are determined by a range of factors and categorized by their likelihood of occurring as 10-, 100-, and 500-year zones.

A 100-year flood zone, also known as a 1% annual chance flood, means there is a 1-in-100 chance of flooding in any given year within that area. An area within a 500-year flood zone has a 1-in-500, or 0.2%, chance of flooding in any given year (McCaughey, 2021). The infographic below depicts the difference between flood zones.

To better understand your area's flood risk, visit [Floodsmart.gov](https://www.floodsmart.gov).

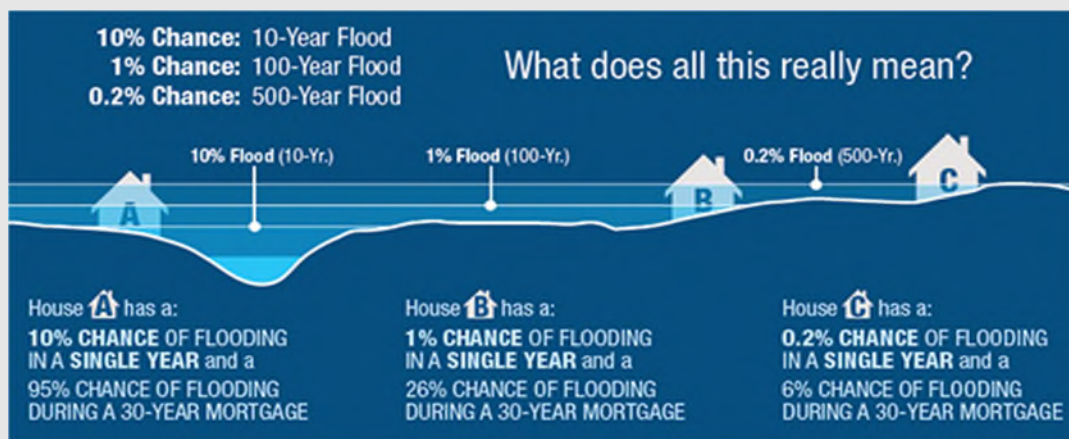


Image Source: McCaughey, 2021



Image Source: Farrell, 2021

Safety Tip

During a flooding event, you may be alerted that there are flash floods in your area. This type of flood occurs when water rises rapidly, resulting in a high-flow velocity. Flash floods have enough force to pull up and carry significant amounts of large debris, such as cars and trees. Rapidly moving water carries momentum and force that can damage structures and infrastructure and cause injury or loss of life from the water impact, or the debris carried by the water. Never attempt to cross floodwaters, no matter what type of vehicle you have. The depth of floodwaters can be deceiving, and just one foot of moving water can sweep a large SUV off the road and just six inches can knock a person down (Ready.gov, 2020). Use designated evacuation roads appointed by local, county, or state officials; however, if you do find yourself in floodwaters in a vehicle and the vehicle remains dry inside, stay in the vehicle. If water is rapidly rising inside the vehicle, exit it immediately, seek refuge on the roof, and signal for help. If your vehicle stalls, leave it immediately unless water is moving at an extremely high velocity; seek higher ground to avoid being swept away (FEMA, 2022b).

For More Information

- 📄 Atlantic County Hazard Profile: www.atlantic-county.org/hazard-mitigation/plan-draft.asp
- 📄 New Jersey Office of Emergency Management (NJOEM): <https://nj.gov/njoem/>
- ❓ NJOEM Submit Questions: www.state.nj.us/cgi-bin/dep/contactdep_general.pl
- ☎️ NJOEM Phone: 1-800-331-0075

For more information on flood zones in your community, visit the New Jersey Office of Emergency Management website above or the FEMA Flood Map Service Center at msc.fema.gov/portal/home. See the next page of this document for the Atlantic County Coastal Region Flood Depth map or see Section 6 for municipal maps.

Flood Depth and Evacuation Routes - Overview Map Resilient New Jersey, Atlantic County Coastal Region (ACCR)

Date: 2/22/22
 File: C:\Users\jacob\OneDrive\Documents\ResilientNJ\Atlantic County Coastal Region (ACCR)\Flood Depth and Evacuation Routes - Overview Map

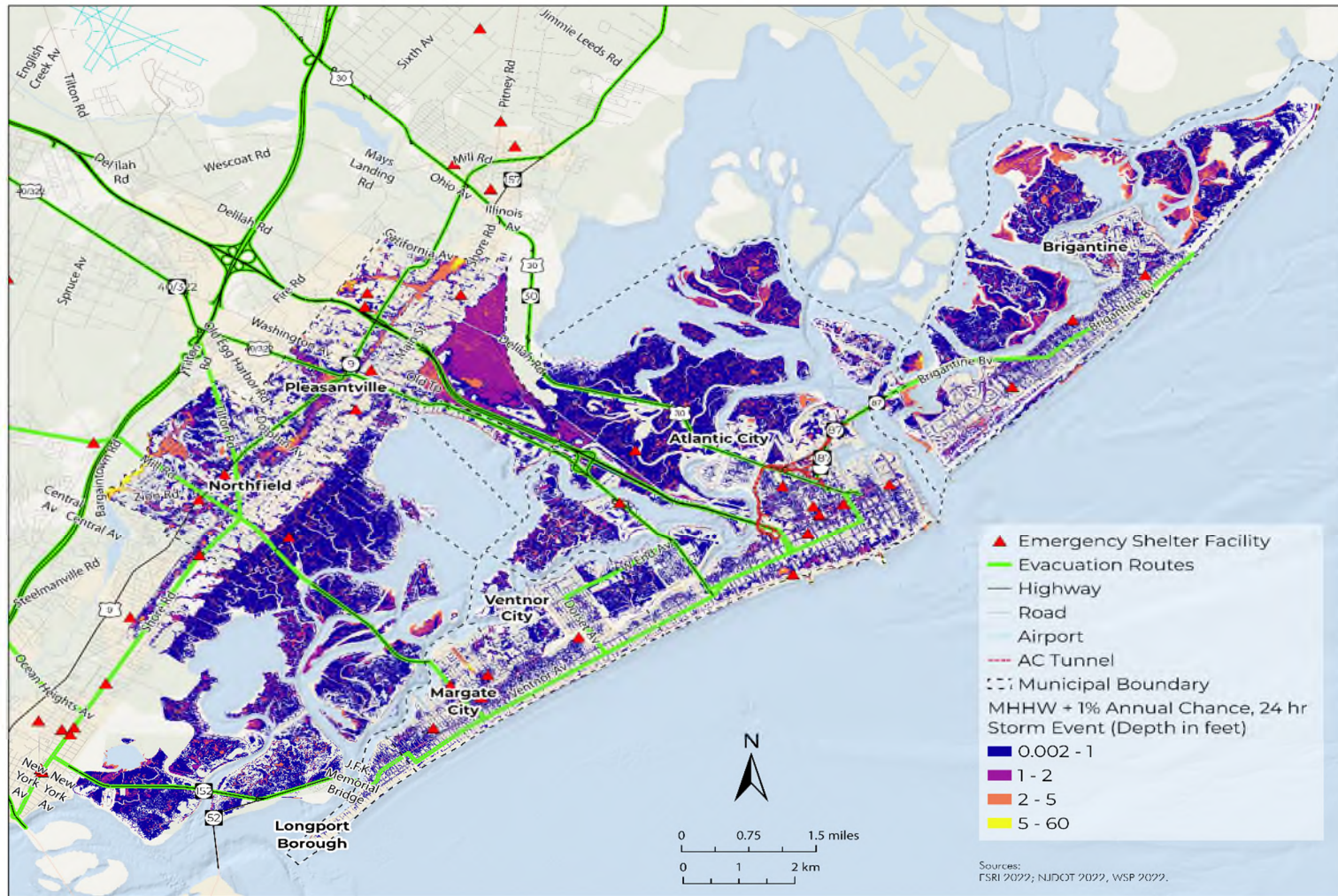
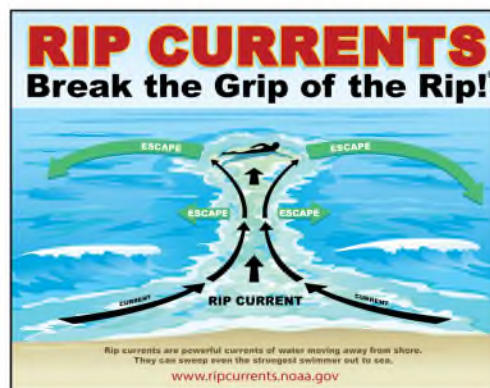




Image Source: New Jersey Department of Environmental Protection, 2022

Rip currents are formed by wave action and winds pushing water down the beach. They are narrow, powerful channels of fast-moving water and are easily spotted by their blue or greenish color compared to the surrounding water. Rip currents are dangerous because they can move at speeds of up to 8 feet per second and can be present days before a hurricane, tropical storm, or other weather event (NOAA, 2022a). Rip currents can even be present when there is no threat of a hurricane or tropical storm.

Fortunately, rip currents do not pull you under the water, but they do pull you away from shore. Knowing how to react if caught in a rip current is important. See the safety tip below to help better prepare yourself.



IF CAUGHT IN A RIP CURRENT

- ◆ Don't fight the current
- ◆ Swim out of the current, then to shore
- ◆ If you can't escape, float or tread water
- ◆ If you need help, call or wave for assistance

SAFETY

- ◆ Know how to swim
- ◆ Never Swim alone
- ◆ If in doubt, don't go out

More information about rip currents can be found at the following web sites:

www.ripcurrents.noaa.gov
www.usla.org



Image Source: NOAA, 2022a

Rip currents are not to be confused with rip tides, which are strong currents formed when the tide pulls out. Rip currents form because waves are breaking on the shoreline or a break in a sand bar and the excess water is flowing back out to sea, causing a narrow current to form. Rip currents can occur just past the shoreline or extend out hundreds of yards from the shoreline. They typically flow at about 5 mph, which can take out even the strongest of swimmers, and are the greatest hazard for beachgoers. The intensity of a rip current can become increasingly dangerous when a hurricane approaches the shoreline (NOAA, 2022c). Check your local rip current forecast (see link below) and weather forecasts because rip currents can be at the beach days before a hurricane is expected to reach land. Connect with local lifeguards to ask about ocean conditions when you arrive at the beach and look for any posted signs that may indicate it is not safe to be in the water.



Image source: Mills, 2013

Safety Tip

You should never enter water where a rip current is present. However, if you are caught in a rip current, do not fight the current or swim directly to shore within the rip current. Instead, you should swim out of the current laterally, then to shore. If you are having trouble escaping the rip current, you should either float or tread water. Always call or wave for assistance if you need help when swimming, know how to swim, and never swim alone. If you are ever questioning whether a rip tide is present, don't go in the water. Rip currents are one of the main reasons people drown near ocean beaches. You should only swim in areas where a lifeguard is present, and it is important to pay attention to local beach signs to determine if it is safe or not to swim (NOAA, 2022a).

For More Information

- 🖥 Atlantic County Hazard Profile: www.atlantic-county.org/hazard-mitigation/plan-draft.asp
- 🖥 New Jersey Office of Emergency Management (NJOEM): <https://nj.gov/njoem/>
- ❓ NJOEM Submit Questions: www.state.nj.us/cgi-bin/dep/contactdep_general.pl
- ☎ NJOEM Phone: 1-800-331-0075

For more information on rip currents in your community, visit the New Jersey Office of Emergency Management website above or the National Weather Service Surf and Rip current Forecast weather.gov/phi/surfrfp7. See Section 6 of this document for Atlantic County and municipal maps.



Image Source: New Jersey Department of Environmental Protection, 2022

A storm surge is an abnormal rise of ocean water generated by a storm. This hazard occurs when water is pushed toward the shore by the force of a storm's winds and can combine with normal tides, increasing their reach by 20 feet or more (NOAA, 2022e). Wind-driven waves are carried on top of this storm tide. The rise in water level resulting from these circumstances can cause severe flooding and erosion in coastal areas (FEMA, 2022e).

In coastal communities, storm surge is typically the greatest threat to lives and property when a hurricane occurs. Storm surge is often the leading cause of death due to the rise of ocean as hurricanes touch down on land.

During Hurricane Ida in 2021, 29 people died from storm surge and high-water levels (Stanmyre, 2021).

Storm surge is accompanied by battering waves that become a threat to buildings and homes directly on the coast. Extended pounding of frequent waves can wipe out structures. Additionally, currents from the tides combined with storm surge waves can cause serious erosion. Beaches and coastal highways can be destroyed. Noncoastal communities up to 30 miles or more from the coastline can be affected by the effects of storm surge (NOAA, 2022e).

The magnitude of storm surge is affected by several factors. Understanding why and how storm surge occurs when a hurricane is approaching landfall can help determine the best mitigation and preparedness efforts. Review the graphic below to see how a hurricane can create a storm surge.

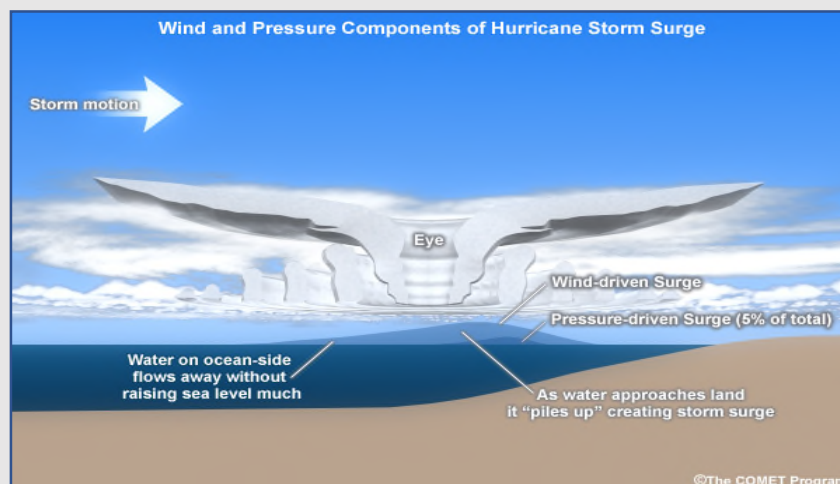


Image Source: NOAA, 2022e



Image Source: New Jersey Department of Environmental Protection, 2022

Safety Tip

Evacuation preparedness includes activities to protect your home before a disaster strikes, which can reduce hesitation to leave your home when an emergency event requires it. You can take the following measures to improve the safety of your home during storm surge: install bracing kits or a reinforced garage door; install storm shutters, board over windows and doors, or install high-impact glass; secure objects outside your home to prevent them from causing damage; trim or remove dead or rotting trees and limbs; seal cracks and gaps around doors and windows with caulk; and anchor fuel tanks and utility links (FEMA, 2022e).

For More Information

- 📄 Atlantic County Hazard Profile: www.atlantic-county.org/hazard-mitigation/plan-draft.asp
- 📄 New Jersey Office of Emergency Management (NJOEM): <https://nj.gov/njoem/>
- ❓ NJOEM Submit Questions: www.state.nj.us/cgi-bin/dep/contactdep_general.pl
- ☎️ NJOEM Phone: 1-800-331-0075

For more information on storm surge in your community, visit the New Jersey Office of Emergency Management website above or the National Hurricane Center (NHC) Storm Surge Risk Maps nhc.noaa.gov/nationalsurge/. See the next page of this document for the Atlantic County Coastal Region Storm Surge map or visit Section 6 for municipal maps.

NHC Storm Surge Evacuation Routes - Overview Map Resilient New Jersey, Atlantic County Coastal Region (ACCR)

Map Date: 02/20/24
 Project File Name: J:\Project\ResilientNJ_Accr\Map\Map_02_20_24.aprx

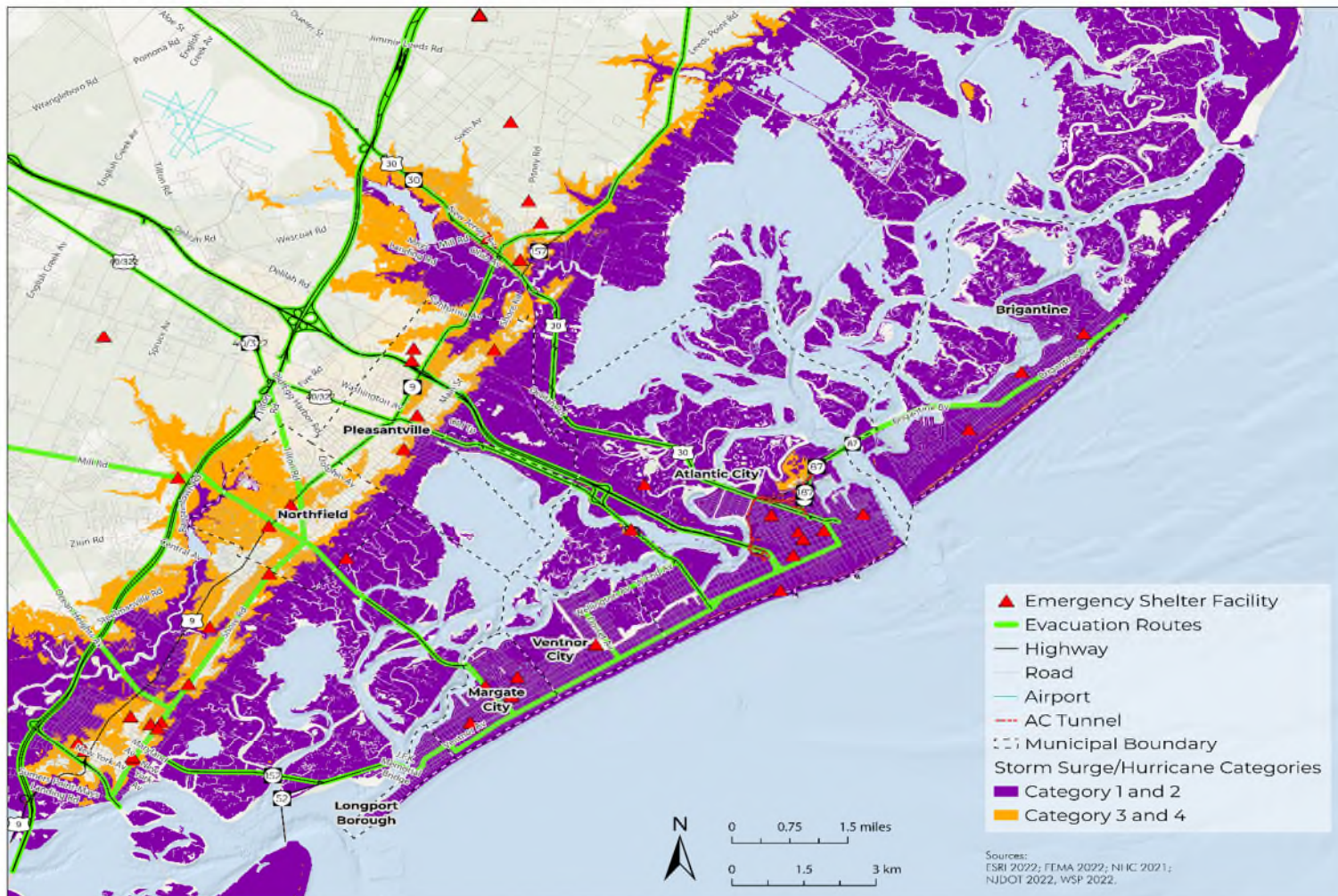




Image Source: New Jersey Department of Environmental Protection, 2022

Hurricanes can produce tornadoes as they move onto land. A tornado is characterized by violent, rotating columns of air that extend from the ground to the thunderstorm above (Ready.gov, 2022d). It is produced when cool air mixes with a layer of warm air, causing the warm air to rapidly rise into a tunnel formation (NJOEM, 2022). The effects of tornadoes combined with hurricane-force winds can produce substantial damage. On average, five tornadoes of low magnitude touch down in Atlantic County each year; however, when combined with hurricanes or other strong weather events, a tornado can become quite intense and damaging (Atlantic County, 2021). The tornadoes associated with tropical storms and hurricanes occur most frequently in September and October, when tropical storm instances are at their peak in New Jersey (Atlantic County, 2021). Tornadoes are measured based on damage intensity by the Enhanced Fujita Scale (EF Scale). This scale factors in a combination of damage indicators and degrees of damage to determine the range of wind speeds a particular tornado likely produced, then assigns a rating (NOAA, 2022b). The scale is ranked from zero to five, zero being the least destructive and five the most destructive. See the table below for the EF Scale descriptions for each tornado type.

F Scale	Character	Estimated winds	Description
Zero (F0)	Weak	40–72 mph	Light Damage. Some damage to chimneys; branches broken off trees, shallow-rooted trees uprooted, sign boards damaged.
One (F1)	Weak	73–112 mph	Moderate damage. Roof surfaces peeled off; mobile homes pushed off foundations or overturned; moving cars pushed off road.
Two (F2)	Strong	113–157 mph	Considerable damage. Roofs torn from frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light objects become projectiles.
Three (F3)	Strong	158–206 mph	Severe damage. Roofs and some walls torn from well-constructed houses; trains overturned; most trees in forested areas uprooted; heavy cars lifted and thrown.
Four (F4)	Violent	207–260 mph	Devastating damage. Well-constructed houses leveled; structures with weak foundation blown some distance; cars thrown; large missiles generated.
Five (F5)	Violent	260–318 mph	Incredible damage. Strong frame houses lifted off foundations, carried considerable distances, and disintegrated; car-sized missiles airborne for several hundred feet or more; trees debarked.

Image Source: NOAA, 2022b







*The EF-3 tornado that decimated a neighborhood Wednesday 9/1/21 in Mullica Hill.
Image Source: Guion, 2021*

Safety Tip

There are key danger signs to consider in the event of a tornado. Local weather channels should make it known if a tornado is coming to your area, but the onset can be quite rapid, sometimes within a matter of minutes. It is important to watch the sky; however, some tornadoes have no visible tunnel and are only indicated by a cloud of debris. Tornadoes can be accompanied by hail or heavy rain, making it difficult to see the funnel, followed by a strange calmness or an extreme wind shift. Being able to identify when a tornado is coming can greatly improve your evacuation process and your chances of safely avoiding the worst effects of a tornado.

For More Information

-  Extensive Hazard Profile: www.atlantic-county.org/hazard-mitigation/plan-draft.asp
-  New Jersey Office of Emergency Management (NJOEM): <https://nj.gov/njoem/>
-  Submit Questions: www.state.nj.us/cgi-bin/dep/contactdep_general.pl
-  Phone: 1-800-331-0075

For more information on tornadoes in your community, visit the New Jersey Office of Emergency Management website above or the National Weather Service's Storm Predictor Center spc.noaa.gov/wcm/. See Section 6 of this document for Atlantic County and municipal maps.



Image Source: NASA GSFC GOES, 2011

The Atlantic hurricane season lasts from June 1 to November 30. New Jersey's tropical storm activity is typically between August and late October (Ready NJ, 2014). A tropical storm has maximum sustained winds of 39 to 73 mph, while a hurricane has maximum sustained winds of 74 mph or higher and can be up to 600 miles across (FEMA, 2022a). Both can be life-threatening and generate secondary hazards such as storm surge, flooding, high winds, and tornadoes. These types of weather events pose a much higher risk for barrier islands, coastal communities, and mobile home parks or other housing vulnerable to flooding (NJOEM, 2022).

The potential damage from a tropical storm or hurricane varies tremendously depending on the severity and strength of the storm. It can cause impacts ranging from minor flooding and no structural damage to severe casualties, demolished communities, and extensive power outages that can last for weeks at a time. Both can cause many secondary hazards such as extreme wind, storm surge, coastal erosion, riverine flooding, wave action hazards, and tornadoes (Atlantic County, 2021). New Jersey residents are impacted on a regular basis by hurricanes and tropical storms. A typical storm season in New Jersey sees about 14 named storms, with seven of those becoming hurricanes. On average, three of those storms will end up being major storms that impact New Jersey residents more significantly (NOAA, 2022d).

Past Major Storm Events

October 29–30, 2012, Hurricane Sandy: the most destructive hurricane ever recorded in New Jersey and the fourth costliest hurricane in U.S. history, causing severe damage and leaving some residents without power for up to 3 weeks.

September 30, 2010, Tropical Storm Nicole: caused flooding with rains of 4.79 inches of precipitation.

August 27–28, 2011, Hurricane Irene: caused beach erosion, major flooding, downed trees, and power outages.

July 10, 2020, Tropical Storm Fay: caused maximum sustained winds of 50 mph and was the first landfalling cyclone since Hurricane Sandy.

September 1, 2021, Hurricane Ida: the remnants of this hurricane brought tornadoes and flash flooding.



Image Source: Coast Guard, 2012

Safety Tip

If you are evacuating when a hurricane has hit landfall or afterward, you should beware of many dangers caused by structural damage and debris from the storm. You should stay out of floodwaters and off of flooded roads, be careful near damaged buildings and only go near them when local authorities have determined it is safe and stay clear of fallen power lines and report them to your local electric company if you come across one. The risk of injury during and after a hurricane or tropical storm is very high because of displaced items, debris, and high-water levels. It is important to protect yourself and to take care of any wounds or injuries you get during this time to prevent infection. Medical assistance and emergency personnel may not be able to provide rescue response until days after a large storm, so protecting yourself is very important before, during, and after an evacuation (CDC, 2022).

For More Information

-  Atlantic County Hazard Profile: www.atlantic-county.org/hazard-mitigation/plan-draft.asp
-  New Jersey Office of Emergency Management (NJOEM): <https://nj.gov/njoem/>
-  NJOEM Submit Questions: www.state.nj.us/cgi-bin/dep/contactdep_general.pl
-  NJOEM Phone: 1-800-331-0075

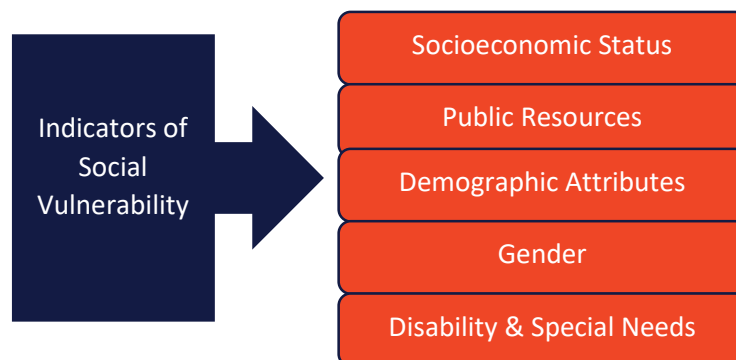
For more information on tropical storms and hurricanes in your community, visit the New Jersey Office of Emergency Management website above or the National Hurricane Center nhc.noaa.gov/nationalsurge/. See Section 6 of this document for Atlantic County and municipal maps.

Section 3: Socially Vulnerable Populations

Disaster events disproportionately impact socially vulnerable communities, exposing them to greater health and safety risks, costs, and barriers to evacuate. Socially vulnerable populations may be defined as individuals and groups of people who are challenged in their capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard based on physical or socioeconomic factors (Singh et al., 2014). Key characteristics can include but are not limited to: age (elderly and very young); low income; language other than English spoken at home; limited access to transportation; inadequate housing/shelter; low educational attainment; ethnic minorities; physically and mentally challenged; and special medical needs.

The more prepared and well equipped the general population is to react appropriately during emergencies, the higher the likelihood that resources will be available for the acute needs of the socially vulnerable (Hoffman, 2009). Socially vulnerable populations are more at risk in the event of a disaster, and it is important for residents to have an evacuation plan with specific resources that meets the needs of individuals and groups that are identified as socially vulnerable.

A proactive first step for individuals who fall within a socially vulnerable population is registering in the State of New Jersey's Office of Emergency Management's [NJ Register Ready](#). This resource allows New Jersey residents with access and functional needs and their families, friends, and caregivers an opportunity to provide emergency response personnel with critical information to better serve them in a disaster or other emergency (NJOEM, 2022).



There are additional evacuation resources that are specific and unique to each socially vulnerable population, listed below and discussed further in the sections that follow:

1. Limited English Proficiency Residents
2. Low-Income Residents
3. People with Disabilities
4. People without Housing
5. Senior or Older Adults
6. Youth & Institutions

People with Disabilities



Image Source: Shutterstock, 2022

People with disabilities must consider how a disaster might affect their individual needs. Residents with physical or mental disabilities have unique needs and vulnerabilities pertaining to housing, transportation, and medical care, and they often rely heavily on social and support services. Often, these individuals are also heavily reliant on caregivers to facilitate their needs, coordinate services, and assist them with day-to-day tasks. If you have a disability, it is important that you or a qualified caregiver identify what kind of resources you use on a daily basis, like medications or durable medical equipment, and what you might do if they are limited or not available.

Additionally, if you rely on Social Security or other regular benefits, you should switch to electronic payments as mail services can be disrupted for weeks (Ready.gov, 2022c).

Evacuation Preparedness Tips

Tips for those with severe speech, hearing, or language disabilities:

- When you dial 911, tap the space bar to indicate a TDD (Telecommunications Device for the Deaf) call on a Teletypewriter (TTY) Device.
- Store a writing pad and pencils to communicate with others.
- Keep a flashlight handy to signal your whereabouts to other people and for illumination to aid in communication.
- Remind friends, neighbors, and family if cannot completely hear warnings or emergency instructions. Ask them to be your source of emergency information as it comes over their radio.

Below are resources to help prepare for a disaster, tailored to residents with disabilities. For more information, see section 1 of this document for New Jersey evacuation preparedness resources.

Source	Type	Description
Ready.gov	Website (ready.gov/low-and-no-cost)	Provides tips on evacuation preparedness that are of low or no cost.
Red Cross Disasters and Financial Planning	Website (www.redcross.org/get-help/disaster-relief-and-recovery-services/recovering-financially.html)	Provides tips on recovering financially after a disaster.
FEMA Individuals and Families Disaster Assistance	Website (www.fema.gov/assistance/individual)	See if you are eligible for support from FEMA to recover from a major disaster.

People without Housing



Image Source: Shutterstock, 2022

In January 2021 the state of New Jersey reported that 8,097 of its residents are experiencing houselessness, with about 1,493 persons identified as chronically houseless (NJ 2-1-1, 2022). The consequences of disasters for the houseless population in New Jersey are severe, as these residents are already experiencing crisis; a disaster can multiply their difficulties, while adversely affecting their ability to cope. It is important that teams with trusted sources such as service providers, outreach workers, or EMTs assist the houseless.

If you or someone you know is struggling with houselessness, you can find a local shelter by calling 211 or 877-652-1148 and asking for help.

Evacuation Preparedness Tips

If you are experiencing houselessness and live in a disaster-prone area, consider the following:

- Store water in plastic containers such as soft drink bottles. Avoid using containers that will decompose or break, such as paper cartons or glass bottles.
- If you have children or other people you are caring for, make sure you have at least one water container per person.
- Try to locate a sealable container, bag, or basket to keep important items in to take with you (e.g., cellphone, clothing, identification information).
- Find a nearby shelter with evacuation resources.

Below are resources to help prepare for a disaster that are tailored resources for houseless residents to find shelter in New Jersey. For more information see section 1 of this document for New Jersey evacuation preparedness resources.

Name	Location	Contact
Atlantic City Rescue Mission	2009 Bacharach Boulevard Atlantic City, NJ 08401	(609) 345-5517
Atlantic County Women's Center	P.O. Box 311 Northfield, NJ 08225	(607)-646-6767
Covenant House of New Jersey	929 Atlantic Avenue Atlantic City, NJ 08401	(609) 348-4070
Salvation Army	22 South Texas Avenue Atlantic City, NJ 08401	(609) 344-0660

Limited English Proficiency



Image Source: Shutterstock, 2022

Language barriers may prohibit people with limited English proficiency from accessing information about emergencies and evacuations. In New Jersey, 44.6% of residents have limited English proficiency, which limits their access to evacuation and emergency notifications (Migration Policy Institute, 2019).

New Jersey residents can dial 211 to receive translation services that are free, confidential, and always available. Additionally, the FEMA app provides evacuation preparedness tips and evacuation alerts that are available in both Spanish and English versions. See the table below for more information on these resources.

Evacuation Preparedness Tips

If you do not speak English as your primary language or have a limited ability to write, read, or speak English, consider the following in an evacuation:

- Make sure you have a way to get evacuation notifications in your primary language (e.g., by phone, app, or friend/family member).
- Consider including in your evacuation plan someone who can speak English fluently.
- Keep a list of resources with translation services for disaster events.
- Consider getting an English phrase book or pocket dictionary to keep in your emergency preparedness kit.

Below are resources to help prepare for a disaster, tailored to limited English proficient residents. For more information see section 1 of this document for New Jersey evacuation preparedness resources.

Source	Type	Description
NJ 2-1-1	Phone/Email/Website (nj211.org)	Free statewide live assistance phone line open 24/7 that offers translation services
New Jersey Office of Emergency Management Register Ready	Website (nj.gov/njoem/plan-prepare/access-functional-needs.shtml)	Multilingual brochure options to aid NJ residents with access and functional needs on evacuation preparedness
FEMA App	App	Evacuation preparedness tips in English and Spanish

Senior or Older Adults



Image Source: Shutterstock, 2022

Older adults are disproportionately affected by disasters due to the impacts such events can have on their mental and physical health, well-being, and economic security. Older adults can be dependent on the availability of healthcare services, accessible transportation, special diets, medication, mobility devices, access to power, communications, and other vital resources (Kassraie, 2019).

FEMA suggests that older adults maintain an emergency preparedness plan to reduce the impacts of disasters and make their community (e.g., friends, neighbors, family) aware of it (FEMA, 2022f). The plan should identify specific resources and requirements needed to evacuate, such as the mode of transportation for an evacuation.

Evacuation Preparedness Tips

Senior or older adults should consider the following actions when developing an emergency evacuation preparedness plan:

- Prepare all your care items, medications, and medical equipment to easily be taken with you during a disaster.
- Store evacuation supplies in a container with wheels.
- Give a copy of your evacuation plan to someone in your community (friends, neighbors, family, etc.).
- Arrange or identify transportation if you are not able to readily transport yourself during an evacuation.
- Choose a contact person who will check on you during a disaster, and set up a system to do so (e.g., by phone, knocking on doors).

Below are resources to help prepare older or senior adults if an evacuation occurs. For more information, see section 1 of this document for New Jersey evacuation preparedness resources.

Source	Type	Description
Red Cross Disaster Preparedness for Seniors	Website (www.redcross.org/get-help/how-to-prepare-for-emergencies/older-adults.html)	Provides in-depth evacuation preparedness tips and checklists.
AARP Emergency Preparedness Plan	Website (https://www.aarp.org/home-family/your-home/info-2019/fema-disaster-preparedness-tips.html)	Provides suggestions for before, during, and after an emergency for older/senior adults or caregivers.

Low-income Residents



Image Source: Shutterstock, 2022

The U.S. Department of Housing and Development (HUD) defines a low-income household as one whose total income does not exceed 80% of the median income for the area (HUD, 1998). An extreme weather event may exacerbate financial insecurity for these residents, as lost wages and other financial hardships are more likely to push already struggling families into poverty.

Disaster preparedness can reduce financial burdens associated with these events. According to Ready.gov (2022), there are preparedness options that require low or no cost. For instance, the FEMA app provides evacuation preparedness tips, checklists, and evacuation alerts for free. If you have a cell phone, check with your service provider if your phone is enabled to see Wireless Emergency Alert (WEA) notifications (NJOEM, 2022).

Evacuation Preparedness Tips

Emergency preparedness kits don't have to be expensive; consider the following:

- Build your emergency supply kit using the free checklists attached to this document and start with items you may already have in your home such as a flashlight, copies of important documents, water, and non-perishable foods.
- Look into local charities in your area; some may supply free emergency kits or supplies in your area.
- Community food banks are a potential resource for food-insecure families looking to stock their emergency supply kit.
- Locate nearby shelters or family members that you may evacuate to in disaster.

Below are resources to help prepare for the financial burden of a disaster, tailored for low-income residents. For more information, see section 1 of this document for New Jersey evacuation preparedness resources.

Source	Type	Description
Ready.gov	Website (ready.gov/low-and-no-cost)	Provides tips on evacuation preparedness that are of low or no cost.
Red Cross Disasters and Financial Planning	Website (www.redcross.org/get-help/disaster-relief-and-recovery-services/recovering-financially.html)	Provides tips on recovering financially after a disaster.
FEMA Individuals and Families Disaster Assistance	Website (www.fema.gov/assistance/individual)	See if you are eligible for support from FEMA to recover from a major disaster.

Youth & Institutions



Image Source: Shutterstock, 2022

Children spend a lot of time outside their homes in school, recreational facilities, after school programs, and community programs. Youth should work on an evacuation plan with their family or care providers to know how to react inside and outside their home.

Youth can be changemakers in evacuation preparedness by sharing information they have learned with parents and their communities, and they can offer creative and resourceful preparedness ideas (Youth.gov, 2022). For youth interested in a disaster preparedness leadership role, click the link to the FEMA Youth Preparedness Council, below.

www.fema.gov/emergency-managers/individuals-communities/youth-preparedness-council

Evacuation Preparedness Tips

Start the conversation on evacuation preparedness by doing the following:

- Choose who you will contact in the event of an emergency, preferably out of state, and memorize their contact details.
- Decide on a familiar meeting location within your community and somewhere outside your area to be prepared for any event.
- After you've created a plan and collected supplies, practice regularly what you would do in the event of an emergency to avoid confusion if one does occur.

Below are resources to help prepare youth for a disaster. For more information, see section 1 of this document for New Jersey evacuation preparedness resources.

Source	Type	Description
Ready.gov	Website (https://www.ready.gov/kids)	Provides tips on evacuation preparedness tailored to youth.
NJ Office of School Preparedness & Emergency Planning	Website (https://www.nj.gov/education/security/)	Provides detailed New Jersey Emergency Management Plan for schools and youth.
State of New Jersey Parent Link	Website (https://www.nj.gov/njparentlink/)	Provides various tools for temporary housing, food assistance, etc. for parents.

Section 4: Transportation

Transportation is key in the event of an evacuation; therefore, knowing the evacuation routes in your area or methods of transportation you will have access to is important. State evacuation routes are shown in the Overview (Section 1) of this document, and municipal-level evacuation routes are provided in Section 6.

It is important to note that if you are using a personal vehicle or are in a car with family members or friends during an evacuation, it is not safe to travel in a vehicle on flooded roads. Use designated evacuation roads appointed by local, county, or state officials. Be sure to always follow designated routes because some evacuation routes may require you are on foot depending on the type of disaster. Plan for how you will leave and where you will go when it is time to evacuate. Do not take shortcuts because their may be obstructions preventing a safe and accessible evacuation route (Ready.gov, 2022b).

If you do not have access to a car, broadcast information should let you know about the bus or other transit routes that should be available to you in a disaster (NJOEM, 2022). The table lists government entities that could be used for transit in anticipation of a disaster event. Visit www.state.nj.us/humanservices/dds/hottopics/transportation/ for more transportation and contact information for Paratransit Services.

Transit Name	Link
Regular Transit Services	
NJ Transit Bus Lines	njtransit.com/bus-to
NJ Transit Light Rail	njtransit.com/light-rail-to
NJ Transit Rail	www.njtransit.com/train-to
The Port Authority of New York and New Jersey Bus	www.panynj.gov/bus-terminals/en/port-authority.html
Port Authority Transit Corporation (PATCO)	www.ridepatco.org/
Amtrak Train	amtrakguide.com/stations/amtrak-stations-in-nj/
Metropolitan Transportation Authority (MTA) – subway, bus, rail	new.mta.info/
On-Demand Transit Services	
NJ Transit On-Demand Services	njtransit.com/accessibility/access-link-ada-paratransit
Paratransit Services	
Access Link - NJ TRANSIT's ADA paratransit program	www.njtransit.com/accessibility/access-link-ada-paratransit
NJ Transit Reduced Fair Program – available for senior or older adults and people with disabilities	www.njtransit.com/schedules-and-fares/reduced-fare-program
NJ 2-1-1 Transportation	www.nj211.org/transportation-options-new-jersey
Community Transportation by County	www.njtransit.com/accessibility/community-transportation
Medical Transportation for NJ Family Care Recipients	www.nj.gov/humanservices/dmahs/home/logistcare.html
Amtrak	www.amtrak.com/accessible-travel-servicesa

Section 5: Emergency Evacuation Checklist

Your emergency preparedness kit should have food, bottled water, and enough supplies to support you for up to three days. It is important that you keep your preparedness kit in a designated spot and in an easy-to-carry container or bag in case you need to leave suddenly. Make sure everyone in your household knows where the preparedness kit is located. Keep a smaller version of your preparedness kit in the trunk of your car.

To properly assemble your preparedness kit, you should put important items in airtight plastic bags and try to limit your 3-day survival supplies to one or two easy-to-carry backpacks or duffel bags.

Emergency Preparedness Kit	
Medical & Support Supplies	
<input type="checkbox"/> Battery-operated alarm clock <input type="checkbox"/> Battery or crank-operated radio/TV <input type="checkbox"/> NOAA all-hazards radio <input type="checkbox"/> Flashlights (one per person) <input type="checkbox"/> Batteries for radio/flashlights to last several days <input type="checkbox"/> Fire extinguisher <input type="checkbox"/> First aid kit and manual <input type="checkbox"/> Cash (especially in small bills because ATMs will be out if power is lost) <input type="checkbox"/> Credit or debit cards <input type="checkbox"/> Driver's license	<input type="checkbox"/> Cell phones and chargers <input type="checkbox"/> Important phone numbers <input type="checkbox"/> Prescriptions, including eyeglasses <input type="checkbox"/> Gas cans and oil <input type="checkbox"/> 25 to 30 gallons of gas <input type="checkbox"/> Charge electric vehicles to 80% during weather or power outage threats <input type="checkbox"/> Identify the nearest two fast chargers in your community <input type="checkbox"/> Mylar blanket <input type="checkbox"/> Extra set of car and house keys
Hygiene	
<input type="checkbox"/> Bleach without scents/additives (in a secure, well-marked container) <input type="checkbox"/> Soap, shampoo, and other toiletries <input type="checkbox"/> Sponges/paper towels	<input type="checkbox"/> Toilet paper and towelettes <input type="checkbox"/> Feminine hygiene products <input type="checkbox"/> Baby food, diapers, and formula
Food & Water	
<input type="checkbox"/> Water (1 gallon per person per day) <input type="checkbox"/> Water purification tablets <input type="checkbox"/> Coolers for food and water <input type="checkbox"/> Canned and dried food <input type="checkbox"/> Non-electric can opener	<input type="checkbox"/> Pots and pans <input type="checkbox"/> Eating and cooking utensils <input type="checkbox"/> Emergency cooking facilities (grill/camp stove) <input type="checkbox"/> Gas for the grill <input type="checkbox"/> Butane lighter
Clothing & Miscellaneous	
<input type="checkbox"/> Work boots/shoes <input type="checkbox"/> Change of clothes <input type="checkbox"/> Sleeping bags, sheets, and towels	<input type="checkbox"/> Blankets and pillows <input type="checkbox"/> Toys (to occupy children) <input type="checkbox"/> Lightweight raincoat
Documents	
<i>*Put important documents in a waterproof bag or container</i>	
<input type="checkbox"/> Insurance Cards and Policies <input type="checkbox"/> Photo IDs <input type="checkbox"/> Birth certificates <input type="checkbox"/> Deeds and mortgages <input type="checkbox"/> Proof of address	<input type="checkbox"/> Inventory of household goods <input type="checkbox"/> Computer file backups <input type="checkbox"/> Local map showing your neighborhood's evacuation routes

Section 5: Emergency Evacuation Checklist

- | | |
|--|--|
| <input type="checkbox"/> Family emergency plan | <input type="checkbox"/> Copies of all prescriptions and contact information for doctors and pharmacists |
| <input type="checkbox"/> Social security cards | <input type="checkbox"/> Contact and meeting place information for your household |
| <input type="checkbox"/> Stocks and bond documentation | <input type="checkbox"/> Health information form (list of medicine, what it's for, and when to take it, for all household members) |
| <input type="checkbox"/> Savings and checking books | <input type="checkbox"/> Pictures (both personal and of belongings) |
| <input type="checkbox"/> Wills | |
| <input type="checkbox"/> Marriage and death records | |

Cleanup & Repair

- | | |
|--|---|
| <input type="checkbox"/> Axes, hammers, and hatchets | <input type="checkbox"/> Extension cords |
| <input type="checkbox"/> Bars, wrecking and crow | <input type="checkbox"/> Generators |
| <input type="checkbox"/> Brooms | <input type="checkbox"/> Heavy plastic tarps |
| <input type="checkbox"/> Camera to record damage | <input type="checkbox"/> Inflatable raft |
| <input type="checkbox"/> Chain, steel | <input type="checkbox"/> Ladders |
| <input type="checkbox"/> Chain saw and fuel | <input type="checkbox"/> Lanterns and fuel |
| <input type="checkbox"/> Caulk and caulking gun | <input type="checkbox"/> Lumber |
| <input type="checkbox"/> Cleaning supplies | <input type="checkbox"/> Mosquito repellent |
| <input type="checkbox"/> Duct and masking tape | <input type="checkbox"/> Plastic trash bags |
| <input type="checkbox"/> Drill and bits | <input type="checkbox"/> Nails, screws, and bolts |

Pet Supplies

- | |
|--|
| <input type="checkbox"/> Pack essentials for your pet (food, water, etc.) |
| <input type="checkbox"/> Copies of pet license, microchip, tattoo, and/or ID, photos of pet and plastic bag with proof of vaccination |
| <input type="checkbox"/> Proper size metal or plastic pet carrier |
| <input type="checkbox"/> Leashes and obedience aids |
| <input type="checkbox"/> Motion sickness pills prescribed by your veterinarian, if needed |
| <input type="checkbox"/> Special medications, with instructions |
| <input type="checkbox"/> Special needs items for exotic pets, such as a heat source |
| <input type="checkbox"/> Newspapers, paper towels, handwipes, can openers, blanket, and flashlight |
| <input type="checkbox"/> Arrange a safe haven for your pet (not all evacuation shelters allow pets, be sure to check in advance when planning your evacuation options) |
| <input type="checkbox"/> Do not leave your pets behind (if it is not safe for you, it is not safe for them) |
| <input type="checkbox"/> Contact your veterinarian for a list of preferred boarding kennels and facilities |
| <input type="checkbox"/> Ask your local animal shelter if they provide emergency shelter or foster care for pets |
| <input type="checkbox"/> Identify hotels or motels outside of your immediate area that accept pets |
| <input type="checkbox"/> Ask friends and relatives outside your immediate area if they would be willing to take in your pet |

Section 6: Municipal Maps

This section includes municipal maps for both storm surge and flood depth for the following cities in the Atlantic County Coastal Region:

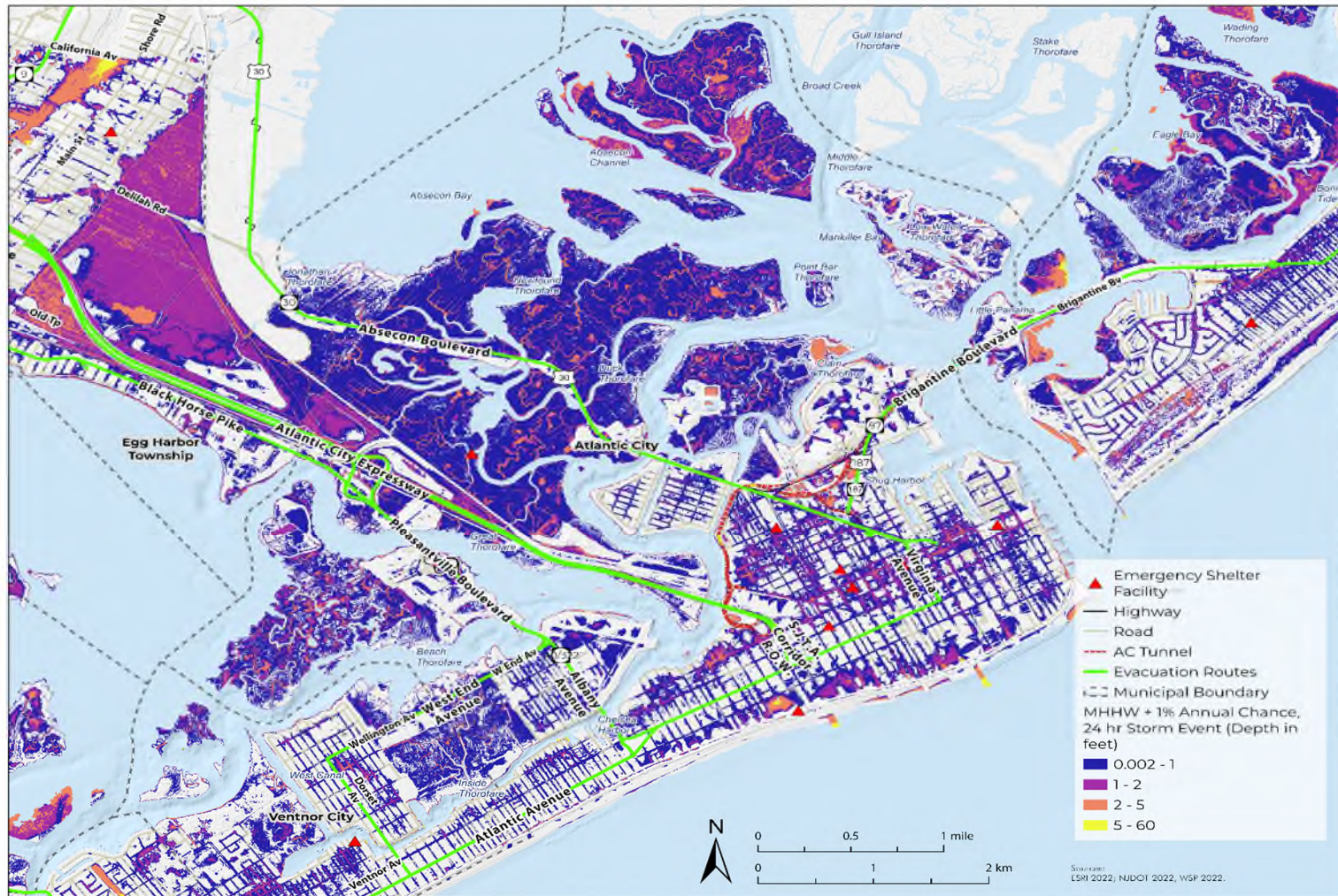
1. Atlantic County
2. Brigantine
3. Longport Borough
4. Margate City
5. Northfield
6. Pleasantville
7. Ventnor City



See the following pages to view the municipal maps. For more information, see the Storm Surge and Flooding sections in Section 2 of this document for flood depth and storm surge overview maps.

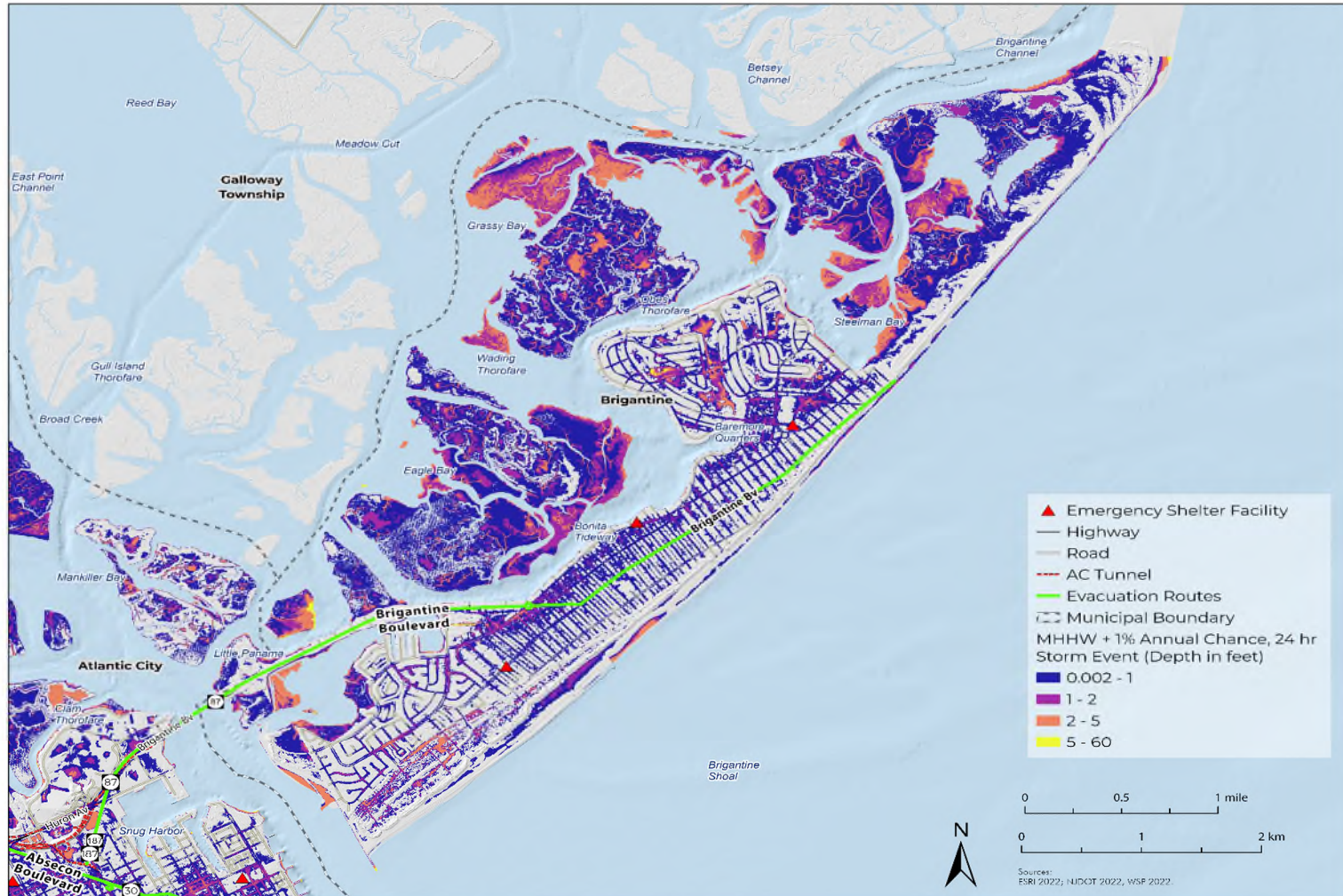
Flood Depth and Evacuation Routes - Atlantic City Resilient New Jersey, Atlantic County Coastal Region (ACCR)

Map Date: 2/22/22
Map Scale: 1:50,000

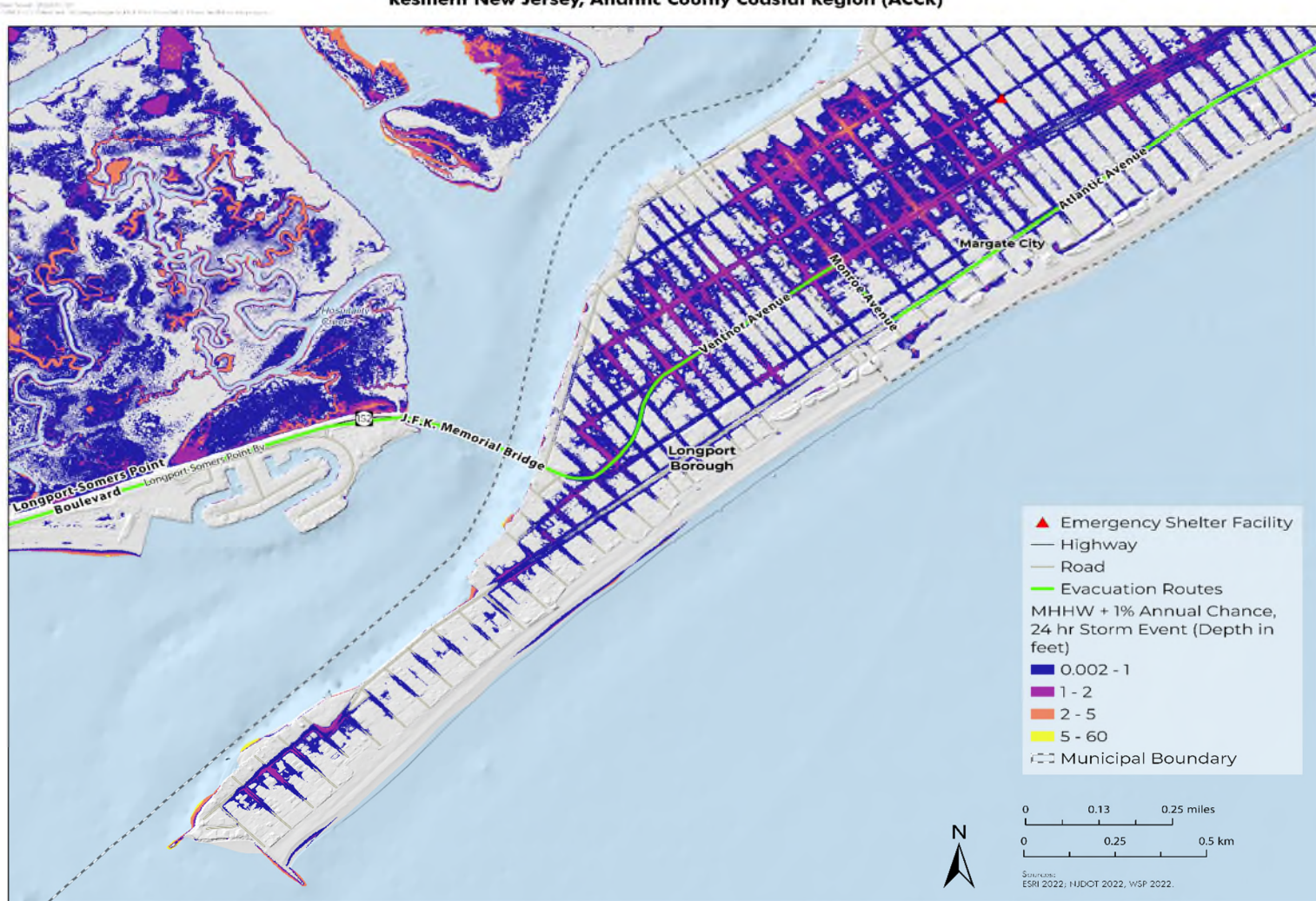


Flood Depth and Evacuation Routes - Brigantine Resilient New Jersey, Atlantic County Coastal Region (ACCR)

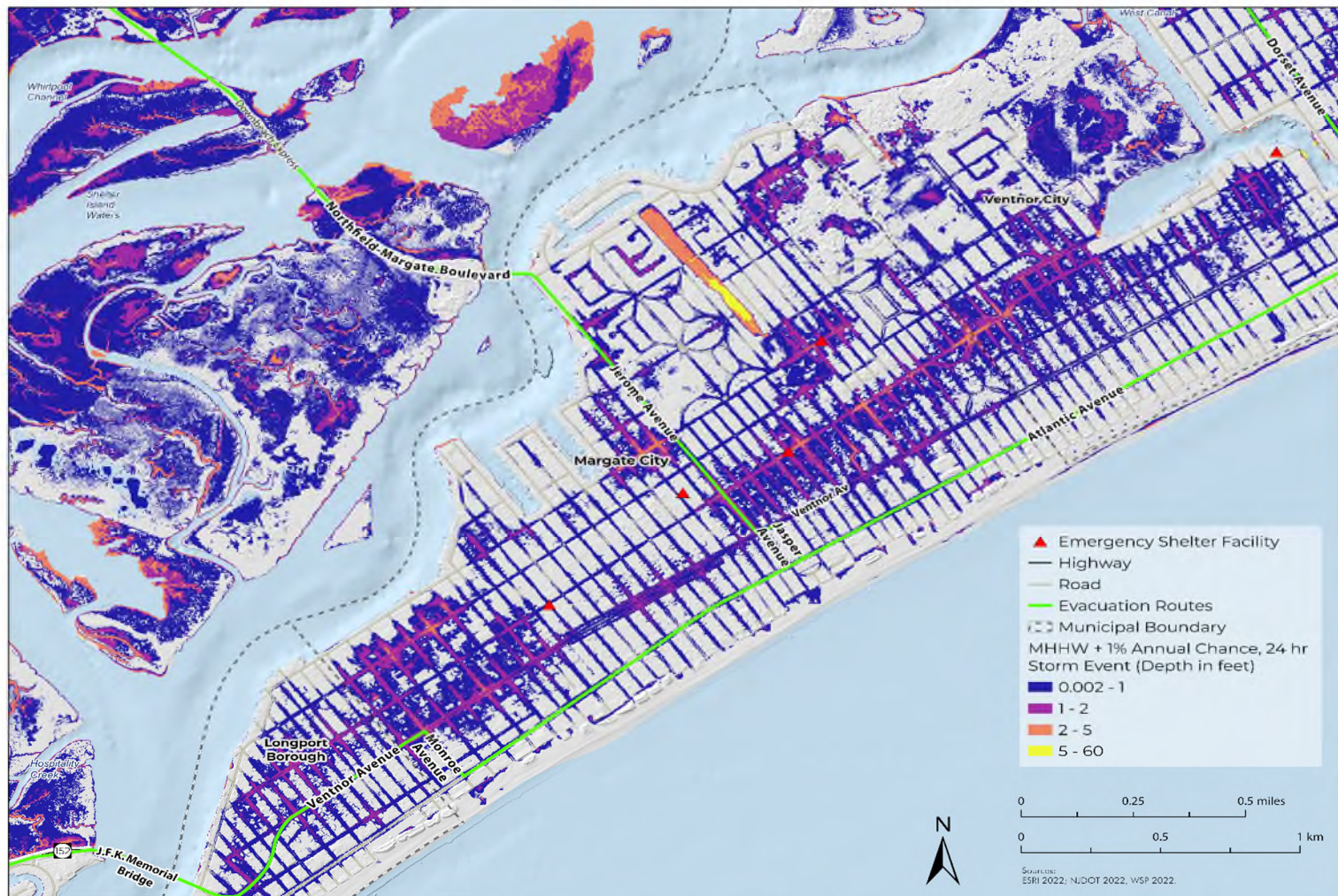
Date: 2023/01/27
 File: R23_01_27_001.mxd
 Project: R23_01_27_001



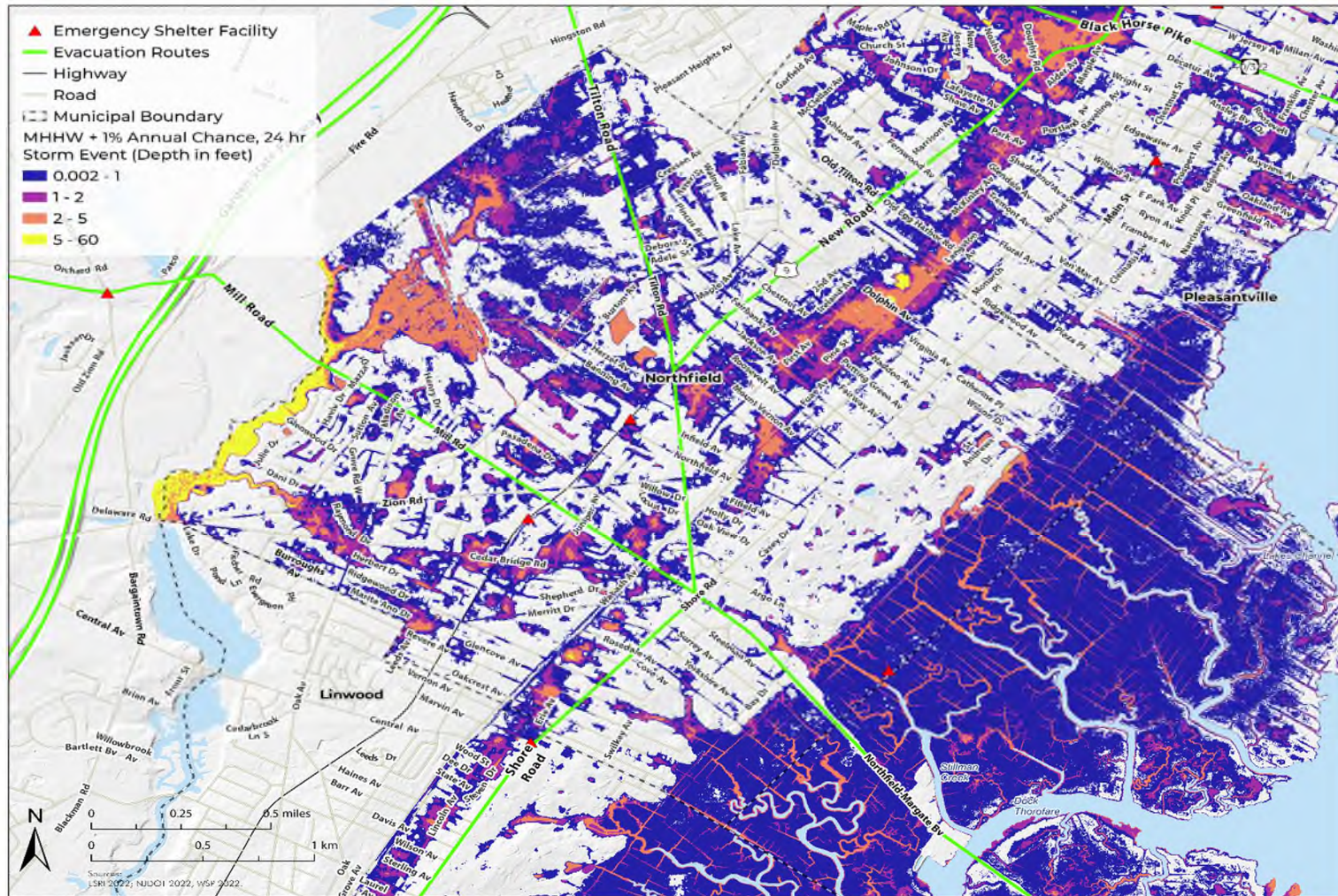
**Flood Depth and Evacuation Routes - Longport Borough
Resilient New Jersey, Atlantic County Coastal Region (ACCR)**



Flood Depth and Evacuation Routes - Margate City Resilient New Jersey, Atlantic County Coastal Region (ACCR)

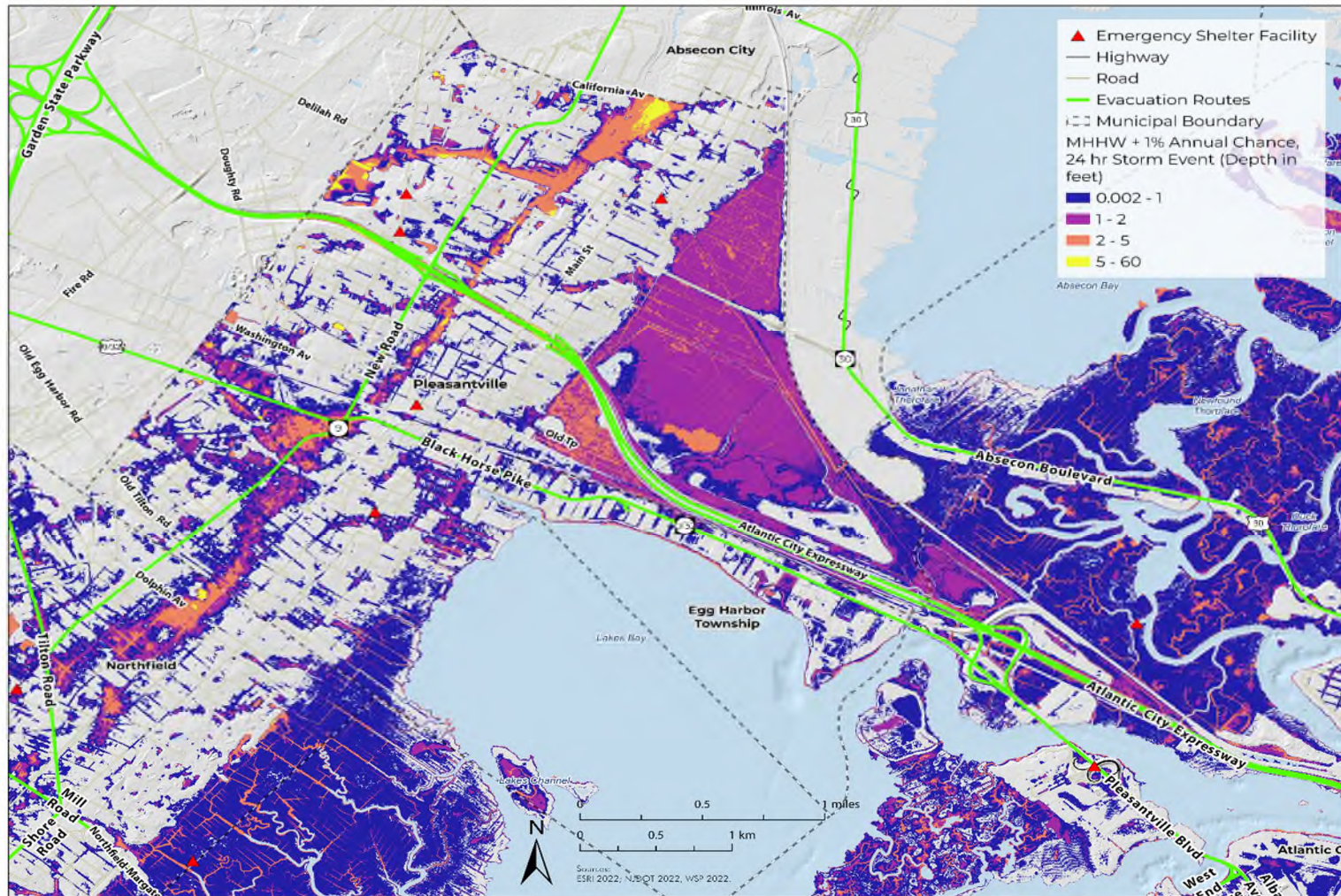


**Flood Depth and Evacuation Routes - Northfield
Resilient New Jersey, Atlantic County Coastal Region (ACCR)**

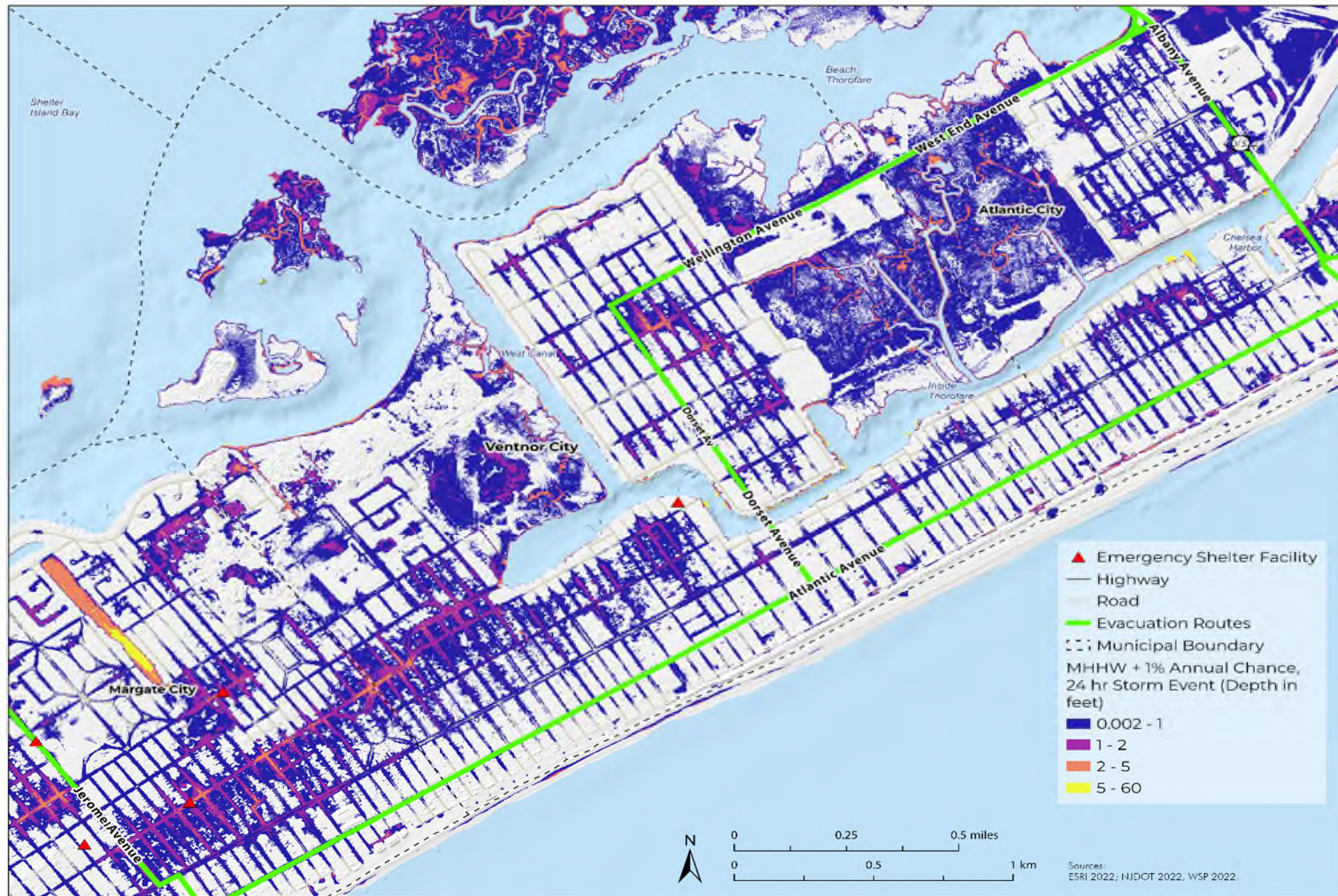


**Flood Depth and Evacuation Routes - Pleasantville
Resilient New Jersey, Atlantic County Coastal Region (ACCR)**

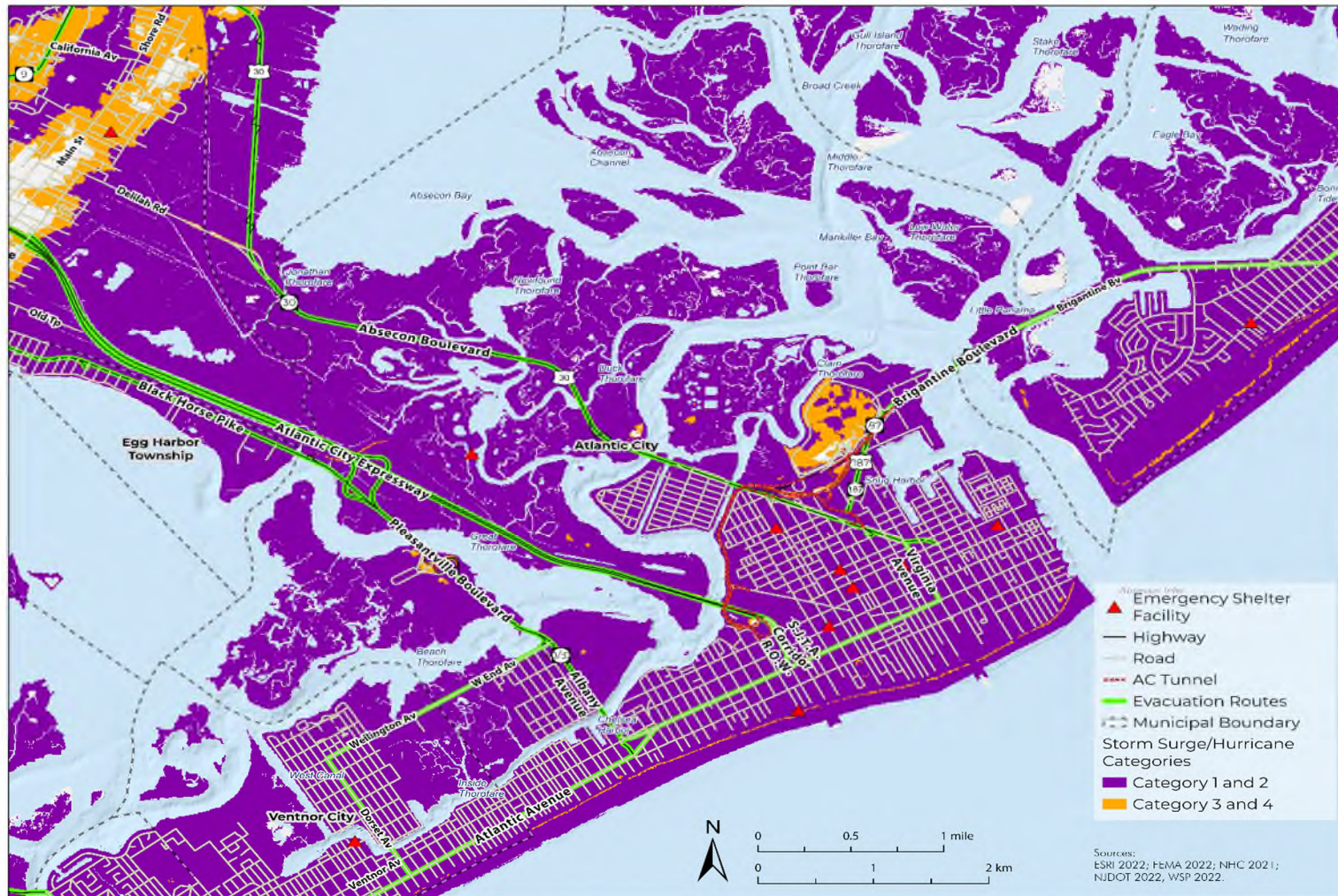
Map Name: 20220112
 File Path: C:\Users\jgarcia\OneDrive\Documents\2022\12\Flood\Map\20220112\Flood Depth and Evacuation Routes



**Flood Depth and Evacuation Routes - Ventnor City
Resilient New Jersey, Atlantic County Coastal Region (ACCR)**



NHC Storm Surge Evacuation Routes - Atlantic City Resilient New Jersey, Atlantic County Coastal Region (ACCR)



NHC Storm Surge Evacuation Routes - Brigantine Resilient New Jersey, Atlantic County Coastal Region (ACCR)

OpenStreetMap contributors, CC-BY, Imagery © Mapbox

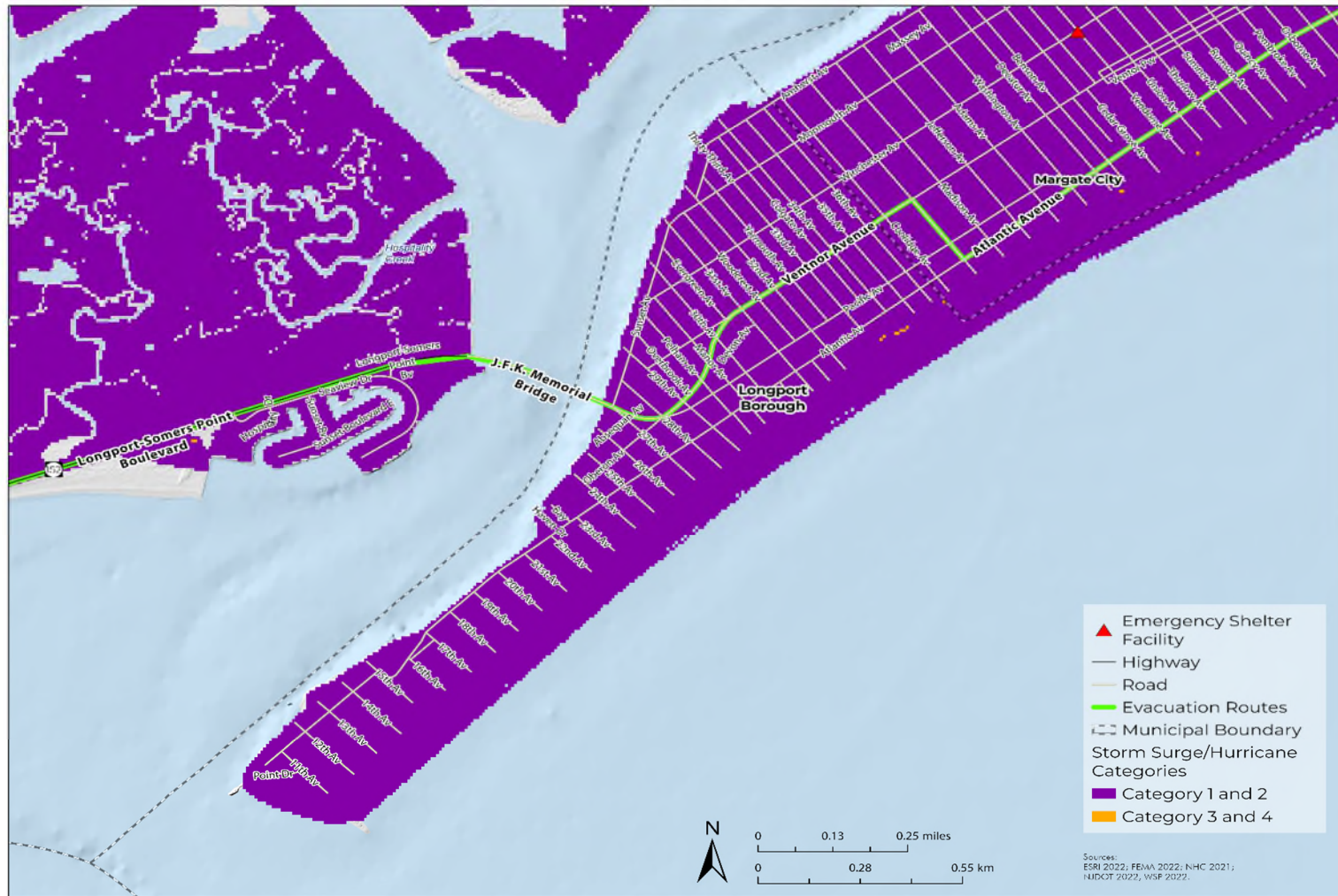


- ▲ Emergency Shelter Facility
- Highway
- Road
- - - AC Tunnel
- Evacuation Routes
- Municipal Boundary
- Storm Surge/Hurricane Categories
- Category 1 and 2
- Category 3 and 4

Sources:
ESRI 2022; FEMA 2022; NHC 2021;
NJDCCT 2022; WSP 2022.

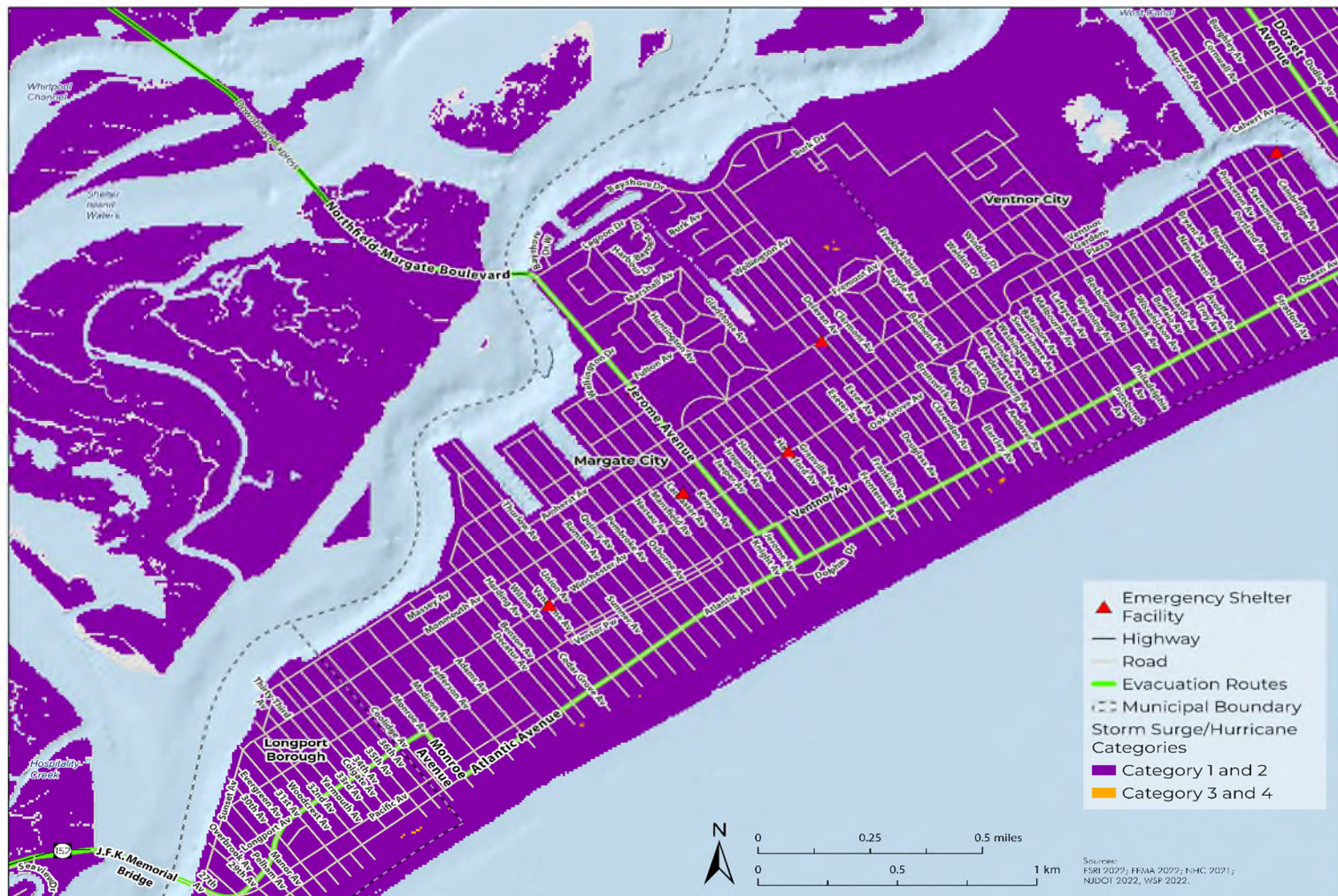
**NHC Storm Surge Evacuation Routes - Longport Borough
Resilient New Jersey, Atlantic County Coastal Region (ACCR)**

Map Name: 2102010101
 Date: 11/11/2021 11:44:44 AM
 Project: Resilient New Jersey, Atlantic County Coastal Region (ACCR)



NHC Storm Surge Evacuation Routes - Margate City Resilient New Jersey, Atlantic County Coastal Region (ACCR)

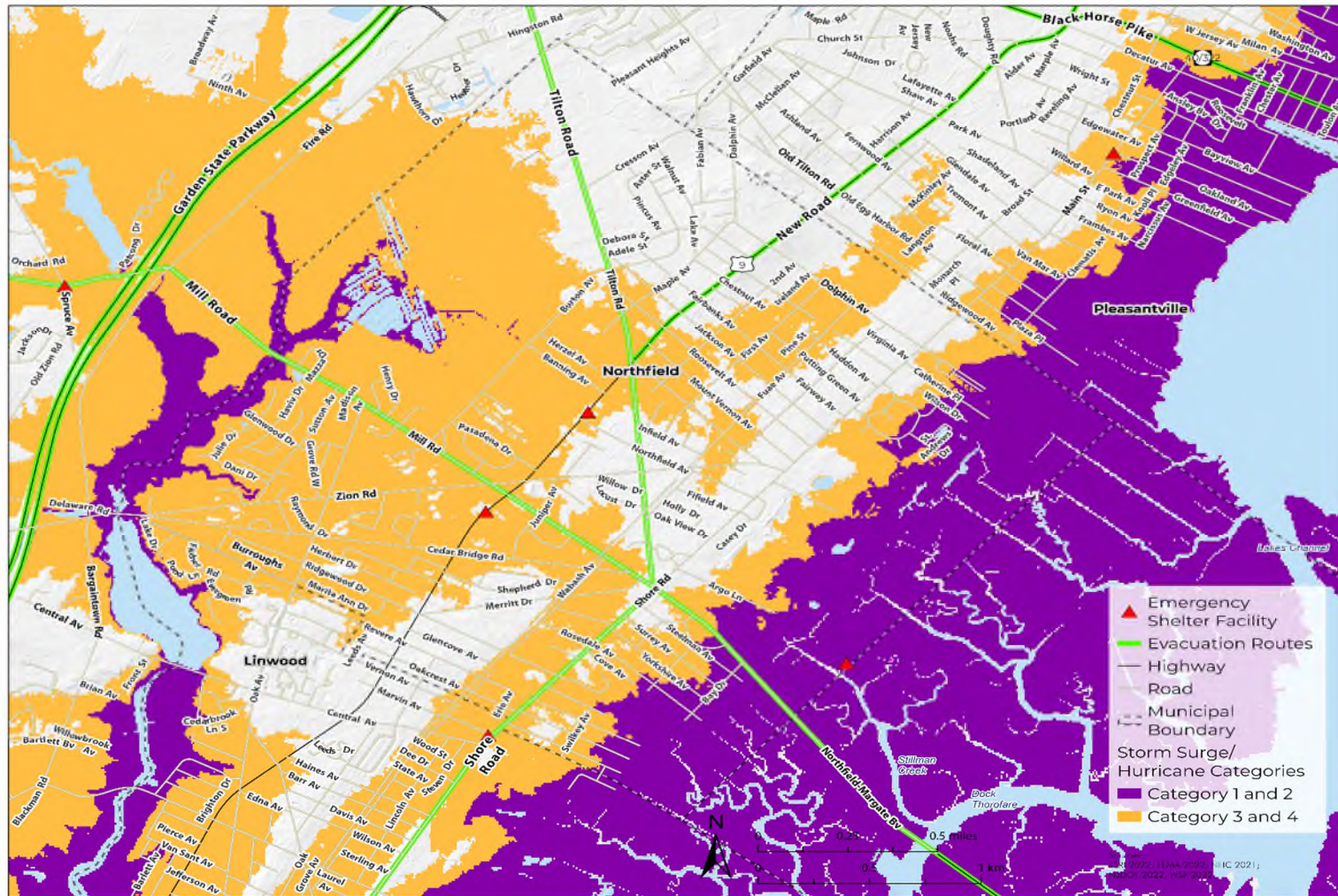
OpenStreetMap contributors, CC-BY, Imagery © Mapbox, © OpenStreetMap contributors, CC-BY, Imagery © Mapbox



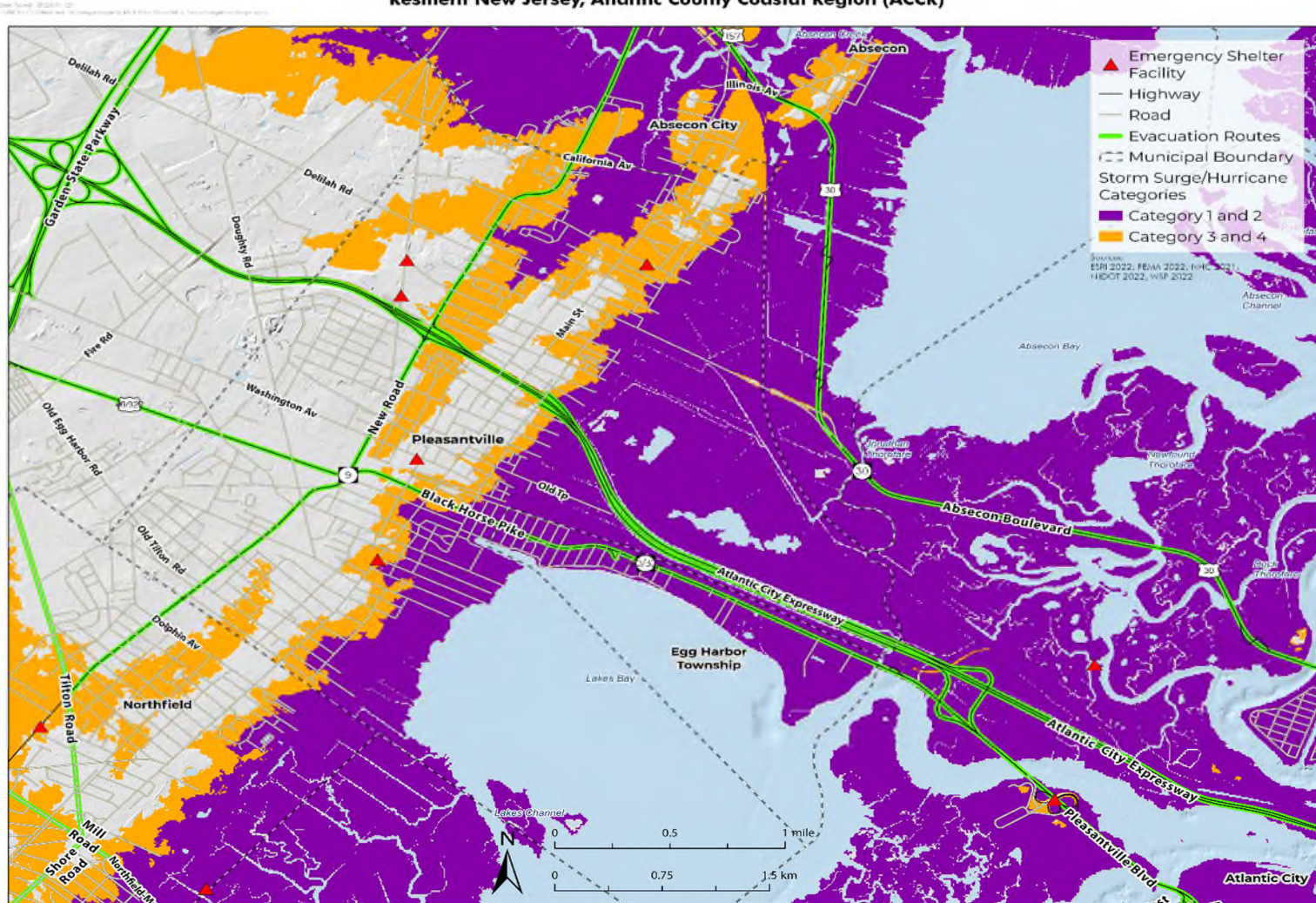
Sources:
 ESRI 2022; FEMA 2022; NHC 2021;
 NJDOT 2022, WSP 2022.

**NHC Storm Surge Evacuation Routes - Northfield
Resilient New Jersey, Atlantic County Coastal Region (ACCR)**

Map Date: 08/2022
Map Scale: 1:50,000
Map Projection: NAD 83 / UTM Zone 18N
Map SRS: UTM Zone 18N
Map Units: Meter

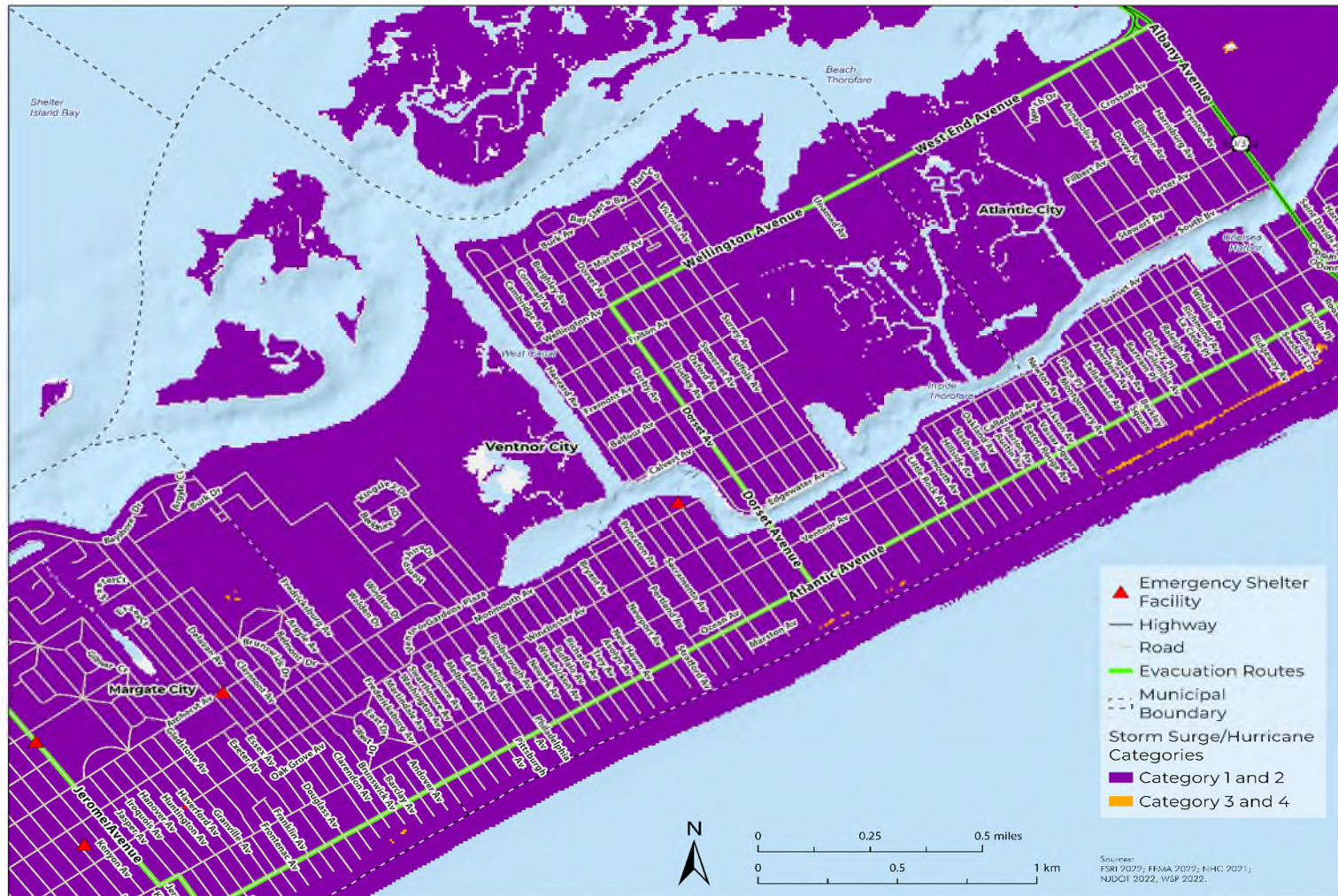


**NHC Storm Surge Evacuation Routes - Pleasantville
Resilient New Jersey, Atlantic County Coastal Region (ACCR)**



**NHC Storm Surge Evacuation Routes - Ventnor City
Resilient New Jersey, Atlantic County Coastal Region (ACCR)**

OpenStreetMap contributors, CC-BY, Imagery © Mapbox



Section 7: References

- Atlantic County, “Atlantic County Hazard Mitigation Plan” (2021). Atlantic County 2022 Draft Plan Update. <https://www.atlantic-county.org/hazard-mitigation/plan-draft.asp>
- CDC (Centers for Disease Control and Prevention), “Stay Safe After a Hurricane or Other Tropical Storm” (2022). CDC Natural Disasters and Severe Weather. <https://www.cdc.gov/disasters/hurricanes/be-safe-after.html>
- Coast Guard, “Tuckerton, N.J., seems adrift at sea after Sandy passed on Oct. 30. Can residents of the Jersey shore expect more of the same in the future?” (2012). Coastal Review. <https://coastalreview.org/2012/11/superstorm-sandy-now-the-new-normal/>
- Farrell, Tim, “Observer Highway in Hoboken is flooded as New Jersey feels the aftereffects of Hurricane Sandy. Hoboken, NJ” (2012). Digital Photograph. <https://www.nj.com/hudson/2021/03/northeast-nj-coalition-formed-to-find-solutions-for-flood-prone-areas.html>
- FEMA (Federal Emergency Management Agency), “About Hurricanes” (2022a). FEMA Factsheet. https://www.fema.gov/doc/about/regions/Region%20III/hurricane_factsheet.txt
- FEMA, “Flood” (2020). FEMA Glossary. <https://www.fema.gov/glossary/flood>
- FEMA, “Flood | Vehicle (Do Not Drive in Floodwaters; "Turn Around, Don't Drown!")” (2022b). FEMA Preparedness Community. <https://community.fema.gov/ProtectiveActions/s/article/Flood-Vehicle-Do-Not-Drive-in-Floodwaters-Turn-Around-Don-t-Drown>
- FEMA, “High-Rise Fire Safety” (2022c). Preparedness Community. <https://community.fema.gov/PreparednessConnect/s/article/High-Rise-Fire-Safety>
- FEMA, “Lesson 4: Storm Surge Mitigation Measures” (2022d). Lesson Summary. <https://emilms.fema.gov/IS321/HM0104summary.html>
- FEMA, “Protect Your Property from Storm Surge” (2022e). Protect Your Property from Natural Hazards Brochures. <https://www.fema.gov/flood-maps/products-tools/know-your-risk/homeowners-renters/protect-property>
- FEMA, “The Citizen’s Role in Disaster Preparedness” (2022f). FEMA Training. https://training.fema.gov/emiweb/downloads/is7unit_5.pdf
- Guion, Payton, “Will tornadoes become more common in N.J.? Experts wonder themselves” (2021). Digital Photograph. <https://www.nj.com/news/2021/09/will-tornadoes-become-more-common-in-nj-experts-wonder-themselves.html>
- Shutterstock, “The best things to do in New Jersey” (2022). Digital Photograph. <https://www.timeout.com/new-jersey/things-to-do/best-things-to-do-in-new-jersey>

- Hoffman, Sharona, "Preparing for Disaster: Protecting the Most Vulnerable in Emergencies" (2009). Faculty Publications. 9. https://scholarlycommons.law.case.edu/faculty_publications/9
- HUD (Housing and Urban Development), "HUD Income Limits FY 1998" (1998). U.S. Department of Housing and Urban Development PDR-98-02. <https://www.huduser.gov/portal/datasets/il/fmr98/sect8.html>
- Kassraie, Aaron, "FEMA advice for older adults on disaster preparedness" (2019). AARP FEMA Disaster Preparedness Tips. <https://www.aarp.org/home-family/your-home/info-2019/fema-disaster-preparedness-tips.html>
- McCaughey, Kelly, "What does the term '100-yearflood' mean?" (2021). My Flood Status. <https://newmyfloodstatus.squarespace.com/blog/what-does-the-term-100-year-flood-mean>
- Migration Policy Institute, "State Immigration Data Profiles – New Jersey" (2019). Migration Policy Institute. <https://www.migrationpolicy.org/data/state-profiles/state/language/NJ>
- Mills, Andrew, "A rip current is visible from the air as beach patrons frolic in the surf on a sunny summer afternoon in Avon-by-the-Sea in Monmouth County in August 2015" (2015). NJ Advance Media Digital Photograph. https://www.nj.com/weather/2017/06/the_deadliest_day_and_time_for_dangerous_rip_currents.html
- NASA GSFC GOES, "Hurricane Irene" (2011). Digital Photograph. <https://earthobservatory.nasa.gov/images/51899/hurricane-irene-nears-landfall>
- New Jersey Department of Environmental Protection, "Atlantic County Photos" (2022). Digital Photographs.
- NJ 2-1-1, "Homeless in New Jersey" (2022). New Jersey 211. <https://www.nj211.org/homeless-new-jersey#:~:text=The%20New%20Jersey%202020%20Point,of%20New%20Jersey%20experiencing%20homelessness.>
- NJOEM (New Jersey Office of Emergency Management), "Plan & Prepare" (2022). State of New Jersey Office of Emergency Management. <https://nj.gov/njoem/plan-prepare/index.shtml>
- NOAA (National Oceanic and Atmospheric Administration), "Break the grip of the rip" (2022a). NOAA's National Weather Service. https://www.weather.gov/media/owlie/rip_brochure_51419b.pdf
- NOAA, "The Enhanced Fujita Scale (EF Scale)" (2022b). National Weather Service. <https://www.weather.gov/oun/efscale>

- NOAA, “Final Talking Points and Fact Sheet: Rip Currents” (2022c). National Weather Service. https://www.weather.gov/media/owlie/Final%20Talking%20Points%20and%20Fact%20Sheet_041707.pdf
- NOAA, “NOAA predicts above-normal 2022 Atlantic Hurricane Season” (2022d). National Oceanic and Atmospheric Administration. <https://www.noaa.gov/news-release/noaa-predicts-above-normal-2022-atlantic-hurricane-season>
- NOAA, “Storm Surge Overview” (2022e). National Oceanic and Atmospheric Administration. <https://www.nhc.noaa.gov/surge/>
- NOAA, “What is high tide flooding?” (2022f). National Oceanic and Atmospheric Administration. <https://oceanservice.noaa.gov/facts/high-tide-flooding.html#:~:text=High%20tide%20flooding%20occurs%20when,streets%20even%20on%20sunny%20days>.
- NSSL (NOAA National Severe Storms Laboratory), “Severe Weather 101” (2022). NOAA national Severe Storms Laboratory. <https://www.nssl.noaa.gov/education/svrwx101/floods/types/#:~:text=Inland%20flooding%20occurs%20when%20moderate,or%20dam%20or%20levee%20failure>.
- Ready.gov, “Disasters and Emergencies - Floods” (2022a). Ready.gov U.S. Department of Homeland Security. <https://www.ready.gov/floods#:~:text=Preparing%20for%20a%20Flood,-Make%20a%20plan&text=Learn%20and%20practice%20evacuation%20routes,cut%20off%20in%20your%20area>.
- Ready.gov. “Evacuation.” (2022b). Ready.gov U.S. Department of Homeland Security. <https://www.ready.gov/evacuation>
- Ready.gov. “Floods.” (2020). <https://www.ready.gov/floods#:~:text=Flooding%20is%20a%20temporary%20overflow,lead%20to%20injury%20or%20death>.
- Ready.gov. “Individuals with Disabilities.” (2022c). Ready.gov U.S. Department of Homeland Security. <https://www.ready.gov/disability>
- Ready.gov, “Tornado.” (2022d). Ready.gov U.S. Department of Homeland Security. <https://community.fema.gov/ProtectiveActions/s/article/Tornado>
- Ready NJ, “Hurricane Survival Guide” (2014). New Jersey Office of Emergency Management. https://www.atlantic-ounty.org/documents/oep/prepare/070214_hurricane_survival_guide.pdf
- Singh, S., Eghdami, M., Singh, S., “The Concept of Social Vulnerability: A Review from Disasters Perspectives” (2014). International Journal of Interdisciplinary and Multidisciplinary

Studies (IJIMS), 2014, Vol 1, No.6, 71-82.

<https://www.researchgate.net/publication/345360747> The Concept of Social Vulnerability A Review from Disasters Perspectives

Stanmyre, Matthew, "They were here and then they were gone. Remembering Ida's 29 victims" (2021). NJ.com True Jersey. <https://www.nj.com/news/2021/09/they-were-here-and-then-they-were-gone-remembering-idas-27-victims.html>

Youth.gov, "Practical Information on Crisis Planning: A Guide for Schools and Communities" (2022). Youth.gov Preparation: Schools and Programs. <https://youth.gov/youth-topics/youth-disaster-preparedness-and-response/preparing-disasters-schools-youth-serving-programs>