



5.4.9 Terrorism

This section provides the hazard profile and vulnerability assessment for the terrorism hazard for Putnam County.

5.4.9.1 Profile

Hazard Description

According to the Federal Bureau of Investigation (FBI), terrorism is “the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives” (National Institute of Justice 2019). Acts of terrorism include threats of terrorism, assassinations, kidnappings, hijackings, bomb scares and bombings, cyber-attacks (computer-based attacks), and use of chemical, biological, nuclear, and radiological weapons (FEMA 2009). Various types of terrorism are discussed in the sections below.

Active Shooter Incidents

The US Department of Homeland Security identifies an Active Shooter as an individual actively engaged in killing or attempting to kill people in a populated and confined area, predominantly using firearms (US DHS 2008). Active shooter incidents can occur without warning and target random persons or places with no apparent motive from the perpetrator. In other cases, a location such as a former workplace, hospital, or social gathering may be targeted (Maryniak 2016).

Agroterrorism

Agroterrorism is the intentional use of plant or animal pathogens to cripple the nation’s biological infrastructure. There are similarities to bioterrorism, but the aim of agriterrorism is to specifically target crops and livestock to cause a significant economic impact or to damage food supplies (Congressional Research Service 2002).

Armed Attacks and Assassinations

Armed attacks and assassinations include a range of tactics (typically involving firearms) to inflict harm. An assassination is the targeted killing of a victim, whereas armed attacks may be less discriminatory. Both armed attacks and assassinations can entail single or multiple perpetrators. These attacks can be used to advance psychological or tactical means (NJOEM 2019).

Arson and Firebombing

Arson and firebombing entail the use of incendiary devices to cause fire damage to people or property. These attacks can be accomplished without the use of sophisticated training and incendiary devices can be easy to deploy or conceal (NJOEM 2019).

Bioterrorism

Bioterrorism entails the purposeful distribution of toxic biological agents to harm civilians. According to the Centers for Disease Control, Category A Biological Diseases are most likely to cause the greatest harm. These include:

- Anthrax (*Bacillus anthracis*)
- Botulism (*Clostridium botulinum toxin*)
- Plague (*Yersinia pestis*)



- Smallpox (*Variola major*)
- Tularemia (*Francisella tularensis*)
- Hemorrhagic fever caused by Ebola virus or Marburg virus (NJOEM 2019).

Bombings/Explosions

Bombings are a type of terrorist attack that entails the use of explosive devices that cause loud noises, shrapnel, and blast/secondary damage. Bombs can take a variety of forms and can be assembled through the use of commonly found supplies available to consumers. Bombs are often portable and can be easily concealed or transported (NJOEM 2019).

Cyber Terrorism

Cyber terrorists use communications systems to attack civilians and information technology infrastructure of targets. Cyberterrorism can result in service disruptions, data theft, distribution of propaganda, and other tactics to advance terroristic intentions (NJOEM 2019).

Hijackings and Skyjackings

Hijacking is the seizure by force of a vehicle, cargo, or passengers on the ground. Skyjacking is the seizure of an aircraft. In both instances, these situations offer the terrorist a means to escape, media attention, and potential hostages or victims (NJOEM 2019).

Intentional Hazardous Materials Release

Intentional hazardous materials releases are the intentional distribution of hazardous materials or substances by terrorist to inflict harm (NIEHS 2006). Releases can occur due to disgruntled workers, terrorists, hate groups, or other extremists that intend to weaponize the caustic properties of hazardous materials (NJOEM 2019).

Kidnappings and Hostage-Takings

Kidnappings and hostage-takings are tactics used by terrorists to establish leverage in a bargaining situation and/or to generate publicity for a terroristic cause. Hostage-taking is different from kidnapping in that hostage-taking is intended to directly confront authorities and maintain media attention (NJOEM 2019).

Nuclear/Radiological Terrorism

Nuclear/radiological terrorism refers to the use of nuclear materials to advance terroristic intent. This includes the dispersal of radioactive elements upon victims, the procurement or acquisition of nuclear weapons, or attacks against nuclear facilities (NJOEM 2019).

Location and Extent

Terrorism can occur anywhere within Putnam County and surrounding area depending on the individual's or organization's agenda. Any facility or structure is vulnerable to a terrorist attack, as terrorists have historically sent chemical or biological agents through the mail. High-risk targets include local, county, state, or federal government facilities; major venues and gathering places; sites with historical, cultural, or other significance; and critical infrastructure. Damage to or disruption of operations at government facilities could profoundly impact the County's population, even if the terrorism event is relatively small-scale.

In Putnam County, the Steering Committee indicated that dams and government buildings are treated as potential targets. The County's proximity to New York City – the location of multiple attacks -- increases the County's



vulnerability. Other nearby critical facilities, including the United States Military Academy and Indian Point Energy Center, present a potential vulnerability to Putnam County.

Previous Occurrences and Losses

Between 1954 and 2020, FEMA issued one disaster (DR) or emergency (EM) declaration for the State of New York. This declaration was for the terrorist attacks on September 11th, 2001 and Putnam County was included in the declaration. Five Putnam County residents perished in the attacks. Since the 2015 HMP, terrorism-related events have not been recorded in Putnam County.

Climate Change Projections

Because terrorism is a human-caused hazard, climate change is not anticipated to affect vulnerability associated with terrorism.

Probability of Future Occurrences

The potential for future terrorism incidents in Putnam County is difficult to predict. However, the combination of past incidents and potential terrorist targets make a terrorism incident possible. Efforts from local, state, and federal officials must be coordinated to prevent future terrorist incidents from occurring. However, despite the best efforts of these entities, the reality is that a terrorist attack may occur in the County or the greater metropolitan area. The County's proximity to sensitive targets such as New York City and the United States Military Academy continue to contribute to the County's vulnerability.

Based on the recent incident events, the future occurrence of terrorism in Putnam County can be considered rare. Refer to Section 4.4 for additional information on the hazard ranking methodology and probability criteria.

5.4.9.2 Vulnerability Assessment

To understand risk, a community must evaluate what assets are exposed or vulnerable to the identified hazard. Terrorism events may impact public safety, property, infrastructure, environmental resources and local economies. The following text evaluates and estimates the potential impact of terrorism events on Putnam County.

Impact on Life, Health and Safety

For the purposes of this hazard mitigation plan, the entire population of Putnam County is exposed to terrorism events. The 2018 American Community Survey 5-Year population estimates that Putnam County has 99,070 residents throughout its communities. However, because terrorists typically prefer to impact the greatest number of individuals in a given location, it can be inferred that individuals living in highly populated areas, or mass transit systems with a large number of commuters will have a greater exposure to terrorist incidents. The Town of Carmel has the greatest number of persons in Putnam County (i.e., 34,227), whereas the Village of Brewster has the greatest density of persons per square mile. To protect its citizens, Putnam County is in partnership with the U.S. Attorney's Office for the Southern District of New York, which incorporates several boroughs and counties to ensure the safety of local residents from terrorism. The main unit within this district that handles terrorism is the Terrorism and International Narcotics Unit, which was created in 2009 (U.S. Department of Justice 2020).

Impact on General Building Stock

The entire building stock in the County is exposed and vulnerable to the terrorism hazard. There are 31,346 structures at risk, which have a total replacement cost value of \$27.5 billion for the County. Major commercial



and industrial structures may be at greatest risk, particularly those that are key economic drivers for the community. However, regardless of building type, accessibility to the building, the building design, and the building's roof access could make any structure vulnerable to a terrorism event. Additionally, buildings that contain below-ground garages, those that are unmonitored, and buildings that are within close proximity to transportation routes and underground pipelines are vulnerable to terrorism events.

Impact on Critical Facilities

All critical facilities in Putnam County are exposed to terrorist attacks. Critical facilities may be targeted more frequently by terrorists because of the essential services they provide to the community, especially critical facilities that are considered lifelines. Targeted critical facilities that may require more protection from terrorism include dams, power stations, and transportation corridors. Essential services such as communications systems, first-responder stations, and emergency operations centers are also extremely vulnerable to terrorist attacks. Disrupting one of these facilities would have devastating, cascading impacts on the County. Overall, there are 419 critical facilities in the County and 363 are considered lifelines for Putnam County.

Impact on Economy

Measuring the economic impact of a terrorist attack on Putnam County is difficult. The initial impact can be measured in immediate costs such as costs related to responding to the event, and those associated with the immediate loss of productivity due to closed businesses. For example, after the terrorist attack on September 11, 2001, the economic impacts New York City experienced was profound. Over 143,000 jobs were lost per month over a period of three months post-attack (U.S. Bureau of Labor Statistics 2004). Consequentially, this job loss caused a major drop in economic profits and productivity throughout the City and the state. Should a terrorist event be of a significant magnitude, there could be ramifications in the financial markets which could affect a greater geographic extent compared to the County and state.

Impact on Environment

According to FEMA, terrorism may impact the environment, particularly major bodies of water where dams and levees are in place (FEMA 2002). If a dam or levee is destroyed by a terrorism attack, these water resources could become contaminated, impacting the aquatic habitat and surrounding resources. Furthermore, destruction of the land or built environment could have residual effects on the local air quality where ash or debris is generated.

Cascading Impacts on Other Hazards

Terrorism may escalate the impacts of flooding and disease outbreaks. Destruction of the natural and built environment could alter the flood zones throughout the County. Areas within dam inundation zones may also be affected if key dam infrastructure sites are destroyed. Furthermore, disease outbreaks could become exacerbated if the County's essential services are interrupted. The spread of disease may become more prevalent if people within the County do not have access to health care. Refer to Section 5.4.4. (Flood) and Section 5.4.10 (Disease Outbreaks) for more information about these hazards of concern.

Future Changes that May Impact Vulnerability

Understanding future changes that impact vulnerability in the County can assist in planning for future development and ensuring that appropriate mitigation, planning, and preparedness measures are in place. The County considered the following factors to examine potential conditions that may affect hazard vulnerability:

- Potential or projected development



- Projected changes in population
- Other identified conditions as relevant and appropriate, including the impacts of climate change.

Projected Development

Any areas of growth could be potentially impacted by the terrorism hazard because the County is exposed and potentially vulnerable. Future development throughout the County should take into consideration possible terrorist incidents; particularly if new facilities are built that could be potential terrorist targets, such as a festival site and a community center currently under construction.

Projected Changes in Population

According to the U.S. Census Bureau, the population in Putnam County has decreased by approximately 0.7-percent between 2010 and 2018 (US Census Bureau 2018). Estimated population projections provided by the 2017 Cornell Program on Applied Demographics indicates that the County's population will increase slowly into 2040, increasing the total population to approximately 100,435 persons (Cornell University Program on Applied Demographics 2017). The increase in population will expose more people to the terrorism hazard as residents move into area and the population exposed increases.

Climate Change

Because terrorism is a human-caused hazard, climate change is not anticipated to affected vulnerability associated with terrorism.

Changes in Vulnerability Since the 2015 HMP

Terrorism is a new hazard of concern for Putnam County.

Identified Issues

Terrorist incidents are difficult to predict and fully prepare for. The County's location in relation to several potential targets (i.e. the US Military Academy at West Point, the New York City water supply system, and the Indian Point Energy Center) and location in the New York City metropolitan area makes the County vulnerable to potential incidents targeting those locations. Vulnerabilities also exist within the County's government buildings, where enhanced security has been identified as a need.