



5.4.7 Hazardous Materials

This section provides a hazard profile (description, location, extent, previous occurrences and losses, probability of future occurrences, and impact of climate change) and vulnerability assessment of the hazardous materials hazard for the Genesee County Hazard Mitigation Plan (HMP) Update.

5.4.7.1 Hazard Profile

Description

Hazardous substances include materials and wastes that are considered severely harmful to human health and the environment, as defined by the United States Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (also known as Superfund). Many hazardous materials are commonly used substances, which are harmless in their normal uses, but are quite dangerous if released. EPA designates more than 800 substances as hazardous and identifies many more as potentially hazardous due to their characteristics and the circumstances of their release (EPA 2013).

Superfund’s definition of a hazardous substance includes the following:

- Any element, compound, mixture, solution, or substance designated as hazardous under Section 102 of CERCLA.
- Any hazardous substance designated under Section 311(b)(2)(a) of the Clean Water Act (CWA), or any toxic pollutant listed under Section 307(a) of the CWA. More than 400 substances are designated as either hazardous or toxic under the CWA.
- Any hazardous waste having the characteristics identified or listed under section 3001 of the Resource Conservation and Recovery Act (RCRA).
- Any hazardous air pollutant listed under Section 112 of the Clean Air Act (CAA), as amended. More than 200 substances are listed as hazardous air pollutants under the CAA.
- Any imminently hazardous chemical substance or mixture that the EPA Administrator has “taken action” under Section 7 of the Toxic Substances Control Act (TSCA) (EPA 2016).

If released or misused, hazardous substances can cause death, serious injury, long-lasting health effects, and damage to structures and other properties, as well as the environment. Many products containing hazardous substances are used and stored in homes and these products are shipped daily on highways, railroads, waterways, and pipelines. For the purpose of this HMP update, hazardous substance incidents occurring at fixed sites and those that occur during transport will be discussed in this profile.

Hazardous Substances at Fixed Sites

A fixed-site hazardous substance (materials and waste) incident is the uncontrolled release of materials from a fixed site, capable of posing a risk to health, safety, and property as determined by RCRA. It is possible to identify and prepare for a fixed-site incident because federal and state laws require those facilities to notify state and local authorities about what is being used or produced at the site. Hazardous materials at fixed sites are regulated by the EPA.

The EPA chooses to specifically list substances as hazardous and extremely hazardous, rather than providing objective definitions. Hazardous substances, as listed, are generally materials that, if released into the environment, tend to persist for long periods and pose long-term health hazards for living organisms. Extremely hazardous substances, while also generally toxic materials, represent acute health hazards that,



when released, are immediately dangerous to the lives of humans and animals and cause serious damage to the environment. When facilities contain these materials in quantities at or above the threshold planning quantity (TPQ), they must submit “Tier II” information to appropriate state and/or local agencies to facilitate emergency planning.

Nuclear power-generating stations, research reactors, or other stationary sources of radioactivity present the threat of release of radiological material. This type of event could threaten a large, multi-jurisdictional area, and result in property damage, contamination of farm and water supplies, and economic damage. This could be a concern to Genesee County because the Robert Emmett Ginna Nuclear Power Plant’s 50-mile Emergency Planning Zone (EPZ) extends across the eastern half of the county (U.S. Energy Information Administration [EIA] 2010; U.S. Nuclear Regulatory Commission [NRC] 2016). Genesee County is outside the EPZ of the remaining three New York nuclear power-generating stations.

Hazardous Substances in Transit

A hazardous materials transportation incident is any event resulting in uncontrolled release of materials during transport that can pose a risk to health, safety, and property as defined by the U.S. Department of Transportation (DOT) Materials Transport regulations. Transportation incidents are difficult to prepare for because there is little, if any, notice about what materials could be involved should an accident happen. Hazardous materials transportation incidents can occur anywhere within the United States. Transportation of hazardous materials on highways involves tanker trucks or trailers, and these are responsible for the greatest number of hazardous substance release incidents. Potential also exists for hazardous substance releases to occur along rail lines, as collisions and derailments of train cars can result in large spills. Hazardous materials in transit are regulated by the DOT.

DOT regulations define hazardous materials as a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under Section 5103 of Federal Hazardous Materials Transportation Law (49 U.S.C. 5103). The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (see 49 CFR 172.101), and materials that meet the defining criteria for hazard classes and divisions. When a substance meets the DOT definition of a hazardous material, it must be transported in accordance with safety regulations which provide guidelines for appropriate packaging, communication of hazards, and proper shipping controls.

In Genesee County, approximately 1,034 miles of state and local roads are present; of which, 260 miles of roadway are county-owned, and 535 miles are municipal roadways (New York State Department of Transportation [NYSDOT] 2016). These roads cross rivers and streams; hazardous substance spills on roads could pollute watersheds that serve as domestic water supplies for areas within Genesee County and other parts of the state. Hazardous substance releases also could occur along rail lines, as collisions and derailments of train cars can result in large spills.

Location

Hazardous materials are widely stored and transported throughout Genesee County. An event involving hazardous materials can occur anywhere; however, they usually occur along major highways and railways (in-transit) or at facilities that store and/or use hazardous materials (fixed site).



Hazardous Materials at Fixed Sites

Many years ago, numerous wastes were dumped on the ground, in rivers, or left out in the open. As a result, thousands of uncontrolled or abandoned contaminated sites were created. These sites included abandoned warehouses, manufacturing facilities, processing plants, and landfills. In response to concerns regarding health and environmental risks, Congress established the Superfund program in 1980 to clean up these sites. The Superfund program is administered by the EPA in cooperation with individual states.

Federal regulations, including CERCLA and Superfund Amendments and Reauthorization Act (SARA), required that a National Priorities List (NPL) of sites throughout the United States be maintained and revised at least annually. The NPL contains a list of sites of national priority with known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. As of the date of this plan, two NPL (Superfund) sites exist in Genesee County (EPA 2018). They are described below. The Batavia Landfill is listed in EPA data as well; however, the site was removed from the NPL in November 2005 (EPA 2018). In New York State, the Department of Environmental Conservation (NYSDEC) Inactive Hazardous Waste Disposal Site Program oversees the Superfund program (NYSDEC 2015).

- The Byron Barrel & Drum site, located in the Town of Byron, was identified as a hazardous waste site in 1982. The site is a 2-acre portion of a former heavy construction salvage yard and hazardous waste disposal location. Investigations identified more than 200 drums present on site. Contamination of soil and groundwater occurred over a period of years as abandoned waste drums deteriorated. Other drums were destroyed and mixed with site fill. No spill containment or control measures were in place, which allowed the hazardous drum contents to migrate into soil and groundwater. In August 1984, emergency actions were conducted to protect human health and the environment, including the removal of 219 drums and approximately 40 cubic yards of contaminated soil and debris. Remedial actions, including soil washing; groundwater extraction, treatment and re-injection; and bioremediation, have also occurred resulting in a reduction in contamination. Environmental easements and restrictive covenants were in the process of being acquired (EPA 2017).
- The Lehigh Valley Railroad site, located in the town of LeRoy, was designated a hazardous waste site after a derailment involving chemicals occurred in December 1970. Approximately 1 ton of cyanide crystals and 30,000 to 35,000 gallons of trichloroethane (TCE) spilled, which contaminated soil and groundwater. Despite the use of neutralizers on the spill site, TCE migrated into the groundwater where it formed a 4-mile plume. Protective actions have included vapor monitoring in nearby residences, the installation of soil vapor extraction systems, placement of affected homes on the public water supply, and groundwater monitoring. Remediation of this site is ongoing (EPA 2017).

The Emergency Planning and Community Right-to-Know Act (EPCRA) was passed by Congress in 1986 (Title III of SARA). EPCRA establishes requirements for federal, state and local governments, Indian tribes, and industry regarding emergency planning and “Community Right-to-Know” reporting on hazardous and toxic chemicals. The Community Right-to-Know provisions help increase the public’s knowledge and provide access to information on chemicals at individual facilities, their uses, and releases into the environment. States and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment. There are four key provisions to EPCRA, which are described below.

- **Emergency planning** – local governments are required to prepare chemical emergency response plans and to review those plans at least annually. State governments are required to oversee and coordinate local planning efforts. Facilities that maintain extremely hazardous substances (EHS) on site in quantities greater than corresponding threshold planning quantities (TPQs) must also cooperate in preparing emergency plans.



- **Emergency release notification** – facilities must immediately report accidental releases of EHS and any other hazardous substances, as defined under CERCLA. Any release of these substances in quantities greater than their corresponding reportable quantities must be reported to state and local officials.
- **Hazardous chemical storage reporting requirements** – facilities handling or storing any hazardous chemicals, as defined under the Occupational Safety and Health Administration (OSHA), must submit Material Safety Data Sheets (MSDSs), or Safety Data Sheets (SDSs), to state and local officials and fire departments. Facilities must also submit an inventory form for these chemicals to state and local officials and local fire departments.
- **Toxic chemical release inventory (TRI)** – facilities must complete and submit a toxic chemical release inventory form (Form R) each year. Form R must be submitted for each TRI chemical manufactured or otherwise used above the applicable threshold quantities.

As part of the requirements for hazardous chemical storage reporting, facilities must annually submit an Emergency and Hazardous Chemical Inventory Form to the local emergency planning committee, the State Emergency Response Commission (SERC), and the local fire department. Facilities provide either a Tier I or Tier II inventory form; however, most states require Tier II inventory forms. The forms need to be submitted on or before March 1 each year, providing information on chemicals present at the facility in the previous year.

SARA requires the governor of each state to establish a SERC. New York's SERC was established by Executive Law, Article 2-B in 1978. The signing of this legislation also established the Disaster Preparedness Commission in 1978. SARA also requires establishment of emergency planning districts by SERC, and specifies that these districts can be existing political subdivisions. The function of the emergency planning district is to facilitate preparation and implementation of emergency plans.

Genesee County is home to 11 fixed facilities that store or use hazardous materials and that fall under Tier II reporting requirements. For security purposes, they are not mapped in this profile.

Additionally, EPA identifies ten facilities under the Toxic Release Inventory (TRI). These facilities are required to annually report how much of each chemical is recycled, combusted for energy recovery, treated for destruction, and disposed of or otherwise released on and off site. In 2016, the TRI facilities in Genesee County reported a total of 4.4 thousand pounds (lbs) of on-site and off-site disposal or other releases, with the following breakdown:

- Total On Site: 87 lbs
 - Air: 81 lbs
 - Water: 0 lbs
 - Land: 6 lbs
- Total Off Site: 4.3 thousand lbs

The majority of chemicals released into the air in Genesee County (in 2016) includes nickel (51 percent), chromium (21 percent), manganese (14 percent), lead (8 percent), and copper (11 percent) (EPA 2017).

Hazardous Materials In-Transit

Incidents involving hazardous materials in transit can occur anywhere in Genesee County. Transportation corridors within Genesee County that carry hazardous materials include highways, railroads, air/flight paths, pipelines, and navigable waterways. Major highways are more likely to be settings for this type of hazard because of interstate and local commercial transport of hazardous materials. Transport vehicles do not typically travel through residential areas unless they are en route to destinations such as gasoline service stations or storage facilities.



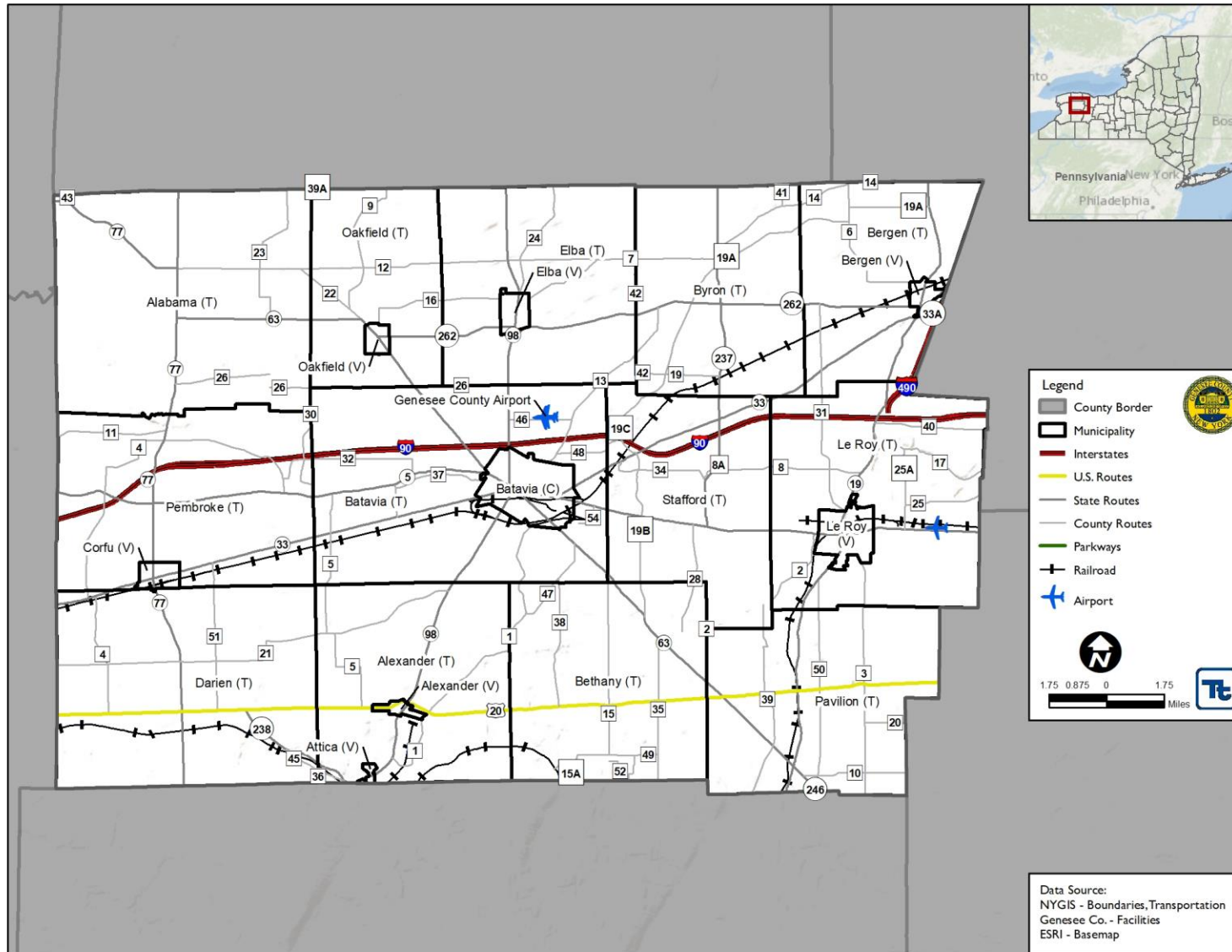
Hazardous substance releases in navigable waterways are not a significant concern for Genesee County; per U.S. Coast Guard (USCG) determinations, there are no navigable waterways within the county (USCG 2017). The U.S. Army Corps of Engineers (USACE) only finds one waterway within the county as navigable and requiring permits: the Genesee River is considered navigable from its mouth in Belfast, New York, to Black Creek, about 119.1 miles upstream (USACE 1999).

Major transportation routes through Genesee County include a framework of north/south, east/west and diagonal roads. Primary east/west roads include State Routes (S.R.-) 5, 20, 33 and 262, and Interstate (I-) 90. Primary north/south roads include S.R. 19, 77, 98, and 237. SR 63 crosses Genesee County diagonally from the northwest to the southeast. The potential for a spill also exists on routes used for industrial and business purposes. Section 4 of this HMP discusses roadways in the County. Figure 5.4.7-1 shows the major transportation routes and railways in Genesee County.

Hazardous material incidents may occur along railways in Genesee County. Rail lines that may carry hazardous materials include the CSX Corporation, Norfolk Southern, and two short lines: Depew, Lancaster & Western Railroad; and Rochester & Southern Railroad. Railways pose an immediate risk for the following municipalities: the City of Batavia; and the Towns of Alexander, Batavia, Bergen, Bethany, Byron, Corfu, Darien, Le Roy, Pavilion, Pembroke, and Stafford. Passenger rail service was discontinued in 1971. NYSDOT has a vital interest in preserving and improving the rail freight part of its transportation network. Rail shipments allow cost-effective movement of goods and thus decrease stress on the state's highway system. Major commodities shipped by rail include petrochemicals (including plastic pellets), construction materials, food products, raw materials, and finished goods for manufacturers. An accident involving a rail car carrying hazardous materials could pose a public safety hazard to the community. Figure 5.4.7-1 below shows railways that run throughout Genesee County.



Figure 5.4.7-1. Major Transportation Routes and Railways in Genesee County



Source: NYGIS, Genesee County



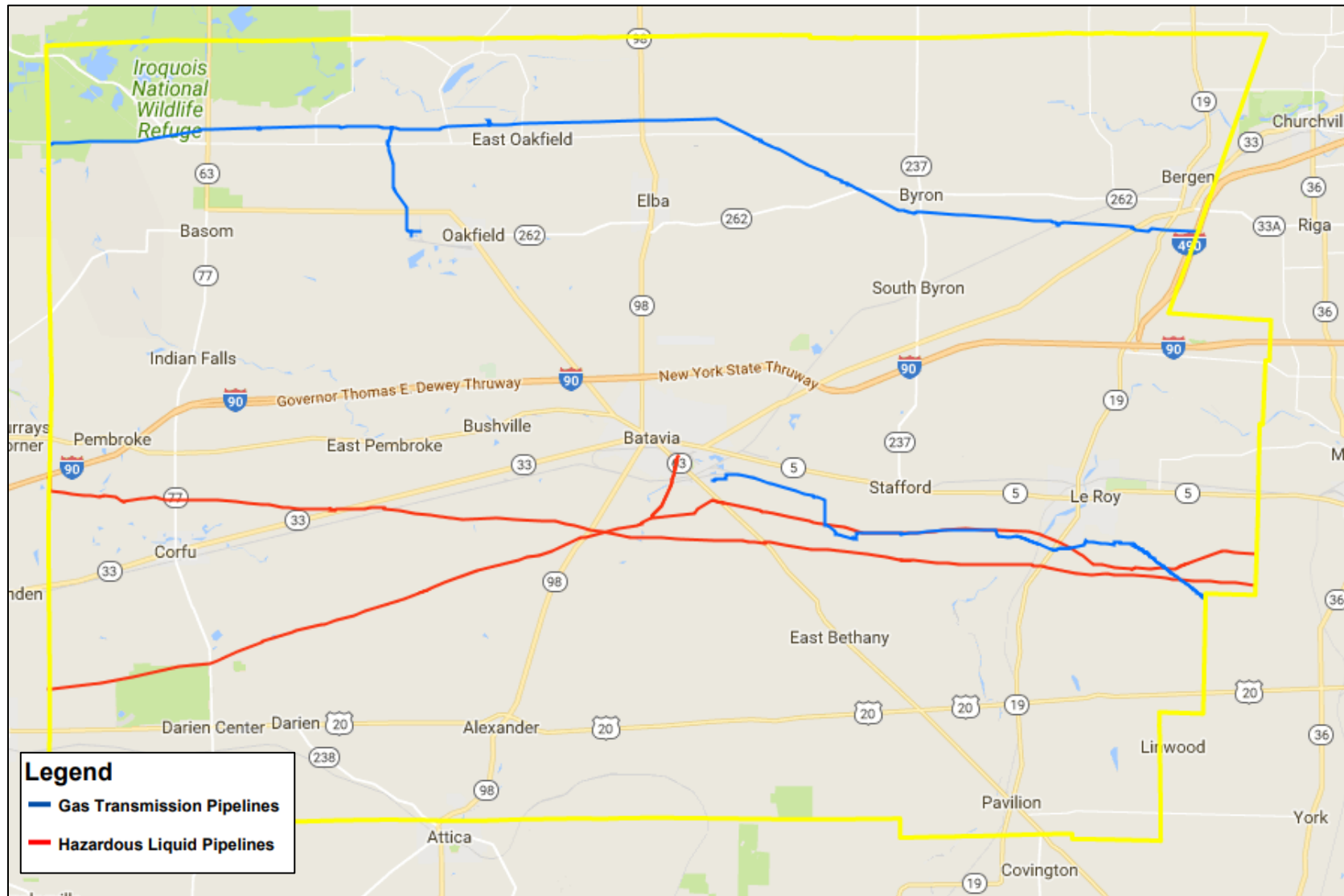


Section 5.4.7: Risk Assessment - Hazardous Materials

Hazardous materials can also be transported via underground petroleum and gas (natural and propane) pipelines across the state. New York State has an extensive network of natural gas and petroleum pipelines, some of which pass through Genesee County. Figure 5.4.7-2, below, shows the extent and location of gas and hazardous liquid pipelines in the county. The pipelines operating in Genesee County are owned by Buckeye Partners, LP; Dominion Energy Transmission, Inc.; Empire Pipeline Inc.; Sunoco Pipeline L.P.; and United States Gypsum Co. (National Pipeline Mapping System [NPMS] 2018).



Figure 5.4.7-2. Gas Transmission and Hazardous Liquid Pipelines in Genesee County



Source: National Pipeline Mapping System 2018

Note: Pipelines depicted on this map represent gas transmission and hazardous liquid lines only. Gas gathering and gas distribution systems are not represented.





Extent

The extent of a hazardous substance release depends on (1) whether the substance is released from a fixed or mobile source, (2) the size of the impacted area, (3) the toxicity and properties of the substance, (4) the duration of the release, and (5) environmental conditions (for example, wind and precipitation, terrain, etc.).

Hazardous substance releases can contaminate air, water, and soils, possibly resulting in death or injuries. Dispersion can occur rapidly when the hazardous substance is transported by water and wind. While often accidental, releases can occur as a result of human carelessness, intentional acts, or natural hazards. Hazardous releases caused by natural hazards are known as secondary events. Hazardous materials can include toxic chemicals, radioactive substances, infectious substances, and hazardous wastes. Such releases can affect nearby populations and contaminate critical or sensitive environmental areas.

The severity or impact of a hazardous substance release, whether accidental or intentional, depends on several potentially mitigating or exacerbating circumstances. Mitigation involves precautionary measures taken in advance to reduce the impact of a release on the surrounding environment. For example, primary and secondary containment, or shielding by sheltering-in-place, protects people and property from the harmful effects of a hazardous substance release. Exacerbating conditions—characteristics that can enhance or magnify the effects of a hazardous substance release—include the following:

- Weather conditions, which affect the ways in which the hazard occurs and develops
- Micro-meteorological effects of buildings and terrain, which alter dispersion of hazardous materials
- Maintenance failures (such as fire protection and containment features), which can substantially increase damage to a facility and to surrounding buildings

The severity of an incident depends not only on the circumstances described above, but also on the type of substance released and the distance from the incident and related response time of emergency response teams. Areas closest to a release are generally at greatest risk; however, depending on the substance, a release can travel great distances or remain present in the environment for a long period of time (for example, centuries to millennia).

The warning time for a hazardous materials incident can be sudden, without any warning, such as an explosion, or may slowly develop such as a leaking container. Facilities that store extremely hazardous substances are required to notify local officials when an incident occurs. Local emergency responders and emergency management officials would determine whether they need to evacuate the public or to advise to shelter in place. Similar to on-site hazardous substances incidents, the amount of warning time for incidents associated with hazardous substances in transit varies based on the nature and scope of the incident. If an explosion did not occur immediately following an accident, there may be time to warn adjacent neighborhoods and enough time to facilitate appropriate protective actions.

Previous Occurrences and Losses

Hazardous materials incidents, both on site or in transit, occur frequently across the state and in Genesee County. These incidents are typically small, localized events. Between 1954 and 2016, the State of New York was included in two Federal Emergency Management Agency (FEMA)-declared emergencies (EM) related to hazardous substance incidents. Typically, EMs cover a wide region of an included state, and therefore could impact many counties within that state. However, not all counties in New York State were included in the two EMs cited above. Importantly, Genesee County was not included in either EM (FEMA 2017).



The U.S. Department of Transportation (USDOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) provides an incident report database with information on incidents throughout the United States. The data are from hazardous materials incident reports. According to this database, 59 incidents occurred in Genesee County between 1973 and 2017 (57 highway and two rail), releasing combustible liquid, flammable combustible liquid, flammable gas, oxidizer, poisonous materials, very insensitive explosives, and nonflammable compressed gas (PHMSA 2018).

Additionally, the NYSDEC Spill Incidents Database lists 1,226 spill incidents throughout the county from 1978, through October 10, 2017. Common products spilled include diesel fuel, gasoline, kerosene, fuel oil, hydraulic oil, agricultural and various chemicals, food products, and other petroleum products (Genesee 2008). The most recent incident was a residential transformer oil spill on September 19, 2017, in the City of Batavia (NYSDEC 2017).

For this 2019 HMP update, known hazardous substances incidents that have impacted Genesee County between 2006 and 2017 are identified in Table 5.4.7-1. Between 1954 and 2017, New York State was included in one FEMA EM related to a hazardous substance incident. On August 7, 1978, and May 21, 1980, emergency declarations (EM-3066 and EM-3080) for New York State were issued related to the Love Canal incident. Genesee County was not included in this declaration (FEMA 2018). For events prior to 2006, refer to the 2008 Genesee County HMP. It should be noted that not all events that have occurred in Genesee County are included due to the extent of documentation and the fact that not all sources may have been identified or researched. Loss and impact information could vary depending on the source. Therefore, the accuracy of monetary figures discussed is based only on the available information identified during research for this HMP update.



Table 5.4.7-1. Hazardous Materials Incidents in Genesee County, 2006 to 2017

Date(s) of Event	Event Type	FEMA Declaration Number	County Designated?	Losses / Impacts
February 20, 2009	Hazardous Substance Release	No	N/A	In the City of Batavia, on I-90 Eastbound, a vehicle tried passing a tanker truck. The vehicle lost control and struck the tanker truck in the front corner, causing a rollover of the truck. A small crack in the top of the tank released approximately 20 gallons of gasoline. There were no reports of injuries or fatalities; however, approximately \$126,074 in damage was reported.
May 26, 2009	Hazardous Substance Release	No	N/A	Ammonia leak reported at a large farm in the Town of Elba
August 20, 2009	Chemical Fire	No	N/A	At the Flying J on Route 77 at the Thruway in Pembroke, a truck fire involving a chemical was reported. There was concern with it mixing with water and going down a storm drain in the parking lot. Route 77 was shut down due to the chemical spill and fire.
June 12, 2010	Hazardous Substance Release	No	N/A	County Emergency Management officials issued a voluntary evacuation for residents following an anhydrous ammonia leak in the Village of Oakfield.
March 24, 2011	Hazardous Substance Release	No	N/A	Approximately 400 gallons of fuel oil was released due to a vehicular crash at the intersection of Clinton Street and West Bergen in the Town of Bergen. There were no reports of injuries or fatalities; however, approximately \$199,000 in damage was reported.
May 14, 2011	Hazardous Substance Release	No	N/A	A fuel tank reportedly came completely off a car while it was traveling on Byron-Stafford Road near Thwing Road in the Town of Stafford. Approximately 20 gallons of gas was released; the release was declared a Level 1 hazmat incident. The road was closed until the release was cleaned up.
September 12, 2012	Hazardous Substance Release	No	N/A	A motor vehicle accident with injuries was reported on Route 77 in front of the T/A Travel Plaza, involving a semi-truck. The side saddle gas tank of the truck was leaking. Approximately 30 to 40 gallons of gasoline was released. Three injuries were reported as result of this accident.
September 10, 2013	Hazardous Substance Release	No	N/A	Two trucks in the Town of Elba collided, spilling significant amounts of gasoline
May 26, 2014	Hazardous Substance Release	No	N/A	A tank carrying 500 pounds of ammonia-based fertilizer tipped over in the Town of Byron

Sources: PHMSA 2018; North American Hazmat Situations and Deployments 2018

FEMA Federal Emergency Management Agency

N/A Not applicable





Probability of Future Occurrences

Predicting future hazardous substance incidents in Genesee County is difficult. These can occur at any time and any location in the county. Incidents can occur suddenly, without any warning, or develop slowly. Small spills, both fixed site and in transit, occur throughout the year, and the probability of occurrences of these events is high. Risk of a major incident within a given year is small. The county is expected to continue to undergo direct and indirect impacts of hazardous substance incidents annually that may induce secondary hazards such as infrastructure deterioration or failure; potential decreases in water quality and supply; and transportation delays, accidents, and inconveniences.

For the 2019 HMP update, the most up-to-date data was collected to calculate the probability of future occurrence of both in-transit and fixed-site hazardous material incidents for Genesee County. Information from the 2008 County HMP, PHMSA, and the North American Hazmat Situations and Deployments was used to identify the number of events that occurred between 1978 and 2017. The table below provides these statistics, as well as the annual average number of events, and the estimated percent chance of an incident occurring in any given year. Based on these statistics, Genesee County has a 100 percent chance of a hazardous material incident occurring in any given year.

Table 5.4.7-2. Probability of Future Occurrence of Hazardous Material Incidents in Genesee County

Hazard Type	Number of Occurrences Between 1978 and 2017	Rate of Occurrence or Annual Number of Events (average)	Recurrence Interval (in years) (# Years/Number of Events)	Probability of Event in any given year	Percent chance of occurrence in any given year
Hazardous Material Releases	470	12.05	0.09	11.75	100%

In Section 5.3, the identified hazards of concern within Genesee County were ranked. The probability of occurrence, or likelihood of an event, is one parameter used for hazard rankings. Based on historical records and input from the Planning Partnership, the probability of occurrence of hazardous materials spills within the County is considered “frequent” (likely to occur within 25 years, as presented in Table 5.3-1).

Climate Change Impacts

Non-natural incidents, such as hazardous substance incidents, are not typically considered vulnerable to climate change; however, this assessment not completely accurate. Climate change and its impact on hazardous materials sites, particularly waste sites, is a growing concern. Hazardous waste sites near rivers are tentatively at highest risk because extreme storms and higher water levels could release pollution into the environment. Many of these sites were built in locations believed to be removed from potential contamination or exposure-increasing factors. However, development, floodplain boundary change, and an increase in extreme events from climate change are increasing the possibility that water may reach hazardous material and waste sites (Flatt 2013).

5.4.7.2 Vulnerability Assessment

To understand risk, a community must evaluate its assets that are exposed or vulnerable within the identified hazard area. Regarding the hazardous materials hazard, all of Genesee County has been identified as the hazard area. Therefore, all assets within the county (population, structures, critical facilities, and lifelines), as described in the County Profile (Section 4), are vulnerable to hazardous material incidents. This section





addresses the following factors to evaluate and estimates potential impacts of the hazardous material incident hazard on Genesee County:

- Overview of vulnerability
- Data and methodology used for the evaluation
- Impacts on (1) life, health, and safety of residents; (2) general building stock; (3) critical facilities; (4) economy; and (5) future growth and development
- Effect of climate change on vulnerability
- Change of vulnerability compared to that presented in the 2008 Genesee County HMP
- Further data collections that will assist understanding of this hazard over time

Overview of Vulnerability

Overall, potential losses from hazardous material incidents are difficult to quantify due to the many variables and human elements. Human safety and welfare can be compromised as a result of negative health effects of poisoning or exposure to toxic substances, fires, or explosions.

Effects from a radiological incident at a fixed facility would vary, depending on the product released (type of radiation), amount of radiation released, current weather conditions, and time of day. The priority following an incident at any facility within the State of New York is life and safety of all individuals within the area impacted. Secondary to health and safety would be effects on critical infrastructure, environment, property, and the economy.

Data and Methodology

Data regarding this hazard were obtained from Genesee County and the Planning Partnership, as well as appropriate state and federal resources.

Impacts on Life, Health, and Safety

Several reporting mechanisms and databases exist to support 1976 RCRA, which considers solid waste and hazardous waste management. RCRAInfo is a comprehensive information system and has replaced the Resource Conservation and Recovery Information System (RCRIS) and Biennial Reporting System (BRS) previously used to gather data. RCRAInfo tracks many types of information about the regulated hazardous waste handlers, including facility status, regulated activities, and compliance histories. It also captures data on hazardous waste generation from large-quantity generators and waste management practices, including treatment, storage, and disposal facilities. In March 2018, 112 facilities in Genesee County reported information to RCRAInfo.

As stated earlier, Superfund is a program administered by EPA to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. According to the Superfund Enterprise Management System (SEMS), which identifies current and former NPL facilities and facilities not on the NPL, there are five facilities in Genesee County. Of the five, only two are currently on the NPL, one has been removed, and two are not on the NPL. There are two facilities in Batavia and one facility in each of the following: Byron, Le Roy, and Corfu. Byron Barrel & Drum (Town of Byron) and Lehigh Valley Railroad (Town of Le Roy) are currently on the NPL (EPA 2018).

Depending on the type and quantity of chemicals released and weather conditions, an incident can affect larger areas that cross jurisdictional boundaries. When hazardous materials are released into the air, water, or on land,



they may contaminate the environment and pose greater danger to human health. The general population may be exposed to a hazardous materials release through inhalation, ingestion, or dermal exposure. Exposure may be either acute or chronic, depending on the nature of the substance and extent of release and contamination. Hazardous material incidents can lead to injury, illnesses, and/or death of involved persons and those living within the impacted areas.

Locations of different hazardous materials and wastes sites in Genesee County render the entire county vulnerable to hazardous material incident hazard. Populations particularly vulnerable to effects of hazardous material incidents are those residing along major transportation routes, because significant quantities of chemicals are transported along these major thoroughfares.

Impacts on General Building Stock

Potential losses of general building stock caused by a hazardous material incident are difficult to quantify. Extent of damage to the general building stock depends on the scale of the incident. Potential losses may include inaccessibility, loss of service, contamination, and/or potential structural and content losses if an explosion occurs.

Impacts on Critical Facilities

Potential losses of critical facilities caused by a hazardous material incident are difficult to quantify. Potential losses may include inaccessibility, loss of service, contamination, and/or potential structural and content losses if an explosion occurs. Section 4 (County Profile) summarizes the number and type of critical facilities in Genesee County.

Impact on the Economy

If a significant hazardous material incident occurs, not only would life, safety, and building stock be at risk, but the economy of Genesee County would be affected as well. A significant incident within an urban area may force businesses to close for an extended period of time because of contamination or because of direct damage caused by an explosion. Exact impacts on the economy are difficult to predict, given the uncertainty of the size and scope of potential incidents.

Hazardous material incidents can lead to closures of major transportation routes in Genesee County. Closures of waterways, railroads, airports, and highways as a result of these incidents can hinder delivery of goods and services. Potential impacts may be local, regional, or statewide depending on the magnitude of the event and the extent of disruptions to services.

Future Growth and Development

As discussed in Sections 4 and 9, areas targeted for future growth and development have been identified across Genesee County. Any areas of growth could be impacted by hazardous material incidents because the entire county is exposed and vulnerable. An increase in development and population can increase likelihood of a hazardous substance incident. Future migration to larger jurisdictions may also increase the likelihood of an incident. The tables and hazard maps, included in the jurisdictional annexes in Volume II, Section 9 of this plan, contain information regarding the specific areas of development that would increase county vulnerability to the hazardous materials incident hazard.



Change of Vulnerability

Overall, Genesee County’s vulnerability has not changed, and exposure and vulnerability of the entire county to hazardous material incidents will continue.

Additional Data and Next Steps

For this HMP Update, any additional information regarding localized concerns and past impacts will be collected and analyzed. These data will be developed to support future revisions to the plan. Mitigation efforts could include extensions of existing efforts currently being developed for New York State, Genesee County, and locally.