

#### 4.3.16.9. State Facility Loss Estimation

Winter storm hazards can cause a range of damage to state critical facilities that will depend on the magnitude and duration of storm events. Losses may be as small as lost productivity and wages when workers are unable to travel or as large as sustained roof damage or building collapse. Roof pitch and building age are typical determinants in the vulnerability of an individual structure to snow load or icing during a winter storm. However, if all the critical facilities located in winter storm hazard zones were to be destroyed in a winter storm event, the estimated replacement cost of all State Critical Facilities is \$2,675,883,338.

## HUMAN-MADE HAZARDS

### 4.3.17. Civil Disturbance

#### 4.3.17.1. Location and Extent

Civil disturbance is a broad term that is typically used by law enforcement to describe one or more forms of disturbance caused by a group of people. Civil disturbance is typically a symptom of, and a form of protest against, major socio-political problems. Typically the severity of the action coincides with the level of public outrage. In addition to a form of protest against major socio-political problems, civil disturbances can also arise out of union protest, institutional population uprising, or from large celebrations that become disorderly. The scale and scope of civil disturbance events varies widely. However, government facilities, landmarks, prisons, and universities are common sites where crowds and mobs may gather. The concentration of federal buildings in Philadelphia and state government buildings in Harrisburg may be targets of civil disturbance. Additionally, Pennsylvania has 26 state correctional facilities, one motivational boot camp, 14 community corrections centers, 40 contract facilities and a training academy. In addition, Pennsylvania is home to eight federal prison facilities as well as local and private facilities that may be targets for civil unrest.

#### 4.3.17.2. Range of Magnitude

Civil disturbances can take the form of small gatherings or large groups blocking or impeding access to a building, or disrupting normal activities by generating noise and intimidating people. They can range from a peaceful sit-in to a full scale riot, in which a mob burns or otherwise destroys property and terrorizes individuals. Even in its more passive forms, a group that blocks roadways, sidewalks, or buildings interferes with public order. Often that which was intended to be a peaceful demonstration to the public and the government can escalate into general chaos. There are two types of large gatherings typically associated with civil disturbances: a crowd and a mob. A crowd may be defined as a casual, temporary collection of people without a strong, cohesive relationship. Crowds can be classified into four categories (Blumer, 1946):

- **Casual Crowd:** A casual crowd is merely a group of people who happen to be in the same place at the same time. Violent conduct does not occur.
- **Cohesive Crowd:** A cohesive crowd consists of members who are involved in some type of unified behavior. Members of this group are involved in some type of common activity, such as worshipping, dancing, or watching a sporting event. Although they may have intense internal discipline, they require substantial provocation to arouse to action.
- **Expressive Crowd:** An expressive crowd is one held together by a common commitment or purpose. Although they may not be formally organized, they are

assembled as an expression of common sentiment or frustration. Members wish to be seen as a formidable influence. One of the best examples of this type is a group assembled to protest.

- **Aggressive Crowd:** An aggressive crowd is comprised of individuals who have assembled for a specific purpose. This crowd often has leaders who attempt to arouse the members or motivate them to action. Members are noisy and threatening and will taunt authorities. They may be more impulsive and emotional, and require only minimal stimulation to arouse violence. Examples of this type of crowd could include demonstrators and strikers, though not all demonstrators and strikers are aggressive.

A mob can be defined as a large disorderly crowd or throng. Mobs are usually emotional, loud, tumultuous, violent and lawless. Similar to crowds, mobs have different levels of commitment and can be classified into four categories (Alvarez and Bachman, 2007):

- **Aggressive Mob:** An aggressive mob is one that attacks, riots and terrorizes. The object of violence may be a person, property, or both. An aggressive mob is distinguished from an aggressive crowd only by lawless activity. Examples of aggressive mobs are the inmate mobs in prisons and jails, mobs that act out their frustrations after political defeat, or violent mobs at political protests or rallies.
- **Escape Mob:** An escape mob is attempting to flee from something such as a fire, bomb, flood, or other catastrophe. Members of escape mobs are generally difficult to control can be characterized by unreasonable terror.
- **Acquisitive Mob:** An acquisitive mob is one motivated by a desire to acquire something. Riots caused by other factors often turn into looting sprees. This mob exploits a lack of control by authorities in safeguarding property.
- **Expressive Mob:** An expressive mob is one that expresses fervor or revelry following some sporting event, religious activity, or celebration. Members experience a release of pent up emotions in highly charged situations.

The worst-case scenario for a civil disturbance event would be riots akin to the 1967 Newark Riots, an event fueled by police brutality, political exclusion of blacks, urban renewal, inadequate housing, unemployment, and poverty. In this event, the arrest and subsequent treatment of a cab driver sparked violence and looting in downtown Newark, NJ. The National Guard was called in, but their presence only served to intensify the violence. The riots lasted six days, after which 23 people were dead, 725 were injured, and nearly 1,500 were arrested. A similar event could occur in one of Pennsylvania's major cities and have a comparable impact.

#### 4.3.17.3. *Past Occurrence*

Over the past 265 years Pennsylvania has had a dozen civil disorders take place which were notable enough to be recorded in the state's history (Klein, 1973):

- 1742 – Philadelphia Election Riot
- 1764 – Paxton Riots
- 1775 – Philadelphia Anti-Loyalist Riot
- 1794 – Whiskey Rebellion
- 1844 – Philadelphia Nativist Riots

- 1851 – Christiana Riot
- 1877 – Pennsylvania Railroad Strike
- 1892 – Homestead Steel Riot
- 1919 – Pennsylvania Steel Strike
- 1964 – Philadelphia race riot (August 28-30)
- 1969 – York Race Riot (1969)
- 1998 – State College (1998)
- 2011 – State College Paterno Riots
- 2011 – Occupy Philadelphia protests

While there have been some civil disturbances in the Commonwealth, they have largely not been catastrophic or widespread. Civil disturbance events of some kind occur every day with minimal impact on the Commonwealth, often in relation to politics, elections, economic stagnation, inflation, unemployment, oppression, disruption of services, or political scandal. These kinds of events have been housed in two different PEMA databases in recent years: PEIRS and WebEOC. Between January 2001 and June 2009, there was an average of 19 civil disturbance events reported to PEIRS, as shown in Table 4.3.17-1 below.

**Table 4.3.17-1 Civil disturbance events reported to PEIRS, 2001-2009 (PEMA, 2010)**

EVENT TYPE	2001	2002	2003	2004	2005	2006	2007	2008	2009*
Demonstration	6	1	4	0	0	1	8	3	1
Juvenile Detention Center	0	0	0	1	0	2	3	0	1
Prison Disturbance	1	4	2	0	3	2	3	1	1
Prison Escape	6	1	9	8	4	8	4	1	5
Protest	0	4	3	6	7	9	8	4	3
Riot	6	2	4	2	0	3	6	6	1
<b>Civil Disorder - totals</b>	<b>19</b>	<b>12</b>	<b>22</b>	<b>17</b>	<b>14</b>	<b>25</b>	<b>32</b>	<b>15</b>	<b>12</b>

*\*Events totaled through June 2009*

WebEOC captured emergency and incidents reported in 2010, 2011, and 2012. Events are not available for 2013. WebEOC categorized events differently than PEIRS did, but in general, events with the type “law enforcement” can be considered various kinds of civil disturbance events, shown in Table 4.3.17-2.

**Table 4.3.17-2 Civil disturbance events reported to WebEOC, 2010-2012 (PEMA, 2013)**

EVENT TYPE	2010	2011	2012
Law Enforcement	764	841	1,048
<b>Civil Disorder - total</b>	<b>2,653</b>		

#### 4.3.17.4. *Future Occurrence*

Civil disturbance is always a possibility as long as there is discrimination or other perceived social or economic injustices. However, it may be possible to recognize the potential for an event to occur in the near-term. For example, an upcoming significant sporting event at one of the colleges or universities in the Commonwealth may result in gathering of large crowds. Local law enforcement should anticipate these types of events and be prepared to handle a crowd so that peaceful gatherings are prevented from turning into unruly public disturbances. Overall, the probability of future civil disturbance events can be considered *likely* as defined by the Risk Factor Methodology (See Section 4.1).

#### 4.3.17.5. *Environmental Impacts*

The impacts of civil disturbance events are contingent upon numerous factors including issues, politics, and method of response. Generally, the impact of civil disturbance events is nominal and short-lived unless acts of sabotage are performed. There may be minor injuries to first responders or participants from physical confrontations, and vandalism may cause minimal damage to property, facilities, and infrastructure. Adequate law enforcement at planned civil disturbance events and around likely target locations like the offices of state agencies minimizes the chances of a small assembly of individuals turning into a significant disturbance.

#### 4.3.17.6. *Jurisdictional Vulnerability Assessment*

The vulnerability of individual jurisdictions is difficult to determine because civil disturbance hazards are tied to the current political and economic climate. A jurisdiction that is very vulnerable one month may be less vulnerable the next. However, in general, Philadelphia, Harrisburg, Dauphin County, Pittsburgh, Allegheny County, and individual county seats may have higher vulnerabilities due to higher concentrations of local, state, and federal facilities. Sites identified in Section 4.3.17.1 are locations where such events are more likely to occur and therefore should be considered more vulnerable.

Table 4.3.17-3 illustrates which counties did and did not profile civil disturbance, along with any ranking provided. As stated in Section 4.1, the decision by a county to profile a hazard is one indicator of the presence of risk from that hazard. This indicator should be viewed complementary to other analysis in this section. Together this analysis from reputable sources addresses different aspects of risk for a full risk profile.

Of the 9 counties which currently have calculated risk factor values for civil disturbance, the average value is 1.6; this average does not include Lebanon, Montour, Perry, and Philadelphia, who use an alternate Risk Factor/Ranking system. The State Risk Factor for civil disturbance is 2, while the Pennsylvania THIRA scored civil disturbance as a 6 out of 10. For more details on the State Risk Factor and THIRA rankings, please see Section 4.1.

<b>Table 4.3.17-3 Counties profiling civil disturbance hazards with hazard ranking and risk factor (if available).</b>				
<b>COUNTY</b>	<b>PROFILED HAZARD</b>	<b>DID NOT PROFILE HAZARD</b>	<b>RANKING (IF AVAILABLE)</b>	<b>RISK FACTOR (IF AVAILABLE)</b>
Adams		X		
Allegheny	X		Medium	2.2
Armstrong		X		
Beaver		X		
Bedford		X		
Berks		X		
Blair		X		
Bradford	X		Not Ranked	No RF
Bucks		X		
Butler	X		Low	1.6
Cambria		X		
Cameron	X		Low	1.2
Carbon		X		
Centre	X		Low	1.6
Chester		X		
Clarion		X		
Clearfield		X		
Clinton		X		
Columbia		X		
Crawford		X		
Cumberland	X		Low	1.2
Dauphin		X		
Delaware		X		
Elk		X		
Erie		X		
Fayette	X		Low	1.3
Forest		X		
Franklin		X		
Fulton		X		
Greene		X		
Huntingdon	X		Not Ranked	No RF
Indiana		X		
Jefferson		X		

<b>Table 4.3.17-3 Counties profiling civil disturbance hazards with hazard ranking and risk factor (if available).</b>				
<b>COUNTY</b>	<b>PROFILED HAZARD</b>	<b>DID NOT PROFILE HAZARD</b>	<b>RANKING (IF AVAILABLE)</b>	<b>RISK FACTOR (IF AVAILABLE)</b>
Juniata	X		Low	1.3
Lackawanna		X		
Lancaster		X		
Lawrence		X		
Lebanon*		X		
Lehigh	X		Medium	2.0
Luzerne		X		
Lycoming		X		
McKean		X		
Mercer	X		Low	1.9
Mifflin	X		Not Ranked	No RF
Monroe		X		
Montgomery	X		Medium	2.2
Montour*	X		Not Ranked	2.0
Northampton	X		Medium	2.0
Northumberland		X		
Perry*	X		Not Ranked	1.0
Philadelphia**		X		
Pike		X		
Potter		X		
Schuylkill		X		
Snyder		X		
Somerset	X		Not Ranked	No RF
Sullivan		X		
Susquehanna		X		
Tioga		X		
Union		X		
Venango		X		
Warren		X		
Washington		X		
Wayne		X		
Westmoreland		X		
Wyoming		X		
York	X		Low	1.6

Table 4.3.17-3 Counties profiling civil disturbance hazards with hazard ranking and risk factor (if available).				
COUNTY	PROFILED HAZARD	DID NOT PROFILE HAZARD	RANKING (IF AVAILABLE)	RISK FACTOR (IF AVAILABLE)
<p>* Lebanon, Montour, and Perry use an alternate weighted ranking where Risk Factor = Frequency x [(0.25 x Critical facilities) + (0.40 x Social) + (0.25 x Economic) + (0.10 x Environmental)]. While this risk factor was used to comparatively rank hazards, the number does not correspond to a high-medium-low rating.</p> <p>**Philadelphia uses an A, B, C rating system where A is high, B is medium, and C is low.</p>				

**4.3.17.7. State Facility Vulnerability Assessment**

The vulnerability of state facilities depends on the type and function of each individual entity as well as the greater geographic context of the facility. As visible symbols of government, government facilities and national monuments are more vulnerable to civil disturbance events, but the vulnerability of each facility may change based on hot-button issues. Table 4.3.17-4 illustrates the number of critical facilities in Pennsylvania that fall into these more vulnerable types. To a certain extent, though, any facility deemed critical may be a target for civil disturbance.

Table 4.3.17-4 State Critical Facilities vulnerable to Civil Disturbance incidents by Critical Facility Type	
STATE CRITICAL FACILITY TYPE	NUMBER OF IMPACTED FACILITIES
Government Facilities	41
National Monuments & Icons	6
<b>Grand Total</b>	<b>47</b>

**4.3.17.8. Jurisdictional Loss Estimation**

Losses for civil disturbance events are difficult to predict and can vary significantly in range. For example, the State College Riot in July 1998, fueled by alcohol consumption, resulted in approximately \$150,000 in damages. Because of its national, state, and regional importance, Philadelphia is the most threatened jurisdiction for civil disturbances. Philadelphia, Allegheny County, and Dauphin County, the most vulnerable jurisdictions, have total estimated losses of approximately \$429.6 billion (Table 4.3.17-5).

Table 4.3.17-5 Estimated jurisdictional losses due to civil disturbances.		
COUNTY	NUMBER OF IMPACTED BUILDINGS	DOLLAR VALUE OF EXPOSURE, BUILDING AND CONTENTS (THOUSANDS \$)
Allegheny	706,960	\$180,606,811.00
Dauphin	163,526	\$39,786,066.00
Philadelphia	778,715	\$201,276,171.00
<b>TOTAL</b>	<b>1,649,201</b>	<b>\$421,669,048.00</b>

#### 4.3.17.9. State Facility Loss Estimation

The maximum threat of civil disturbance is hard to project. It has the potential (in terms of injuries, loss of life, and economic, property, and infrastructure damage) to inflict tremendous loss. The critical facilities listed in Section 4.3.17.7 have a total replacement value of \$1,753,675,818. Please note, though, that national monuments and icons do not have a replacement value, so potential losses should be considered an underestimation. More broadly, in the case of large civil disturbance events, the Commonwealth may incur losses related to work stoppages in addition to any acts of vandalism that may occur. Failure to pursue a program of civil disturbance awareness may result in increased loss of lives and property.

#### 4.3.18. Dam Failure

The Dam Failure profile can be found in *Appendix H*.

#### 4.3.19. Environmental Hazards

Environmental hazards in Pennsylvania focus mainly on hazardous material release, coal mining, and oil and gas well drilling (both conventional and unconventional). These hazards result from human activities and industries and can result in injury and death to humans and damage to property.

Additional environmental hazards include superfund facilities, manure spills, and product defect or contamination. These are included in the definition of environmental hazards, but were not profiled in the SSAHMP update. Superfund sites are hazards originating from abandoned hazardous waste sites listed on the National Priorities List. The EPA maintains superfund site information which includes hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL. There are 290 superfund sites in Pennsylvania. Manure spills involve the release of stored or transported agricultural waste. Product defect or contamination includes highly flammable or otherwise unsafe consumer products and dangerous foods.

No information on deaths, serious injury, or property damage could be found for superfund sites, manure spills, or product defect or contamination; therefore these types of environmental hazards were not profiled in this plan.

##### 4.3.19.1. Location and Extent

###### *Hazardous Materials Release*

Hazardous material releases pose threats to the natural environment, the built environment, and public safety through the diffusion of harmful substances, materials, or products. Hazardous materials can include toxic chemicals, infectious substances, biohazardous waste, and any materials that are explosive, corrosive, flammable, or radioactive (PL 1990-165, §207(e)). Hazardous material releases can occur wherever hazardous materials are manufactured, used, stored, or transported. Such releases can occur along transportation routes or at fixed-site facilities. Hazardous material releases can result in human and wildlife injury, property damage, and contamination of air, water, and soils.