Table 4.3.14-5 Potential jurisdictional losses due to tornados.		
COUNTY	**TOTAL NUMBER OF IMPACTED BUILDINGS**	**DOLLAR VALUE OF EXPOSURE, BUILDING AND CONTENTS (THOUSANDS $)**
York	209,096	$52,263,528.00
Grand Total	***6,127,881***	***$1,579,087,105.00***

4.3.14.9. State Facility Loss Estimation

State facility loss estimates were calculated by summing the replacement cost of all state critical facilities located within the tornado hazard area defined in section 4.3.14.6. The estimated replacement cost of all state critical facilities located in tornado zones is approximately $32,255,517,320.

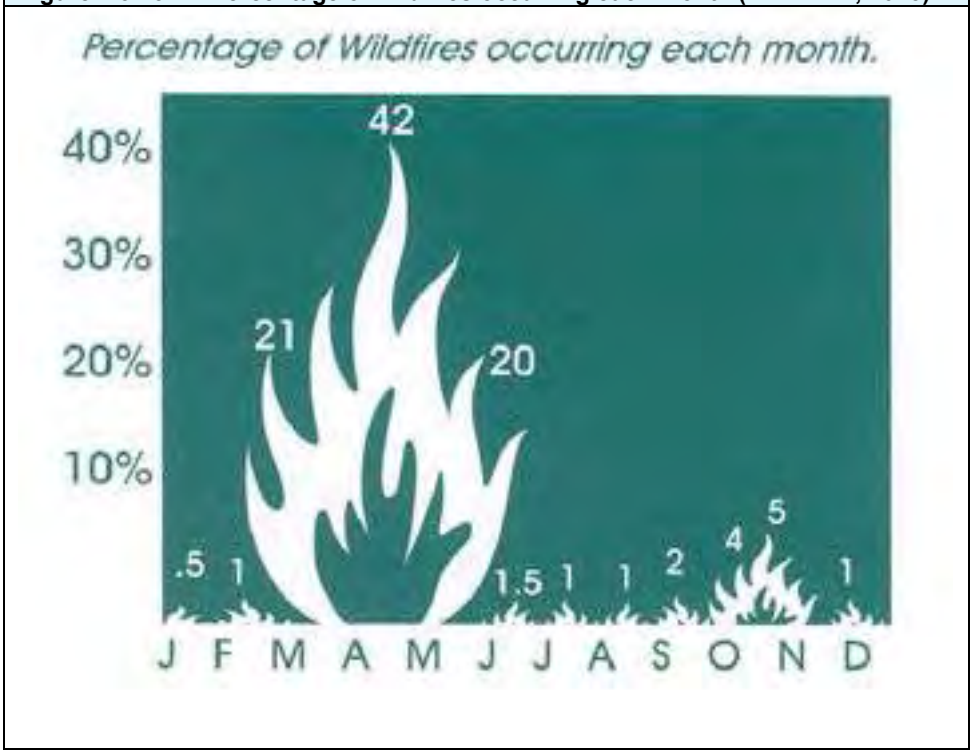
4.3.15. Wildfire

4.3.15.1. Location and Extent

Wildfires occur throughout wooded and open vegetation areas of Pennsylvania. They can occur any time of the year, but mostly occur during long, dry hot spells. Any small fire, if not quickly detected and suppressed, can get out of control. Most wildfires are caused by human carelessness or negligence. However, some are precipitated by lightning strikes and in rare instances, spontaneous combustion.

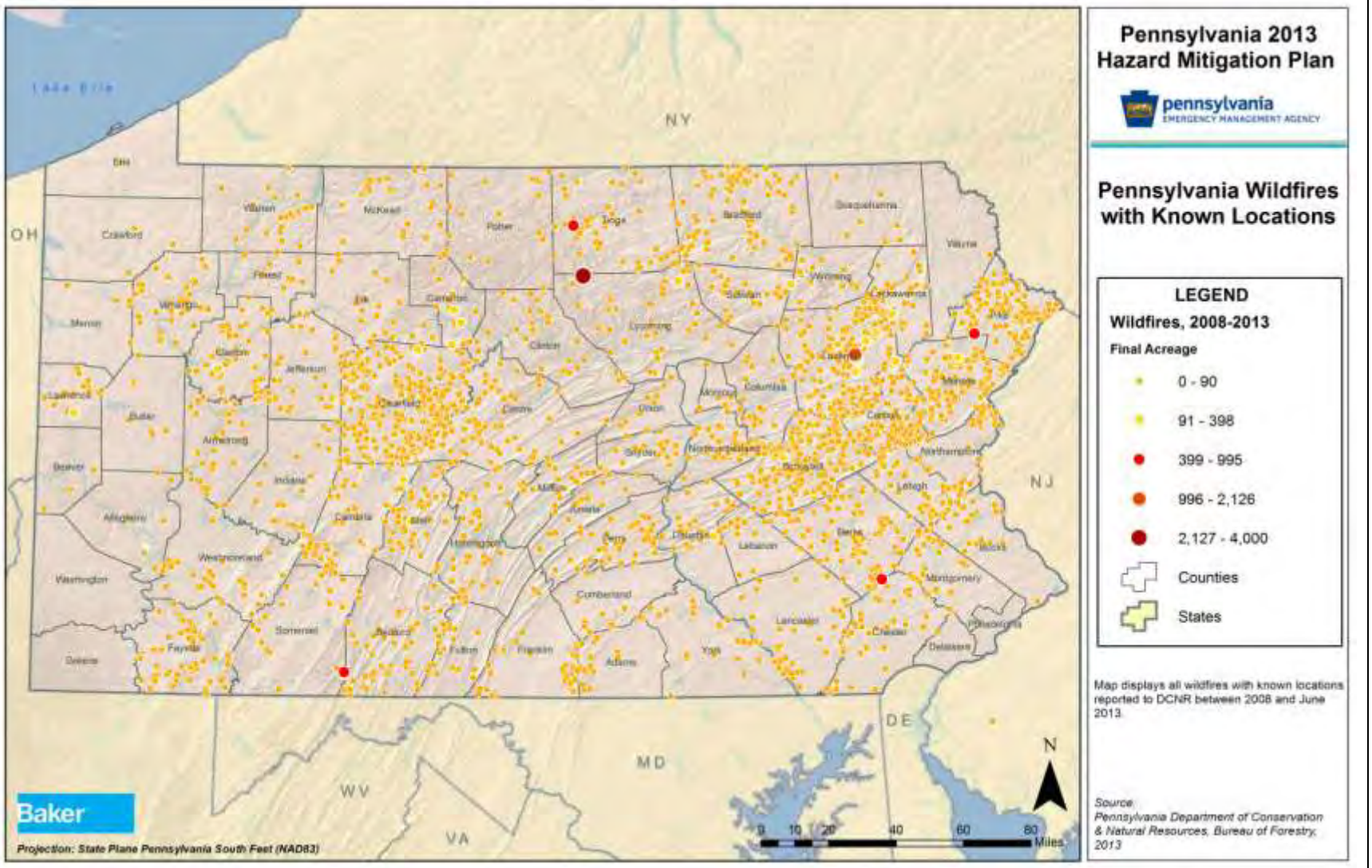
Open fields, grass, dense brush and forest-covered areas are typical sites for wildfire events. Under dry conditions or droughts, wildfires have the potential to burn forests as well as croplands. The greatest potential for wildfires is in the spring months of March, April and May, and, to a lesser extent, the autumn months of October and November. In the spring, bare trees allow sunlight to reach the forest floor, drying fallen leaves and other ground debris. In the fall, dried leaves are also fuel for fires. The percentage of wildfires occurring each month is shown in Figure 4.3.15-1.

Figure 4.3.15-1 Percentage of wildfires occurring each month (PA DCNR, 2013).



Most wildfires in Pennsylvania are caused by people, often by debris burns (PADCNR-BOF, 2010). Several fires have started in a person's backyard and traveled through dead grasses and weeds into bordering woodlands. Ninety-two percent of Pennsylvania wildfires burn less than ten acres and are suppressed within the first burning period. Figure 4.3.15-2 shows the locations wildfires that the Bureau of Forestry (BOF) *responded to* since 2002. This data from 2002-June 2013, and all the wildfire data in this section, represents the best available data for wildfires. Wildfires are known to be an under reported. Many wildfires occur every year and are suppressed by volunteer fire departments without any response or assistance from the BOF. To date, information on the number and size of these fires is not located in any central point. It is estimated that there are approximately 5,000 to 10,000 wildfires occurring annually in Pennsylvania. By far the most wildfires have occurred in Clearfield, Schuylkill, and Luzerne Counties.

Figure 4.3.15-2 Map showing location of wildfire events with known locations reported to DCNR across Pennsylvania (PADCNR-BOF, 2013).



Areas of the Commonwealth that have large home developments built in volatile fuel types are at risk for catastrophic wildfires. Many areas of the state are at risk for large wildfires, but Northeastern Pennsylvania is the most at risk for loss of life and/or property due to the number of homes at risk for wildfires. This area has large home developments built in volatile fuel types including scrub oak, mountain laurel, blueberry, and huckleberry. If spring weather conditions were perfect for a fire (i.e. clear sky, high winds, low relative humidity, and a prolonged period of dry weather), it is possible that 10,000 acres could burn in areas of Monroe or Pike Counties. In Monroe County in particular, concerns about ignition of fallen limbs after strong wind storms and winter storms continue.

In locations where homes are at risk for wildfires, the BOF's Wildland/Urban Interface Guidance Document is available to assist homeowners, community associations, local government and developers to assess and mitigation the potential dangers of a wildfire. The guidance also provides information for developing and action plan in coordination with local emergency managers. Communities at risks for wildfires can adopt by local ordinance the "International Wildland-Urban Interface Code" of the Uniform Construction Code. The actions under Objective 1-9 address Wildland-Urban Interface related mitigation.

4.3.15.2. Range of Magnitude

Wildfire events can range from small fires that can be managed by local firefighters to large fires impacting many acres of land. Large events may require evacuation from one or more communities and necessitate regional or national firefighting support. The impact of a severe wildfire can be devastating. A wildfire has the potential to kill people, livestock, fish and wildlife. They often destroy property, valuable timber, forage and recreational and scenic values.

In addition to the risk wildfires pose to the general public and property owners, the safety of firefighters is also a concern. Although loss of life among firefighters does not occur often in Pennsylvania, it is always a risk. More common firefighting injuries includes falls, sprains, abrasions or heat-related injuries such as dehydration. Response to wildfires also exposes emergency responders to the risk of motor vehicle accidents and can place them in remote areas away from the communities that they are chartered to protect.

The largest wildfire in Pennsylvania in recent years burned 10,000 acres in the north-central area of the Commonwealth. This fire was controlled within a week. It destroyed five cabins, but there was no loss of life. Several other fires have burned over 2,000 acres each and again have been controlled within a week of the reported start. A potential worst-case scenario for a wildfire in Pennsylvania would be if a large fire ignited in/around a secluded but populated area of the Pocono Mountains. This kind of an event could cause damage to homes, threaten lives, and destroy stands of trees with both agricultural and tourism economic value. The seclusion of housing developments along with the strong availability of wildfire fuel could also complicate emergency response and home defense.

4.3.15.3. Past Occurrence

The Pennsylvania Department of Conservation of Natural Resources, Bureau of Forestry (BOF), maintains an inventory of wildfire events dating back to 1913. This information indicates that while wildfires have occurred and will likely continue to occur annually, the total number of fires

has fallen in recent years. Table 4.3.15-1 shows this nearly 100 years of wildfire history in Pennsylvania. The most expensive year for fighting wildfires was 2006, when the estimated cost of extinction for all fires neared $1 million.

Table 4.3.15-1 Pennsylvania wildfire history (DCNR, 2013).

YEAR	NUMBER OF FIRES	ACRES BURNED	AVERAGE SIZE	COST OF EXTINCTION ($)
1913	937	386,267	412.2	$ 29,593.56
1914	1,182	360,236	304.8	$ 32,535.83
1915	1,080	340,634	315.4	$ 27,154.94
1916	1,012	143,295	141.6	$ 13,760.86
1917	1,902	286,184	150.5	$ 27,831.28
1918	1,625	227,485	140.0	$ 30,166.12
1919	950	126,626	133.3	$ 15,839.21
1920	1,597	256,158	160.4	$ 55,538.10
1921	2,409	188,536	78.3	$ 60,941.12
1922	3,628	331,566	91.4	$ 185,201.55
1923	3,538	375,737	106.2	$ 158,825.45
1924	1,997	95,792	48.0	$ 85,777.64
1925	2,562	125,150	48.8	$ 63,793.35
1926	2,917	224,256	76.9	$ 177,353.41
1927	1,246	37,680	30.2	$ 28,856.14
1928	2,534	111,631	44.1	$ 99,380.14
1929	2,467	41,929	17.0	$ 59,367.33
1930	6,790	312,300	46.0	$ 675,943.52
1931	4,020	150,140	37.3	$ 200,143.09
1932	4,898	95,141	19.4	$ 171,429.95
1933	2,028	28,598	14.1	$ 43,760.63
1934	4,188	179,727	42.9	$ 146,624.42
1935	3,507	72,551	20.7	$ 92,119.85
1936	2,926	35,328	12.1	$ 76,062.77
1937	2,470	35,364	14.3	$ 54,137.62
1938	3,467	57,590	16.6	$ 104,336.84
1939	4,790	72,287	15.1	$ 195,912.67
1940	2,411	33,972	14.1	$ 71,881.86
1941	4,084	109,116	26.7	$ 204,385.27
1942	2,010	71,386	35.5	$ 101,133.20
1943	2,117	67,826	32.0	$ 118,771.21
1944	1,723	68,001	39.5	$ 84,943.42
1945	865	26,366	30.5	$ 40,960.39
1946	2,171	47,931	22.1	$ 89,413.56
1947	1,495	52,494	35.1	$ 124,148.65
1948	871	13,016	14.9	$ 32,401.30
1949	1,540	32,723	21.2	$ 88,151.34
1951	858	33,959	39.6	$ 65,942.14
1952	1,653	68,823	41.6	$ 228,056.49
1653	1,414	33,148	23.4	$ 274,457.69
1954	947	21,275	22.5	$ 96,405.78

Table 4.3.15-1 Pennsylvania wildfire history (DCNR, 2013).

YEAR	NUMBER OF FIRES	ACRES BURNED	AVERAGE SIZE	COST OF EXTINCTION ($)
1955	1,258	33,783	26.9	$ 167,187.49
1956	559	6,940	12.4	$ 29,754.95
1957	1,250	37,077	29.7	$ 144,824.45
1958	912	15,537	17.0	$ 64,470.12
1959	984	25,812	26.2	$ 90,650.83
1960	1,257	33,324	26.5	$ 179,476.52
1961	537	3,104	5.8	$ 44,871.66
1962	1,773	44,315	25.0	$ 323,696.69
1963	2,641	44,583	16.9	$ 659,436.01
1964	1,909	27,098	14.2	$ 436,923.45
1965	1,207	12,835	10.6	$ 199,268.69
1966	1,353	13,276	9.8	$ 317,896.12
1967	918	5,264	5.7	$ 178,169.18
1968	1,454	13,039	9.0	$ 197,748.90
1969	1,735	16,507	9.5	$ 194,011.00
1970	907	4,508	5.0	$ 104,303.00
1971	1,607	14,901	9.3	$ 248,867.00
1972	1,000	3,881	3.9	$ 94,655.00
1973	1,000	3,930	3.9	$ 111,662.00
1974	1,446	8,231	5.7	$ 226,315.00
1975	1,323	5,755	4.3	$ 183,637.00
1976	1,781	14,852	8.3	$ 431,470.00
1977	1,630	10,402	6.4	$ 296,390.00
1978	1,149	5,091	4.4	$ 201,401.00
1979	1,544	8,514	5.5	$ 256,363.00
1980	1,864	8,606	4.6	$ 440,971.00
1981	1,827	13,440	7.4	$ 391,466.00
1982	1,536	9,396	6.1	$ 404,841.00
1983	948	4,038	4.3	$ 260,117.00
1984	800	3,886	4.9	$ 175,808.00
1985	1,284	6,537	5.1	$ 329,613.00
1986	1,640	16,192	9.9	$ 471,247.00
1987	1,331	5,290	3.9	$ 253,278.00
1988	1,761	6,803	3.9	$ 657,523.00
1989	1,327	9,527	7.2	$ 371,381.00
1990	829	15,541	18.59	$ 370,287.00
1991	1,330	3,820	2.87	$ 474,286.00
1992	876	1,926	2.20	$ 170,817.00
1993	653	3,318	5.08	$ 244,323.00
1994	903	4,537	5.24	$ 423,484.00
1995	1,034	3,459	3.35	$ 419,194.00
1996	397	1,712	4.30	$ 229,585.00
1997	967	4,023	4.16	$ 589,152.00
1998	910	6,013	6.61	$ 736,103.00
2000	744	4,702	6.32	$ 598,394.00

Table 4.3.15-1 Pennsylvania wildfire history (DCNR, 2013).				
YEAR	**NUMBER OF FIRES**	**ACRES BURNED**	**AVERAGE SIZE**	**COST OF EXTINCTION ($)**
2001	974	7,244	7.47	$ 941,452.00
2002	636	2903	4.56	$ 540,454.00
2003	407	2024	4.97	$ 262,736.52
2004	211	2,780	13.7	$ 169,065.00
2005	804	4,268	5.30	$ 599,910.00
2006	912	7,920	8.03	$ 942,544.00
2007	540	1,140	2.10	$ 299,971.00
2008	689	7,670	11.1	$ 711,229.19
2009	619	6,605	9.80	$ 613,838.48
2010	569	3,399	6.00	$ 638,248.84
2011	202	579	2.90	$ 83,654.69
2012	717	3,186	4.44	$ 677,708.70
TOTAL	***160,201***	***5,973,267***	***35***	***$24,409,571.17***

4.3.15.4. Future Occurrence

Wildfire events will occur in Pennsylvania every year; therefore, annual occurrence should be considered *highly likely* according to the Risk Factor Methodology (see Section 4.1). However, the likelihood of one of those fires attaining significant size and intensity is unpredictable and highly dependent on environmental conditions and firefighting response. Weather conditions, particularly drought events, increase the likelihood of wildfires occurring. Additionally, invasive forest insects can increase the likelihood of wildfires occurring; insects that attack and kill trees increase the total wildfire fuel available in wooded areas. Climate change is also likely to increase the probability of future wildfires. Prolonged periods of drought caused by climate change can potentially increase the length of the wildfire season and provide a more favorable climate for ignition.

It is important to note that 98% of wildfires in Pennsylvania are human-caused (PADCNR-BOF, 2010). Thus, there is rationale for including this hazard under the summary of *human-made hazards*. Nonetheless, the critical inference to draw from this statistic is the fact that the occurrence of future wildfire events will strongly depend on patterns of human activity. Events are more likely to occur in wildfire-prone areas experiencing new or additional development.

4.3.15.5. Environmental Impacts

Vegetation loss is often a concern, but it typically is not a serious impact since natural re-growth occurs with time. The most significant environmental impact is the potential for severe erosion, silting of stream beds and reservoirs, and flooding due to ground-cover loss following a fire event.

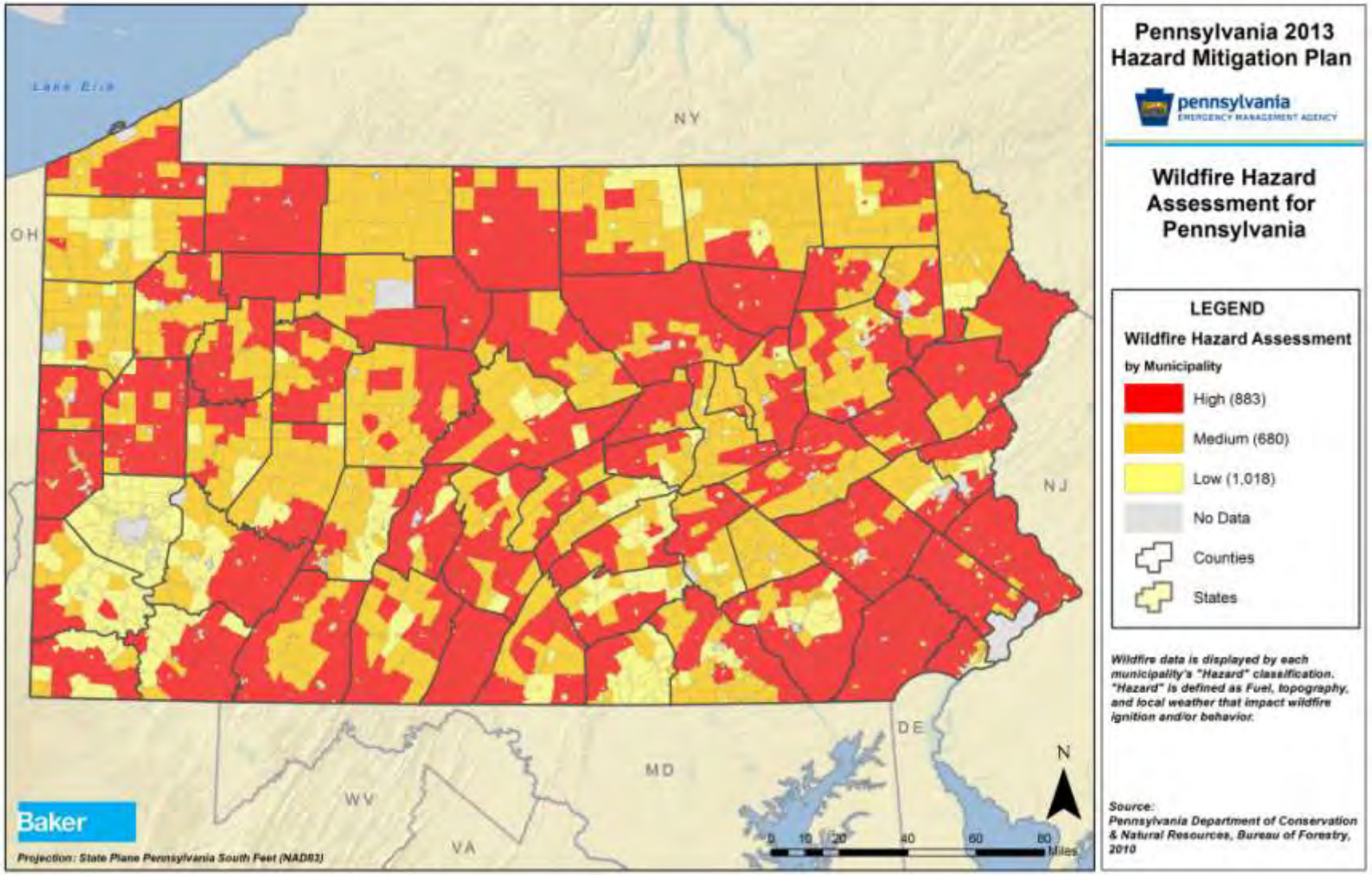
Wildfires also have a positive environmental impact in that they burn dead trees, leaves, and grasses to allow more open spaces for new and different types of vegetation to grow and receive sunlight. Another positive effect of a wildfire is that it stimulates the growth of new shoots on trees and shrubs and its heat can open pine cones and other seed pods.

4.3.15.6. Jurisdictional Vulnerability Assessment

As stated in Section 4.2.2, jurisdictional and state critical facility vulnerability assessments were completed by spatially overlaying hazards with census tracts and state critical facility layers in GIS. When spatial analysis determined that the hazard would impact a census tracts within a county or the location of state critical facilities these locations where deemed vulnerable to the hazard. Loss estimates were prepared based on the value of the facilities impacted by census tract and by state critical facility. Each hazard uses a methodology that is specific to the type of risk it may cause; Table 4.2.2-2 includes a complete methodology description for vulnerability assessments and loss estimates for each hazard.

The Pennsylvania Department of Conservation of Natural Resources, BOF conducts jurisdictional assessments of wildfire hazard throughout the Commonwealth. This analysis was completed in 2009 and represents the best available information on areas of wildfire hazards. *Hazard* is defined by fuel, topography, and local weather that impact wildfire ignition and/or behavior. In other words, the wildfire *hazard* expresses which jurisdictions are most vulnerable to wildfires, shown in Figure 4.3.15-3.

Figure 4.3.15-3 Map showing wildfire *hazard* by jurisdiction across Pennsylvania.



Another component of jurisdictional vulnerability involves examining the number of past wildfire occurrences and their respective acres burned. Table 4.3.15-2displays number of reported wildfires and acres burned per county. In terms of number of past wildfires, Clearfield County is the most vulnerable with 358 wildfire events. Lycoming County is most vulnerable to large-scale wildfires; from 2002-2008 this county only had 36 events but they burned an average of 123.7 acres.

Table 4.3.15-2 Number of reported wildfires and acres burned per county from 2002-2013 (PADCNR, 2013)

COUNTY	WILDFIRES	ACRES BURNED	COUNTY	WILDFIRES	ACRES BURNED
Adams	19	12.86	Lackawanna	59	731.1
Allegheny	24	6.6	Lancaster	51	58.924
Armstrong	38	101.91	Lawrence	22	155.9
Beaver	4	14.5	Lebanon	16	26.55
Bedford	58	306.62	Lehigh	64	56.99
Berks	162	852.99	Luzerne	252	4237.56
Blair	37	448.5	Lycoming	36	4453.27
Bradford	135	208.13	McKean	26	201.07
Bucks	13	10.62	Mercer	6	8.5
Butler	5	7.15	Mifflin	16	60.89
Cambria	47	309.537	Monroe	117	317.06
Cameron	22	867.518	Montgomery	19	15.1
Carbon	189	239.32212	Montour	7	13.1
Centre	87	299.1841	Northampton	62	95.47
Chester	41	170.8	Northumberland	103	115.13
Clarion	37	358.4	Perry	55	92.28
Clearfield	358	832.34829	Pike	146	1161.52
Clinton	28	345.251	Potter	14	156.86
Columbia	22	65.55	Schuylkill	261	798.87
Crawford	4	5.33	Snyder	18	89.6
Cumberland	10	18.76	Somerset	21	608.52
Dauphin	35	304.05	Sullivan	26	215.61
Elk	23	233.6316	Susquehanna	9	19
Erie	1	2.6	Tioga	50	1008.2
Fayette	87	203.55	Union	10	18.11
Forest	4	112.7	Venango	44	91.07
Franklin	48	154.69	Warren	33	286.155
Fulton	18	10.16	Wayne	2	7
Huntingdon	49	210.64	Westmoreland	37	135.6
Indiana	23	101.35	Wyoming	10	39.25
Jefferson	31	107.96	York	25	36.4
Juniata	14	66.19	***Total***	***3,290***	***22,300.06***

The final component of wildfire vulnerability is the how much forested land and agricultural land in each county. All agricultural land is somewhat vulnerable to wildfire, as its open nature and frequent proximity to forested lands can fuel wild land fires. While all agricultural land is somewhat vulnerable to wildfire for these reasons, woodlands and idle croplands are a particularly vulnerable sub-type of agricultural land vulnerable to wildfires. Table 4.3.15-3 shows the total acres land in farms as well as the total acreage of woodlands and idle cropland per county as reported to the 2007 Census of Agriculture. Please note that this does not indicate all wooded or idle lands per county, just those woodlands and idle cropland in farms.

Table 4.3.15-3 Farmland, woodland, and idle cropland by county (USDA, Census of Agriculture, 2007).

COUNTY	TOTAL ACRES OF LAND IN FARMS	TOTAL ACRES OF WOODLAND	TOTAL ACRES OF IDLE CROPLAND
Adams	174,595	25,393	6,768
Allegheny	38,023	10,560	5,444
Armstrong	122,275	30,196	8,355
Beaver	67,075	18,232	5,210
Bedford	210,990	58,145	7,989
Berks	222,119	21,778	7,816
Blair	87,434	15,783	3,637
Bradford	266,635	70,680	18,488
Bucks	75,883	7,366	2,153
Butler	129,850	27,792	6,273
Cambria	87,924	22,532	7,120
Cameron	5,092	2,087	(D)
Carbon	20,035	5,978	1,801
Centre	148,464	42,008	5,660
Chester	166,891	18,095	2,758
Clarion	132,140	42,875	11,037
Clearfield	62,721	20,373	3,702
Clinton	56,626	14,644	3,611
Columbia	122,621	22,905	15,774
Crawford	232,093	55,047	9,550
Cumberland	157,388	16,120	9,364
Dauphin	89,533	11,277	5,179
Delaware	4,361	1,811	(D)
Elk	33,258	14,650	2,344
Erie	173,125	41,485	13,449
Fayette	140,688	40,109	8,702
Forest	10,728	5,374	(D)
Franklin	242,634	26,451	6,589
Fulton	103,516	36,245	6,637
Greene	150,203	45,325	8,490
Huntingdon	148,289	52,593	7,449
Indiana	187,711	46,117	19,415

Table 4.3.15-3 Farmland, woodland, and idle cropland by county (USDA, Census of Agriculture, 2007).			
COUNTY	**TOTAL ACRES OF LAND IN FARMS**	**TOTAL ACRES OF WOODLAND**	**TOTAL ACRES OF IDLE CROPLAND**
Jefferson	87,043	22,534	6,643
Juniata	97,681	27,006	5,427
Lackawanna	39,756	10,868	4,699
Lancaster	425,336	30,545	4,884
Lawrence	92,391	12,809	3,640
Lebanon	113,486	7,679	2,216
Lehigh	84,643	5,880	2,412
Luzerne	66,577	19,562	6,859
Lycoming	160,456	52,399	13,757
McKean	41,466	16,333	1,411
Mercer	171,860	32,028	7,404
Mifflin	94,133	21,893	4,175
Monroe	29,165	10,970	1,798
Montgomery	41,908	5,580	2,861
Montour	50,252	9,482	9,108
Northampton	68,252	4,210	2,220
Northumberland	147,660	22,448	11,724
Perry	144,375	35,390	9,941
Philadelphia	262	67	592
Pike	27,569	22,688	5,302
Potter	88,457	32,421	10,033
Schuylkill	118,501	24,550	5,511
Snyder	100,179	21,228	15,130
Somerset	206,651	52,057	1,012
Sullivan	27,821	8,462	9,610
Susquehanna	158,218	51,510	11,906
Tioga	184,108	49,615	3,864
Union	63,795	5,818	2,616
Venango	64,796	24,431	7,741
Warren	99,582	39,865	12,595
Washington	211,053	50,663	1,984
Wayne	92,939	29,530	12,513
Westmoreland	167,489	29,575	9,766
Wyoming	77,957	24,253	11,023
York	292,507	33,416	6,768
TOTAL	***7,809,244***	***1,717,791***	***433,785***
NOTE: Data marked with a (D) has been withheld by the Census to avoid disclosing data for individual operations.			

In addition to the jurisdictions with a high wildfire hazard value, Table 4.3.15-4 shows which counties did and did not profile wildfires in their most recent hazard mitigation plan, along with any risk factor/ranking information. 50 of 67 counties profiled this hazard. 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 32 counties which currently have calculated risk factor values for wildfire, the average value is 2.4; this average does not include Lebanon, Montour, Perry, and Philadelphia, who use an alternate Risk Factor/Ranking system. The State Risk Factor for wildfire is 2.4, while the Pennsylvania THIRA scored wildfire as a 5 out of 10. For more details on the State Risk Factor and THIRA rankings, please see Section 4.1.

Table 4.3.15-4 Counties profiling wildfire hazards with hazard ranking and risk factor (if available).

COUNTY	PROFILED HAZARD	DID NOT PROFILE HAZARD	RANKING (IF AVAILABLE)	RISK FACTOR (IF AVAILABLE)
Adams	X		High	3.4
Allegheny	X		High	2.7
Armstrong	X		Not Ranked	No RF
Beaver		X		
Bedford	X		Medium	2.2
Berks	X		Not Ranked	No RF
Blair	X		Not Ranked	No RF
Bradford		X		
Bucks	X		Medium	2.2
Butler	X		Low	1.8
Cambria	X		High	2.5
Cameron	X		High	2.8
Carbon	X		High	2.8
Centre	X		Low	1.7
Chester		X		
Clarion		X		
Clearfield	X		Low	1.8
Clinton	X		High	2.7
Columbia	X		Low	1.7
Crawford		X		
Cumberland	X		Medium	2.4
Dauphin	X		Not Ranked	No RF

Table 4.3.15-4 Counties profiling wildfire hazards with hazard ranking and risk factor (if available).

COUNTY	PROFILED HAZARD	DID NOT PROFILE HAZARD	RANKING (IF AVAILABLE)	RISK FACTOR (IF AVAILABLE)
Delaware	X		Medium	2.1
Elk	X		High	2.6
Erie		X		
Fayette	X		High	3.0
Forest		X		
Franklin	X		Not Ranked	No RF
Fulton		X		
Greene		X		
Huntingdon	X		Not Ranked	No RF
Indiana		X		
Jefferson	X		Medium	2.3
Juniata	X		Low	1.3
Lackawanna	X		Not Ranked	No RF
Lancaster	X		Low	1.8
Lawrence	X		High	3.4
Lebanon*	X		Not Ranked	1.0
Lehigh	X		Medium	2.2
Luzerne	X		Not Ranked	No RF
Lycoming		X		
McKean	X		High	2.7
Mercer	X		Low	1.9
Mifflin	X		Not Ranked	No RF
Monroe	X		High	2.8
Montgomery	X		Medium	2.0
Montour*		X		
Northampton	X		Medium	2.2
Northumberland	X		Low	1.5
Perry*	X		Not Ranked	1.0
Philadelphia**		X		
Pike	X		High	3.1
Potter		X		
Schuylkill	X		Not Ranked	No RF
Snyder	X		Medium	2.4

Table 4.3.15-4 Counties profiling wildfire hazards with hazard ranking and risk factor (if available).

COUNTY	PROFILED HAZARD	DID NOT PROFILE HAZARD	RANKING (IF AVAILABLE)	RISK FACTOR (IF AVAILABLE)
Somerset	X		High	3.4
Sullivan	X		Not Ranked	No RF
Susquehanna	X		Medium	2.0
Tioga	X		High	2.6
Union	X		Not Ranked	No RF
Venango	X		Medium	2.4
Warren	X		Medium	2.4
Washington		X		
Wayne		X		
Westmoreland		X		
Wyoming	X		Not Ranked	No RF
York	X		Low	1.9

* 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.

**Philadelphia uses an A, B, C rating system where A is high, B is medium, and C is low.

The jurisdictions vulnerable to wildfire hazards are home to 1,538 state critical facilities, shown inTable 4.3.15-5. The average vulnerable county hosts about 25 vulnerable critical facilities. Geographically, over one-third of the vulnerable critical facilities are located in the southeastern Pennsylvania counties of Montgomery, Bucks, and Chester.

Table 4.3.15-5 Number of state critical facilities impacted by wildfire located in each county

COUNTY	NUMBER OF CRITICAL FACILITIES	COUNTY	NUMBER OF CRITICAL FACILITIES
Adams	7	Jefferson	21
Armstrong	28	Lackawanna	57
Beaver	83	Lancaster	52
Bedford	14	Lawrence	20
Berks	74	Lehigh	17
Blair	30	Luzerne	48
Bradford	6	Lycoming	30
Bucks	85	Mifflin	12
Butler	44	Monroe	20
Cambria	17	Montgomery	157

Table 4.3.15-5 Number of state critical facilities impacted by wildfire located in each county			
COUNTY	**NUMBER OF CRITICAL FACILITIES**	**COUNTY**	**NUMBER OF CRITICAL FACILITIES**
Cameron	3	Montour	7
Carbon	38	Northampton	22
Centre	31	Northumberland	22
Chester	102	Perry	3
Clarion	9	Pike	17
Clearfield	12	Potter	7
Clinton	1	Schuylkill	74
Columbia	19	Snyder	7
Crawford	1	Somerset	22
Cumberland	6	Sullivan	6
Dauphin	13	Susquehanna	9
Delaware	62	Tioga	3
Elk	6	Union	4
Erie	11	Venango	13
Fayette	37	Warren	20
Forest	5	Washington	6
Franklin	9	Wayne	2
Fulton	6	Westmoreland	42
Greene	12	Wyoming	5
Huntingdon	11	York	18
Indiana	13	**Grand Total**	**1,538**

In Pennsylvania, 36 communities have taken steps to reduce their wildfire vulnerability by joining the Firewise. Firewise participation is outlined in more detail in 0

Summary & Evaluation of Local Mitigation Capability.

4.3.15.7. State Facility Vulnerability Assessment

State facility vulnerability to wildfires was evaluated as facilities that are located within a high-hazard municipality. Using this criterion, it was determined that over 25% of all critical facilities fall into these highest hazard wildfire areas, seen in 0 There are five government facilities potentially impacted by wildfires. It is important to note that while they are not considered critical facilities, Pennsylvania's many state parks, state game lands, and state forests are also highly susceptible to wildfire events by nature.

Table 4.3.15-6 State Critical Facilities vulnerable to wildfire by Critical Facility Type	
STATE CRITICAL FACILITY TYPE	**NUMBER OF IMPACTED FACILITIES**
Agriculture	21
Banking	7
Chemical	4
Commercial Facilities	15
Communications	1
Dams	16
Defense Industrial Base	6
Education	34
Emergency Services	20
Energy	16
Fire Departments (Non-HSIP)	691
Government Facilities	5
Healthcare & Public Health	14
Hospital (Non-HSIP)	66
National Monuments & Icons	1
Nuclear Reactors, Materials & Waste	1
Police (Non-HSIP)	311
Postal & Shipping	1
School (Non-HSIP)	294
Transportation	10
Water	4
Grand Total	***1,538***

4.3.15.8. Jurisdictional Loss Estimation

According to the National Climatic Data Center, there were 54 wildfire events from 1950-2013 with reported property damage of $1,405,000. This is considered a broad estimate of jurisdictional losses. As stated in Section 4.3.9.6, loss estimates were prepared based on the sum of the number and value of buildings located within wildfire high-hazard jurisdictions, aggregated to the county level. Using this technique, Montgomery County was identified as the jurisdiction most threatened by wildfire hazards with $127 billion in exposed building and contents value (0). Bucks, Berks, Chester, Delaware, and Lancaster counties are also highly threatened by wildfire events. Each of these counties has over 100,000 exposed buildings worth $30-95 billion.

Table 4.3.15-7 Estimated jurisdictional losses in wildfire High Hazard areas		
COUNTY	**NUMBER OF IMPACTED BUILDINGS**	**DOLLAR VALUE OF EXPOSURE, BUILDING AND CONTENTS ($)**
Adams	22,674	$5,142,810
Allegheny	1,652	$368,265
Armstrong	20,817	$4,264,530
Beaver	80,852	$20,992,541
Bedford	28,139	$4,903,310
Berks	140,619	$37,688,000
Blair	42,693	$8,731,004
Bradford	5,552	$907,751
Bucks	278,182	$95,375,042
Butler	76,927	$18,429,749
Cambria	24,095	$4,869,669
Cameron	39,323	$6,905,571
Carbon	63,207	$14,565,129
Centre	56,951	$11,838,361
Chester	243,231	$85,689,971
Clarion	33,351	$5,982,911
Clearfield	22,597	$3,815,979
Clinton	31,296	$5,478,425
Columbia	29,470	$5,599,327
Crawford	8,445	$1,773,876
Cumberland	32,568	$7,933,629
Dauphin	25,379	$5,827,216
Delaware	153,931	$54,635,123
Elk	19,910	$3,679,290
Erie	33,325	$7,325,002
Fayette	37,606	$7,147,592
Forest	30,106	$5,119,416
Franklin	34,715	$7,566,621
Fulton	14,699	$2,657,617
Greene	12,315	$2,352,567
Huntingdon	31,874	$6,061,297
Indiana	24,340	$4,841,493
Jefferson	24,073	$4,404,597
Juniata	15,877	$2,859,639
Lackawanna	57,729	$12,812,741
Lancaster	122,814	$30,296,942
Lawrence	28,264	$6,046,921
Lehigh	55,959	$17,377,468
Luzerne	75,836	$17,488,995

Table 4.3.15-7 Estimated jurisdictional losses in wildfire High Hazard areas		
COUNTY	**NUMBER OF IMPACTED BUILDINGS**	**DOLLAR VALUE OF EXPOSURE, BUILDING AND CONTENTS ($)**
Lycoming	55,457	$10,416,509
Mckean	3,504	$640,829
Mifflin	22,555	$4,453,176
Monroe	92,982	$22,120,898
Montgomery	366,737	$127,701,377
Montour	1,955	$822,789
Northampton	71,559	$20,456,956
Northumberland	17,858	$3,716,933
Perry	31,551	$7,440,292
Philadelphia	17,542	$5,721,785
Pike	48,641	$11,878,628
Potter	38,280	$6,625,976
Schuylkill	56,149	$11,654,800
Snyder	15,205	$3,114,066
Somerset	48,522	$9,407,900
Sullivan	24,267	$4,320,707
Susquehanna	13,504	$2,608,801
Tioga	12,880	$2,199,234
Union	30,651	$6,067,339
Venango	20,926	$3,663,769
Warren	31,166	$5,799,808
Washington	11,493	$2,323,382
Wayne	23,196	$5,079,273
Westmoreland	50,905	$11,214,851
Wyoming	19,631	$3,666,036
York	96,189	$23,154,898
Grand Total	***3,304,698***	***$866,027,399***

4.3.15.9. State Facility Loss Estimation

The estimated replacement cost of all State Critical Facilities located in High Hazard jurisdictions is $9,464,720,342. The exact losses will depend on the construction material of each facility, its location in relation to wooded areas, and the size and intensity of the wildfire event itself.

4.3.16. Winter Storm

4.3.16.1. Location and Extent

Winter storms are regional events. An event most often impacts a large swath or all of Pennsylvania. In many cases, surrounding states and even the larger northeastern U.S. region are affected.