

STATE OF OHIO HAZARD MITIGATION PLAN

EXECUTIVE SUMMARY

The turn of the millennia witnessed a dramatic change in how our Nation prepares for and responds to disasters. The passage of the Disaster Mitigation Act of 2000 (DMA2K) reoriented the focus of the Federal Emergency Management Agency (FEMA) programs to promote projects and plans which reduce the exposure of Americans and their property to natural hazards. In 2002 Congress further defined how to implement DMA2K by publishing rules in the Federal Register containing criteria for state mitigation plan content. Ohio must have a FEMA-approved hazard mitigation plan to remain eligible for Federal Mitigation and Public Assistance funds associated with a Presidential disaster declaration.

The development of the state plan began in 2002, and it involved the participation of numerous state and federal agencies, adjacent state EMA representatives, and various subject-matter experts. The plan was approved by FEMA in 2005, and updated and re-approved in 2008 and 2011, and 2012. The 2014 revision of the plan analyzes Ohio's highest priority hazards: riverine flood, tornado, winter storm, landslide, dam/levee failure, wildfire, seiche/coastal flooding, earthquake, coastal erosion, drought, severe summer storm, invasive species and land subsidence. The states vulnerability to those hazards is analyzed utilizing data from multiple sources to evaluate risk, including: HAZUS software, historical damage data, input from subject-matter experts, and information from local natural hazard mitigation plans. The state hazard mitigation plan describes the unique vulnerabilities associated with the highest priority hazards in Ohio.

The plan also includes a statewide blueprint of actions that will mitigate the risk to the identified hazards. The State Mitigation Strategy includes: goals, objectives, and action items that will help reduce risk, an evaluation of state capability to accomplish this task, and identification of available funding sources. The State Mitigation Strategy is outlined in broad terms by the following goals described in this plan update:

- Reduce loss of life and injury from hazard events;
- Minimize damage to property and societal disruptions from hazard events;
- Integrate hazard mitigation policies and programs;
- Eliminate vulnerable repetitive loss flood-prone structures;
- Promote research, education, and outreach activities to create a culture of mitigation in Ohio; and
- Provide leadership in hazard mitigation in Ohio.

Each of these goals has associated objectives and actions aimed at getting the state closer to realizing community resiliency. For example, the Ohio EMA developed the Ohio Safe Room Rebate Program. This program provides funding to homeowners for the construction/installation of a safe room that is capable of providing near absolute protection from a tornado with 250 mph wind speeds.

The statewide blueprint for hazard reduction is only part of the solution. To effectively reduce hazard exposure the state plan must reflect the goals, objectives and actions identified in local mitigation planning efforts. While the state has a goal of eliminating structures that are repetitively flooded, it is local planning that leads to the projects that will mitigate those properties. The state plan contains information from various local hazard mitigation plans, ranging from hazard identification and vulnerability analysis to specific, community mitigation objectives and actions.

Ohio's mitigation plan addresses each required element for "standard" plan approval in 44 CFR 201.4 and "enhanced" plan approval in 44 CFR 201.5. Ohio is one of only seven states that currently meet enhanced plan criteria. The enhanced plan status designation is a recognition of Ohio's comprehensive mitigation program, and qualifies the state for additional Federal mitigation funds following future disasters.

SECTION 1: INTRODUCTION

1.1 STATE PROFILE

INTRODUCTION

Ohio was the 17th territory to become part of the United State of America with its induction on March 1, 1803. Ohio is an Iroquoian word (Senecan dialect) meaning, ‘beautiful river.’ Located in the north central region of the United States, Ohio was home to eight of the forty-three people whom have held the office President of the nation including William Henry Harrison, Ulysses Simpson Grant, Rutherford Birchard Hayes, James Abram Garfield, Benjamin Harrison, William McKinley, William Howard Taft and Warren Gamaliel Harding

GEOGRAPHY

The state is divided into two broad geographic regions loosely following a diagonal line running from the south-western corner to the north-eastern corner. The portion of the state above the line was repeatedly inundated by glaciers. The result is a generally flat or gently rolling topography with layers of glacial sediments conducive to agriculture and large population centers. One notable exception is a region in west central Ohio where an outcropping of large hills exists. The portion south of the line consists of the foothills to the Appalachian Mountains, a weathering range located south and east of Ohio.

Water distribution across the state is also regional. The glaciers which altered the land also impacted Ohio’s water system. Lake Erie, which encompasses the majority of Ohio’s northern border, was created by and subsequently filled with water from glaciers. Rivers systems in approximately the northern third of Ohio flow north into Lake Erie. Major rivers from west to east include the Maumee, Middle Branch, Sandusky, Huron, Black, Cuyahoga and Grand. The remainder of the waterways in the state flow south into the Ohio River. Significant rivers include the Great & Little Miami, Scioto, Hocking and Muskingum along with the Ohio itself.

Ohio borders the states of Pennsylvania, Kentucky, West Virginia, Indiana and Michigan while sharing an international border with the Canadian province of Ontario. A large portion of the state’s border is associated with bodies of water including West Virginia and Kentucky along the Ohio River and Ontario near the center of Lake Erie.

Ohio covers 40,952 square miles of land. Land use percentages range from a high of 43.53 for cropland to a low of 1.30 for wetlands (See Table 1.1.a)

Table 1.1.a

Land Use/Land Cover	
Type	Percentage
Urban	9.17
Cropland	43.53
Pasture	7.81
Forest	37.12
Open Water	0.92
Wetlands	1.30
Bare/Mines	0.16

From the perspective of taxable land value, the distribution varies significantly from land use. Ohio has over 161 billion dollars of residential inventory and agriculture has nearly 9 billion (See Table 1.1.b)

Table 1.1.b

Taxable Value Inventory	
Type	Value (in Billions)
Residential	161.27
Agriculture	8.80
Industrial	9.46
Commercial	38.96
Mineral	0.13

DEMOGRAPHY

The last decennial US census placed Ohio's population at 11,536,504 with a projected population in 2030 of 12,317,610. The Ohio Development Services Agency, Office of Strategic Research has developed fact sheets for the state and each of Ohio's 88 counties. Based on statewide data, the largest racial group in Ohio is White followed by African-American (See Table 1.1.c)

Table 1.1.c

Population		
Race	Count	Percentage
White	9,669,759	84.0
African-American	1,349,893	11.7
Native American	21,960	0.2
Asian	173,463	1.5
Pacific Islander	2,870	0.0
Other	100,807	0.9
Two or More Races	193,106	1.7
Hispanic (any race)	301,340	2.6

There are a total of 2,143,439 persons falling into minority categories making up 18.6 percent of the population. The median age of Ohioans is 37.9 years.

Map 1.1 A



Source: <http://development.ohio.gov/files/research/P3002.pdf>

Ohio is home to three large metropolitan statistical areas (MSAs) located around the cities of Cleveland (2,077,240), Columbus (1,836,536) and Cincinnati (2,130,151) based on the 2010 census and information from the Ohio Development Services Agency 2010 State of Ohio Profile. There are an additional four notable moderate sized MSAs located around the cities of Akron (703,200), Dayton (841,502), Toledo (651,429) and Youngstown (565,773), see Map 1.1.a. Combined, these MSAs account for 9,120,655 people or 76.3 percent of the state's population. The central counties for these MSAs account for 1,102,290 African-Americans or 9.55 percent of the state population. Individual county populations range from a low of 13,435 in Vinton County located in south-east Ohio to a high of 2,077,240 in Cuyahoga County which is the center of the Cleveland MSA.

Ohio contains a federally and state recognized demographic region known as Appalachia. In 1965, the U.S. Congress identified counties in thirteen states along the Appalachian Mountain Range as part of the Appalachian Regional Commission. The Governor's Office of Appalachia represents the interests of the 29 counties comprising East Central, Southeast and Southern Ohio (See Map 1.1.b).

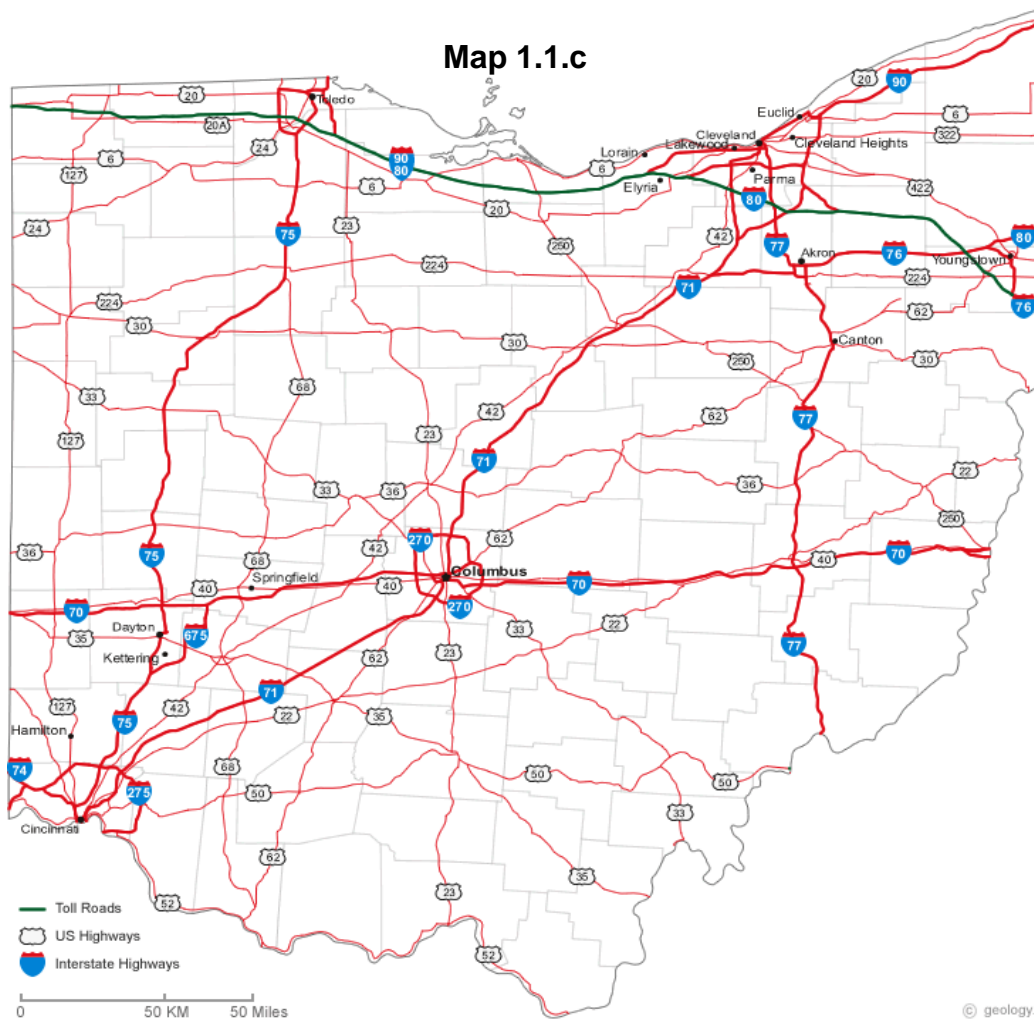


Source: <http://www.odod.state.oh.us/research/files/s0/appalachia.pdf>

Appalachia's population in 2010 was 2,042,040 of which 93.1 percent is white. In recent history, Appalachia has faced significant economic and developmental challenges.

TRANSPORTATION

Ohio has been dubbed the crossroads connecting the northeastern US with the Midwest (See Map 1.1.c). The map only represents federal highways and interstates. Three major east-west interstates (I-70, I-80 and I-90) traverse the state. Three north-south interstates (I-75, I-71 and I-77) run the full length of the state.



Source: <http://geology.com/state-map/ohio.shtml>

LAND USE

REGIONAL LEVEL ANALYSIS

Ohio has elected to address hazard mitigation planning on three regions which have similar geographic, socio-economic and land-use characteristics. Still, there are a few anomalies, which do not reflect these general trends for the host region. For example, the region as a whole may be experiencing population growth, but some of the counties within that region may be experiencing significant population decline due to out-migration. Analyses of these types of differences are a necessary process in the development of the risk and vulnerability assessments for each hazard as well as for the development of the hazard mitigation strategies.

REGION 1

Region 1 is characterized by largely rural, agricultural counties with flat to gently rolling topography. It is the northwest portion of the state.

General Population

Region 1 experienced modest population increases between 1980 and 2010, but the average population increase between these two dates (1.18%) was less than half that of the state as a whole (6.84%). Regional growth is expected to continue at a rate of about 0.85% (see Table 1.1.d).

All communities did not share same increase in growth even though the region as a whole has experienced an increase in population (see Table 1.1.e). Half of the ten largest communities experienced population decreases between 1990 and 2010 with Lima (Allen County) having the largest decrease at -14.88%. The final four largest communities saw an increase. The most significant, with an increase of 28.65%, was in Troy (Miami County).

Table 1.1.d

Region 1 Population Trends 1980-2030		
YEAR	POPULATION	% CHANGE 1980-2030
1980	2,108,373	
1990	2,109,289	(+) 0.04%
2000	2,159,494	(+) 2.32%
2010	2,147,186	(-) 0.57 %
2020 (projected)	2,204,560	(+) 2.67 %
2030 (projected)	2,214,330	(+) 0.44%
Source: Ohio Development Services Agency		

Table 1.1.e

Region 1: Percent Growth in Large Cities				
LARGEST AREAS	1990	2000	2010	% CHANGE
Toledo	332,943	313,619	287,208	(-) 8.42%
Springfield	70,487	65,358	60,608	(-) 7.26%
Lima	45,549	40,081	38,771	(-) 3.27%
Findlay	35,703	38,967	41,202	(+) 5.74%
Marion	34,075	35,318	36,837	(+) 4.30%
Bowling Green	28,176	29,636	30,028	(+) 1.32%
Sandusky	29,764	27,844	25,793	(-) 7.37%
Troy	19,478	21,999	25,058	(+) 13.90
Sidney	18,710	18,135	21,229	(+) 17.06
Tiffin	18,604	18,135	17,963	(-) 0.94%
<i>Source: Ohio Development Services Agency</i>				

Special Populations

The number of people within the special population category generally increases with the size of the county or community. These special population groups include: infant children, elderly, non-English speaking populations, convalescing populations, assisted living populations, as well as inmates. The number of people with disabilities in the region's two largest counties, Lucas and Clark, is higher than most counties in the region.

Convalescing and Assisted Living Populations

There are a number of facilities in Region 1 that house special or disabled populations. They include 219 nursing homes and 54 hospitals with a total of 26,705 beds. There are also two psychiatric hospitals within the region. Although these facilities have their own contingency plans, they coordinate with state, county and city hazard mitigation planning efforts.

Inmate Populations

There are eight correctional facilities in Region 1 including 2 prisons in Allen County, 1 in Lucas County, 2 in Madison County, 2 in Marion County, and 1 in Union County. As of the second quarter of 2011, the combined inmate population in these facilities totals 15,127.

Ethnic / Poverty Level Considerations

Ethnicity, poverty levels, and the ability to comprehend the English language vary throughout the region. Caucasians comprise over 90% of the region's ethnic mix compared to the state's average of 84%. The region's largest minority (African-American) groups are concentrated in more urbanized areas such as Lucas (17.8%), Allen (11.3%), Clark (8.6%) and Erie (8.4%) counties. African-Americans across the region as a whole comprise about 6.28% of the population (see Table 1.1.f).

Table 1.1.f

REGION 1 ETHNIC PROFILE		
POPULATION BY RACE	NUMBER	PERCENT
Total Population	2,147,186	100
Total Minority	295,586	13.77
Caucasian	1,941,529	90.42
African-American	134,783	6.28
Hispanic	73,083	3.40
Native American	5,358	0.25
Asian	10,797	0.50
Pacific Islander	660	0.06
Other	25,535	1.19
Two or More Races	38,512	1.79
<i>Source: Ohio Development Services Agency</i>		

The Hispanic population encompasses the region's third largest ethnic group at 3.4% of the population. The main cores of Hispanic inhabitants are located in more rural northwestern Ohio counties such as Defiance (8.2), Sandusky (8.0), Fulton (6.8), Henry (6.8), Putnam (5.5), and Huron (5.4) counties, which also have large numbers of foreign language speakers. Other ethnic groups in the region total less than 1% of the population. Poverty rates between 2005 and 2009 doubled in most instances across the region from 6.3% to 13.6%. Among the highest were Williams (15.7%), Huron (15.4%), Wyandot (13.9%), Fulton (13.4%), and Henry (13.3%) counties. Three of these counties (Huron, Henry and Fulton) also have the largest ethnic minority populations.

Age Profiles

The median age group in Region 1 is 39.6. The age population categories, which require the most care after a disaster event are the “under 5 years of age” and over “65 years of age” and are distributed consistently throughout the region. The percentage of children under the age of 5 is about the same throughout Region 1 counties but ranges from a high of 18.2% of the population in Allen County to a low of 5.4% in Ottawa County. The percentage of people 65 years of age and older is also consistent with percentages ranging from a low of 11.7% in Wood County to a high of 17.1% in Erie and Ottawa counties (see Table 1.1.g). The highest median age for any of Ohio’s counties occurs in Region 1 (44.4 in Ottawa County).

Regional Economy

The economy in Region 1 is firmly based in trade, transportation and utilities both in terms of work force and wages. Other economic sectors ranked in terms of workforce and wages include (2) professional and business services, (3) leisure and hospitality, (4) education and health services, and (5) construction. In early 2008, the Financial Crisis took a significant toll on the automotive industry and related supply/parts manufacturing firms in the region, resulting in massive

layoffs, unemployment and foreclosures. Statistics show there was a loss of 3,300 assembly and 2,400 parts manufacturing jobs from 10 years ago. At the same time, fuel prices increased to record levels impacting the many transportation firms located in the central part of the region and farm vehicles in the agriculture sector. The effects of the financial crisis remain to the present with little to no improvement. While currently there is no change in the aerospace and defense sectors, the projections for the next several years are not as favorable as the changes experienced from 2000 to 2007. (See Table 1.1.h).

Regional unemployment rates rose dramatically from 6.38% in 2005 to 13.6% in 2009. The highest median incomes were in Putnam (\$55,630), Ottawa (\$53,277), Madison (\$53,041), and Wood (\$52,818) counties. Several other counties were slightly lower (see Table 1.1.i).

Table 1.1.g

REGION 1 POPULATION BY AGE								
COUNTY	Population 2010	Under 5 Years	5-17 years	18-24 years	25-44 years	45-64 years	65 years & over	Median Age
Allen	106,331	7,025	19,166	10,501	25,498	27,632	15,174	37.9
Auglaize	45,949	3,032	8,782	3,966	11,228	12,517	7,095	39.4
Champaign	40,097	2,499	7,510	3,332	9,832	10,955	5,421	39.3
Clark	138,333	8,994	24,494	12,240	34,545	38,158	21,988	39.8
Clinton	42,040	2,916	7,815	4,169	11,295	11,242	5,383	37.4
Crawford	43,784	2,645	7,754	3,330	10,810	12,246	7,396	40.9
Defiance	39,037	2,647	6,745	3,550	9,365	10,582	5,627	39.0
Darke	52,959	3,353	9,841	4,216	12,672	14,078	8,396	40.1
Erie	77,079	4,375	13,076	6,131	17,516	23,099	13,203	42.6
Fayette	29,030	1,950	5,003	2,318	7,297	7,532	4,105	38.4
Fulton	42,698	2,743	8,277	3,447	10,419	11,875	5,721	39.2
Hancock	74,782	4,678	12,982	7,291	19,493	19,388	10,226	37.5
Hardin	32,058	1,949	5,149	4,696	8,333	7,513	4,099	34.2
Henry	28,215	1,878	5,399	2,547	7,014	7,953	4,185	38.5
Huron	59,626	4,345	11,806	4,942	15,240	15,771	7,893	37.2
Logan	45,858	3,128	8,570	3,684	11,796	12,545	6,707	39.1
Lucas	441,815	31,204	82,297	45,334	127,414	119,424	59,283	63.2
Madison	43,435	2,373	7,112	3,759	12,399	11,007	4,979	38.1
Marion	66,501	3,856	11,137	5,827	18,186	17,509	9,078	38.4
Morrow	34,827	2,193	6,575	2,684	9,232	9,563	4,188	38.2
Mercer	40,814	2,857	8,128	3,612	9,223	10,954	5,987	38.1
Miami	102,506	6,155	18,111	7,983	25,327	28,594	14,812	39.8
Ottawa	41,428	2,207	6,617	2,978	9,097	13,198	7,035	44.4
Paulding	19,614	1,218	3,485	1,525	4,749	5,528	2,681	40.1
Preble	42,270	2,576	7,380	3,282	10,501	11,842	6,108	40.6
Putnam	34,499	2,481	6,993	3,192	8,084	8,947	4,832	37.9
Sandusky	60,944	4,000	10,981	4,953	14,750	16,972	9,003	39.7
Seneca	56,745	3,633	9,895	5,905	13,860	15,400	8,018	38.7
Shelby	49,423	3,593	9,745	4,017	12,495	12,836	6,026	37.1
Van Wert	28,744	1,859	5,153	2,431	7,055	7,934	4,414	39.2
Williams	37,642	2,315	6,666	3,232	9,637	10,583	5,771	39.7
Wood	125,488	6,958	20,202	24,802	26,685	31,697	14,631	34.4
Wyandot	22,615	1,351	4,062	1,752	5,703	5,988	3,643	40.2
Region Median								39.6
<i>Source: OSU Extension Data Center</i>								

The median annual income for Region 1 households is \$47,295, which slightly exceeds that of the State of Ohio (\$47,144). The regional median income is greater, but 15 of its 33 counties are below the state mean (see Table 1.1.j). There are approximately 7.5% of the people residing in Region 1 that live below the Ohio poverty level, which is not a high percentage, considering that the state average is about 8.3%. The Region 1 counties that have comparatively high numbers of people living below the poverty level include: Hardin (12.3%), Lucas (10.7%), Marion (9.0%), Fayette (8.5%), and Allen (8.3%). These counties may warrant special consideration in pre- and post- disaster planning.

Table 1.1.h

REGION 1 EMPLOYMENT AND WAGES BY SECTOR						
Industrial Sector	2008			2009		
	# of Establishments	Avg Employment	Total Wages	# of Establishments	Avg Employment	Total Wages
Private Sector	45,636	23,667	\$27,921,610,875	44,851	21,614	\$25,268,002,893
<u>Goods Producing</u>	8,895	7,308	\$11,840,325,495	8,585	6,219	\$9,898,099,741
Natural Resources & Mining	583	148	\$145,381,336	588	213	\$211,608,755
Construction	4,924	766	\$1,174,757,084	4,701	898	\$1,335,566,497
Manufacturing	3,395	5,974	\$9,894,158,845	3,306	5,029	8,138,722,981
<u>Services-Providing</u>	36,747	16,359	\$16,081,285,380	36,264	15,395	\$15,369,903,152
Trade, Transportation & Utilities	11,647	5,586	\$5,803,079,881	11,409	5,111	\$5,337,637,819
Information	649	292	\$386,651,915	653	269	\$353,668,812
Financial Services	4,584	937	\$1,210,277,192	4,503	904	\$1,182,110,486
Professional & Business Services	5,609	2,160	\$2,486,839,856	5,558	1,861	\$2,243,780,155
Education & Health Services	4,950	3,883	\$4,530,022,105	4,931	3,879	\$4,653,607,031
Leisure & Hospitality	5,111	2,628	\$1,070,435,439	5,079	2,542	\$1,038,792,618
Other Services	4,163	870	\$592,046,466	4,080	821	\$554,150,173
Federal Government	573	200	\$344,117,935	570	200	\$347,260,737
State Government	512	609	\$976,286,801	461	581	\$990,664,577
Local Government	3,081	3,139	\$3,831,950,596	3,066	3,112	\$3,892,378,047
<i>Source: Ohio Development Services Agency</i>						

Table 1.1.i

Region 1 Unemployment Rate					
Labor Force	2005	2006	2007	2008	2009
Employed	1,056,600	1,072,700	1,032,100	1,044,600	986,300
Unemployed	67,400	62,700	65,700	80,600	134,100
Unemployment Rate	6.38	5.85	6.37	7.72	13.60
<i>Source: Ohio Development Services Agency</i>					

Housing

2010 Census statistics indicate that there are approximately 1,792,112 housing units in Region 1, of which 96,867 (5.4%) are vacant (see Table 1.1.k). Ottawa and Logan counties have a surprisingly high number of vacant units. Ottawa County has a total of about 27,148 housing units, of which 9,287 units (34.21%) are vacant. Logan County has a total of about 23,096 housing units, of which

about 4,633 units (20.06%) are vacant. The reasons for such high vacancy rates may be real estate used as seasonal and vacation property (categorized as a second home) rather than structures used to house the permanent population.

More than half of the houses in Region 1 were constructed before the implementation of the National Flood Insurance Program was implemented, which has important mitigation implications. It is likely that a majority of homes built in the region's floodplains do not provide adequate flood protection.

Table 1.1.j

REGION 1 HOUSEHOLD INCOME IN 2010		
	Number	Percent
Total Households	847,539	100
Less than \$10,000	63,283	7.47
\$10,000 - \$19,999	100,966	11.91
\$20,000 - \$29,999	103,468	12.21
\$30,000 - \$39,999	97,559	11.51
\$40,000 - \$49,999	89,579	10.57
\$50,000 - \$59,999	80,275	9.47
\$60,000 - \$74,999	97,526	11.51
\$75,000 - \$99,999	104,911	12.38
\$100,000 - \$149,999	79,344	9.36
\$150,000 - \$199,999	17,664	2.08
\$200,000 or more	12,964	1.53
Source: Ohio Development Services Agency		

Table 1.1.k

Region 1 Housing by Type		
Housing Units	Number	Percent
Total Units	1,792,112	100
Occupied Units	847,633	47.30
Owner Occupied	616,454	34.40
Renter Occupied	231,158	12.90
Vacant Housing Units	96,867	5.41
Source: Ohio Development Services Agency		

Transportation

Region 1 has a well-developed transportation system, despite the fact that 14 of its 33 counties do not have interstate highways. State and US Highway systems coupled with extensive rail networks meets ground transportation needs for

residents in Region 1. Every county in Region 1 has at least 1 commercial airport. Four lake-oriented counties have ports (see Table 1.1.I).

Table 1.1.I

REGION 1 TRANSPORTATION SYSTEMS						
Counties	Interstate Highways	US Highways	Rail Line (Number)	Principal Airport (Number)	Local Airport (Number)	Lakeports (Number)
Allen	X	X	4		1	
Auglaize	X	X	6		1	
Champaign	X	X	3		2	
Clark	X	X	4		2	
Clinton	X	X	2		3	
Crawford	0	X	4		1	
Darke	0	X	2		1	
Defiance	0	X	2		1	
Erie	X	X	2		2	3
Fayette	X	X	4		1	
Fulton	X	X	2	1	1	
Hancock	X	X	3		2	
Hardin	0	X	4		2	
Henry	0	X	3		1	
Huron	0	X	4		2	
Logan	0	X	3		1	
Lucas	X	X	7	1		1
Madison	X	X	2		1	
Marion	0	X	4		1	
Mercer	0	X	1		1	
Miami	X	X	1		2	
Morrow	X	X	2		1	
Ottawa	X	X	2		6	
Paulding	0	X	2			
Preble	X	X	1			
Putnam	0	X	3		3	
Sandusky	X	X	3		2	
Seneca	0	X	5		4	
Shelby	X	0	3		1	
Van Wert	0	X	3		1	
Williams	X	X	3		1	
Wood	X	X	4		4	
Wyandot	0	X	3		1	
Source: Ohio Development Services Agency						

REGION 2

Region 2 is defined by the I-71 corridor and contains all of Ohio's largest cities: Cleveland, Columbus, and Cincinnati. Geographically, it is also, in many respects, the boundary between the previously glaciated portion of the state, and the unglaciated Appalachian foothills.

General Population

The population in Region 2, according to the Ohio Development Services Agency, was 7,845,610 in 2010. The Region has experienced modest, but steady, population growth since 1980. The regional growth rate between 1980 and 2010 was about 6.99%, which is similar to the State of Ohio's rate of 6.84% for the same period. Regional growth rates are expected to increase approximately by 4% into 2020 and 3% into 2030.

The counties in Region 2 do not share regional growth trends as eight of the region's 10 largest communities registered a population decline in 2000 and 2010. The minus (-) 18.4% decline in Youngstown (Mahoning Co.) contrasts with that of Columbus (Franklin Co.), which gained 9.68% during the same period (see Table 1.4.4.1.b). Rapid population gains or declines can have an effect on hazard mitigation strategies, but due to the relatively recent history of mitigation projects and the impact of Region 2 population changes, the effect it has on mitigation activities is unknown.

Special Populations

Region 2 shares the same special population concerns as Regions 1 and 3. The large number of people warranting special consideration coincides with the region's most populous areas. Nine of Ohio's ten most-populated counties are in Region 2.

Emergency managers and mitigation planners must pay particular attention to counties having large numbers of disabled people (e.g., Cuyahoga, Hamilton, and Montgomery counties), large numbers of people living below the state's poverty level (e.g., Cuyahoga, Mahoning, Hamilton, and Montgomery counties), and those with limited English capabilities (e.g., Cuyahoga, Geauga, and Wayne counties). The age of the population is also an important factor. Each county is unique and must be treated accordingly.

Convalescing and Assisted Living Populations

There are a large number of hospitals (139) and nursing homes (558) in Region 2. They account for 93,804 beds. The average availability of these beds is yet to be determined, but they figure prominently in pre- and post-disaster considerations. There also are eleven psychiatric hospitals within the region. Although these facilities have their own contingency plans, they must be coordinated with state, county and city hazard mitigation planning efforts.

Table 1.1.m

Region 2 Population Trends 1980-2030		
YEAR	POPULATION	% CHANGE 1980-2030
1980	7,283,925	
1990	7,332,975	(+) 0.04%
2000	7,697,425	(+) 2.32%
2010	7,845,610	(+) 1.95 %
2020 (projected)	8,165,410	(+) 4.08%
2030 (projected)	8,407,580	(+) 2.97%
<i>Source: Ohio Development Services Agency</i>		

Table 1.1.n

Region 2: Percent Growth in Large Cities				
LARGEST AREAS	1990	2000	2010	% CHANGE
Columbus	632,270	702,132	770,122	(+) 9.68
Cleveland	505,616	478,403	396,815	(-) 17.05
Cincinnati	364,040	331,285	296,943	(-) 10.37
Akron	223,019	217,019	199,110	(-) 8.25
Montgomery	182,044	166,179	141,527	(-) 14.83
Youngstown	95,706	82,076	66,971	(-) 18.40
Canton	84,161	80,806	73,007	(-) 9.65
Lorain	71,245	68,652	64,097	(-) 6.63
Hamilton	61,368	60,960	62,477	(+) 2.49
Mentor	47,358	50,278	47,159	(-) 6.20
<i>Source: Ohio Development Services Agency</i>				

Inmate Populations

There are 17 prisons within Region 2 with a total inmate population of about 10,604. Each prison has a contingency plan that addresses a variety of circumstances. The challenge then is coordination with prison officials. The large inmate population and associated special considerations cannot be ignored.

Ethnic / Poverty Level Considerations

The minority population in Region 2 is almost 22.5% of the regional total (7,845,610) (Table 1.1.o). African-Americans are the largest minority (15.08%) followed by Hispanics (2.74%), Asians (0.17%) and Native Americans (0.14%). Their concentrations within the largest communities may be linked to the availability of jobs in the area. The greatest concentration of people with limited English skills is in those counties with the greatest Hispanic populations (Lorain, Cuyahoga, and Franklin). There also appears to be a correlation with counties

having the greatest number of people living below the state's poverty level and those counties having the greatest minority populations.

Table 1.1.o

REGION 2 ETHNIC PROFILE		
POPULATION BY RACE	NUMBER	PERCENT
Total Population	7,845,610	100
Total Minority	1,764,725	22.49
Caucasian	6,156,229	78.47
African-American	1,183,185	15.08
Hispanic	214,835	2.74
Native American	13,344	0.17
Asian	10,797	0.14
Pacific Islander	1,750	0.16
Other	70,943	0.90
Two or More Races	132,036	1.68

Source: Ohio Development Services Agency

Age Profiles

The median age group in Region 2 is 38.5. The age population categories, which require the most care after a disaster event are the “under 5 years of age” and over “65 years of age” and are distributed consistently throughout the region. The percentage of children under the age of 5 is about the same throughout Region 2 counties with percentages ranging from a low of 5.3% in Portage County to a high of 7.5% in Franklin County and 7.9% in Delaware County. The percentage of people 65 years of age and older is also consistent with percentages ranging from a low of 8.4% in Delaware County to a high of 17.4% in Mahoning County (see Table 1.1.g).

Table 1.1.p

REGION 2 POPULATION BY AGE								
COUNTY	Population 2010	Under 5 Years	5-17 years	18-24 years	25-44 years	45-64 years	65 years & over	Median Age
Ashland	53,139	3,495	9,709	5,949	13,193	14,287	7,989	38.1
Ashtabula	101,497	6,188	18,194	7,915	25,350	28,697	15,049	40.3
Butler	368,130	24,822	64,201	35,983	102,815	89,410	39,647	35.4
Cuyahoga	1,280,122	80,846	225,273	111,438	335,462	346,775	196,493	39.2
Delaware	174,214	12,658	32,176	11,434	49,909	40,213	13,478	36.2
Fairfield	146,156	9,071	27,487	11,442	39,625	36,906	16,311	37.1
Franklin	1,163,414	84,685	187,994	112,089	371,618	257,413	110,274	33.1
Geauga	93,389	5,742	19,833	8,028	19,701	30,401	14,438	41.9
Greene	161,573	9,179	25,962	27,124	34,168	42,155	19,801	36.7
Hamilton	802,374	56,878	147,643	83,503	231,856	217,924	114,513	36.8
Knox	60,921	3,846	10,257	7,097	13,764	15,490	8,417	38.2
Lake	230,041	13,218	39,830	18,617	59,423	68,275	35,217	41.4
Licking	166,492	10,440	28,340	14,098	40,467	43,027	20,042	38.5
Lorain	301,356	18,830	55,132	26,008	79,491	83,172	40,178	38.8
Mahoning	238,823	13,219	40,450	20,183	56,911	68,479	41,829	42.0
Medina	172,332	10,676	32,977	12,832	45,213	47,769	20,479	39.2
Montgomery	535,153	34,716	90,418	50,946	142,628	140,480	79,111	38.2
Pickaway	55,698	3,335	9,179	4,898	15,468	14,266	6,718	37.9
Portage	161,419	8,310	25,351	25,959	36,123	41,600	18,658	37.0
Richland	124,475	7,658	21,424	10,705	31,848	34,491	19,665	39.8
Stark	375,586	22,522	65,982	33,160	92,869	104,664	59,361	40.3
Summit	541,781	32,875	94,534	45,867	145,463	149,062	76,420	39.1
Trumbull	210,312	11,947	36,047	17,073	51,218	61,535	35,530	41.8
Warren	212,693	14,456	40,152	14,908	61,143	52,298	20,172	36.8
Wayne	114,520	8,090	21,206	11,040	26,004	29,988	15,500	37.6
Region Median								38.5
<i>Source: Ohio Development Services Agency</i>								

Regional Economy

Trade, transportation and utilities are the region's principal economic sector. Other sectors, in order of economic importance, include (2) Education & Health Services, (3) Professional Business Services (4) Manufacturing, and (5) Leisure & Hospitality (see Table 1.1.q). The region contains the Columbus-Dayton corridor which is home for many types of trucking firms and rail. Interstate 71 bisects the region from southwest to northeast and links to other freeways leading to both the Midwestern states as well as the east coast. The region contains the majority of the state's rail lines with several intermodal sites. Region 2 also is home to many colleges and universities, which are located in the larger metropolitan statistical areas. This accounts for the slight job increase in the education and health sector as some of the hospitals are also teaching facilities.

Region 2 is home to aerospace and defense industries such as General Electric Aircraft Engines in Cincinnati, Joint Systems Manufacturing in Lima, and Wright-Patterson Air Force Base in Dayton. Cincinnati is also home to a significant

concentration of corporations engaged in the communications systems and software industries. In manufacturing, Cincinnati is ranked #6, Cleveland #10 and Columbus #19 in the nation. However, it has been reported that the state, once third in nation in manufacturing GDP in 2008, has lost 106,629 manufacturing jobs and over 1,000 manufacturers since 2007.

Region 2 unemployment rates increased dramatically between a low of 5.57% in 2006 to a high of 10.62 % in 2009 (see Table 1.1.r). There is a correlation between unemployment rates and the fortunes of the manufacturing sector. Government and health care services have generated a large number of jobs in Region 2, after the manufacturing sector. The median household income in Region 2 is between \$60,000 and \$74,999 a year (see Table 1.1.s).

Table 1.1.q

REGION 2 EMPLOYMENT AND WAGES BY SECTOR						
	2008			2009		
Industrial Sector	# of Establishments	Average Employment	Total Wages	# of Establishments	Average Employment	Total Wages
Private Sector	193,047	130,149	\$135,563,420,107	189,317	122,300	\$126,990,859,658
Goods Producing	30,385	24,782	\$31,913,662,367	29,117	21,186	\$27,124,757,770
Natural Resources & Mining	827	205	\$182,536,117	836	195	\$173,517,129
Construction	17,646	2,213	\$2,371,537,412	16,704	1,897	\$2,061,656,358
Manufacturing	11,921	18,470	\$24,651,971,377	11,581	15,791	20,839,227,259
Services-Providing	162,661	105,367	\$103,649,757,740	160,201	101,114	\$99,866,101,888
Trade, Transportation & Utilities	45,743	29,059	\$26,302,578,042	44,775	27,151	\$24,386,911,855
Information	2,936	2,775	\$3,995,116,074	2,774	2,578	\$3,726,603,263
Financial Services	21,051	9,085	\$12,669,859,186	20,440	8,763	\$12,322,483,782
Professional & Business Services	35,270	21,793	\$28,741,956,552	34,841	20,272	\$26,889,591,061
Education & Health Services	21,132	23,653	\$23,153,726,498	21,349	24,063	\$24,018,803,571
Leisure & Hospitality	18,751	14,342	\$5,711,245,295	18,509	13,856	\$5,589,737,088
Other Services	17,232	4,630	\$3,005,681,907	16,819	4,383	\$2,899,557,648
Federal Government	925	2,612	\$4,322,205,969	924	2,652	\$4,445,913,039
State Government	774	3,558	\$4,371,998,308	682	3,563	\$4,449,762,415
Local Government	6,125	13,961	\$14,810,069,772	6,084	13,815	\$14,994,490,492
<i>Source: Ohio Development Services Agency</i>						

Table 1.1.r

Region 2 Unemployment Rate					
Labor Force	2005	2006	2007	2008	2009
Employed	3,807,600	3,859,200	3,882,400	3,863,600	3,713,400
Unemployed	228,500	215,100	219,400	260,500	394,200
Unemployment Rate	6.00	5.57	5.65	6.74	10.62
<i>Source: Ohio Development Services Agency</i>					

Table 1.1.s

REGION 2 HOUSEHOLD INCOME IN 2010		
	Number	Percent
Total Households	3,099,436	100
Less than \$10,000	257,241	8.30
\$10,000 - \$19,999	347,736	11.22
\$20,000 - \$29,999	345,147	11.14
\$30,000 - \$39,999	335,324	10.82
\$40,000 - \$49,999	301,924	9.74
\$50,000 - \$59,999	261,408	8.43
\$60,000 - \$74,999	329,952	10.65
\$75,000 - \$99,999	378,021	12.20
\$100,000 - \$149,999	344,276	11.11
\$150,000 - \$199,999	109,410	3.53
\$200,000 or more	88,997	2.87
<i>Source: Ohio Development Services Agency</i>		

Housing

About one half of Region 2's housing stock was constructed prior to 1969, when the National Flood Insurance Program was created. This implies that a large number of houses constructed in the region's floodplains do not have adequate flood protection. Most of the homes in Region 2 are owner occupied (60.56%), as opposed to those occupied by renters (28.84%). The number of vacant homes is relatively low (10.54%), but livability of these vacant homes is unknown.

Table 1.1.t

Region 2 Housing by Type		
Housing Units	Number	Percent
Total Units	3,466,755	100
Occupied Units	3,109,452	89.69
Owner Occupied	2,099,623	60.56
Renter Occupied	999,829	28.84
Vacant Housing Units	367,276	10.59
<i>Source: Ohio Development Services Agency</i>		

Transportation

Region 2 has a well-developed transportation system, which includes 6 principal airports and 65 local airports. Geauga and Knox Counties are the only Region 2 counties that do not have interstate highways. All are served by the US Highway system and a variety of rail lines. The region possesses both lake and river port facilities (see Table 1.1.u).

Table 1.1.u

REGION 2 TRANSPORTATION SYSTEMS						
County	Interstate Highways (X)	US Hwys (X)	Rail Lines (number)	Principal Airport (number)	Local Airport (number)	Lake/River Ports (number)
Ashland	X	X	3	0	1	0
Ashtabula	X	X	4	0	3	2
Butler	X	X	6	0	3	0
Cuyahoga	X	X	6	1	2	1
Delaware	X	X	3	0	1	0
Fairfield	X	X	0	0	2	0
Franklin	X	X	4	1	5	0
Gauga	0	X	1	0	2	0
Green	X	X	1	0	2	0
Hamilton	X	X	7	1	3	2
Knox	0	X	1	0	2	0
Lake	X	X	2	0	2	1
Licking	X	X	3	0	1	0
Lorain	X	X	4	0	5	1
Mahoning	X	X	4	0	4	0
Medina	X	X	4	0	3	0
Montgomery	X	X	3	1	5	0
Pickaway	X	X	3	0	2	0
Portage	X	X	6	0	5	0
Richland	X	X	3	0	3	0
Stark	X	X	5	1	1	0
Summit	X	X	6	0	3	0
Trumbull	X	X	4	1	2	0
Warren	X	X	1	0	2	0
Wayne	X	X	5	0	1	0
<i>Sources: Ohio Department of Transportation - Ohio Development Services Agency</i>						

REGION 3

Region 3 is defined largely as the Appalachian region of Ohio. This region consists largely of the Appalachian foothills, and also is the area of the state that has the most exposure to the Ohio River, a significant flooding source in the state.

General Population

The population in Region 3 of 1,491,408, according to the Ohio Development Services Agency, demonstrated an increase of 36,095 people over a 10-year period (2000-2010). The 2.48% growth rate is below the state's growth of 4% for the same period. Since 1950 the regional growth has increased steadily (see Table 1.1.v).

The region as a whole has seen an increase in population, but four of the region's areas have experienced losses in population between 2000 and 2010 (see Table 1.1.w). These areas include Portsmouth (Scioto County), Marietta (Washington County), Steubenville (Jefferson County) and Zanesville (Muskingum County).

Table 1.1.v

Region 3 Population Trends 1980-2030		
YEAR	POPULATION	% CHANGE 1980-2030
1980	1,376,130	
1990	1,372,893	(-) 0.23%
2000	1,455,313	(+) 6.00%
2010	1,491,408	(+) 2.48%
2020 (projected)	1,571,210	(+) 5.35%
2030 (projected)	1,610,340	(+) 2.49%
Source: Ohio Development Services Agency		

Table 1.1.w

Region 3: Percent Growth in Large Cities				
LARGEST AREAS	1990	2000	2010	% CHANGE
Union Twp., Clermont County	33,368	42,332	46,416	(+) 9.65%
Miami Twp., Clermont County	28,199	36,632	40,161	(+) 9.63%
Zanesville, Muskingum County	26,778	25,586	25,487	(-) 0.39%
Chillicothe, Ross County	21,923	21,796	21,901	(+) 0.48%
Athens, Athens County	21,265	21,342	23,832	(+) 11.67%
Portsmouth, Scioto County	22,676	20,909	20,226	(-) 3.27%
Steubenville, Jefferson County	22,125	19,015	18,659	(-) 1.87%
New Philadelphia, Tuscarawas County	15,698	15,039	17,288	(+) 14.95%
Batavia Twp., Clermont County	11,254	15,039	23,280	(+) 54.80%
Marietta, Washington County	15,026	14,515	14,085	(-) 2.96%
Source: Ohio Development Services Agency				

Special Populations

There is a significant part of the population in Region 3 that could require higher levels of assistance before and after a disaster occurs. These special population groups include: infant children, elderly, non-English speaking populations, convalescing populations, assisted living populations, as well as inmates.

Convalescing and Assisted Living Populations

The convalescing and assisted living populations include hospitals, nursing homes, and mental institutions. There are 146 nursing homes and 32 hospitals in Region 3 with a total of 16,764 beds. There also are three psychiatric hospitals in the region. Although these facilities have their own contingency plans, they coordinate with state, county and city hazard mitigation planning efforts.

Inmate Populations

Region 3 also contains six prisons, which are divided among Belmont, Hocking, Noble, Ross, and Scioto counties. The inmate population at this point in time is 12,215. Most notably is Ross County, which contains two of the six prisons but approximately 42.44% of the population.

Ethnic / Poverty Level Considerations

Approximately 81.39% of the region's 1,491,408 people are Caucasian. This leaves a total minority population of 79,321; many who may not be fluent in the English language (see Tables 1.1.x). Athens and Coshocton counties have significantly large populations that speak languages other than English in the home (5.4 and 6.7% respectively). By comparison, the average for the State of Ohio is about 6.1 %.

Table 1.1.x

REGION 3 ETHNIC PROFILE		
POPULATION BY RACE	NUMBER	PERCENT
Total Population	1,491,408	100
Total Minority	79,321	5.32
Caucasian	1,213,804	81.39
African-American	30,674	2.06
Hispanic	12,848	0.86
Native American	3,141	0.21
Asian	10,797	0.72
Pacific Islander	460	0.04
Other	4,048	0.27
Two or More Races	21,578	1.45
<i>Source: Ohio Development Services Agency</i>		

The African-American (2.02%) and Hispanic (0.75%) populations in Region 3 are comparatively small. The largest percentages of African Americans reside in Noble (7.4%), Jefferson (5.2%) and Ross (5.1%) counties. The majority of Hispanics reside in Jackson (1.4%), Athens (1.3%), Clermont (1.3%) and Columbiana (1.3%) counties.

Approximately 8.3% of Ohio's populations live below the poverty level. Twenty-three counties within the region are above the state average. Athens County (16.5%) has the highest poverty level in the state. In comparison, six of the Region 3 counties have poverty levels less than that of the state average: Clermont: 7.1%, Coshocton: 9.1%, and Tuscarawas: 9.4%. Counties listed as below poverty level face potentially severe implications of ensuring mitigation actions are implemented and often must depend on outside resources.

Age Profiles

The median age in Region 3 is 38.9 years, which does not vary significantly from that in Region 1 (39.6) or Region 2 (38.5).

The two populations, which often require special attention during disaster times, are children under 5 and those over 65. At present, approximately 6.11% of the region's population is less than 5 years of age (91,183) and 14.09% of the population is 65 or more (210,191). Within the region, Columbiana and Clermont counties contain the largest population above 65 years of age. Additionally, Clermont County also contains the highest number of minor population under the age of 5.

Table 1.1.y

Region 3 Population by Age						
COUNTY	Population	Under 5	21 yrs. +	65 yrs. +	85 yrs. +	Median
Adams	27,330	1,756	19,067	3,643	412	36
Athens	62,223	2,972	40,721	5,793	702	26
Belmont	70,226	3,531	52,526	12,758	1,503	41
Brown	42,285	2,979	29,024	4,914	540	35
Carroll	28,836	1,731	20,578	1,809	398	39
Columbiana	112,075	6,618	80,752	16,843	1,755	38
Clermont	177,977	13,550	121,525	16,747	1,692	35
Coshocton	36,655	2,351	25,608	5,375	579	38
Gallia	31,069	1,963	21,811	4,211	493	37
Guernsey	40,792	2,748	28,569	5,896	678	38
Harrison	15,856	914	11,713	2,804	383	41
Highland	40,875	2,906	28,241	5,649	666	36
Holmes	38,943	4,003	23,233	4,092	546	28
Hocking	28,241	1,879	20,023	3,708	410	38
Jackson	32,641	2,139	22,867	4,439	520	36
Jefferson	73,894	3,860	55,001	13,752	1,516	42
Lawrence	62,319	3,839	44,559	8,966	891	38
Meigs	23,072	1,312	16,625	3,406	386	39
Monroe	15,108	804	11,060	2,467	290	41
Morgan	14,897	903	10,548	2,327	256	39
Muskingham	84,585	5,637	58,767	12,092	1,536	36
Noble	14,058	703	10,229	1,836	227	36
Perry	34,078	2,505	23,095	4,093	434	35
Pike	27,695	1,905	19,054	3,756	467	35
Ross	73,345	4,544	53,040	8,928	984	37
Scioto	79,195	5,025	56,391	11,826	1,409	37
Tuscarawas	90,914	6,002	64,447	13,599	1,686	38
Vinton	12,806	921	8,807	1,551	148	36
Washington	63,251	3,691	45,586	3,925	1,094	39
Region Median						35.7
<i>Source: Ohio Development Services Agency</i>						

Regional Economy

Region 3 is Ohio's most forested region containing 5,284,888 acres of woodland. The remaining acreage, 9,197,677 acres are committed to urban development. The economic base of Region 3 is deeply rooted in its land use.

Natural resources and mining was the primary source of regional income in 2008 and 2009, followed by (2) Construction, (3) Health Care, and (4) Local Government, and (5) Federal Government. The natural resources and mining sector increase can be attributed to the Great Shale Gas Rush whereby natural gas deposits located in the Utica and Marcellus Shale can be extracted through hydraulic fracturing techniques. The current status and future impacts of hydraulic fracturing is discussed in greater detail in later sections. A probable correlation can be drawn as the second notable increase in jobs is the construction sector followed by the health care sector. This is good news as the region is well-known for the iron and steel industry. As the state produces between 14% and 17% of the nation's raw steel, employment rates have declined, generally attributed to the weakening national economy. The Ohio

Development Services Agency predicts decreases will continue in the coming years.

Regional unemployment rates fluctuated between 2005 and 2008, but the rates differed only by a percentage point or less. In 2009, unemployment rates reached an incredible high of 12.43% leaving 78,920 workers in Region 3 without jobs (see Table 1.1.aa).

The state median income for the year was \$48,370 and for the U.S., \$47,640 (see Table 1.1.bb). In 2009, the median household income in Region 3 was \$41,180 that is considerably lower than the state and national median income.

Table 1.1.z

REGION 3 EMPLOYMENT AND WAGES BY SECTOR								
Industrial Sector	2008				2009			
	# of Establishments	Average Employment	Total Wages	Average Weekly Wage	# of Establishments	Average Employment	Total Wages	Average Weekly Wage
Private Sector	27,773	12,741	\$11,837,939,400	\$592	27,360	11,992	\$11,106,032,659	\$594
<u>Goods Producing</u>	5,797	3,396	\$4,260,307,519	\$820	5,580	2,909	\$3,635,556,550	\$832
Natural Resources & Mining	566	122	\$141,033,186	\$389	567	221	\$314,968,187	\$685
Construction	3,349	488	\$638,672,117	\$483	3,177	627	\$782,022,778	\$741
Manufacturing	1,887	2,348	\$2,907,141,846	\$770	1,841	1,995	\$2,448,627,574	\$772
<u>Services-Providing</u>	21,981	9,345	\$7,577,631,881	\$493	21,784	9,083	\$7,470,476,109	\$503
Trade, Transportation & Utilities	7,226	3,229	\$2,752,499,415	\$528	7,101	3,090	\$2,667,005,543	\$538
Information	364	193	\$248,543,671	\$634	356	185	\$229,363,410	\$630
Financial Services	2,609	609	\$678,668,687	\$603	2,514	575	\$641,388,176	\$612
Professional & Business Services	3,232	892	\$851,162,517	\$548	3,192	812	\$785,345,078	\$578
Education & Health Services	3,029	2,462	\$2,273,523,613	\$549	3,071	2,494	\$2,376,328,944	\$566
Leisure & Hospitality	2,914	1,525	\$516,264,548	\$210	2,896	1,501	\$519,151,662	\$218
Other Services	2,600	425	\$248,454,146	\$335	2,626	417	\$245,253,728	\$348
Federal Government	503	186	\$298,644,366	\$884	505	186	\$299,156,563	\$887
State Government	410	470	\$647,802,519	\$847	376	459	\$668,307,739	\$875
Local Government	2,412	2,278	\$2,187,684,844	\$612	2,386	2,290	\$2,257,785,936	\$629
Source: Ohio Development Services Agency								

Table 1.1.aa

Region 3 Unemployment Rate					
Labor Force	2005	2006	2007	2008	2009
Employed	657,300	664,400	666,300	658,600	635,100
Unemployed	48,200	43,300	44,300	50,300	78,920
Unemployment Rate	7.33	6.52	6.65	7.64	12.43
Source: Ohio Development Services Agency					

Table 1.1.bb

REGION 3 HOUSEHOLD INCOME IN 2010		
	Number	Percent
Total Households	561,773	100
Less than \$10,000	52,847	9.41
\$10,000 - \$19,999	82,029	14.60
\$20,000 - \$29,999	74,604	13.28
\$30,000 - \$39,999	68,293	12.16
\$40,000 - \$49,999	57,765	10.28
\$50,000 - \$59,999	49,803	8.87
\$60,000 - \$74,999	58,630	10.44
\$75,000 - \$99,999	58,583	10.43
\$100,000 - \$149,999	42,323	7.53
\$150,000 - \$199,999	9,695	1.73
\$200,000 or more	7,201	1.28
Source: Ohio Development Services Agency		

Housing

There were 634,000 housing units in Region 3 (see Table 1.1.cc). The majority of the homes (88.45%) are owner-occupied and about 23% are rentals. There were 11% of the region's stocks that were vacant.

According to the Ohio Development Services Agency, approximately 71% of the region's housing stock was built before 1970, which indicates most construction, occurred prior to the National Floodplain Insurance Program (NFIP) floodplain mapping initiative. Communities participating in the NFIP are routinely visited to ensure compliance with building and floodplain management standards, which ensures reduction in the vulnerability to flood related damage.

Table 1.1.cc

Region 3 Housing by Type		
Housing Units	Number	Percent
Total Units	634,594	100
Occupied Units	561,323	88.45
Owner Occupied	415,436	65.46
Renter Occupied	146,337	23.06
Vacant Housing Units	72,821	11.48
Source: Ohio Development Services Agency		

Transportation

Table 1.1.dd provides a general overview of Region 3 transportation systems, which include interstate highways, US highways, rail lines, local airports, and river ports. There are no large (i.e., principal) airports in the Region.

Only six of twenty-nine counties are served by the interstate system, but most counties have at least one US highway. A major rail line serves all counties except Noble and eight counties have ports along the Ohio River. Knowledge of transportation systems provides a basis for regional hazard mitigation and emergency response strategies.

Table 1.1.dd

REGION 3 TRANSPORTATION SYSTEMS						
County	Interstate Highways	US Hwys	Rail Line (Number)	Principal Airport (Number)	Local Airport (Number)	Riverports (Number)
Adams		X	1		1	
Athens		X	1		1	
Belmont	I -70	X	1		2	3
Brown		X	1		1	
Carroll		0	2		3	
Columbiana		X	2		2	2
Clermont		X	2		1	
Coshocton		X	1		2	
Gallia		X	2		1	2
Guernsey	I -70; I-77	X	1		1	
Harrison		X	2		1	
Highland		X	1		1	
Holmes		X	1		1	
Hocking		X	1		0	
Jackson		X	1		1	
Jefferson		X	3		2	3
Lawrence		X	2		1	2
Meigs		X	1		0	
Monroe		0	2		1	2
Morgan		0	1		1	
Muskingum	I - 70	X	4		2	
Noble	I - 70	0	0		1	
Perry		X	2		2	
Pike		X	2		1	
Ross		X	3		1	
Scioto		X	2		1	3
Tuscarawas	I - 77	X	3		1	
Vinton		X	1		1	
Washington	I - 77	X	1		0	2
Source: Ohio Development Services Agency						

1.2 PLANNING PROCESS

According to 44CRF 201.4(c)(1) Ohio's SHMP must provide a, 'Description of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how other agencies participated.'

STATE MITIGATION PLANNING ADVISORY TEAMS

State Hazard Mitigation Team (SHMT)

Prior to DMA 2000, Ohio had created a mitigation team, the SHMT, which served two primary functions: To provide input / score applications for FEMA mitigation programs and to provide general input on the State of Ohio's hazard mitigation policies. Today the SHMT continues to exist and is the lead advisory group involving mitigation project scoring and mitigation policy – which includes mitigation planning issues.

Currently, the SHMT includes the following entities:

State Hazard Mitigation Team (March 2014)	
Agency	Name
Ohio EMA - Recovery Branch	Brigitte Bouska
Ohio DNR - Division of Soil and Water	Christopher Thoms
Ohio DNR - Division of Soil and Water	Matt Knittel
Ohio DNR - Division of Soil and Water	Matt Leshner
Ohio Department of Development	Karen Fabiano
Ohio PWC	Kim Killian
MWCD	Boris Slogar
US Army Corps of Engineers-Buffalo	Laura Ortiz
US Army Corps of Engineers-Huntington	Dan Bailey
US Army Corps of Engineers-Louisville	Brandon Brummett
FEMA (NFIP and Mitigation Branches)	Jenn Redmond
Emergency Mgmt. Association of Ohio	Sean Miller, Delaware Co. EMA
US Geological Survey	Scott Jackson
Ohio EMA - Mitigation Branch (non-voting)	Steve Ferryman
Ohio EMA - Mitigation Branch (non-voting)	Jacob Hoover
Ohio EMA - Mitigation Branch (non-voting)	Rachael Evans
Ohio EMA - Mitigation Branch (non-voting)	Dan Clevidence
Ohio EMA - Mitigation Branch (non-voting)	Sharon Rolf
Ohio EMA - Mitigation Branch (non-voting)	Jessica Nelson
Ohio EMA - Mitigation Branch (non-voting)	Dean Ervin

Ohio Mitigation Plan Advisory Team (OMPAT)

For the initial creation of the SHMP, a larger advisory group called the OMPAT was created. This was to ensure that the initial development of the plan was comprehensive and inclusive. After the initial plan was completed, the OMPAT became defunct. From that point on, the SHMT, coordinating with various entities involved in different aspects of the SHMP will provide overall plan guidance.

INITIAL STATE MITIGATION PLAN DEVELOPMENT & ADOPTION PROCESS (2005)

In early 2004, the SHMT outlined a draft of the plan and determined additional input from members of OMPAT was necessary to enhance the plan. The SHMT scheduled an initial meeting with potential members of the OMPAT in May 2004. The selection of state agencies invited was determined by the DAS comprehensive agency listing. Key criteria for receiving a POC request included agencies already involved with mitigation, agencies dealing with financial issues, and any agency that could be impacted during project development and implementation. Fifty-three State agencies received request for points of contact from Ohio EMA. Of those, 46 responded favorably and agreed to participate as needed in the State's mitigation planning process and provided points of contact for Ohio EMA (see Table 1.2.a). Eight of the 46 agencies attended the kick-off meeting and agreed to become members of the active OMPAT (see Table 1.2.d).

Invitations were also forwarded to the FEMA Region V Regional Director and Director of the Mitigation and Flood Insurance Directorate, the emergency management agencies of the five states contiguous to Ohio and the directors of the seven Ohio regional planning commissions (see Table 1.2.c). The only representatives from this category that were able to attend the meeting were from the West Virginia Office of Emergency Management and Pennsylvania Emergency Management Agency.

The meeting included a general introduction by the Ohio EMA Executive Director, which provided attendees with an overview of emergency management and natural hazard mitigation. The SHMO outlined the significance of and benefits received from mitigation planning and showed the state has received over \$35M in mitigation funding from federal programs. The state mitigation planner discussed the detailed requirements of the two types of state plans (Standard and Enhanced) and a question and answer session provided an opportunity for attendees to query anyone present regarding the subject at hand. The attendees were then encouraged to become a part of the OMPAT. All attendees agreed to assist with the planning initiative by:

- Developing the narrative and conducting analyses;
- Reviewing and commenting on draft planning documents;
- Identifying new and existing goals and actions;
- Reviewing and commenting on final planning documents; and/or
- Promoting participation from fellow colleagues.

Table 1.2.a

Agencies That Have Received Invitations to Participate in the Planning Process			
Agency	First Name	Last Name	Title
Auditor of State	Betty	Montgomery	Auditor of State
Air Quality Development Authority	Mark R.	Shanahan	Executive Director
Ambulance Licensing Board	Robert F.	Featheringham	Executive Director
Architects & Landscape Board	William N.	Wilcox	Executive Director
Arts & Sports Facilities Commission	Kathleen M.	Fox	Executive Director
Attorney General	Jim	Petro	Attorney General
Board of Engineers & Surveyors	Mark T.	Jones	Executive Secretary
Board of Regents	Roderick	Chu	Chancellor
Board of Tax Appeals	Julia	Snow	Executive Director
Civil Rights Commission	G. Michael	Payon	Executive Director
Commission on Minority Health	Cheryl A.	Boyce	Executive Director
Counselor & Social Worker Board	Beth	Farnsworth	Executive Director
Dept. of Administrative Services	C. Scott	Johnson	Director
Dept. of Aging	Joan	Lawrence	Director
Dept. of Agriculture	Fred L.	Dailey	Director
Dept. of Commerce	Jeanette	Bradley	Lt. Governor/Director
Dept. of Development	Bruce E.	Johnson	Director
Dept. of Education	Susan T.	Zelman	Sup. of Public Instruction
Dept. of Health	James	Baird Jr.	Director
Dept. of Insurance	Ann Womer	Benjamin	Director
Dept. of Job & Family Services	Tom	Hayes	Director
Dept. of Mental Health	Michael F.	Hogan	Director
Dept. of Mental Retardation	Kenneth W.	Ritchey	Director
Dept. of Taxation	Pat	McAndrew	Interim Tax Comm.
Dept. of Transportation	Gordon	Proctor	Director
Dept. of Youth Services	Geno	Natalucci-Persichetti	Director
Dept. of Natural Resources	Samuel W.	Speck	Director
Dept. of Rehabilitation and Correction	Reginald A.	Wilkinson	Director
Employment Relations Board	Carol Nolan	Drake	Chairman
Environmental Protection Agency	Christopher	Jones	Director
Ethics Commission	David E.	Freel	Executive Director
Industrial Commission	William E.	Thompson	Chairman
Legal Rights Service	Carolyn S.	Knight	Executive Director
Legislative Information Services	George	Yeager	Director
Office of Budget and Management	R. Thomas W.	Johnson	Director
Office of the Adjutant General	Major General John H.	Smith	Adjutant General
Ohio Arts Council	Wayne P.	Lawson	Executive Director
Ohio Historical Society	Gary C.	Ness	Director
Ohio Library Board	Michael	Lucas	State Librarian
Public Utilities Commission	Alan R.	Schriber	Chairman
Public Works Commission	W. Laurance	Bicking	Director
Rail Development Commission	James E.	Seney	Executive Director
School Facilities Commission	Mary Lynn	Readey	Executive Director
Secretary of State	J. Kenneth	Blackwell	Secretary of State
Treasurer of State	Joseph	Deters	Treasurer of State
Veterinary Medical Board	Heather	Hissom	Executive Director

Table 1.2.b

Regional Planning Agency Invitation List			
Name	Title	Department	City
Theken	Section Director	Medina County Planning Department	Magadore
Efland	Section Director	Senior City, Planner City of Cincinnati	Cincinnati
Reddy	Section Director	City of Cleveland Heights Planning and Development	Cleveland
Gad	Section Director	ODOT Office of Urban and Corridor Planning	Columbus
Anderson	Section Director	City Planner, City of Kettering	Kettering
Etchie	Section Director	Transportation Planner, Mannik & Smith Group	Maumee

Table 1.2.c

List of Initial Kick off Meeting Attendees	
Name	Agency
Sharon Gbur	Ohio Environmental Protection Agency
Shawn Smith	Public Utilities Commission
Ron Grout	Ohio Department of Transportation
Scott Roberts	Ohio Department of Administrative Services
Chuck Kirschner	Ohio Department of Agriculture
Carol Shkolnik	Ohio Department of Aging
Karen Ernes	Ohio Department of Job and Family Services
Deborah LoSchiano	Board of Tax Appeals

Drafting the Plan

The development of the 2005 SHMP required the participation of many state and federal agencies. Their cooperation and assistance in the development of the mitigation plan made the completion of the plan possible.

The Ohio EMA Mitigation Branch initially worked with ODNR – Division of Water in the fall of 2003 to develop the flood and dam/levee failure sections of the HIRA. A FEMA DAE assisted the state in its planning efforts as it was handling multiple disasters at the time. The enhanced section of the original plan (formerly Section 7) was initially developed by the SHMO.

The development of the risk and vulnerability assessment portion of the State plan was partially completed through a contract FEMA assigned to URS; however, only portions of it were used for tornadoes, landslides, and winter storms. Other data was not used for a variety of reasons.

The initial SHMP provided a comprehensive inventory of local and state capabilities. The local capability assessments information was also identified in local plans. Ohio EMA Mitigation staff reviewed the plans, collected the information and created a database utilizing the 17 state certified local plans. The database included information on the types of plans for each jurisdiction and any future-planning activities. The information from the database was used to develop a narrative discussing the capabilities identified and the need for additional information.

The Ohio EMA Mitigation Branch sent surveys via e-mail to the participating state agencies to identify their capabilities. The survey requested the title of the agency, a contact name and telephone information. However, information on any agency policies, procedures, funding sources or programs that could impact mitigation activities was the main focus of the survey. The agencies were asked to determine if the program would support, hinder or facilitate mitigation actions. Ohio EMA received 21 responses to the surveys after follow-up phone calls and meetings with several agencies to explain the significance of the survey process. The information received was incorporated in the Section 4.2 State Capability Assessment.

The state mitigation planner reviewed the existing goals, objectives and action items in the latest 409 SHMP. Any goal, objective or action item, which supports the current mitigation strategy and remained applicable to the hazards affecting Ohio for tornado, landslide, and severe winter storms were incorporated into the new mitigation plan.

The existing hazard mitigation goals and actions were evaluated and additional information was requested from various agencies. Each agency was asked to review, comment and identify any additional existing goals, related objectives and pending action items not currently documented. The state mitigation planners reviewed each response and incorporated any newly identified mitigation goals, related objectives or pending action items into the appropriate sections of the mitigation plan. The state mitigation planner reviewed the current hazard analysis and loss estimate to develop new mitigation goals, objectives and actions for the tornado, dam failure and severe winter storm sections. The newly identified mitigation goals, related objectives or pending action items were incorporated into the appropriate section of the mitigation plan. Plan update procedures were drafted by the Ohio EMA Mitigation Branch.

Reviewing the Plan

An electronic copy of a draft of the mitigation plan was posted on the Ohio EMA web page, hard copies were supplied to the state library of Ohio for distribution to the public, and notification was made through the Alert Newsletter to all county directors. A public survey regarding the draft plan was available on the Ohio EMA web page and included in all hard copies of the draft plan.

All surveys returned to the Ohio EMA were forwarded to the members of the OMPAT and SHMT for their review. The results of the surveys were discussed at regularly scheduled meetings of the OMPAT and SHMT. Recommendations made by the OMPAT and SHMT, from their assessment of the information from the public surveys, were incorporated into the mitigation plan.

Approving the Plan

Members of the OMPAT worked cooperatively in the mitigation planning effort. The agencies developed narratives, conducted analyses, reviewed draft-planning documents and provided comments. All the information received from their plan development efforts were incorporated into the final plan.

The document was submitted to FEMA Region V for a courtesy compliance review of the plan with the CFR. Once FEMA completed the courtesy review and states the plan meets the requirements of the 44 CFR 201.4 the plan was returned to the state for promulgation by the Governor.

The final step after the approval of the plan by the OMPAT, SHMT, and FEMA (preliminary approval), was the Governor's Authorized Representative signature of the plan and promulgation by the Governor on January 24, 2005. FEMA gave Standard Plan approval on January 26, 2005. Some additional revisions were made to the plan, including a FEMA review of the state's management performance over the previous four quarters and FEMA gave Enhanced Plan approval on May 17, 2005.

After the plan received FEMA approval, copies were made available to the public on the Ohio EMA webpage.



2008 PLAN UPDATE AND ADOPTION PROCESS

Conceptually, it was realized that the 2008 Mitigation Plan Update would be much different than the original plan creation. As discussed earlier the overall coordination / advisory body for the update would be the SHMT. Also, other agencies would need to be identified who could provide technical data for the HIRA development/review. The steps involved in updating the 2008 plan are identified below.

Step 1: Review the Existing State Mitigation Plan, Other Plans, Agency Goals and Objectives, Trends, Etc.

The initial 2005 SHMP identified several mitigation actions that were related to the update of the SHMP. Specifically, those were:

- Develop risk assessments and vulnerability analyses for remaining hazards of which Ohio was vulnerable.
- Update the SHMP with new information provided in approved local mitigation plans.
- Update the inventory of state assets worth more than \$1 million.
- Update goals, objectives, action.

The Ohio EMA Mitigation Branch also reviewed the following plans:

- State Emergency Operations Plan, State Preparedness Plan, Homeland Security Strategic Plan, Ohio EMA and Mitigation Branch Strategic Plans, Ohio Water Resource Council Strategic Plan
- Mitigation Strategies and Administrative Plan updates after Federal disaster declarations and National level plans for specific hazards.

Step 2: Coordinate with SHMT – Obtain Input on Overall Plan Update Method

The SHMT meets several times per year (2-4) and discusses and is briefed on the SHMP update. SHMT members have been solicited for input, and several team members have contributed to the update.

Step 3: Apply for PDM Funding for Plan Update Project

In 2006, the Ohio EMA Mitigation Branch began to prepare its framework for updating the SHMP. One project idea was developed that would assist with the enhanced plan update criteria, the creation of a portal / information management system that would 1) Store, catalog, and provide easy access to local mitigation plans, supported by a database which would capture key local plan data; 2) Provide planning and other mitigation program data in an easily accessible public web portal that could be updated by local mitigation plan “keepers” and Ohio EMA Mitigation Branch and 3) Identify and catalog mitigation successes and cataloging/tracking acquired properties.

Step 4: Draft the HIRA

Agencies with either the assigned statutory authority related to a particular hazard or those with expertise in dealing with the hazard were contacted and information was requested. For some hazards, such as tornado and winter storm, the Ohio EMA Mitigation Branch was the primary author.

In the 2008 update, HAZUS was used for three different hazards: flood, seiche/coastal flood, and earthquake. HAZUS work on the seiche/coastal flood and earthquake portion of the HIRA was performed in-house by the Mitigation Branch. HAZUS work on the flood portion of the HIRA was accomplished through two avenues – as a work activity identified in the Mitigation Strategy developed for DR-1720-OH, and as a deliverable under a Planning Assistance to States (PAS) cooperative agreement between Ohio EMA, Ohio DNR, and the USACE. The PAS project resulted in Level 1 HAZUS runs for 41 of 88 Ohio counties for the 25-year and 100-year scenario floods.

Step 5: Draft/Update State Mitigation Strategy, Goals, Objectives, and Action Items

Since 2005, the goals, objectives and action items have been reviewed on an annual basis. The 2008 update contains a significant reformatting of this section, and identifies progress made, or not made on the 2005 goals. Also, input from the SHMT, local mitigation plans, and other state plans were reviewed.

One element that was updated included the creation of a Severe Repetitive Loss (SRL) Addendum. The SRL Addendum was created to identify specific state mitigation goals and actions to address severe repetitive loss properties. This addendum was approved by FEMA on April 22, 2008.

Step 6: Draft other Elements of the Plan

The 2008 update reflects a restructuring of the plan from the 2005 version, including the incorporation of the enhanced plan criteria into the state plan. The enhanced plan elements will not be updated until the plan is being submitted for enhanced plan approval.

Step 7: Review Draft

The 2008 update had several levels of review. First, elements of the HIRA where another agency was identified as the lead were review by Ohio EMA. Second, the draft plan was reviewed by the SHMT, and the Ohio EMA executive group. Finally, an action item in the State Mitigation Strategy of this plan is to have a comment form on the website for the public to provide input at any time.

Step 8: Approve Plan

The 2008 update was approved by the Ohio EMA Executive Director and later approved by FEMA Region V. After meeting all of the State Standard Mitigation Plan requirements, and formal adoption by the State of Ohio, the State Standard Mitigation Plan was fully approved by FEMA Region V on May 16, 2008.

Step 9: Implement PDM Plan Update Project

Because the 2008 update is being performed in two steps – standard plan approval in May and enhanced plan approval later. This enhanced approval is projected to be completed in 2011.

Step 10: Draft Enhanced Plan Element Updates

These elements were drafted after the standard plan review and approval in May 2008 and prior to the projected completion date of 2011.

Step 11: Review Draft Enhanced Plan Element Updates

The enhanced plan review follows a similar procedure that was used in the standard plan review.

Step 12: Approve Enhanced Plan Element Updates

The enhanced plan review follows a similar procedure that was used in the standard plan review.

2011 PLAN UPDATE AND ADOPTION PROCESS

The 2011 plan update process was similar to the 2008 process and the steps involved in the 2011 update process are outlined below. Various state and federal agencies participated in the 2011 plan update either through the SHMT, silver jackets team, and/or as subject-matter experts. The SHMT helped to develop the mitigation strategy and reviewed draft sections of the plan.

Step 1: Review the existing state mitigation plan, other plans, agency goals and objectives, trends, etc.

Several of the 2011 SHMP update tasks were identified in the 2008 SHMP update including:

- To enhance the current Ohio EMA Mitigation Branch webpage(s) to provide much more information than currently exists. This action item was addressed through the development of the State Hazard Analysis Resource and Planning Portal (SHARPP).
- To complete HAZUS analyses for all Ohio counties for the 100-year and 25-year scenario floods.
- To review and update scoring/ranking criteria for mitigation projects to ensure projects that propose mitigating repetitive loss structures are prioritized.
- Update the HIRA to include an analysis of levees in the state.
- Update the SHMP with new information provided in local mitigation plans.
- Update goals, objectives, and action items.

- Update the SHMP to include information on the straight-line wind event (DR-1805) and the two tornado events that occurred in Ohio since the last plan update.

In addition to reviewing the SHMP, Mitigation Branch staff also reviewed the following plans to ensure coordination:

- State Emergency Operations Plan, State Preparedness Plan, Homeland Security Strategic Plan, Ohio EMA and Mitigation Branch Strategic Plans, Ohio Water Resource Council Strategic Plan
- Mitigation Strategies and Administrative Plan updates after Federal disaster declarations and National level plans for specific hazards.

Step 2: Coordinate with SHMT – Obtain Input on Overall Plan Update

The SHMT meets several times per year, which provided opportunities to discuss the SHMP update and implementation progress. SHMT provided input to the plan HIRA and mitigation strategy, and reviewed draft sections of the plan. The Ohio Silver Jackets Team was also consulted during the mitigation plan update process.

Step 3: Initiate and Complete the SHARPP Project

SHARPP (see Appendix J) was funded through a PDM grant utilizing state dollars as non-federal match. SHARPP has been designed, built, and is in the final stages of testing. The completion of SHARPP is a critical component of the state's strategy for coordinating local mitigation programs, and will help the state plan to meet federal mitigation planning criteria.

Step 4: Complete HAZUS Analyses

For the 2008 update, Ohio EMA and ODNR cooperated with the US Army Corps of Engineers (USACE) to undertake a HAZUS analysis project under the USACE's Planning Assistance to States program. In this project, the ODNR-FPM and USACE combined to complete Level 1 flood analyses for 49 counties. During 2009 and 2010, Ohio EMA analyzed the remainder of the state using HAZUS-MH MR-4, with versions 1 and 2. All county analyses included runs for the 100-year and 25-year events, while analyzing watersheds at the 4-square-mile drainage area. Results of HAZUS analyses were shared with counties and jurisdictions to assist in updating local mitigation plans.

Step 5: Update the SHMP HIRA to Include a Levee Analysis

Mitigation Branch staff members coordinated with the ODNR-Dam Safety Program, FEMA, and the USACE to gather data for the levee analysis portion of the HIRA update.

Step 6: Draft/Update the State Mitigation Strategy, Goals, Objectives and Action Items

The Mitigation Branch is the author of this section, and has the responsibility to review and update the goals, objectives and action items on an annual basis. Input from the SHMT, local mitigation plans, and the various other plans reviewed by the Mitigation Branch were considered during the development the current mitigation strategy.

Step 7: Develop a Draft Plan Document

Major revisions to the plan are documented in the Guide to Revisions. Portions of the HIRA were also updated to include two tornado events and one straight-line wind event that have occurred since the last plan update.

Step 8: Review the Draft Plan

The draft plan was reviewed by the SHMT and the Ohio EMA Executive Branch. The public was provided the opportunity to comment on the draft plan through the Ohio EMA website. Comments and suggestions were incorporated into the plan where appropriate.

Step 9: Standard Plan Review and Comment

The plan will be submitted to FEMA Region V for review and comment. The Mitigation Branch will incorporate any required changes to the plan document before resubmitting for approval.

Step 10: Standard Plan Adoption

Once the plan has been approved as meeting standard plan criteria, the plan will be formally adopted by the State of Ohio.

Step 11: Enhanced Plan Review and Submittal

Once the standard plan has been formally adopted by the State of Ohio, the Mitigation Branch will resubmit the plan to FEMA for Enhanced Plan review.

2014 PLAN UPDATE AND ADOPTION PROCESS

The 201 plan update process was similar to the 2011 process and the steps are listed below. Various state and federal agencies participated in the 2014 plan update either through the SHMT, silver jackets team, and/or as subject-matter experts. The SHMT helped to develop the mitigation strategy and reviewed draft sections of the plan.

Step 1: Review the existing state mitigation plan, other plans, agency goals and objectives, trends, etc.

Several of the 2014 SHMP update tasks were identified in the 2012 SHMP update including:

- Update the HIRA to incorporate information from SHARPP

- Update the SHMP with new information provided in local mitigation plans.
- Update goals, objectives, and action items and address all recommendations identified by FEMA in the 2012 plan crosswalk
- Update the SHMP to include information from DR-4002(Spring Flooding), DR-4077 (Derecho), and DR-4098 (Super Storm Sandy).

In addition to reviewing the SHMP, Mitigation Branch staff also reviewed the following plans to ensure coordination:

- State Emergency Operations Plan, State Preparedness Plan, Homeland Security Strategic Plan, Ohio EMA and Mitigation Branch Strategic Plans, Ohio Water Resource Council Strategic Plan
- Mitigation Strategies and Administrative Plan updates after Federal disaster declarations and National level plans for specific hazards.

Step 2: Coordinate with SHMT – Obtain Input on Overall Plan Update

The SHMT meets several times per year, which provided opportunities to discuss the SHMP update and implementation progress. SHMT provided input to the plan HIRA and mitigation strategy, and reviewed draft sections of the plan. The Ohio Silver Jackets Team was also consulted during the mitigation plan update process.

Step 3: Update the HIRA to incorporate information from SHARPP and address the Ohio Balanced Growth Initiative, hydraulic fracturing and the impacts of climate change.

The Ohio EMA mitigation branch will integrate available information entered in SHARPP as part of the local hazard mitigation plans into the HIRA. The HIRA will also include information addressing the Ohio Balanced Growth Initiative, Hydraulic Fracturing and the impacts of climate change on the State.

Step 4: Update the SHMP to include the necessary language to allow for an increase of 5% projects to 10% in wind specific presidentially declared disasters.

FEMA allows increasing the 5 percent Initiative amount up to 10 percent for a Presidential major disaster declaration for tornadoes and high winds. The increased initiative funding can be used for activities that address the unique hazards posed by tornadoes. The SHMP will address the warning of citizens (ensuring 90 percent coverage), further the concept of safe room construction or rehabilitation for residences or commercial structures, and address sheltering in mobile home parks. The SHMP will also explain how the state will implement an ongoing public education program so that citizens are aware of warning systems and their meaning and the availability of in-home shelter designs.

Step 5: Update the SHMP to include a Rural Electric Cooperative Addendum.

The Ohio EMA mitigation branch has partnered with Ohio Rural Electric Cooperative to develop this addendum. The addendum is needed for many reasons, first Rural Electric Cooperatives (RECs) are allowed to apply for FEMA's PDM and HMGP grant programs as sub-applicants with an approved Rural Electric Cooperative Addendum to the SHMP. Second, by establishing a formal hazard mitigation planning process for rural electric cooperatives, an emphasis is made on reducing the impacts of natural disasters. Third, the development of a hazard mitigation plan annex allow for RECs to develop a plan, even though the cooperative may be in a county that does not have a plan or is in the process of developing a local hazard mitigation plan.

Step 6: Draft/Update the State Mitigation Strategy, Goals, Objectives and Action Items

The Mitigation Branch is the author of this section, and has the responsibility to review and update the goals, objectives and action items on an annual basis. Input from the SHMT, local mitigation plans, and the various other plans reviewed by the Mitigation Branch were considered during the development the current mitigation strategy.

Step 7: Develop a Draft Plan Document

Major revisions to the plan are documented in the Guide to Revisions. Portions of the HIRA were also updated to include the three presidential declared disasters (DR-4022, DR-4077, and DR-4098) that have occurred since the last plan update.

Step 8: Review the Draft Plan

The draft plan was reviewed by the SHMT and the Ohio EMA Executive Branch. The public was provided the opportunity to comment on the draft plan through the Ohio EMA website. Comments and suggestions were incorporated into the plan where appropriate.

Step 9: Enhanced Plan Review and Comment

The plan will be submitted to FEMA Region V for review and comment. The Mitigation Branch will incorporate any required changes to the plan document before resubmitting for approval.

Step 10: Enhanced Plan Adoption

Once the plan has been approved as meeting enhanced plan criteria, the plan will be formally adopted by the State of Ohio.

1.3 PLANNING PROCESS COORDINATION AMONG AGENCIES & ENTITIES

44 CFR 201.4 (b) recommends coordinating with other state agencies, appropriate federal agencies, and other interested entities to participate in the development of the SHMP.

INITIAL STATE HAZARD MITIGATION PLAN (2005)

The Ohio EMA Mitigation Branch developed and distributed a participation letter to all state agencies. The letter explained the federal requirements for development of the SHMP and the importance of the plan for all State agencies. The agencies were encouraged to participate and the letter requested they identify a liaison to represent their agency in the development of the SHMP. In January of 2004, the participation letter was sent directly from the Director of the Department of Public Safety to all other cabinet level Directors.

In May of 2004 the Ohio EMA Mitigation Branch hosted a SHMP kick-off meeting and invited the forty-seven state agencies that received and responded to the participation letter. The State requested the agencies support the planning process as a member of the OMPAT, which guided the mitigations plan's development and future implementation. Membership in the OMPAT requires: review and comments of the draft plan, adoption of the final plan, attendance at an annual meeting to review and direct plan update and revision, and assistance in soliciting additional state agencies for OMPAT membership. The activities required of the OMPAT are minimal compared to those of the SHMT.

The FEMA Region V Regional Administrator and Region V Chief of the Mitigation and Flood Insurance DM received participation letters and an invitation to the mitigation plan kick-off meeting, but were unable to attend. However, FEMA R-V and R-IV staffs were active participants in the mitigation planning process.

There were other Federal agencies that actively participated in the development of the plan. These agencies included NWS, USACE, USFW, HUD, Census Bureau.

The plan development also incorporated non-governmental groups. Ohio's Regional Planning Commissions and the Ohio VOAD contributed information for several sections of the plan. VOAD represents all the non-profit groups with interests in assisting disaster victims and is responsible for coordination of all volunteer activities associated with disaster events in Ohio. The Regional Planning and Development Organizations, established as not-for-profit corporations, receive financial support from a combination of federal and state grants and local service contracts. The Regional Commissions help counties plan and secure funding for development with projects such as construction, repair of upgrade of roads, bridges and water and sewer lines, industrial park development as well as projects related to community services, education and workforce development.

Ohio EMA Mitigation staff solicited assistance from The Ohio State University Department of Geology who works in cooperation with the ODNR Division of Geological Survey to study Ohio's earthquake risk. The OSU departments involved in geo-coding, long-term weather forecasting, hydrological analysis and urban development were also consulted during plan development. Potential updates for the plan could include information from The University of Akron's Emergency Management Program, which provides a network to other academic institutions including: the Ohio University Geology Department, OSU Agricultural Extension Office and University of Cincinnati Law Enforcement Program.

Pennsylvania and West Virginia State EMA's, which are contiguous to Ohio and have similar risks and vulnerabilities and were able to provide insight, which assisted Ohio in its state mitigation planning efforts.

2008 UPDATE

As was indicated in Section 1.2, several agencies who either had the statutory programmatic responsibility for various hazards or those that had data/expertise in those hazards were coordinated with closely (*see table 1.2.d*). Also, the Ohio Department of Administrative Services and Ohio Department of Insurance were consulted. Additionally, the agencies / entities that are members of the SHMT were consulted, often leading to extensive coordination (*see Section 1.2*) on the plan update.

2011 UPDATE

Agency coordination for the 2011 SHMP update was conducted very similarly to the 2008 plan update. Agencies with statutory programmatic responsibility or that are subject matter experts in particular areas were consulted on an as-needed basis. The State Hazard Mitigation Team also participated in the development and review of the 2011 plan update.

2014 UPDATE

Agency coordination for the 2014 SHMP update was conducted very similarly to the 2011 plan update. Agencies with statutory programmatic responsibility or that are subject matter experts in particular areas were consulted on an as-needed basis. The State Hazard Mitigation Team also participated in the development and review of the 2014 plan update.

1.4 PLAN INTEGRATION WITH OTHER INITIATIVES

The 44 CFR 201.4(b)(1) indicates the state's mitigation plan must be integrated to the extent possible with 1) ongoing state and/or regional planning efforts, 2) FEMA mitigation programs, and 3) other initiatives that provide guidance to state and regional agencies. This is optional for a standard SHMP and is required in an enhanced SHMP. The list below identifies the many ways the State of Ohio's mitigation plan and programs are integrated.

PROJECT / PROGRAM / AGENCY	INTEGRATED HOW?
----------------------------	-----------------

STATE / REGIONAL / LOCAL PLANNING EFFORTS

Local Hazard Mitigation Planning	Local entities are encouraged to review SHMP; state mitigation planner reviews all local plans for consistency with state plan and federal planning requirements. Local plan data reviewed and integrated into state plan. Ongoing.
Silver Jackets / USACE	Utilizing USACE Planning Assistance to States program, Silver Jackets pilot program began in Ohio in 2006 and the program is now active in multiple states around the country. Silver Jackets is a strategic and collaborative initiative of federal and state agencies to advance natural hazard risk reduction activities that align with state priorities. The initiative seeks to leverage resources available through all levels of government, the private sector, and NGO's to identify and implement local solutions to risk vulnerability. Various members of the SHMT also participate in this effort. 2006-ongoing.
Local Flood Plain Management Plans / USACE	Local FPM plan required whenever a community requests a USACE Feasibility Study for a flood control project. State and local mitigation officials work to ensure state and local plan goals are followed. Also, state and local mitigation plan is good source for data. Ongoing
Southern Ohio Watershed Study / Appalachian Regional Commission (ARC)	ARC is doing a study to provide coordination assistance to five Appalachian counties and develop watershed plans to address a variety of challenges such as flooding, storm water, ecosystem degradation, etc. Ohio EMA Mitigation Branch and Ohio DNR – Floodplain Management Program providing local and state data including data from LHMP and SHMP. 2007-ongoing.
Strategic Plan Update / Ohio Water Resource Council	Ohio EMA Mitigation Branch participated in strategic plan update in 2006-07. Plan includes water hazards section that is consistent with SHMP, goals, and objectives. See http://www.dnr.state.oh.us/owrc/hazards/tabid/15359/Default.aspx . Complete.
Strategic Plan Update / Ohio Water Science Center	The USGS's Ohio Water Science Center has requested Ohio EMA Mitigation Branch to participate in the update of its strategic plan to ensure consistency with SHMP goals. Beginning May 2008.
Strategic Plan Update / Ohio Homeland Security	Ohio EMA Mitigation Branch participated in the initial development of Ohio Homeland Security strategic plan by ensuring that the plan was consistent with State of Ohio Hazard Mitigation Plan. The Mitigation Branch currently participates on the OHS Strategic Plan Infrastructure and Structural Recovery Advisory Committee and continues to participate in the development of this plan. Ongoing.

PROJECT / PROGRAM / AGENCY INTEGRATED HOW?

Strategic Plan Update / Ohio EMA The Ohio EMA updates its strategic plan on an annual basis. Different branches, including the Mitigation Branch, formulate branch strategic goals and objectives. The Ohio EMA Mitigation Branch strategic plan is partially based on actions in SHMP.

SHARPP / Ohio EMA SHARPP is a web portal that encompasses mitigation planning efforts, project-related information, record and data assessment calculations that can share data and information with all levels of government. The general public is able to access selected components for review and comment on plans, programs and activity information.

STATE / FEDERAL MITIGATION PROGRAMS

CDBG & HUD Supplemental Funds / ODOT The Ohio Development Services Agency ODSA works both independently and with Ohio's mitigation programs to provide funding for non-structural mitigation projects in communities with populations of low and moderate income individuals. Such funds may match FEMA mitigation programs or may be independent of them. Program staff are members of the SHMT.

NFIP & State Floodplain Management Program / ODNR-DOW Floodplain Management Program State coordinating entity for the National Flood Insurance Program as well as state floodplain management office. Coordinates closely with Ohio EMA Mitigation Branch, and participates on the SHMT. Participates extensively on SHMP updates. Works with Ohio EMA during events and post-flood issues – coordinates education and outreach for community floodplain administrators.

Staff from ODNR and OHIO EMA collaborated to create the Ohio Natural Hazard Mitigation Planning Guidebook. This document was developed to provide mitigation planning guidance to communities participating in the Appalachian Flood Risk Reduction Initiative (AFRRI) – which preceded large scale mitigation planning projects available through FEMA. As a result of AFRRI, 41 jurisdictions are covered by natural hazard mitigation plans. Information from the plans was utilized in the SHMP and will continually be updated as more plans are approved.

Staff from ODNR and OHIO EMA also collaborated on facilitating Risk MAP in the state. Risk Mapping, Assessment, and Planning (Risk MAP) is the Federal Emergency Management Agency (FEMA) Program that provides communities with flood information and tools they can use to enhance their mitigation plans and take action to better protect their citizens. Through more precise flood mapping products, risk assessment tools, and planning and outreach support, Risk MAP strengthens local ability to make informed decisions about reducing risk.

Ohio Dam Safety Program / ODNR-DOW, Dam Safety Program The Dam Safety Program has statutory authority for permitting/monitoring dams and levees in Ohio. The DSP provides data for the state plan HIRA.

Ohio Building Code / ODC, OBOA The Ohio Department of Commerce – Board of Building Standards and the Ohio Building Officials Association work on state building codes and issues related to hazards in Ohio. The Ohio Residential Code of Ohio includes provisions for flood

PROJECT / PROGRAM / AGENCY	INTEGRATED HOW?
----------------------------	-----------------

	hazards and the ODNR – Floodplain Management Program coordinates closely with them to ensure the Ohio RCO meets federal requirements. The state has utilized information provided in the “Flood Resistant Construction” section of the OBBC to outline expectations of the local jurisdictions, post-disaster, to help them achieve the flood reduction goals. The Board of Building Standards has also adopted code specific to the construction and/or installation of FEMA tornado safe rooms.
Ohio Mine Subsidence Insurance / OMSIUA	Underground mines, some of which have been abandoned for years, can be found in many parts of the state, particularly eastern Ohio. When buildings are constructed above mines, major damage to walls and foundations can occur if the mine collapses. The Ohio Legislature authorized the establishment of the Ohio Mine Subsidence Insurance Underwriting Association (OMSIUA), the Mine Subsidence Governing Board and the Mine Subsidence Insurance Fund in 1985. Ohio Mine Subsidence Insurance is a regional mitigation tool.
Firewise / ODNR – Div. of Forestry	The ODNR – Division of Forestry administers the Firewise program which is a multi-organizational initiative designed to include not only fire safety professionals, but also homeowners, community leaders, planners, developers, and others in localized efforts to lessen the risk of interface wildfires.
Unified Hazard Mitigation Programs (HMGP, FMA, PDM) / FEMA	<p>The ultimate goal of this program is to reduce the susceptibility of homes, communities, and structures to wildfire through cooperative education and mitigation techniques. The Division of Forestry contributed to the wildfire portion of the HIRA.</p> <p>FEMA's hazard mitigation program closely coordinated with and consistent with SHMP. FEMA sits on the SHMT. Ohio EMA utilizes FEMA repetitive loss lists to identify projects for funding under the FMA, and PDM programs.</p> <p>The Ohio EMA Mitigation Branch manages these three programs. These programs provide a significant portion of the mitigation funding resources to implement mitigation activities. Funding from the PDM and HMGP programs are used as funds to assist the State of Ohio and local governments in developing and updating their hazard mitigation plans.</p>
Disaster Resistant University / FEMA	The University of Akron was one of the few recipients of the DRU grant provided by FEMA. The DRU project was coordinated by Ohio EMA.
Structural Flood Control and Non-Structural Authorities / USACE	USACE sits on the SHMT which is the primary vehicle for program/plan coordination. Also, USACE participates in state plan update and FEMA's competitive PDM review panels.
Flood Gauging & Warning / USGS	The USGS's Ohio Water Science Center assists local entities by entering into cooperative agreements for stream gauging and warning system development. These mitigation activities are identified in numerous local mitigation plans and factor into the state mitigation strategy. The USGS also attends the SHMT meetings and assist the Ohio EMA Mitigation Branch with data development for benefit cost analyses. Finally the USGS also produces reports on significant flood events in cooperation with Ohio DNR and Ohio EMA.

PROJECT / PROGRAM / AGENCY	INTEGRATED HOW?
-------------------------------	-----------------

OTHER INITIATIVES

EMAP Accreditation

Emergency Management Accreditation Program (EMAP) is a standard-based voluntary assessment and accreditation process for state and local government. In June 2008, Ohio EMA received EMAP Accreditation for requirements pertaining to a state mitigation program. Ohio EMA received EMAP Re-Accreditation in 2014.

1.5 PLAN MAINTENANCE

Section 201.4(c) requires that the state plan to be reviewed, revised, and submitted for approval to the Regional Director of the FEMA every three years. The regulations require a plan maintenance process that includes an established method and schedule for monitoring, evaluating and updating the plan; a system for monitoring implementation of mitigation measures and project closeouts; and a system for reviewing goal and objective progress. The Ohio EMA Mitigation Branch staff is the primary group responsible for the plan maintenance but will utilize other entities review and comments as part of the maintenance process.

The State of Ohio Hazard Mitigation Plan is a living document and will be reviewed, and potentially updated constantly. The plan will be revised if conditions, under which the plan was developed, change such as new or revised Ohio policies, a major disaster, or availability of funding. This section describes how the plan will be monitored, evaluated and updated.

INITIAL STATE HAZARD MITIGATION PLAN MAINTENANCE, MONITORING, AND EVALUATION PROCESS (2003)

The initial SHMP described a process whereby the state would:

- Review the SHMP by SHMO and OMPAT every 12 months to include a review summary
- Review the SHMP after every disaster event
- Update the plan, primarily focusing on the HIRA and updating progress on goals/objectives/actions
- Monitor mitigation projects funded under FEMA's mitigation programs

Since the 2005 plan approval, these items were largely followed; however, the annual review was cursory and a review summary was not prepared due to the ongoing disaster workload. The state plan was reviewed after every disaster event, primarily to ensure that the required Mitigation Strategy was consistent with the state plan and to implement any recommended actions. The HIRA was updated and mitigation projects are subject to an extensive monitoring program. Updates to the state plan action items are discussed in Section 3 of this plan.

2008 STATE MITIGATION PLAN MONITORING, EVALUATION & UPDATE

The Ohio EMA Mitigation Branch will ensure that the SOHMP is monitored and make any adjustments necessary after Presidential disaster declarations. Also, the Mitigation Branch will monitor the plan on the annual basis with a written report to the SHMT and FEMA by the quarterly reporting deadline after the first of the year (April 30th).

Three types of evaluations will occur, annual evaluation of progress on the mitigation actions identified in Section 3, an interim update to achieve "enhanced plan" status, and a comprehensive evaluation in November 2009 which is approximately 1.5 years from the next update. This extensive evaluation will

result in the framework for the comprehensive plan update. The evaluation of mitigation actions will be included in the annual written report.

2012 STATE MITIGATION PLAN MONITORING, EVALUATION & UPDATE

Before the next comprehensive update that will be required, there will be an update of the SOHMP so an enhanced plan status can be achieved. The enhanced plan update will occur after the full implementation and integration of SHARRP, allows for better organization, integration and tracking of local plans. As part of the next enhanced plan update, hazard information will be updated as necessary and if any disasters are declared prior to that time, information will be incorporated as well. In fact, the entire plan will be reviewed and updated to include current information where necessary.

The method for updating will include consulting with the SHMT, posting the update process on the website and inviting general public feedback on the plan and the update by the Ohio EMA Mitigation Branch to be completed three months before the updated plan is due to FEMA.

2014 STATE MITIGATION PLAN MONITORING, EVALUATION & UPDATE

The SOHMP achieved enhanced plan status as part of the 2012 update and the state plans on continuing this status for the 2014 SOHMP. As part of the next enhanced plan, hazard information will be updated as necessary and if any disasters are declared prior to that time, information will be incorporated as well. This process will be made less cumbersome by using SHARRP, which was implemented after the 2012 update. In fact, the entire plan will be reviewed and updated to include current information where necessary.

The method for updating will be similar to the 2012 update and will include consulting with the SHMT, posting the update process on the website and inviting general public feedback on the plan and the update by the Ohio EMA Mitigation Branch.

MONITORING PROJECT IMPLEMENTATION

Section 201.4(c) requires that the standard state plan maintenance process must include a system for monitoring implementation of mitigation measures and project closeouts. The Ohio EMA Mitigation Branch is responsible for monitoring implementation of FEMA funded mitigation projects under HMGP, PDM, and FMA. Review of implementation progress occurs quarterly with the submission of quarterly reports. These reports are verified by monitoring visits. Details of the extensive monitoring program can be found in the Administrative Plan attached in Appendix H. Ohio EMA Mitigation Branch will also coordinate the monitoring of the actions identified in Section 4 of this plan.

Likewise, project closeout procedures can be found in the Administrative Plan. Because project closeouts are a priority for FEMA Region V, they have been included as a strategic goal for the Ohio EMA Mitigation Branch.

1.6 COMPLIANCE WITH FEDERAL LAWS AND REGULATIONS

The 44 CFR 201.4(c)(7) indicates that the SHMP must include assurances that the state will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, in compliance with CFR 13.11(c). The state will amend its plan whenever necessary to reflect change in state or Federal laws and statutes as required in CFR 13.11(d).

Through the development and enforcement of this plan, the State of Ohio will comply with all provisions in 44 Code of Federal Regulations, Part 13, as well as Subchapter B-Insurance and Mitigation, Subchapter D- Disaster Assistance and Subchapter F-Preparedness. Additionally, the assurances listed below are provided as documentation that the state or any subsequent sub-grantee (recipients) that receive federal grant funds will comply with all applicable Federal statutes and regulations. The state will amend the plan whenever necessary to reflect changes in federal statutes and regulations or material changes in state law, organization, policy or state agency operations.

To the extent the following provisions apply to the award of assistance:

- a) Recipient possesses legal authority to enter into agreements and to execute the proposed programs;
- b) Recipient's governing body has duly adopted or passed as an official act a resolution, motion or similar action authorizing the execution of hazard mitigation agreements, including all understandings and assurances contained therein, and directing and authorizing the Recipient's chief administrative officer or designee to act in connection with any application and to provide such additional information as may be required;
- c) No member of or delegate to the Congress of the United States, and no Resident Commissioner, shall be admitted to any share or part of any agreement or to any benefit to arise from the same. No member, officer, or employee of the Recipient or its designees or agents, no member of the governing body of the locality in which the program is situated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the program during his tenure or for one year thereafter, shall have any interest direct or indirect, in any contract or subcontract, or the proceeds thereof, for work to be performed in connection with the program assisted under this plan. The Recipient shall incorporate or cause to be incorporated, in all such contracts or subcontracts, a provision prohibiting such interest pursuant to the purpose state above;
- d) All Recipient contracts for which the State Legislature is in any part a funding source, shall contain language to provide for termination with reasonable costs to be paid by the Recipient for eligible contract work completed prior to the date the notice of suspension of funding was received by the Recipient. Any cost incurred after the Recipient receives a notice of suspension or termination may not be funded with funds

provided under a grant agreement unless previously approved in writing by the Department. All Recipient contracts shall contain provisions for termination for cause or convenience and shall provide for the method of payment in such event;

e) Recipient will comply with:

- 1) Contract Work Hours and Safety Standards Act of 1962, 40 U.S.C. 327 et seq., requiring that mechanics and laborers (including watchmen and guards) employed on federally assisted contracts be paid wages of not less than one and one-half times their basic wage rates for all hours worked in excess of forty hours in a work week; and
- 2) Federal Fair Labor Standards Act, 29 U.S.C. Section 201 et seq., requiring that covered employees be paid at least the minimum prescribed wage, and also that they be paid one and one-half times their basic wage rates for all hours worked in excess of the prescribed work-week.

f) Recipient will comply with:

- 1) Title VI of the Civil Rights Act of 1964 (P.L. 88-352), and the regulations issued pursuant thereto, which provides that no person in the United States shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance and will immediately take any measures necessary to effectuate this assurance. If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the Recipient, this assurance shall obligate the Recipient, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits;
- 2) Any prohibition against discrimination on the basis of age under the Age Discrimination Act of 1975, as amended (42 U.S.C.: 6101-6107), which prohibits discrimination on the basis of age or with respect to otherwise qualified handicapped individuals as provided in Section 504 of the Rehabilitation Act of 1973;
- 3) Executive Order 11246 as amended by Executive Orders 11375 and 12086, and the regulations issued pursuant thereto, which provide that no person shall be discriminated against on the basis of race, color, religion, sex or national origin in all phases of employment during the performance of federal or federally assisted construction contracts; affirmative action to insure fair treatment in employment, upgrading, demotion, or transfer; recruitment or recruitment advertising;

layoff/termination, rates of pay or other forms of compensation; and election for training and apprenticeship;

- g) The Recipient agrees to comply with the Americans With Disabilities Act (Public Law 101-336, 42 U.S.C. Section 12101 et seq.), where applicable, which prohibits discrimination by public and private entities on the basis of disability in the areas of employment, public accommodations, transportation, state and local government services, and in telecommunications;
- h) Recipient will comply with Title IX of the Education Amendments of 1972, as amended (20 U.S.C.: 1681-1683 and 1685 - 1686), which prohibits discrimination on the basis of sex;
- i) Recipient will comply with the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, (42 U.S.C. 4521-45-94) relating to nondiscrimination on the basis of alcohol abuse or alcoholism;
- j) Recipient will comply with 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records;
- k) Recipient will comply with Title VIII of the Civil Rights Act of 1968, 42 U.S.C. 2000c and 42 3601-3619, as amended, relating to non-discrimination in the sale, rental, or financing of housing, and Title VI of the Civil Rights Act of 1964 (P.L. 88-352), which prohibits discrimination on the basis of race, color or nation origin;
- l) Recipient will comply with the Intergovernmental Personnel Act of 1970, 42 U.S.C. 4728-4763;
- m) Recipient will comply with the Rehabilitation Act of 1973, Section 504, 29 U.S.C. 794, regarding non-discrimination;
- n) Recipient will establish safeguards to prohibit employees from using positions for a purpose that is, or gives the appearance of, being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties pursuant to Section 112.313 and Section 112.3135, FS;
- o) Recipient will comply with the Anti-Kickback Act of 1986, 41 U.S.C. Section 51 which outlaws and prescribes penalties for "kickbacks" of wages in federally financed or assisted construction activities;
- p) Recipient will comply with the Hatch Act (18 USC 594, 598, 600-605), which limits the political activities of employees;
- q) Recipient will comply with the flood insurance purchase and other requirements of the Flood Disaster Protection Act of 1973 as amended, 42 USC 4002-4107, including requirements regarding the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any Federal financial assistance for construction or

acquisition purposes for use in any area having special flood hazards. The phrase "Federal financial assistance" includes any form of loan, grant, guaranty, insurance payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect Federal assistance;

- r) Recipient will require every building or facility (other than a privately owned residential structure) designed, constructed, or altered with funds provided under a grant agreement to comply with the "Uniform Federal Accessibility Standards," (AS) which is Appendix A to 41 CFR Section 101-19.6 for general type buildings and Appendix A to 24 CFR Part 40 for residential structures. The Recipient will be responsible for conducting inspections to ensure compliance with these specifications by the contractor;
- s) Recipient will, in connection with its performance of environmental assessments under the National Environmental Policy Act of 1969, comply with Section 106 of the National Historic Preservation Act of 1966 (U.S.C. 470), Executive Order 11593, 24 CFR Part 800, and the Preservation of Archaeological and Historical Data Act of 1966 (16 U.S.C. 469a-1, et seq.) by:
 - 1) Consulting with SHPO to identify properties listed in or eligible for inclusion in the National Register of Historic Places that are subject to adverse effects (see 36 CFR Section 800.8) by the proposed activity; and
 - 2) Complying with all requirements established by the State to avoid or mitigate adverse effects upon such properties.
 - 3) Notifying FEMA and the state if any project may affect a historic property. When any of Recipient's projects funded under a grant agreement may affect a historic property, as defined in 36 CFR 800. (2)(e), FEMA may require Recipient to review the eligible scope of work in consultation with SHPO and suggest methods of repair or construction that will conform with the recommended approaches set out in the Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings 1992 (Standards), the Secretary of the Interior's Guidelines for Archeological Documentation (Guidelines) (48 Federal Register 44734-37), or any other applicable Secretary of Interior standards. If FEMA determines that the eligible scope of work will not conform with the Standards, Recipient agrees to participate in consultations to develop, and, after execution by all parties, to abide by, a written agreement that establishes mitigation and recondition measures, including but not limited to, impacts to archeological sites, and the salvage, storage, and reuse of any significant architectural features that may otherwise be demolished.
 - 4) Notifying FEMA and the state if any project funded under a grant agreement will involve ground disturbing activities, including, but not limited to: subsurface disturbance; removal of trees; excavation for

footings and foundations; and installation of utilities (such as water, sewer, storm drains, electrical, gas, leach lines and septic tanks) except where these activities are restricted solely to areas previously disturbed by the installation, replacement or maintenance of such utilities. FEMA will request the SHPO's opinion on the potential that archeological properties may be present and be affected by such activities. The SHPO will advise Recipient on any feasible steps to be accomplished to avoid any National Register eligible archeological property or will make recommendations for the development of a treatment plan for the recovery of archeological data from the property.

If Recipient is unable to avoid the archeological property, it will develop, in consultation with the SHPO, a treatment plan consistent with the Guidelines and take into account the Advisory Council on Historic Preservation (Council) publication "Treatment of Archeological Properties". Recipient shall forward information regarding the treatment plan to FEMA, the SHPO and the Council for review. If the SHPO and the Council do not object within 15 calendar days of receipt of the treatment plan, FEMA may direct Recipient to implement the treatment plan. If either the Council or the SHPO object, Recipient shall not proceed with the project until the objection is resolved.

- 5) Notifying the state and FEMA as soon as practicable: (a) of any changes in the approved scope of work for a National Register eligible or listed property; (b) of all changes to a project that may result in a supplemental DSR or modify an HMGP project for a National Register eligible or listed property; (c) if it appears that a project funded under a grant agreement will affect a previously unidentified property that may be eligible for inclusion in the National Register or affect a known historic property in an unanticipated manner. Recipient acknowledges that FEMA may require Recipient to stop construction in the vicinity of the discovery of a previously unidentified property that may be eligible for inclusion in the National Register or upon learning that construction may affect a known historic property in an unanticipated manner. Recipient further acknowledges that FEMA may require Recipient to take all reasonable measures to avoid or minimize harm to such property until FEMA concludes consultation with the SHPO. Recipient also acknowledges that FEMA will require, and Recipient shall comply with, modifications to the project scope of work necessary to implement recommendations to address the project and the property.
- 6) Acknowledging that, unless FEMA specifically stipulates otherwise, it shall not receive funding for projects when, with intent to avoid the requirements of the PA or the NHPA, Recipient intentionally and significantly adversely affects a historic property, or having the legal power to prevent it, allowed such significant adverse affect to occur.
- t) Recipient will assist the awarding agency in assuring compliance with the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 270;

- u) Recipient will assist the awarding agency in assuring compliance with the Preservation of Archeological and Historical Preservation Act of 1966, 16 U.S.C. 469a, et seq;
- v) Recipient will comply with the requirements of Titles II and III of the Uniform Relocation Assistance and Property Acquisition Policies Act of 1970, 42 U.S.C. 4621-4638, which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs;
- w) Recipient will assure project consistency with the approved State program developed under the Coastal Zone Management Act of 1972, 16 U.S.C. 1451-1464; and
- x) With respect to demolition activities, recipient will:
 - 1) Create and make available documentation sufficient to demonstrate that the Recipient and its demolition contractor have sufficient manpower and equipment to comply with the obligations as outlined in a grant agreement.
 - 2) Return the property to its natural state as though no improvements had ever been contained thereon.
 - 3) Furnish documentation of all qualified personnel, licenses and all equipment necessary to inspect buildings located in Recipient's jurisdiction to detect the presence of asbestos and lead in accordance with requirements of the U.S. Environmental Protection Agency, the Ohio Department of Environmental Protection and the County Health Department.
 - 4) Provide documentation of the inspection results for each structure to indicate:
 - Safety Hazards Present
 - Health Hazards Present
 - Hazardous Materials Present
 - 5) Provide supervision over contractors or employees employed by Recipient to remove asbestos and lead from demolished or otherwise applicable structures.
 - 6) Leave the demolished site clean, level and free of debris.
 - 7) Notify the department promptly of any unusual existing condition which hampers the contractors work.
 - 8) Obtain all required permits.
 - 9) Provide addresses and marked maps for each site where water wells and septic tanks are to be closed, along with the number of wells and septic tanks located on each site. Provide documentation of closures.

- 10) Comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163).
- 11) Comply with all applicable standards, orders, or requirements issued under Section 112 and 306 of the Clean Air Act (42 U.S.C. 1857 (h)), Section 508 of the Clean Water Act (33 U.S. 1368), Executive Order 11738, and the U.S. Environmental Protection Agency regulations (40 CFR Part 15 and 61). This clause shall be added to any subcontracts.
- 12) Provide documentation of public notices for demolition activities.
- y) Recipient will comply with Lead-Based Paint Poison Prevention Act (42 U.S.C.: 4821 et seq.), which prohibits the use of lead based paint in construction of rehabilitation or residential structures;
- z) Recipient will comply with the Energy Policy and Conservation Act (P.L. 94-163; 42 U.S.C. 6201-6422), and the provisions of the state Energy Conservation Plan adopted pursuant thereto;
- aa) Recipient will comply with the Laboratory Animal Welfare Act of 1966, 7 U.S.C. 2131-2159, pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by an award of assistance under this agreement;
- bb) Recipient will comply with the Clean Air Act of 1955, as amended, 42 U.S.C. 7401-7642;
- cc) Recipient will comply with the Clean Water Act of 1977, as amended, 42 U.S.C. 7419-7626;
- dd) Recipient will comply with the Endangered Species Act of 1973, 16 U.S.C. 1531-1544;
- ee) Recipient will comply with environmental standards which may be prescribed pursuant to the National Environmental Policy Act of 1969, 42 U.S.C. 4321-4347;
- ff) Recipient will comply with the environmental standards that may be prescribed pursuant to the Safe Drinking Water Act of 1974, 42 U.S.C. 300f-300j, regarding the protection of underground water sources;
- gg) Recipient will comply with the Wild and Scenic Rivers Act of 1968, 16 U.S.C. 1271-1287, related to protecting components or potential components of the national wild and scenic rivers system;
- hh) Recipient will comply with the following Executive Orders: EO 11514 (NEPA); EO 11738 (violating facilities); EO 11988 (Floodplain Management); EO 11990 (Wetlands); and EO 12898 (Environmental Justice);
- ii) Recipient will comply with the Coastal Barrier Resources Act of 1977, 16 U.S.C. 3510;

- jj) Recipient will comply with the Fish and Wildlife Coordination Act of 1958; 16 U.S.C. 661-666.

1.7 ASSURANCES / PROMULGATION

The State of Ohio Hazard Mitigation Plan meets the standard requirements of Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, 42 United States Code Sections 5121 and following (commonly referred to as the Stafford Act - Public Law 93-288). Additionally, this plan meets the SRL planning requirements of 44 Code of Federal Regulations, Part 79.4 (SRL and FMA beginning in 2009).

It is intended that this plan also meet the requirements of the Section 322 of the Stafford Act which requires that States, as a condition of receiving federal disaster mitigation funds, have a mitigation plan in place that describes the planning process for identifying hazards, risk and vulnerabilities, identifies and prioritizes mitigation actions, encourages the development of local mitigation and provides technical support for these efforts. In addition, the Act requires local and tribal governments to also have mitigation plans as a condition of receiving disaster mitigation funds.

The development and implementation of this strategy is authorized and/or required by the following state statutes:

- Chapter 5502, Ohio Revised Code (specifically Section 5502.22 establishes the Ohio Emergency Management Agency and requires plan development).
- Chapter 5502, Ohio Revised Code (specifically Sections 5502.26, 5502.27, and 5502.271 require the establishment of county emergency management agencies and plan development).

The adoption and promulgation of the 2008, 2011 and 2014 update is being done by the Executive Director of the Ohio EMA in her capacity as the Governor's Authorized Representative (GAR). The original SHMP was promulgated by Governor Taft in 2005.

State of Ohio Hazard Mitigation Plan

STATEMENT OF ADOPTION

The State of Ohio Hazard Mitigation Plan (SOHMP) is a comprehensive description of the State's commitment to reduce or eliminate the impacts of natural and human-caused hazards. The Disaster Mitigation Act of 2000 requires that states have a natural hazard mitigation plan to maintain eligibility for federal disaster assistance and mitigation funds. The SOHMP is coordinated and maintained by the Ohio Emergency Management Agency, however, the plan is the culmination of input and recommendations from numerous stakeholders from local, state and federal government agencies, private sector organizations, and residents of Ohio.

The SOHMP was initially approved by FEMA on January 17, 2005 and has been updated every three years. The previous plan was updated and approved by FEMA as meeting the "enhanced" plan requirements on June 12, 2012. The 2014 plan update will again meet the "enhanced" plan criteria. This "enhanced" plan status is a testament to the Ohio Emergency Management Agency's commitment to mitigation and will allow the state to continue to qualify for additional funds following future disaster declarations.

In adopting the 2014 update of the SOHMP, the State of Ohio agrees to comply with all applicable state and federal statutes and regulations, as stipulated in previously documented assurances, and will update the plan at least every five years. The SOHMP has been amended to reflect emerging hazard conditions and risks as well as new or revised state and federal statutes and regulations. Future amendments will also reflect changes to State organization or policy as appropriate.

As the Executive Director of the Ohio Emergency Management Agency, I the undersigned do hereby formally adopt the State of Ohio Hazard Mitigation Plan 2014 update.



Nancy J. Dragani, Executive Director
Ohio Emergency Management Agency

Date: 5/8/14

SECTION 2: HAZARD IDENTIFICATION & RISK ASSESSMENT
